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Sohaib Gutub

Framework for the Implementation Process of Public-Private Partnerships (P3s) in Highway Projects

Sohaib Gutub

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Reading Committee:

Ahmed Abdel Aziz, Chair

Stephen T. Muench

Joe P. Mahoney

John Schaufelberger

Program Authorized to Offer Degree:

Department of Civil and Environmental Engineering

University of Washington

Abstract

Framework for the Implementation Process of Public-Private Partnerships (P3s) in Highway Projects

Sohaib Gutub

Chair of the Supervisory Committee:

Ahmed AbdelAziz

Department of Civil and Environmental Engineering

The use of public-private partnerships (P3) for the provision of public facilities and infrastructure services has been growing both in the United States and internationally. In most developed countries, P3s are well established and the P3 market is mature. However, compared to other developed countries, the P3 sector in the US is still in its infancy. Although P3s are gaining momentum in the United States' transportation infrastructure sector, there are still impediments that are stopping the practice from realizing its full potential. One major impediment is the lack of a comprehensive P3 framework that can guide policymakers in the P3 implementation process. This dissertation aims to address this gap by developing a comprehensive P3 framework through a methodology that uses a systematic literature review, content analysis of P3 documentation and processes of successful P3 states, and a structured survey of experts in the field. The research aims to synergize a conceptual P3 framework through a comprehensive literature review that covers various aspects of P3 implementations, complemented with a thorough analysis of best practices for implementation in five of the most successful P3 states in the US: Virginia, Colorado, California, Texas, and Florida. Feedback is solicited from P3 experts in the public,

private, and academic sectors to reach a comprehensive framework. The research addressed the political obstacles to the P3 implementation process in the US by conducting a systematic literature review and survey from experts in the industry. The proposed framework would help those states or countries currently embarking or interested in the successful implementation of public-private partnerships to develop their public facilities and infrastructure.

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Chapter 1. INTRODUCTION

1.1 CHAPTER OVERVIEW

This section lays the groundwork for exploring the currently decaying United States infrastructure and makes a case for Public-Private Partnerships (P3s) as a cost-efficient mechanism to redress it. It begins by introducing the problems the United States infrastructure is facing right now, especially those of lack of finances available to upgrade the deteriorating facilities. It goes on to illustrate the severity of the issue and look at the implications of further delaying investments in United States infrastructure, especially in the road and highway sectors. It then delves into the potential of P3s to overcome this financing gap and the current problems associated with P3 implementation. The final part of this section lays out the framework of this project in terms of proposing solutions for improving P3 outcomes in the United States transportation sector.

1.2 BACKGROUND

The United States has always relied on conventional procurement methods for building its infrastructure, such as design bid build and other delivery methods used in the highway sector. However, in recent years, federal and state governments have faced budget constraints and as a result have significantly reduced the funding for supporting, maintaining and improving the nation's aging infrastructure (Werneck & Saadi, 2015).

The United States' overall infrastructure is deteriorating, and there is a lack of funding to improve its condition and performance. According to the 2017 Infrastructure Report Card issued by the American Society of Civil Engineering (ASCE), the grade for United States' overall infrastructure (which includes aviation, hazardous waste, roads, bridges, inland waterways, schools, dams, levees, solid waste, drinking water, parks & recreation, transit, energy, ports, wastewater,

and rail) remains at a D+, same as it was in the last report in 2013 (ASCE, 2013; ASCE, 2017b). The grade for roads is D, which is lower than the overall infrastructure. Roads in the United States are chronically underfunded, frequently congested, poorly maintained, and are becoming more dangerous (ASCE, 2017c). The 2017 grade report argues that delay in investments regarding infrastructure projects leads to higher future costs that will grow and expand over time. The ASCE 2017 grade report's assessment scope reflects the deteriorating condition and performance of American infrastructure and is indicative of the insufficient progress made towards the repair of the nation's infrastructure, if it is taking place at all. Table 1 shows the history of the ASCE Infrastructure Report card from 1988 to 2017, illustrating the slow pace of improvements over the years (ASCE, 2017b). The table confirms the need for more spending to reach satisfactory infrastructure performance and conditions.

Table 1 Report Card History

Year	1988	1998	2001	2005	2009	2013	2017
GPA	C	D	D+	D	D	D+	D+
Cost to Improve	-	-	$1.3T	$1.6T	$2.2T	$3.6T	$4.6T
Period of Investments Needs	-	-	5	5	5	8	10
Adjusted Cost per 5 Year period	-	-	1.3	1.6	2.2	2.25	2.295
Per cent Cost Increase	-	-	-	23%	38%	2%	2%

Source (ASCE, 2017b)

According to the 2017 Infrastructure Report Card, there has been progress in improving the nation's infrastructure with proper planning and investments. One of the main ASCE recommendations is to raise the nation's infrastructure grade from D+ to B by promoting the government and private sectors to increase their investment and spending from 2.5% to 3.5% of U.S. Gross Domestic Product (GDP) by 2025 (ASCE, 2017). The private sector needs to invest in joint partnerships with the government to meet the required level of investments. There is no dispute that the United States infrastructure needs more investments from the private sector. Many studies suggest that current spending is exacerbating the problems of the nation's infrastructures

needs. According to Aidinoff (2015), the infrastructure sector needs $3.6 trillion of funding by 2020 to maintain a good state of maintenance and earn a "B."

In the "2015 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance" report, the U.S. Department of Transportation (DOT) delves further into the current and expected future investments in the public transportation sector, studying 20 years of different spending scenarios (USDOT, 2015). According to the report, in order to improve the conditions and performance of the nation's highways, bridges, and transit, the average system-wide capital investment should increase up to an average annual investment of $142.5 billion. The capital investment in 2015 would be 35.5 percent higher than the actual spending levels in 2012, thus eliminating and surpassing the $836 billion backlog in capital investment for the transportation system. Other scenarios that would only sustain the current level of conditions and performance of the infrastructure were discussed in the report, as illustrated in Table 2.

Table 2 Average annual investment by scenario

Scenario and Comparison Parameter	**All Roads**	**Federal-Aid Highways**	**NHS**	**Interstate System**
Sustain 2012 Spending Scenario				
Average annual investment (billions of 2012 dollars), for 2013 through 2032	**$105.2**	**$79.0**	**$54.6**	**$20.5**
Maintain Conditions and Performance Scenario				
Average annual investment (billions of 2012 dollars), for 2013 through 2032	**$89.9**	**$69.3**	**$51.7**	**$ 24.1**
Percent difference relative to 2012 spending	-14.5%	-12.3%	-5.3%	17.6%
Annual spending increase needed to support scenario investment level	-1.52%	-1.26%	-0.51%	1.50%
Improve Conditions and Performance Scenario				
Average annual investment (billions of 2012 dollars), for 2013 through 2032	**$142.5**	**$107.9**	**$72.9**	**$31.8**
Percent difference relative to 2012 spending	35.5%	36.6%	33.5%	55.1%
Annual spending increase needed to support scenario investment level	2.81%	2.89%	2.68%	4.04%
State of Good Repair Benchmark				
Average annual investment (billions of 2012 dollars), for 2013 through 2032	**$85.3**	**$64.9**	**$42.2**	**$18.4**

Source (USDOT, 2015)

To summarize, the reports from the USDOT and the ASCE Card Report corroborate the same central problem: the infrastructure of the nation is in dire need of more spending.

1.2.1 *New Procuring Methods*

To encourage the private sector's partnership, alternative contracting methods such as Public-Private Partnerships (P3s) have recently grown in popularity worldwide, including the United States. The United States Department of Transportation in its Condition and Performance Report (2015) defines P3s as follows:

> *"Public-Private Partnerships (P3s) are contractual agreements between a public agency and a private entity that allow for greater private-sector participation in the delivery and financing of transportation projects. Typically, this participation involves the private sector's assuming additional project risks, such as design, finance, long-term operation, maintenance, or traffic and revenue."*

In today's world, as a response to reduced funding in the public sector, partnerships formed between the private and public sectors have gained popularity (Hodge & Greve, 2007; Jingfeng Y. et al, 2009). These partnerships also have considerable advantages over traditional procurement methods. For instance, the Panel on Public-Private Partnerships in its reports finds that generally the P3 delivery systems are much quicker in implementing various high-investment and technically demanding projects than the traditional procurement methods in the United States (Doherty et al., 2014).

The positive impact of private investments on the grade of infrastructure is apparent in the freight rail sector. The 2017 Report Card pinpoints the positive effect of private investment in the rail sector, where it increased the overall rail sector's grade from "D+" to "B." Private investments have been growing in the past five years with investments of up to $27.1 billion invested towards maintaining and modernizing the freight rail system (ASCE, 2017b). The success of the freight rail industry is mainly due to the increase in capital investments, and the same will be true for the roads and highway sector. Such examples illustrate that the path for a sustainable

investment model lies in the ability to attract investment from the private sector to fill the gap in spending needs for maintenance and improvements.

1.2.2 *Current Investment in P3s in the United States*

P3s are starting to become a global phenomenon. In fact, to cope with budgetary constraints, several countries have started to tap into private sector resources using P3s. Similarly, in the context of the United States, some state and local governments have successfully implemented P3 in a variety of infrastructure projects. As it is illustrated in Figure 1, currently 39 states have passed legislation to enable the implementation of P3s (NCSL, 2017).

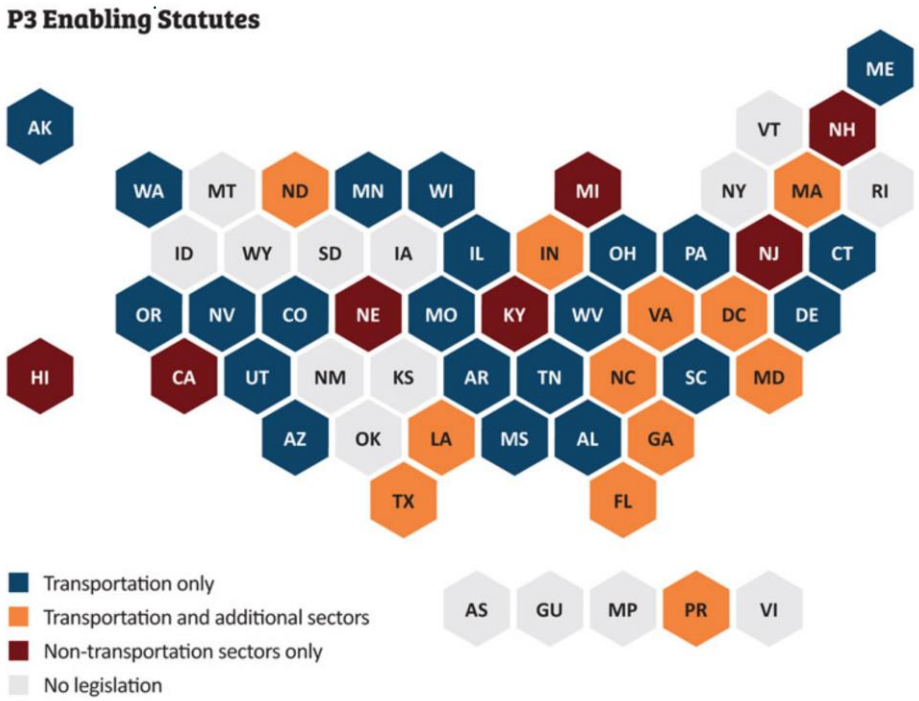

Figure 1 States with P3 Enabling Legislation, as of June 2017 (NCSL, 2017)

Table 3 shows the variety of projects collectively from all enabling P3 states that reached financial close from 1986 to 2012. The water sector makes up about 33 percent of total projects here, followed by the transportation infrastructure with about 28 percent. According to the United States Department of Treasury, P3 projects typically incorporate some private equity, and

thus the transferred risk for effective project management essentially benefits taxpayers and adds value in the long-term by lowering the overall project cost and enhancing the service performance (U.S. Department of Treasury, 2009; Werneck & Saadi, 2015).

As mentioned above, P3s have become a global phenomenon, and many of the United States' contemporaries have already invested in P3s. For instance, it is worth noting that a country like the UK has tapped into private resources with an annual average of £4 billion ($5.8 billion) in capital investments from P3s, known in the UK as Private Finance Initiatives (PFIs), over the past fifteen years (PwC, 2016). In contrast, while the United States' economy is about six times larger than the UK's, the United States in 2015 has only closed five P3 projects (see Table 4) with an estimated $2.4 billion (Bowlus et al., 2016; PwC, 2016).

Table 3 P3 Projects reaching Financial close from 1986-2012

Type of Project	No. of P3 projects that reached financial closure 1986–2012	Percent of total Projects
Building	161	23%
Water and wastewater	105	15%
Wastewater	104	15%
Toll road	95	14%
Motorway	69	10%
Rail	45	6%
Airport	32	5%
Water	23	3%
Toll bridge	22	3%
Parking	14	2%
Seaport	13	2%
Miscellaneous	6	1%
Toll Tunnel	5	1%

Source (Werneck & Saadi, 2015)

Table 4 P3s closed in 2015 adapted from Moody's Investment Service report

State	**Transportation legislation**	**Social Infrastructure Legislature?**	**Year Passed**	**First P3**	**Financial Close Date**
Pennsylvania	Yes	No	2012	Pennsylvania Bridges	19-Mar-15
Ohio	Yes	No	2011	Portsmouth Bypass	9-Apr-15
North Carolina	Yes	No	2009-2013	I-77 HOT Lanes	20-May-15
Michigan	No	No	-	Michigan Lighting	24-Aug-15
Kentucky	No	Yes	-	Kentucky Wired	3-Sep-15

Source (Bowlus et al., 2016)

1.2.3 *Type of Government and its Ramification on Implementing P3s*

Unlike many other countries the United States has a federal government system, in which state governments have significant authority and spending power. While the federal government provides supporting concessional financing and credit support, the state and local governments are usually responsible for the execution of P3s in their areas. The federal government rarely executes P3s itself (Werneck & Saadi, 2015). Over the past 30 years, many states and local governments have used P3s in a wide range of sectors. The use of P3s continues to become more common than before due to the rising pressure of cuts in public budgets (Werneck & Saadi, 2015).

In the grand scheme of government spending and funding, P3s only account for a fraction of the total spending on infrastructure. To be more precise, from 2007 to 2013 the total P3 investment reached $22.7 billion but only accounted for 2 percent of the total capital investment in the nation's transportation system (Werneck & Saadi, 2015). Therefore, diverting government agencies to adopt other ways to support and finance the nation's needs in expanding and maintaining its deteriorating infrastructure seems to be insufficient and more P3 investment may alleviate some of that burden.

However, despite the immense potential of P3s, currently there is a lack of understanding and pushback from some states to adopt these new procurement methods; indeed, in some instances, there is severe lack of awareness regarding P3s. As an illustration, in a survey conducted by the National Cooperative Highway Research Program (NCHRP) (2017) on the issues integral to the state Departments of Transportation (DOTs) and transportation professionals across all levels of government and the private sector, it was evident that out of the 41 respondent states which have responded to their survey, 26 states already had P3 enabling laws and legislation;

however, in response to a question about whether P3s are allowed in their state or not, only 19 states responded that P3s are allowed in their state. All of the interviews were conducted with high-level management at the DOT, and despite the limitations of the data, there is a high likelihood that the contacted authorities had experience in the main delivery methods conducted by their departments. However, seven states were unaware of the availability of P3s in their state and responded negatively to the survey. This survey shows the grave nature of the situation. It illustrates that the first part of any future successful P3 should involve further education and information regarding its implementation to DOTs' management.

1.2.4 *The Current Federal Efforts to Incorporate P3s*

There has been some progress in P3 implementation and P3 incorporation on the federal governmental level. Overall, the incorporation of P3 models at the federal level, especially after the financial recession of 2008, has increased (Werneck & Saadi, 2015). In 2009, the federal government enacted the American Recovery and Reinvestment Act (ARRA), allocating about $46 billion for reinvestment in the national infrastructure, such as bridges and highways *American Recovery and Reinvestment Act 2009* (D.C.) 111-5 (U.S.). Furthermore, in 2014 former President Obama launched the Build America Investment Initiative, which was intended to increase collaboration between the public and the private sector to expand the P3 market.

The Build America Investment Initiative was established in light of the Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94, 2015). The act was enacted into law on December 4, 2015, and became the first federal law in a decade to provide long-term funding for surface transportation infrastructure predevelopment and investment. The FAST Act provides funding of $305 billion for long-term projects through the years 2016-2020 for transport programs across the US (USDOT, 2014). The initiative is considered one of the main drivers of

the promotion of P3s. The initiative is a nationwide effort encouraging public agencies to collaborate with the private sector and promote the use of the P3s in procuring future projects.

1.3 SCOPE

While the federal government has shown considerable efforts to implement P3s, adaptation and implementation at the state and local level has been going at rather a slow pace. There are 33 states that have P3-enabling laws. However, the amount of capital investment in P3 projects of the total budget and the number of projects is still small. Furthermore, while the DOTs are the main public entities to use the P3 enabling laws, they seem to stick to the conventional procuring methods and sway from implementing P3s in new projects. In fact, some states have let their P3 laws expire without renewals, and other states have no guidelines regarding P3 implementation.

However, with the most recent economic downturn in 2008, there is an increasing taxpayer and political resistance towards implementing large-scale federal projects. This resistance has forced the states to often turn to P3s for infrastructure development (Marino, 2013). However, despite the increased urgency of P3 implementation projects, their implementation is still very slow.

It is at this domain of P3 implementation that the research aims to contribute, in an attempt to develop a framework that could expedite the P3 implementation process in the US. The objective of this research is to address the implementation problems of P3s and introduce a framework that can provide guidelines to the states at the program level on how to implement P3s, the trouble areas/impediments, the steps involved, the laws, project initiation and reviews, localized and distributed P3 units, decision levels, and possible solutions to the main trouble areas at the program and project levels.

To answer these questions, this dissertation looks at P3 implementation frameworks in the 5 most successful P3 states in the US (Colorado, Florida, California, Texas, and Virginia), complemented by surveys from P3 experts across the private, public and academic sectors. It is in this regard that the scope of the research entails reviewing the DOT framework focused on transportation projects and focus on the implementation process from identification to the financial close of the P3 project.

1.4 CONTRIBUTION

This dissertation aims to enrich the body of knowledge in the P3 framework process by comparing and evaluating the effectiveness of P3 frameworks in the five most successful P3 implementation states in the US. These conclusions may not only help these states to improve their P3 systems, but can also serve as a framework for other states across the US that are kick-starting the P3 process and want to learn the best practices of experienced P3 states.

In short, the outcome of this study will enable state departments of transportation, transportation planners, contractors, and financial institutions to make more data-informed decisions about P3 allocations which will economize on the resources, finances, and duration of P3 projects as well as allow for better post-project evaluations regarding P3 effectiveness.

In the end, while the study is focused on the US, the learning outcomes can be applied across the world in countries with both extensive P3 experience like Canada and the UK as well as countries with limited P3 experience like the Kingdom of Saudi Arabia and other developing countries across the globe.

Chapter 2. PROBLEM STATEMENT, OBJECTIVE, AND METHODOLOGY

2.1 PROBLEM STATEMENT

While it has been endorsed in several states, P3s have not been used extensively for Highway development. Despite the identification of several impediments, a successful comprehensive P3 implementation process does not exist. This leads to inefficiency in P3 implementation, meaning that its intended efficiency targets are not often achieved. Some of these inefficiencies also lead to the unsuccessful implementation of P3 projects.

While efforts are being made at both the public and private level to adopt P3 structures in the United States, these efforts have fallen shy of reaching the desired investment to support the United States infrastructure needs (PwC, 2016). There are some obstacles and impediments facing the P3 market in the United States that are crippling the ability to implement P3 projects. According to Kangas and Aziz (2007), these issues include a lack of clarity of the federal and state tax laws that are being imposed on P3 projects, lack of knowledge among public stakeholders on the use of alternative delivery systems, the selection of particular procurement methods under P3s, and inefficient selection processes driving P3 projects' entry into market and contributing to inadequate compensation to private company bidders.

To address these perceived impediments, more efforts are needed to enact and articulate P3 laws, develop guidelines, introduce strategies to address and educate public stakeholders, and optimize the timeliness of the selection process (Kangas & Abdel Aziz, 2007). The attempts by the government to promote the P3 model around the country are limited, and the federal governance model of the US exacerbates the impediments of implementing P3 since each state has its own P3 legislation and framework. It is in this regard that there is a need for a

comprehensive framework that can be applied across the US and be adapted to the local circumstances of each state (Werneck & Saadi, 2015).

2.2 RESEARCH OBJECTIVE

This research proposes a national P3 implementation framework that dissects the managerial deficiencies, legal impediments, and proper P3 implementation practices. Developing a robust system/framework will help aid public agencies to implement P3s in an efficient and sufficient manner, which would promote greater participation in P3s from the private sector and thus increase investment in the P3 market. The following are some questions and problems that the framework development will address:

- What are the current issues in P3 frameworks based on a literature review?
- What are the best P3 practices from the states with the most P3 experience?
- What is the best structure, decisions workflow, or framework for a public agency to implement and follow in order to successfully implement P3s?
- What forms of P3 governance structures can positively impact the implementation of P3 projects in the US?
- What are the deficiencies and impediments in the implementation of the current state of P3s?
- How can agencies become better prepared to realize the benefits of infrastructure projects delivered by P3 methods?
- What are the political factors that affect P3 projects?

2.3 RESEARCH OUTLINE

This section details the research process that the researcher undertook to understand these

issues. The research outline covers the process of the research and illustrates the steps to achieve the research goals and objectives. Figure 2 shows the research outline, which is divided into four tasks that will be further explained in the tasks section (3.4.1).

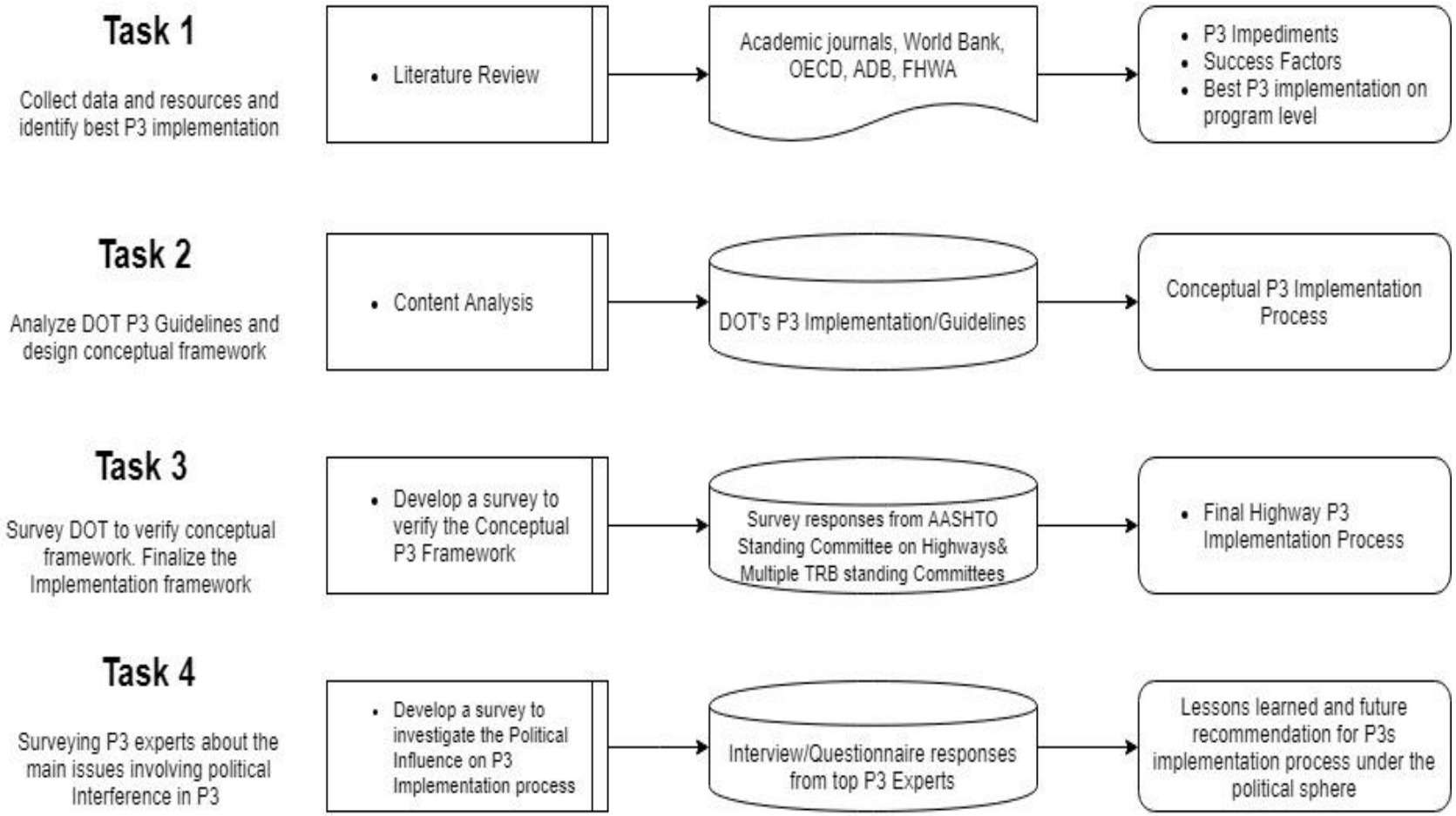

Figure 2 Research outline

2.4 METHODOLOGY

The P3 implementation process is complicated and rigorous. Thus, the approach to developing a framework needs the adaptation of a mixed-method strategy. The concept of mixed-method strategy is less recognized than the qualitative or quantitative strategies. The mixed-methods leverage both quantitative and qualitative approaches and merge both of the databases to reinforce each other. The sequential mixed method was utilized in this research as it is used to elaborate on the findings of one method with another method (John W. Creswell, 2009).

The researcher started with the qualitative method and investigated all the P3 successful practices through a holistic and comprehensive literature review (Task 1). The researcher also conducted content analysis (Task 2) of P3 implementation guidelines (this task is further explained in the Tasks section). This qualitative analysis was supplemented by a quantitative survey to assess if policymakers agreed with the researchers' findings. They were then combined with the content analysis to come up with a P3 framework.

2.4.1 *Task Description*

Task 1: Literature Review

The researcher conducted a comprehensive literature review on P3 implementation. The aim of the review was to understand how literature has discussed P3s. To investigate the success and failure factors of P3 infrastructure projects in developed countries, the researcher reviewed papers published in major construction journals, such as the International Journal of Project Management (IJPM), the Journal of Construction Engineering and Management (JCEM), Construction Management and Economics (CME), and Engineering Construction and Architectural

Management (ECAM). Doing a systematic review of these journals helped establish an initial review of the best P3 practices.

After the comprehensive literature review, the project aimed to develop a comprehensive implementation process guideline by incorporating these recommendations into a more generalizable framework that could be applied across the United States, with the addition of local and state-level variations.

After conducting the initial literature review, the researcher conducted a preliminary analysis of the best practices of P3 infrastructure projects in governmental agencies and institutions such as the United States Department of Transportation (USDOT), United Kingdom Treasury (UKT), and Infrastructure UK.

The purpose of going through these documents was to shed light on the status of the P3 implementation process in the international community and in some of the leading P3-enabling states as well as exploring the major P3 implementation programs/guidelines, DOTs P3s state guidelines, and the USDOT guideline to understand the development of current practice.

Based on this review, an initial list of best practices was developed, which was refined in the next steps of the research. In the next step, the researcher conducted a systematic qualitative analysis of P3 guidelines for the top 5 P3 implementing states.

Task 2: Content Analysis of Existing P3 Frameworks to Develop a Robust Implementation Process

Content analysis is defined as "the systematic, objective, quantitative analysis of message characteristics"(Neuendorf, 2017, p. 1). During this task, the researcher analyzed the variation of P3 frameworks across the US by carrying out a detailed analysis of the content available of P3 implementation frameworks issued by the DOTs of the states with extensive P3 experience. The researcher then compared the differences and similarities found between the states with regards

to P3 implementation. This comparison enabled the researcher to prepare recommendations to form a set of general guidelines for the implementation of P3 projects in the US.

For this process, DOT frameworks were used from states with the most extensive experience in P3 implementation in the US (discussed in more detail in section 4.2). The P3 state guidelines issued by each state are similar in some respects, yet they vary in the implementation details. However, overall they follow the same general process.

The first stage is the project identification process. Most P3 frameworks first must recognize a need for a P3 project to fulfill a public need. The government must also decide whether the need for public financing requires a case-by-case P3 allocation, or if there is a need to have a separate P3 allocation framework that covers all P3-related projects.

The second major component is project selection. In this step, when a P3 approach is found to be the most feasible method of conducting a project, the relevant P3 implementation body solicits interest from private parties on the project and then selects the best implementation partner in terms of costs, expertise and other relevant factors.

The third factor is project approval and implementation, wherein the government decides the most suitable candidate to execute the project and signs a contract with them. After this, the project enters into the Procurement phase. In this stage, the actual project is executed.

For the purpose of this research, all three aspects were focused on. To analyze these processes, the researcher leveraged the analytical framework proposed by Zhang (2004) and Aziz (2007) who recommend that the P3 program follows a nine-area program level to ensure a more comprehensive P3 implementation (discussed in more detail in 4.3).

A systematic qualitative research was carried out in order to completely understand the P3 framework in the chosen states' guidelines. This systematic qualitative research included:

- Analyzing the major P3 implementation programs/Guidelines, state DOTs' P3 guidelines, and the USDOT guideline.
- Investigating the status of the P3 implementation framework in these states and exploring the business structure of the units tasked with the management of P3 projects.
- Finding the commonalities and differences between the P3 implementation frameworks among the states and then tabulating them.

This research analyzed the nature and extent of the impact of different factors that lead to the success of P3 projects, in order to determine whether a particular factor would have a positive influence or a negative impact on the probability of the P3 project being successful. Based on these findings, the researcher developed a set of recommendations which were then sent out as a survey to get feedback from the public, private and academic sectors (discussed in the next section).

Task 3: (A) Review and Verify the P3 Implementation Framework with State DOT Experts

The proposed framework was then reviewed and adjusted by state DOTs' P3 experts using the survey method for primary data collection. The survey method was implemented in this section to gather information on the "what should/what could" from state DOTs from all 50 states that have the most experience in dealing with P3 projects.

The survey consisted of 16 large questions with 26 subsections. Overall, 58 respondents responded to the survey from the academic, private, and public sector (details discussed in Chapter 6).

The aim of the survey was to harness the perspective and knowledge of the public sector to verify and review the robust P3 framework developed in Task 2. Previous research has

demonstrated that to implement P3s in different regions of the world successfully, it is necessary to understand them in the local context and understand how local factors can influence their successful implementation. The survey results allowed us to develop an understanding of the transport sector in the specific context of the United States and allowed us to identify the major risks in P3 transportation projects.

The survey results, once collected and organized, were subjected to multiple statistical analyses. A descriptive analysis that shows the mean, mode, median, and the standard deviation for each of the survey questions was conducted to assist the researcher in evaluating the responses in a more general fashion and describing the details. The descriptive analysis, however, was insufficient to explain the differences between the opinions of different sectors such as public and private. Thus, the results of this survey were also subjected to the Mann-Whitney U test. This test helps the researcher identify and compare the differences between the responses presented by different sectors. Through this test, the researcher was able to compare the difference of opinion between the public sector and the private sector as well as the public sector and the academia.

Task 3: (B) P3 Framework

After analyzing the literature review, content analysis, and the state DOTs survey, the sequential research method designed a comprehensive and robust framework for the successful implementation of P3s in the United States transport sector and more specifically for highway P3 projects.

The robust P3 implementation framework addresses and clarifies the fundamental characteristics and areas to implement P3s successfully. The framework explains and clarifies when the use of P3 units/offices are deemed necessary for the success of implementing P3 projects on the

level of the project. Furthermore, the framework provides a work flowchart for decision making to neutralize the effects of common impediments in P3 implementations. The framework is inclusive of all the findings in the various different research methods conducted. The significant success factors and the parameters for successful practice are used to evaluate the current P3 guidelines and state P3 laws.

Task 4: Investigate the political Influence on P3 Projects by interviewing P3 experts

In this section, the researcher developed a survey to solicit P3 policymakers' opinions about the politicization of the P3 process. The researcher contemplated different opinions on the involvement of politics within the P3 implementation sphere. Public opinions on P3 and the lack of coherent policy regarding the P3 projects due to political differences were also considered.

This task was a culmination of the literature review on the P3 implementation process and the responses from the Framework for the Implementation Process of Public-Private Partnerships in Highway Projects survey. The respondents in this survey were in agreement that P3 was politicized so this research developed a survey that investigates some of the most pressing questions about political interference in the P3 implementation process. The question was open-ended and sought to understand where experts in P3 implementation stand on the issue of political interference and whether they have any recommendation as to how to make the process smooth and seamless, as is the case with many of the traditional delivery methods.

The researcher conducted an open-ended survey with 19 top P3 officials across the US from 19 different states from the public and the private sector. The open-ended survey consisted of 9 questions. The results of the survey were analyzed through qualitative analysis by assessing the differences and similarities between the respondents' views to come up with an overall understanding of how P3 experts view political influence in P3s.

Chapter 3. RESEARCH BACKGROUND ON P3S

3.1 PUBLIC-PRIVATE PARTNERSHIPS DEFINITIONS AND BACKGROUND

3.1.1 *P3 Definition*

There is no universal definition for P3s, but most P3s share the same general characteristics (Chen, 2013). Different parties in different countries are compelled to follow the prevailing legislation system in that country or region to tailor the definition of P3s. This section will investigate some of the different P3 definitions and note the differences and similarities between them.

P3s are alternative project delivery systems that could be used by governments to shift the burden of financing to the private sector to deliver infrastructure facilities or services for the benefit of the public use (Papajohn, Cui, & Bayraktar, 2011). They have also been advocated as a means to optimize the time and cost efficiencies in service delivery regardless of whether private finance is needed or not (Abdel Aziz, 2007).

Definitions of P3s have some common points. The first, even though it is not clearly mentioned in all the definitions, is that most P3s are long-term agreements. The definitions clearly state that the agreements are exclusively between the public agency and the private sector, aiming to improve governmental service delivery by delegating development, management, financing, operations and maintenance to the private party. In this scenario, the private party assumes more risk than traditional procurement methods. The main emphasis of P3s is that they are more cost-efficient than traditional delivery methods.

Secondly, P3s are defined as the mid-ground between traditional procurement and complete privatization. Thus, it is necessary to distinguish the differences between them. In order to understand P3, it is essential to understand that P3 is not privatization of public assets or public projects. Public-Private Partnership is unlike traditional procurement delivery methods where the

public sector primarily owns, finances, arranges and operates the desired facility and only hires the private sector (contractor) to build the facility (Levy, 2011). Public-Private Partnership, overall, is a contract between the public entity and a private party with a concession period, during which the private party, depending on the type and scope of the project, will design, build, operate, and maintain the desired facility, while the public party retains full ownership of the asset and has full oversight of the revenues collected by the private party as agreed in the contract. The private party will raise the revenue for the concession period, maintain the project to the end of the concession period, and then transfer the project back to the public entity (Loxley, 2013).

> P3s encompass extended levels of interaction between public and private sector organizations in which the public sector is required to act as a partner and share equal risks and responsibilities rather than being the mere client as in conventional procurement systems. Similarly, in P3s, the private sector not only enjoys higher freedom and authority to bring innovation and efficiency to the project operations but also retains higher risks than usual and the responsibility of heavy upfront capital investments. Such design and operational freedom and sustained profitable business opportunities with relatively high levels of risks and investments have made the P3 business a difficult endeavor for private sector companies. (Zhang & Ali Soomro, 2016, p. 1)

For the aforementioned reasons, and after investigating many references for P3 definitions (see Table 5), the researcher will be using the following definition for P3s: A Public-Private Partnership is described as a co-operation between the public (state, region, local government) and the private (institution or individual) sector, in which the government and the private sector carry out a project together by an agreed division of tasks and risks, with each party retaining its identity and responsibilities. Using the term project here is to clarify that any project could be

procured in the P3 fashion and thus is not limited to the transportation sector. Rather it covers all infrastructure projects. Economic infrastructure and social infrastructure are the two main infrastructure categories covered in P3s. Economic infrastructure is any structure that typically generates revenues where the service is measured and the ultimate user is charged, such as highways, roads, bridges, wastewater treatment plants, etc. Social infrastructure comprises of facilities (mostly buildings) that provide social services, such as hospitals, schools and universities, social housing, law courts, etc. (ADB et al., 2016).

Therefore, to summarize, P3s can take many forms between two extremes - simple commercialization and full privatization - but in general, P3s can be considered as long-term agreements between the public and the private sector to provide and operate transport infrastructure, services, or both.

Table 5 Definitions developed by different institutions and agencies

Reference	Definition
Public-Private Partnerships Reference Guide, V 2.0 (WB et al, 2014)	A long-term contract between a public party and a private party, for the development and/or management of a public asset or service, in which the private agent bears significant risk and management responsibility through the life of the contract, and remuneration is significantly linked to performance, and/or the demand or use of the asset or service.
United States Department of Transportation in the Conditions & Performance Report (USDOT, 2013)	Public-Private Partnerships (P3s) are contractual agreements formed between a public agency and a private entity that allow for greater private sector participation in the delivery and financing of transportation projects. Typically, this participation involves the private sector taking on additional project risks, such as design, finance, long-term operation, maintenance, or traffic revenue. P3s are undertaken for a variety of purposes, including monetizing the value of existing assets, developing new transportation facilities, or rehabilitating or expanding existing facilities.
OECD in the P3 in Pursuit of Risk Sharing and Value for Money (OECD, 2008)	An agreement between government and one or more private sector partners (which may include the operators and the financiers) according to which the private partners deliver the service in such a manner that the service delivery objectives of the government are aligned with the profit objectives of the private partners and where the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners
HM Treasury (1998)	An arrangement between two or more entities that enables them to work cooperatively towards shared or compatible objectives and in which there is some degree of shared authority and responsibility, a joint investment of resources, shared risk taking, and mutual benefit.
The World Bank (2003)	The term "public-private partnerships" has taken on a very broad meaning. The key elements, however, are the existence of a "partnership" style approach to the provision of infrastructure as opposed to an arms-length "supplier" relationship...Either each party takes responsibilities for an element of the total enterprise, and they work together, or both parties take joint responsibility for each element. A P3 involves a sharing of risk, responsibility, and reward, and it is undertaken in those circumstances when there is a value-for-money (VfM) benefit to the taxpayers.
European Commission (2003)	A partnership is an arrangement between two or more parties who have agreed to work cooperatively toward shared and/or compatible objectives and in which there is shared authority and responsibility; joint investment of resources; shared liability or risk-taking; and ideally mutual benefits.
Canadian Council for Public-Private Partnerships(2016)	P3 is a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks, and rewards.

3.1.2 *P3s and Privatization*

Public-Private Partnerships offer innovative solutions to public sector problems. However, they have been misperceived by many as privatization. Privatization has been defined in many ways, some of which are influenced by the historical context. For instance, in the case of Eastern Europe and many other countries, privatization is the complete transfer of ownership

from the state to private actors. While most people agree that the sale of government industries constitutes privatization, there is less consensus on whether the same applies to other sales of government assets, such as land. In the United States, which has few government-owned enterprises, privatization normally means tendering public services contracts to private businesses. Some, however, refuse to call it privatization and instead call it outsourcing, which normally involves one company contracting another company for its services.

Public-Private Partnership, on the other hand, has been defined by Savas (2006), as an agreement between the government and private actors to provide a public service. In the case of infrastructure, P3s normally stand for the building of capital-intensive and long-term infrastructure through partnerships between the public and the private sectors where the payment for the infrastructure normally spans a long-term (99 years or more in some cases). Some examples include roads, airports, and bridges.

From the aforementioned definitions, we could conclude that what separates P3s from privatization can be summed up in the following points. In the P3 model, the ownership of the land or facility is always in the public sector, whereas the private sector is only either leasing or providing services during the concession period where thereafter the facility or property would be handed back to the public entity or the concession period could be extended (Barutha, 2016). While the private sector is providing service and maintenance to the facility during the concession period, the public sector remains accountable for the success of the project and acts as the project's owner in the best interest of the public.

In this research, we consider that P3s are neither privatization nor a traditional procurement method. Therefore, we can conclude that in the case of P3s, the ultimate ownership of the enterprise stays with the government. Similarly, in the long run, the government still remains re-

sponsible for the success of the project even though it is being maintained by the private sector in the short-term.

Table 6 shows the differences between the two methods. P3 here is considered a means of procurement that leverages the wealth and resources of the private sector to deliver public services while pertaining to the interest of the public. Thus, the facility or service provided by the private partner will undoubtedly be bestowed in the public ownership at the end of the concession or agreement.

Table 6 Privatization versus P3s

Privatization	P3s
The private sector owns the full property of the asset.	Normally the legal owner of the asset is the government, and the asset has to be handed back when the contract expires.
There is no contract in strict terms, but authorizations and conditions are set in regulation of the respective market sector.	There is a detailed contract specifically ruling the rights and obligations of each party.
Time to operate the asset is unlimited.	Time is limited by contract.
Privatization involves no strict alignment of objectives since it usually means that the government is not involved in the output specification of the privatized entity. It is, of course, the private providers that set the quality and quantity of the goods delivered, while they also specify the design and set the price (possibly after negotiating with their clients). (OECD, 2008).	The government specifies in detail both the quantity and quality of the service that it requires.
The privatized entity will have much more liberty to set the price to be charged to users.	The company will receive the agreed price for the service (government-pays) or user charges (in user-pays P3s) which will be defined by government or agreed by the contract with no or very limited flexibility.

Source (ADB et al., 2016b)

3.1.3 *P3 Types and Applications*

P3s take many forms and variations. This section discusses the main considerations and factors involved in classifying P3 types and provides different classifications based on different perspectives. Some classifications take into consideration the source of revenue, ownership, and financing compositions. The APMG Public-Private Partnership Certification Guide (2016) lists the different classifications as follows:

- Source of funds for the private partner´s revenues: user-pays P3s (mainly based on charges to users) versus government-pays P3s (mainly based on government payments for the service);
- Ownership of the P3 company or Special Purpose Vehicle (SPV): There are conventional P3s (100 percent private ownership), institutional P3s (publicly owned with 100 percent public ownership or under a JV or *empresas mixtas* scheme with the public party controlling the P3 company), and other JVs or empresas mixtas;
- Scope of the contract and/or object of the contract: Infrastructure P3s or P3s that include significant capital investment, where the main objective is developing and managing infrastructure over the long term; integrated P3s when, in addition to the infrastructure, the private party is granted the right and obligation to operate a service; and O&M P3s or service P3s when there is neither capital investment nor development of new infrastructure by the private partner; and
- The relevance of private sector financing: Co-financed P3s (P3 schemes where there is a material portion of public finance, usually in the form of grants), versus conventional P3s. (ADB et al., 2016, p. 49)

P3 projects also are defined based on the past status of the land or the project. The aforementioned guide (ADB et al., 2016) notes that the investor's industry tends to use the following classification:

- Green Projects: these reflect bottom-up projects that are entirely new, contracts such as DBFOM that are recently awarded or in construction.

- Brownfield Projects: these represent investments in existing infrastructure projects during the period of procuring the P3 project. It also could be an investment in a completed Greenfield project during the time of operation.
- Yellow fields or secondary stage: P3s where the investment is related to significant renewals, refurbishment, or substantial expansion of the existing infrastructure.

Therefore, P3 covers a broad spectrum of contractual systems such as Design-Build-Operate-Maintain (DBOM), Design-Build-Finance-Operate-Maintain (DBFOM), long-term leases, and several other systems. Figure 3 illustrates the spectrum of responsibility shared by each entity for the different P3 procurement options (The Canadian Council for Public-Private Partnerships, 2016). Across the globe and in the United States, the number of P3 projects has been increasing. P3 takes many forms to serve the needs of a particular project; however, all P3s share certain characteristics. Following are the various P3 models (Levy, 2011):

- Build–Operate–Transfer (BOT): In this form, the private party is liable to follow the public entity's requirements and manage the design, construction, finance, operation and maintenance of the public facility during the concession period. During the concession period, the BOT entity will collect the revenue from the project and eventually return the project to the public entity at the end of the concession period.
- Build–Own–Operate (BOO): BOO is the same as BOT other than the fact that instead of transferring the project to the public sector, the BOO ends up owning the facility.
- Design-Build–Operate–Maintain (DBOM): DBOM is the process of a private party offering its design-build services to build a publicly owned facility and then performing the operations and maintenance of that facility during the concession period.

- Lease–Develop–Operate (LDO): LDO is best defined as a lease based agreement. In this type, the private party leases a facility from a public agency to renovate and expand under the condition to operate and profit from the facility for a specific number of years. This method provides better services and increases the quality of public facilities.
- Buy–Build–Operate (BBO): The BBO encompasses the process of the public entity selling an asset to the private party that would improve, build, and operate the facility to generate profit.
- Availability Payment Process: In this payment mechanism, the private party is paid only when the service meets the quality milestones of the agreement with the public agency.
- Shadow Tolling: Instead of the private entity collecting a direct toll as a mainstream of revenue, the revenue is calculated based on a formula.

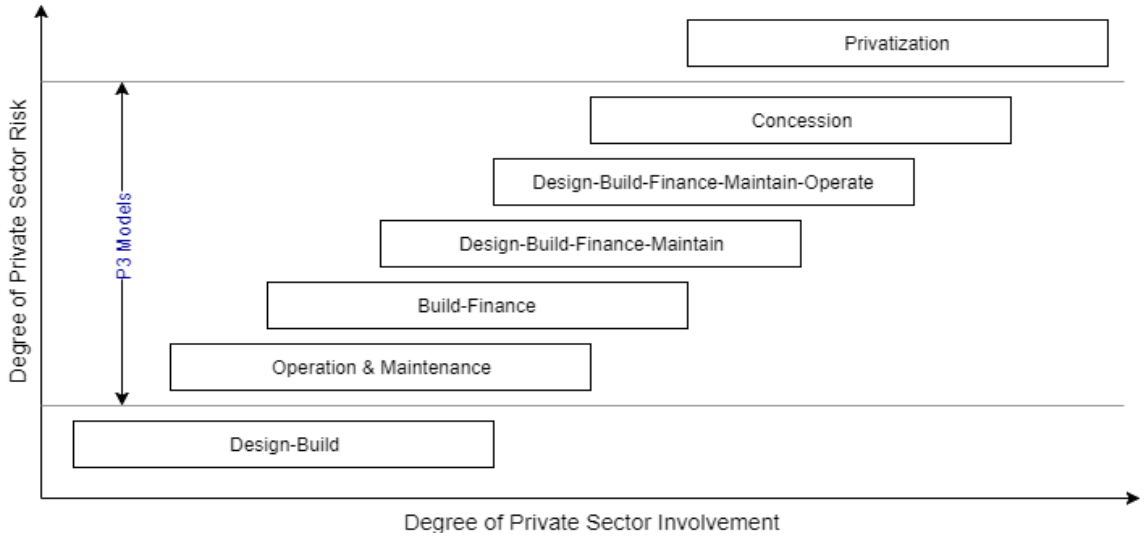

Figure 3 The spectrum of responsibility for P3 agreement options (Levy, 2011)

3.1.4 *P3s' Critical Success Factors*

Numerous studies about the success factors and best practices regarding P3s have been conducted. The apparent success in the P3 sector has made researchers interested in identifying

the best P3 implementation practices in the sector. The proven success of P3s in the last three decades has attracted many researchers to work out a code of conduct for private business in public infrastructure.

For instance, Tiong (1990), focuses on the management aspects of P3 and argues that strong management and financial efficacy are necessary for the projects. In sum, they identified six factors which include: (1) entrepreneurship and leadership, (2) right project identification, (3) strength of the consortium, (4) technical solution advantage, (5) financial package differentiation, and (6) differentiation in guarantees (Soomro & Zhang, 2013). Similarly, Zhang identified 5 critical points which include "(1) favorable investment environment, (2) economic viability (3) reliable concessionaire with strong technical strength (4) sound financial package and (5) appropriate risk allocation via reliable contractual arrangements." Furthermore, in a journal about CSF for P3/PFI projects, the journal notes that the most important critical success factors according to their respondents were a "strong private consortium, appropriate risk allocation and available financial market" (Bing Li et al, 2005).

Furthermore, the detailed analysis made by Aziz (2007) about P3s in the United Kingdom and British Colombia, Canada has provided certain principles for the proper implementation of P3s at the program level. These principles include the availability of a P3 legal framework, creation of P3 implementation units and a good perception for the financial objectives for P3s, their risk-allocation, value-for-money, P3 allocation process transparency and standardization of P3 contracts and procedures. In summary, they seek a more institutionalized regulatory framework for P3s that will allow more standardization and transparency in the P3 allocation and implementation process.

In the case of the United States, Kangas and Aziz (2007) suggest that there needs to be legislation of P3 processes at all levels of government that takes the public interest as its most important consideration. In this regard, it would attempt to allow determination of delivery method (whether P3 or private) that takes into consideration how it would be most beneficial for the public, allows maximum efficient use and provides maximum benefit to the public, as well as having the mechanisms that will protect the interests of the employees that would be affected by P3s. In summary, they seek a mechanism that takes public interest as its prime consideration, while also ensuring fair treatment of employees that may be affected by the P3s.

Overall, different assessments focus on creating frameworks that allow for more efficiency and financial transparency of P3 projects while taking public interest into consideration during the allocation of P3 projects. In essence, the comprehensive framework needs to create a legal framework that focuses on increasing financial efficiency of the programs as well as improving managerial performance, while at the same time making sure that its essence is the public interest. In this regard, the framework needs to maximize the efficiency of the program but not at the cost of public interest. Therefore, the aforementioned criteria for a successful implementation of P3s will be used in this research to develop the framework and evaluate the areas that need to be improved.

3.1.5 *P3s Impediments and Obstacles*

In order to develop a comprehensive P3 framework, it is essential to identify the impediments and challenges of P3s. Numerous reports have examined the main impediments to successful P3 implementation. The following are some of the major reports and research efforts to identify and explain the impediments of P3s in the United States and the international markets from different perspectives.

As identified by Kangas and Aziz (2007), the main impediments to successful P3 implementation based on a survey addressing the private sector's perception are:

1. Public Stakeholders/Community Perception: Overall, the public does not support privately owned infrastructure and demands that the government should be involved in infrastructure development rather than giving it to the private sector.
2. Insurance: Respondents also believed that getting insurance for P3 projects was difficult. However, many companies that had received P3 projects disagreed and said that it was not difficult to get insurance.
3. Taxes: Participants believed that the federal and state taxations for P3s are not clear, and the public sector needs to clarify the tax structure.
4. Unsolicited Proposals: Participants reported that states with adequate P3 legislation accept unsolicited proposals. However, two distinct groups – companies with international P3 experience and companies with internal development branches – find that the inadequate framework to evaluate those proposals is an impediment to submitting unsolicited proposals.
5. Government Time Delay: The time the government takes to short-list, select, and award a contract was mentioned as one of the top ten issues.
6. Desirability of P3 Projects: Most companies are willing to use P3 projects with different types of contracts, especially as the market for other types of the project gets more saturated. This demonstrates how P3s are going to become an increasingly lucrative proposition for the private sector.
7. Financing P3 Projects: A major advantage of the P3 process is that the government is initially financed by the private sector. However, most of the respondents felt that the gov-

ernment still favors public financing as opposed to P3 financing if public money is available.

8. Contractual Issues: Respondents felt that there are still a number of contractual issues regarding which they need more clarity from the public sector.

A journal by Mostaan and Ashuri (2017) about the challenges for the private sector in P3s of highway projects corroborates some of the main impediments suggested in the Aziz and Kangas study. Those primary deterrents to P3 implementation are identified as:

1. Legislative: legislative uncertainty and the lack of the seclusion of the private party's involvement in the predevelopment process of transportation projects.
2. Standardization: lack of a standardized and programmatic process for the P3s project development in the public sector.
3. Financial: extra financial burdens on private financing for P3 projects.
4. Education/Experience: slowness to accept the P3 as a new procuring method and divert from the comfort of the usual and conventional way of delivering public projects.

Table 7 illustrates the primary and secondary challenges of P3s in the transportation sector, internationally and in the United States (Mostaan & Ashuri, 2017). In this context, the major impediments seem to be lack of public acceptance of P3 projects as well as current bureaucratic lack of knowledge and red tape that slows down the progress of P3 implementation. Similarly, the private sector still feels that its role in P3 projects remains underspecified. Ideally, it would prefer more involvement in the P3 pre-development phase and more government acceptance and facilitation of P3 projects. In particular, they want a more robust mechanism to address public concerns about P3 projects as the public is taking time to embrace the utility of P3 frameworks, which slows down their implementation of P3 frameworks.

Table 7 Summary of Major Issues and Challenges of P3s

Issue category		Major issues/challenges	Relative importance	Applicability
Project initiation and planning	Legislative issues and challenges	Legislative limitations and statutory interventions in P3s	Primary	Int. and U.S.
		The wide range of variation in states' enabling legislation	Primary	U.S.
		Regulatory uncertainty, division of authority and control over projects	Primary	U.S.
		The inability of the private sector to be involved in predevelopment phases of transportation projects	Secondary	U.S.
		Inefficient legal and planning frameworks for private investment	Secondary	U.S.
	Agency-related issues and challenges	Lack of political stability and turbulent political conditions	Primary	Int. and U.S.
		Lack of a programmatic approach for P3 project development	Primary	U.S.
		Failure of delegating decision-making authority to the responsible parties	Primary	Int. and U.S.
		Conventional transportation planning and programming challenges	Secondary	U.S.
		Lack of consistency in decision making by public agencies	Secondary	Int. and U.S.
		Long lead times in decision-making by state and federal agencies	Secondary	Int. and U.S.
		Administrative inefficiency and team building issues within public agencies	Secondary	Int. and U.S.
		Bureaucratic and inefficient transportation procurement processes	Secondary	U.S.
Project Procurement	Project readiness and project cancellation	Public opposition and tenure of elected officials to proceed with controversial projects	Primary	Int. and U.S.
		Major National Environmental Policy Act (NEPA), right-of-way (ROW), and other critical permitting risks that must be resolved prior to solicit bids	Primary	Int. and U.S.
		Lack of public sector determination to build the project in a specific timetable	Secondary	U.S.
		Arbitrary government interference in the procurement of mega projects	Secondary	U.S.
	Transaction costs recoverability and opportunity for innovation	Significant transaction costs for projects that involve private financing	Primary	Int. and U.S.
		Lower transaction cost recoverability for DBF projects compared to DBFOM projects	Primary	Int. and U.S.
		Limited opportunity for innovation in DBF projects compared to DBFOM projects	Secondary	Int. and U.S.
		Limited opportunity for innovation due to lack of performance-based procurement criteria	Secondary	U.S.
Partnership Management	Balance sheet and surety-contractor issues	Contractor bankruptcy risks and limited capabilities of sureties to support failed projects	Primary	U.S.
		The negative impact of private sector financing on contractors' balance sheet	Primary	Int. and U.S.
	Post-award project administration issues	A slow shift in mindset and required business processes in transitioning from conventional project delivery to P3	Primary	Int. and U.S.
		Difficulty in conducting timely acceptance and testing functions in the context of fast-track project delivery	Primary	U.S.
		Unnecessarily strict design oversight by public agencies in P3 projects	Secondary	U.S.

Source (Mostaan & Ashuri, 2017)

3.2 P3 Implementation Guidelines and Current State of Practice

3.2.1 *P3 Implementation Guideline Overview*

There is already existing literature that highlights how P3s could be successful in various countries. There are a number of already existing guidelines as well as governing laws that determine how P3s could be practiced in the context of the United States. Some of these include:

- Successful Practices for P3s (USDOT, 2016)
- The APMG Public-Private Partnership (P3) Certification Guide (ADB et al., 2016)
- Use of Performance Requirements for Design and Construction in Public-Private Partnership Concessions (Sadasivam et al., 2016)
- World Bank Group Support for Public-Private Partnerships: Lessons from Experience in Client Countries (Alikhani et al., 2015)
- Creating a Framework for Public-Private Partnership (P3) Programs (Delmon, 2015)
- Developing Public-Private Partnerships in Local Infrastructure and Development Projects: A P3 Manual for LGUs (P3C, 2012)
- Contractors' Experiences and Perceived Impediments in Public-Private Partnerships (Kangas & Abdel Aziz, 2007)
- Public-Private Partnerships: An International Performance Review (Hodge & Greve, 2007)

However, the main concern with these documents is that a lot of them are international case-studies and work needs to be done to assess how these practices can be implemented in the context and case of the transportation highway infrastructure in the United States, which has not

only international but also state-level differences that may influence how the implementation process may vary in different parts of the country.

3.2.2 *The United States P3s State of Practice*

There still remain significant challenges with regards to the successful implementation of P3s in the United States. Currently, the United States P3 market lacks a coherent structure because of the decentralized nature of the United States government. There have been some efforts to cohere the federal and state-level policies (Abdel Aziz & Elmahdy, 2015), led by states with extensive P3 experience like Texas, which established regulatory authorities for P3s. However, one problem with these initiatives is that they do not have a separate funding authority to fund P3 ventures, unlike their successful counterparts in Canada. Despite this shortcoming, some states have been proactive in creating an enabling environment for P3s. For instance, Virginia established a Public-Private-Partnership Advisory Committee, which was tasked with the purpose of looking at whether the transport proposals serve a public purpose or not (VAP3, 2014). It also regularly publishes its annual P3 projections, which are rare in the United States. Similarly, Texas has created a Center of Excellence to provide technical input for new P3 projects, but it still suffers from a lack of funding. At the federal level, Build America Transportation Investment Center (BATIC) under the FAST Act (the Fixing America's Surface Transportation Act) is a national level institution which aims to act as a coordinator between different levels of the government. It will provide expertise to various state departments about learning various financial instruments.

There also have been some setbacks along with this progress in P3s. For instance, the Indianapolis City Council voted against the Indianapolis Courthouse availability-payment P3 project (Bowlus et al., 2016). Likewise, Virginia Route 460 demand risk project was also terminat-

ed. However, these setbacks have for the most part been temporary and while such issues may hamper P3 implementation in the short term, in the long-term that may lead to better ideas about best practices needed to make them work.

Similarly, different states' experience with P3s varies as P3s are still considered a new and innovative concept in the transportation industry. A group of different state transportation planning engineers was surveyed to identify the current state of practice of P3 transportation projects. States were categorized into four categories based on their level of experience with P3s. The four categories and the corresponding states are shown in Table 8.

States that do not plan to implement P3s are mainly located in the northern mid-west and mid-east and have relatively low traffic volume. This survey result shows that experience with P3s in transportation varies among different states. The survey also indicates that more than 40 percent of the states are planning to implement P3s in the future. Experienced P3 states have a tendency to enact legislation that is favorable towards P3s, and the majority of experienced P3 states rate the P3 projects they have implemented as successful (Papajohn et al., 2011).

Table 8 State-of-Practice of Transportation P3s in the United States

State-of-practice	**States**	**Percent of responding states**
Experienced	California, Connecticut, Florida, Minnesota, South Carolina, Texas, Virginia	22
Currently practicing	Colorado, Nevada, Washington	9
Plans to implement	Alabama, Arizona, Illinois, Kansas, Kentucky, Louisiana, Michigan, Missouri, Mississippi, North Carolina, New York, Pennsylvania, Tennessee, Vermont, West Virginia	47
Does not plan to implement	Montana, North Dakota, Oregon, South Dakota, Utah, Wisconsin, Wyoming	22
Did not respond	Alabama, Arkansas, Delaware, Georgia, Hawaii, Iowa, Idaho, Indiana, Massachusetts, Maryland, Maine, Nebraska, New Hampshire, New Jersey, New Mexico, Ohio, Oklahoma, Rhode Island	Not applicable

Source (Papajohn et al., 2011)

Likewise, the reasons to implement P3 vary across the states as well. According to a survey of state respondents, the primary reason for most respondents instituting P3s was financing, followed by time and cost-saving and a shortage of workforce (see Figure 4). It is worth noting that no state mentioned risk transfer as the primary reason for the implementation of P3s (Papajohn et al., 2011).

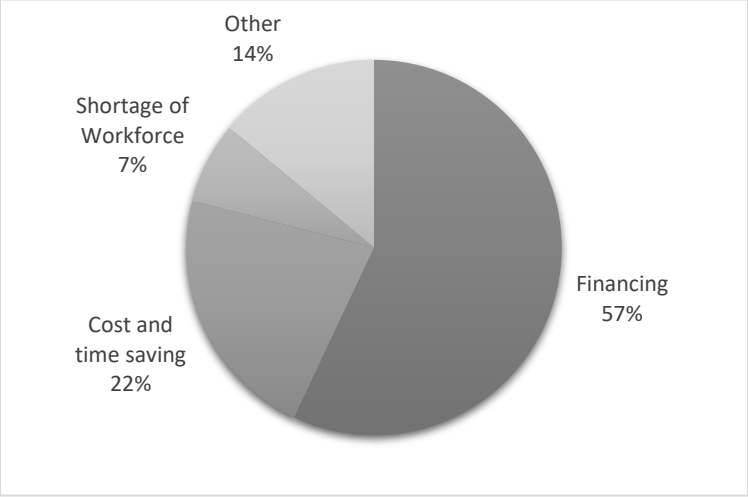

Figure 4 Reasons for adopting P3 projects

Source (Papajohn et al., 2011)

Therefore, there remain a variety of reasons why states are interested in instituting P3s. All of them have separate experiences. These diverse experiences necessitate the development of a comprehensive P3 implementation framework across the states. It is possible to maintain a position of trial-and-error in the case of the transportation sector, but it is too important from both an economic and security perspective to neglect learning best practices from past experiences. Overall, most states that have tried P3s have rated the experience as positive. Most of these states have had a legislative framework in place that is conducive to P3 implementation. Most of them have also created clear communication strategies with the private sector as an intrinsic characteristic of the success of P3s. There are various domains on which P3 literature needs to be extended. One of them is the legal front, as more research needs to be done to assess the type of legisla-

tion that can positively contribute to P3s. Similarly, more research needs to be conducted in the domain of P3 management regarding financing, risk management, value enhancement, project duration, innovation, and transfer of new skills. More work also needs to be conducted into the economics of P3s, including bidding costs, public accountability, and the emergence of private monopolies (among others). At the same time, more work needs to be directed toward public opinion, as the opinion of various stakeholders about P3s also has a major impact on their success or failure.

Chapter 4. REVIEW OF P3 IMPLEMENTATION FRAMEWORKS

4.1 INTRODUCTION

This chapter analyzes the variation of P3 frameworks across the US by conducting a content analysis of P3 implementation frameworks issued by the departments of transportation as well as P3-related legislation passed in five US states (discussed below) with extensive P3 experience. This comparison enables the researcher to develop recommendations regarding P3 framework. These guidelines are particularly salient for states that do not currently have a detailed P3 framework. Experiences from these states can help them learn some best practices that can be implemented in their own states. The DOT frameworks included for this content analysis include the following: California, Colorado, Florida, Texas, and Virginia.

4.2 STATES' SELECTION FOR CONTENT ANALYSIS

The researcher conducted a content analysis of P3 frameworks to assess P3 guidelines for different states. These states include: Texas, Florida, California, Virginia, and Colorado. The researcher chose these states for the following factors:

1- The total number of P3 projects reaching a financial close as illustrated (Figure 6)

2- The total contract value in Billions for the P3 projects (Figure 5)

Figure 5 below shows the US map and illustrates the overall value of P3s per state. It clearly illustrates that the total value of projects in these 5 states is more than that of other states. This graph indicates that these states are highly experienced in conducting P3s, and therefore, it is good to learn from their best practices.

Furthermore, these states vary across geography and are somewhat representative of the geographical region of each state covering the west, mid-west, the south and the eastern states as

illustrated in Figure 5. This diversity enables the researcher to assess how state implementation frameworks vary by geography across the US. Moreover, all the selected states are considered P3 experienced states as illustrated in Table 8.

The content analysis is designed to reveal the main components of a successful P3 implementation framework. Each of the selected states has developed their own P3 guidelines except for Florida where the content analysis was performed based on that state's P3 legislation and a P3 recommendation report for the implementation of P3 for Florida State. Table 9 below summarizes the documents used for the content analysis.

The selected states have passed comprehensive P3 laws for P3 implementation in the transportation sector. These states also have developed a level of experience and have provided some kind of P3 guidelines or frameworks.

Table 9 the documents used for the content analysis for each state

State	P3 Document for the content review analysis	Type	Reference
California	Public-Private Partnerships Program Guide	Guidelines	(Caltrans, 2013)
Colorado	P3 Management Manual	Framework	(RS&H & Clary Consulting, 2016)
Florida	Partnership for Public Facilities and Infrastructure Act Guidelines Task Force Final Report and Recommendations	Report	(Department of Management Service, 2014)
	Approval of contractor-financed projects	Statute	(The Florida Senate, 2018a)
	Public-private transportation facilities	Statute	(The Florida Senate, 2018b)
Texas	Public-Private Partnership (P3) Guidelines	Guidelines	(TxDOT, 2012)
	Texas Facilities Commission Public-Private Partnership Guidelines	Guidelines	(TFC, 2015)
Virginia	PPTA Implementation 2017 Manual and Guidelines	Framework	(VDOT, 2017)

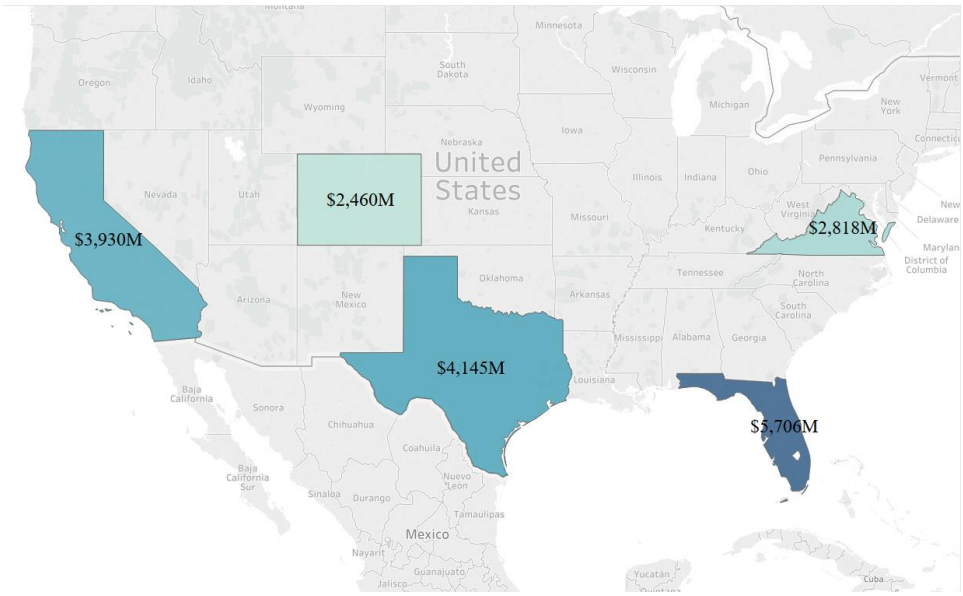

Figure 5 The cost of P3 investments in the selected states in millions of dollars; developed based on Public works financing newsletter's P3 Database (2017)

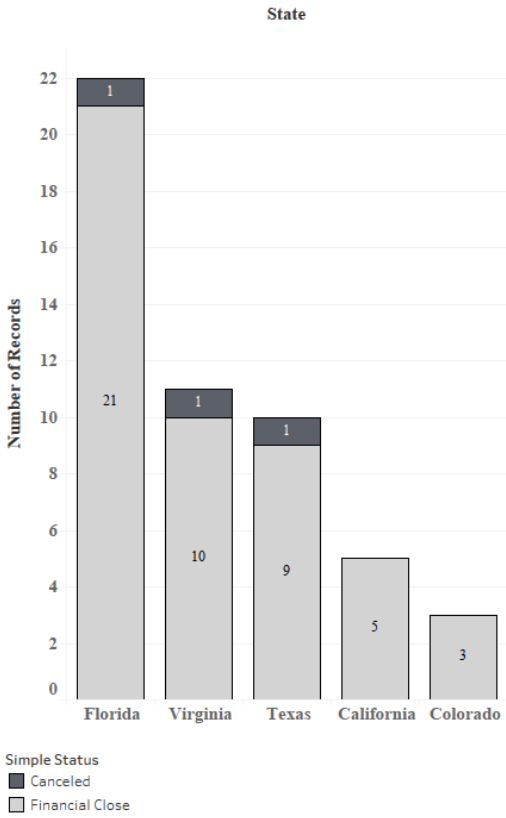

Figure 6 The total number of P3 projects for the selected states; developed based on Public works financing newsletter's P3 Database (2017)

4.3 TRANSPORTATION GUIDELINES FOR P3 IMPLEMENTATION FOCUS AND COMPONENTS

The P3 state guidelines issued by each state are similar in some respects, yet they vary in the implementation details. There are variations in the P3 implementation phase on the program level. Public involvement is higher in some states than the others.

In this regard, the first stage is the project identification process. Most P3 frameworks first need to recognize a need for a P3 project to fulfill a public need. The government also needs to decide whether the need for public financing requires a case-by-case P3 allocation, or if there is a need to have a separate P3 allocation framework that covers all P3-related projects.

The second major component is project selection. In this step, when a P3 approach is found to be the most feasible method of conducting a project, the relevant P3 implementation body solicits interest from private parties on the project and then selects the best implementation partner in terms of costs, expertise and other relevant factors.

The third factor is project approval and implementation, wherein the government decides the most suitable candidate to execute the project and signs a contract with them to execute the project. After this, the project enters into the procurement phase. In this stage, the actual project is executed.

For the purpose of this research, the research primarily focuses on P3 identification and P3 selection. The P3 partner in most P3 projects assumes a large proportion of the risk, and thus the selection of the P3 partner is deemed among the most critical success factors successful implementation of P3 project (Xueqing Zhang, 2005).

As an analytic frame to assess the various P3 frameworks, the researcher uses the nine guidelines used by Zhang and Aziz. Zhang recommends that the P3 program follow a nine-area

practice at the program level to ensure a more robust and leaner implementation of P3. These are:

1. Appropriate roles of government authorities – this entails that each governmental entity pertains to their assigned clear role and develop a lean P3 implementations process.
2. Best value-for-money approach
3. Effective management of advisory services
4. Formulation of appropriate schemes
5. Use of relational contracts
6. Improvement of the procurement framework
7. Payment structure
8. Contract monitoring, termination, and step-in rights
9. Transfer management

Aziz (2007), in a journal article by the title "Successful Delivery of P3s," conducted a detailed analysis of some well-established P3 programs and identified principle characteristics for the implementation of P3 on the program level. The principles are as follows:

1. Availability of PPP institutional/legal framework
2. Availability of PPP policy and implementation units
3. Perception of private finance objectives
4. Perception of risk allocation and contractor's compensation
5. Perception of value-for-money
6. PPP process transparency and disclosure
7. Standardization of PPP procedures and contracts
8. Performance specifications and method specifications. (Abdel Aziz, 2007, p. 920)

The following section highlights the main processes behind selecting the most relevant P3 projects and then selecting the most competent P3 partner. The factors highlighted by Zhang and Aziz are considered, and they are applied in the implementation process content analysis.

4.3.1 *Implementation Process: Decision-Making Process*

Decision making is an essential component of P3 allocation as decision-makers decide whether there is a need for a P3, as well as find the most suitable partner for it. Given below are the details of the main bodies involved in P3 implementation projects as well as the P3 decision-making process in each state.

4.3.1.1 California

4.3.1.1.1 Involved Parties and their Roles

The following main bodies are involved in P3 projects in California: California Department of Transportation (Caltrans), Regional Transportation Agencies (RTA), California Transportation Commission (CTC) and Public Infrastructure Advisory Commission (PIAC). Table 10 shows a summary of the leading roles of each of the parties involved in the decision-making process and at each stage (Caltrans, 2013).

- CTC is the main decision-making body.
- Caltrans/RTA initially screen projects to forward them to CTC.
- PIAC is primarily an advisory body.

California Department of Transportation (Caltrans) and **Regional Transportation Agencies (RTA)** The RTA and the Department or Caltrans roles are interchangeable. They often have the same roles as they represent the same public entity of the local government of the proposed project. The approval process is contingent on the submission of RTA or Caltrans to a Project Pro-

posal Report (PPR). The RTA should show the need for the P3 project through the PPR. It includes the location, description, financial plan of the project, and the tolling plan. The PPR should also include the base of the Department or RTA findings in order to confirm that the project would be in the utmost interest of the public to implement the project through a P3 Agreement.

California Transportation Commission (CTC) is a public authority authorized by the Senate Bill Second Extraordinary Session 4 to conduct public hearings about P3 projects and then select and approve them through a regularly scheduled CTC meeting. The CTC approval includes but is not limited to: project scope, location, financial plan, financial risks, useful life, and value for money.

Public Infrastructure Advisory Commission (PIAC) is a public body designed to provide advice regarding best P3 practices. It primarily has an advisory role and no decision-making power. It is a supplementary component of the Business, Transportation and Housing Agency that helps select appropriate P3 opportunities and provides advice on other P3-related issues.

Table 10 Summary of the main involved parties in the P3 implementation for Caltrans

Party	Project Identification	Project Development	Project Approval	P3 Procurement Process
Caltrans/RTA	X	X		X
CTC	X	X	X	
PIAC	Z	Z		Z

X- Primary role; Z- Advisory role

4.3.1.1.2 The P3 Process

The departments of local district offices conduct the first screening of P3 projects. They forward their recommendations to Caltrans which then is required to justify whether the P3 is the better option in comparison to other traditional delivery methods such as design-build (DB) or design bid build (DBB) and amongst other P3 alternatives. This step is required to identify the

advantages of the selected P3 method and illustrates the cost-saving across the life cycle of the proposed P3 project.

In California, as illustrated in Figure 7, the primary process involves deciding on the P3 projects that need to be implemented. Caltrans/RTA do their research in deciding and adjudicating as well as short-listing the list of P3 projects that may be implemented.

The implementation framework does not talk about the criteria that Caltrans uses to screen projects before forwarding them to CTC. However, it talks extensively about the criteria that CTC employs. CTC treats P3 as a preferable option for delivery if the program cost is higher than $250 million. This condition helps eliminate projects that do not need the attention and capacity that the P3 option provides. However, this does not mean that a $250 million project will automatically be delivered as a P3 delivery method. There are a number of other criteria that the project needs to fulfill to be considered as a P3 project. The CTC tries to assess if the involvement of the private sector adds any additional value to the project when compared to traditional procurement methods. It also assesses whether the implementation organizations are prepared to be able to both financially and technically be able to administer the P3 project. CTC also considers the improvements the project will bring to mobility and transportation in California as well as whether the project will potentially improve the environmental quality in California (Caltrans, 2013).

CTC selects the final projects at a public meeting. In terms of deciding upon the project, CTC also considers the improvements the project will bring to mobility and transportation in California as well as whether the project will potentially improve the environmental quality in California.

The CTC vets the final projects, and Caltrans/RTA vets the implementation partners. They also get feedback from PIAC and legislature on the project. However, their advice is not mandatory, and Caltrans/RTA is the final adjudicating party. CTC selects the final projects at a public meeting.

Overall, the manual does not mention the specific people in the governing bodies that decide on P3 suitability. However, overall, the CTC has the final decision-making power in adjudicating P3 projects.

Once PIAC and the legislature have given their comments, Caltrans then executes the concession agreement with the private entity keeping in mind the comments made by the legislature and PIAC. Caltrans, however, remains the sole authority to execute the agreement. At the end of each year, an annual report will be submitted on the progress by the Legislative Analyst and Caltrans (Caltrans, 2013).

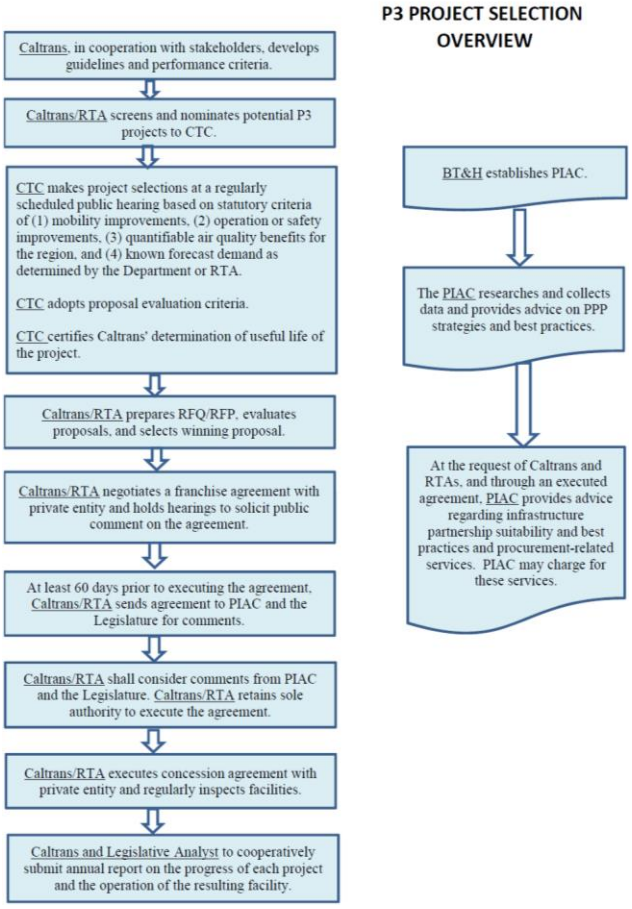

Figure 7 California general P3 process overview (Caltrans, 2013)

4.3.1.2 Colorado

4.3.1.2.1 Involved Parties and their Roles

In Colorado, the Colorado Department of Transportation (CDOT) and the High-Performance Transportation Enterprise (HPTE) are responsible for P3 surface transportation infrastructure projects. These projects include "a highway, a bridge other than a designated bridge, or any other infrastructure, facility, or equipment used primarily or in large part to transport people on systems that operate on or are affixed to the ground" (RS&H & Clary Consulting, 2016, p. 5). Table 11 provides an overview of the main involved parties in the P3 implementation for CDOT P3 projects.

Table 11 Summary of the main involved parties in the P3 implementation for CDOT

Party	Project Identification	Project Development	Project Approval	P3 Procurement Process
CDOT or the RTA of the proposed P3 Project	X	X	X	X
HPTE		X	X	Z

X- Primary role; Z- Advisory role

4.3.1.2.2 P3 Process

Table 12 below details the P3 decision-making process in Colorado. Once a project is considered feasible, a joint team of HPTE and regional bodies conducts a further project feasibility analysis. The HPTE conducts the value-for-money (VfM) analysis for the project. A joint-team conducts analysis to assess whether conducting P3 is the best value for the program. If P3 is found to be the best value for the project, it is further processed. HPTE decides on the preferred proposer for the project. CDOT implements the project while the HPTE team is responsible for the project operations. Table 12 gives details about the project responsibilities at every level.

HPTE works on the project during the Project Procurement stage. The HPTE also works on the project with regards to updating all aspects of it. HPTE selects the preferred proposer, updates VfM, brings it to commercial close and brings it to financial close if it provides the best value. After all these things are done, the project enters the Project Implementation stage where CDOT handles the project. Once everything is sorted out at the development stage, it enters the procurement stage where HPTE handles things (RS&H & Clary Consulting, 2016, p. 5).

A joint team of HPTE and the regional agency screens and short-lists possible transportation projects. The team presents its findings to the Colorado Department of Transportation (CDOT), which decides if a P3 project is feasible. The criteria it uses to select P3 projects include:

- Size of the project:
    - Does the project size justify being considered for the P3 approach?

- Generally, projects need to be $100 million in cost to be considered a P3 project.

- Challenging project funding:
  - Does the project have all funding identified in CDOT's Work Plan?
  - If so, the project might be more appropriate for a design-build approach instead of a P3.
  - What kind of revenue can the project generate and has it been forecasted?
  - If the funding is identified over a long-term, such as ten years or longer in the cost feasible Long-Range Transportation Plan, or there are challenges finishing out the funding plan that equity or tolling could help solve, then this might warrant evaluation as a P3 project.
- Project complexity or uniqueness:
  - Does the project include challenging elements that innovation and/or a lifecycle approach can help solve?
  - Can the P3 help combine phases like design-build-operate?
  - Combining the project into a larger P3 may be an option if it is being broken down into smaller phases because of funding issues.
- Environmental review process
  - Project risks: Can the P3 transfer risk from the government to the private sector? (RS&H & Clary Consulting, 2016, pp. 17–18)

Table 12 Identification of Leadership and Support (RS&H & Clary Consulting, 2016)

Program/ Project Phase	Description	Responsibilities and Resources (HPTE Eligible Projects Only)	
		Region	HPTE
Overall Program	Management and Oversight: Provide communications, overall administration and reporting of P3 Program	Support	Lead

Program/ Project Phase	Description	Responsibilities and Resources (HPTE Eligible Projects Only)	
		Region	HPTE
	• Establish policies	N/A	Lead
	• Provide strategic master planning	Support	Lead
	• Conduct program communications and marketing*	Support*	Lead*
	• Establish procedural guidelines and procedures*	N/A	Lead*
	• Conduct program-level budget planning and reporting	Lead (Commission)	Lead (Board)
Program Planning	Management and Oversight: Conduct initial feasibility, conceptual design, financial plan, initial environmental planning, delivery plan, ID and select projects, prioritization and screening for potential P3 projects	Lead	Support
	• Identify and prioritize potential projects	Lead (PMOGC)	Support
	• Determine initial feasibility of potential projects	Support	Lead
	• Prepare conceptual project definition/scope/design	Lead	Support
	• Conduct Phase I T&R Study (revenue projections)	Support	Lead
	• Prepare conceptual cost estimates and scheduling	Lead	Support
	• Conduct environmental review (pre-NEPA)	Lead	Support
	• Prepare value-for-money analysis	Support	Lead
	• Prepare initial financing plan	Support	Lead
	• Engage industry (program info, initial interest)	Support	Lead
	• Conduct public engagement	Lead	Support
	• Conduct stakeholder engagement (local TR agencies)*	Support*	Lead*
	• Provide FHWA coordination and approvals	Lead	Support
	• Make P3 decision and prepare delivery plan	Support	Lead
Project Development	Management and Oversight: Conduct final feasibility, financing plan, NEPA, and preliminary engineering		
	• Provide overall project management	Lead	Support
	• Determine final feasibility of project	Lead	Support
	• Prepare preliminary project design	Lead	Support
	• Conduct Phase II T&R Study (revenue projections)	Support	Lead
	• Prepare preliminary cost estimates and scheduling	Lead	Support
	• Provide environmental clearance/approval (NEPA)	Lead	Support
	• Prepare value-for-money analysis	Support	Lead
	• Prepare final financing plan	Support	Lead
	• Engage industry (project information, RFI)	Support	Lead
	• Conduct public engagement (project specific)	Lead	Support
	• Conduct stakeholder engagement (local TR agencies)	Lead	Support
	• Provide FHWA coordination and approvals	Lead	Support
	• Develop project communications plan	Lead	Support
	• Develop project management plan	Lead	Support

Program/ Project Phase	Description	Responsibilities and Resources (HPTE Eligible Projects Only)	
		Region	HPTE
	• Make P3 procurement decision and define delivery plan	Support	Lead
Project Procurement	Management and Oversight: Procure the project		
	• Provide overall project management	Lead	Support
	• Prepare solicitation documents (RFI, RFP, others)	Support	Lead
	• Prepare contract documents	Support	Lead
	• Prepare investment-grade T&R (revenue projections)	Support	Lead
	• Prepare final financial documents and requirements	Support	Lead
	• Prepare value engineering and technical requirements	Lead	Support
	• Alternative Technical Concept (ATC) reviews	Lead	Support
	• Coordinate procurement with industry bidders	Support	Lead
	• Review proposals and conduct evaluations	Support	Lead
	• Conduct public engagement (project specific)	Lead	Support
	• Conduct stakeholder engagement (local TR agencies)	Lead	Support
	• Provide FHWA coordination and approvals	Lead	Support
	• Select winning bidder and negotiate contract	Support	Lead
Construction	Management and Oversight: Construct the project		
	• Provide contract management and administration	Lead	Support
	• Provide change management	Lead	Support
	• Provide budget management	Lead	Support
	• Provide financial reviews	Support	Lead
	• Conduct design reviews	Lead	Support
	• Construction oversight and quality audits	Lead	Support
	• Conduct final project acceptance	Lead	Support
O & M	Management and Oversight: Operating the project		
	• Manage P3 project agreement and related contracts (including reporting)	Support*	Lead*
	• Toll collection	Support	Lead
	• Maintenance	Support	Lead
	Roadway Operating Decisions such as road closure	Lead	Support

Every P3 project is different in terms of the requisite capability and budget. HPTE leadership, and the CDOT, with the Executive Director partner bring forth teams that bring together the desired resources and skills. Additionally, each phase has a different decision-making hierarchy. Figure 8 helps identify the critical roles of the CDOT and HPTE at various stages of a P3

project. Most of the steps illustrated in Figure 8 are led by CDOT or HPTE or a joint team of both parties in accordance with the nature of the project.

CDOT works closely with planning groups, including the local officials of the regional transportation agencies. The joint team of HPTE and the CDOT provide a very high-level screening of the projects for consideration of delivery under the P3 approach.
HPTE provides recommendations to move projects forward as P3 in partnership with the CDOT.

As it is evident from Figure 13 and the brief description given above, the P3 implementation process for the state of Colorado is very complex. There are different hierarchies that need to be followed at different stages of the P3 implementation. The number of stakeholders is also very few in the state of Colorado as, besides the private entity, CDOT and HPTE remain the only major players involved throughout the process (RS&H & Clary Consulting, 2016, p. 5).

To summarize the table above and the flowchart below, the CDOT overall takes a primary role in the P3 administrative and managerial aspects while HPTE takes the lead in the financial and technical aspects of P3 programs.

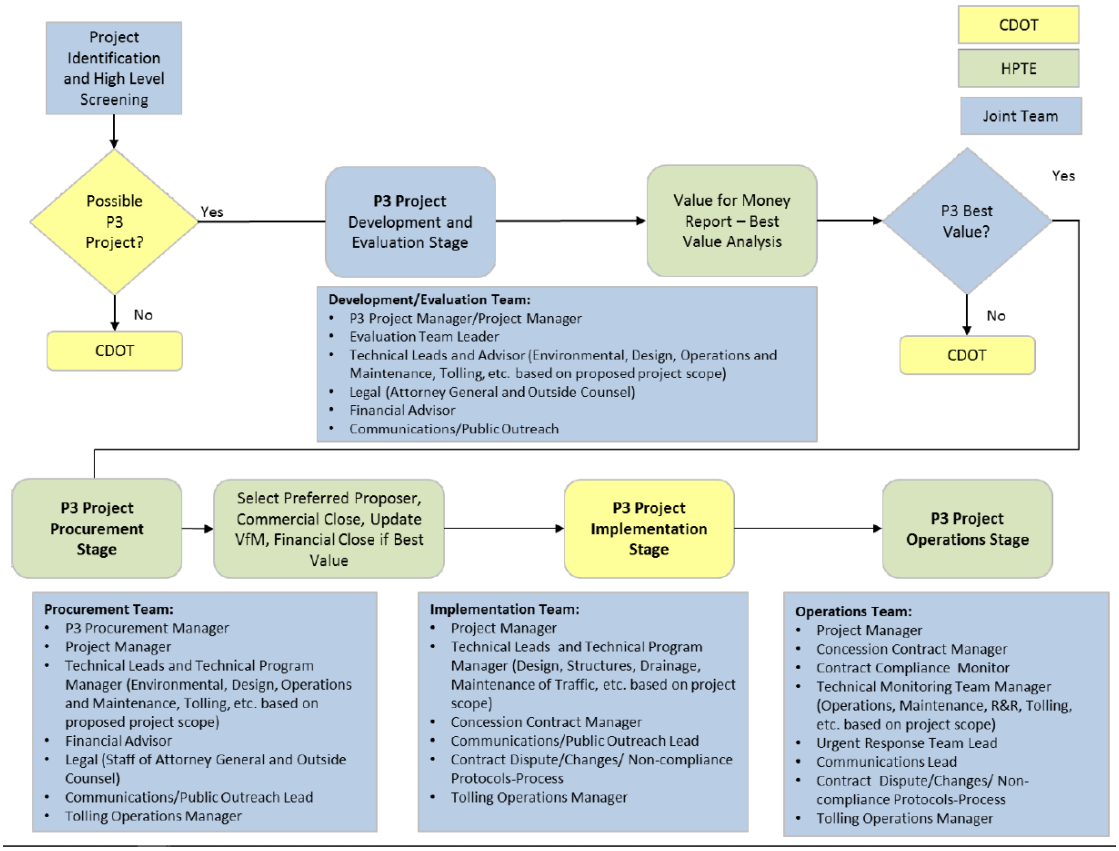

Figure 8 Colorado P3 overall process flowchart (RS&H & Clary Consulting, 2016)

4.3.1.3 Florida

Florida does not have any specific guidelines, as the Florida P3 recommendation guideline has not provided any clear implementation process for their P3 implementations. They have general guidelines which state a responsible public entity (RPE) is responsible for gathering unsolicited or solicited proposals and sections that show what they are supposed to do, but there is no recommended outlined P3 implementation like the other four discussed states guidelines.

However, the P3 legislation in the following section delves into the approval process and gives some guidelines of how to go through the approval process as well as some references from the Infrastructure Act Guidelines Task Force.

4.3.1.3.1 Involved P3 Parties and their Roles

The main actors in Florida are the Department of Transportation, the chair of each legislative appropriations committee, the President of the Senate, the Speaker of the House of Representatives, and the Governor. The Governor has the final decision-making authority while the Department of Transportation is the central P3 implementation authority represented by the Office of Construction with the support of the Office of Project Finance (The Florida Senate, 2018b). The Office of Construction provides template documents for P3 implementation such as the RFP, and the Office of Project Finance offers support and oversight in the implementation of P3 options such as build-finance, DBF, and DBFOM (Abdel Aziz & Elmahdy, 2015). Other members have an advisory role wherein they can give their feedback to the governor about the project; however, the governor has the final approval authority.

Table 13 Summary of the main involved parties in the P3 implementation for FDOT

Party	Project Identification	Project Development	Project Approval	P3 Procurement Process
Florida State Governor	X	X	X	
Office of Construction P3	X	X	X	X
Office of Project Finance				X

X- Primary role; Z- Advisory role

4.3.1.3.2 P3 Process

The legislator has the right to declare the need for the infrastructure project and that the infrastructure project is in the public's interest. The Florida Department of transportation then is responsible for soliciting and processing P3 projects. However, before doing that, it needs to prepare a summary of the projects that have been proposed to the Executive Office of the Governor, the chair of each legislative appropriations committee, the President of the Senate, and the Speaker of the House of Representatives. It discusses the department's work for the project and certifies that the debts incurred by the project do not exceed the limit it is allowed (The Florida Senate, 2018a). The department needs the governor's approval before proceeding with the pro-

posal. If other parties involved do not approve the project, the government has the discretion to reject it. A similar process is adopted for both solicited and unsolicited proposals.

For consideration of a P3 project, the department must show that the project will improve the infrastructure in Florida and will be of a value greater than 500 million dollars. After approval, the department must determine that the proposed project is based on the criteria given:

a) Is it in the public's best interest;
b) Would not require state funds to be used unless the project is on the State Highway System;
c) Would have adequate safeguards in place to ensure that no additional costs or service disruptions would be realized by the traveling public and residents of the state in the event of default or cancellation of the agreement by the department;
d) Would have adequate safeguards in place to ensure that the department or the private entity has the opportunity to add capacity to the proposed project and other transportation facilities serving similar origins and destinations; and
e) Would be owned by the department upon completion or termination of the agreement. (The Florida Senate, 2018b, p. 1)

Thus overall, the department analyzes the public interest, cost, as well as the safety of the project and ensures that the project is still retained by the government at the end of the P3 project.

4.3.1.4 Texas

4.3.1.4.1 Involved P3 Parties and their Roles

The main P3 actors in Texas are the Texas Department of Transportation (TxDOT, also referred to as the Department), the Texas Transportation Commission (Commission), and the

Partnership Advisory Commission (PAC). The main decision-making body in the state is the Texas Department of Transportation, which has the majority of the decision making powers at the project solicitation as well as the conceptual program stage. The Texas Transport Commission is the body that is referenced in case the guideline does not cover some of the steps of the decision and also has an oversight role where it is involved in the decision making at three different stages that will be discussed in the process section. The guideline specifies that if there is anything that is not addressed in the guidelines, the Commission should retain the authority to make those decisions. PAC, as its name suggest, has an advisory role, and it is involved after the Department and the Commission evaluate and pass the project proposal where they address and give their recommendations (TxDOT, 2012).

Table 14 Summary of the main involved parties in the P3 implementation for TxDOT

Party	Project Identification	Project Development	Project Approval	P3 Procurement Process
TxDOT	X	X	X	X
The Commission	X	X	X	X
PAC			Z	Z

X- Primary role; Z- Advisory role

4.3.1.4.2 P3 Process

The TxDOT processes for both solicited and unsolicited proposals are illustrated below in Figure 9. Unsolicited proposals include one more step than that of the solicited proposals, where the executive director has to accept the unsolicited proposal before presenting it to the Texas Transportation Commission (referred to as the "Commission"). The TxDOT guideline does not go into much detail about project solicitation or discuss the project selection process. The next step is to issue the Request for Qualification (RFQ).

The RFQs are then reviewed by the TxDOT which then evaluates their qualifications after. The department then sends a Request for Proposal (RFP) for the solicited proposals or a Re-

quest for Competing Proposals (RFCP) for unsolicited proposals. The Planning and Real Estate Management Division are responsible for negotiating any interim or comprehensive agreement. Texas Facilities Commission makes the final decision regarding P3 allocation at a public meeting with advice from Public Advisory Commission.

Once the commission has selected the best value proposal, they give a 10-day notice to the public in order to allow anyone to bring forth concerns or comments regarding the proposal. Once the 10 day time period has passed, the Department submits the proposal to the Partnership Advisory Commission (PAC). In the next 55 days, PAC provides its recommendations on the proposal (TxDOT, 2012). After PAC has provided their recommendations, the Department holds a public hearing on the proposal.

After the public hearing has been conducted, the commission awards the project and authorizes the negotiations for the comprehensive agreement with the private entity. After this, the Department submits its confirmation to PAC that they have incorporated the recommendations within the agreement that was negotiated. After PAC has received the confirmation from the Department, the Department completes the agreement negotiations with the private entity and executes the agreement, which could either be interim or comprehensive. If the agreement was interim in the first place, the last three steps of the process would be repeated.

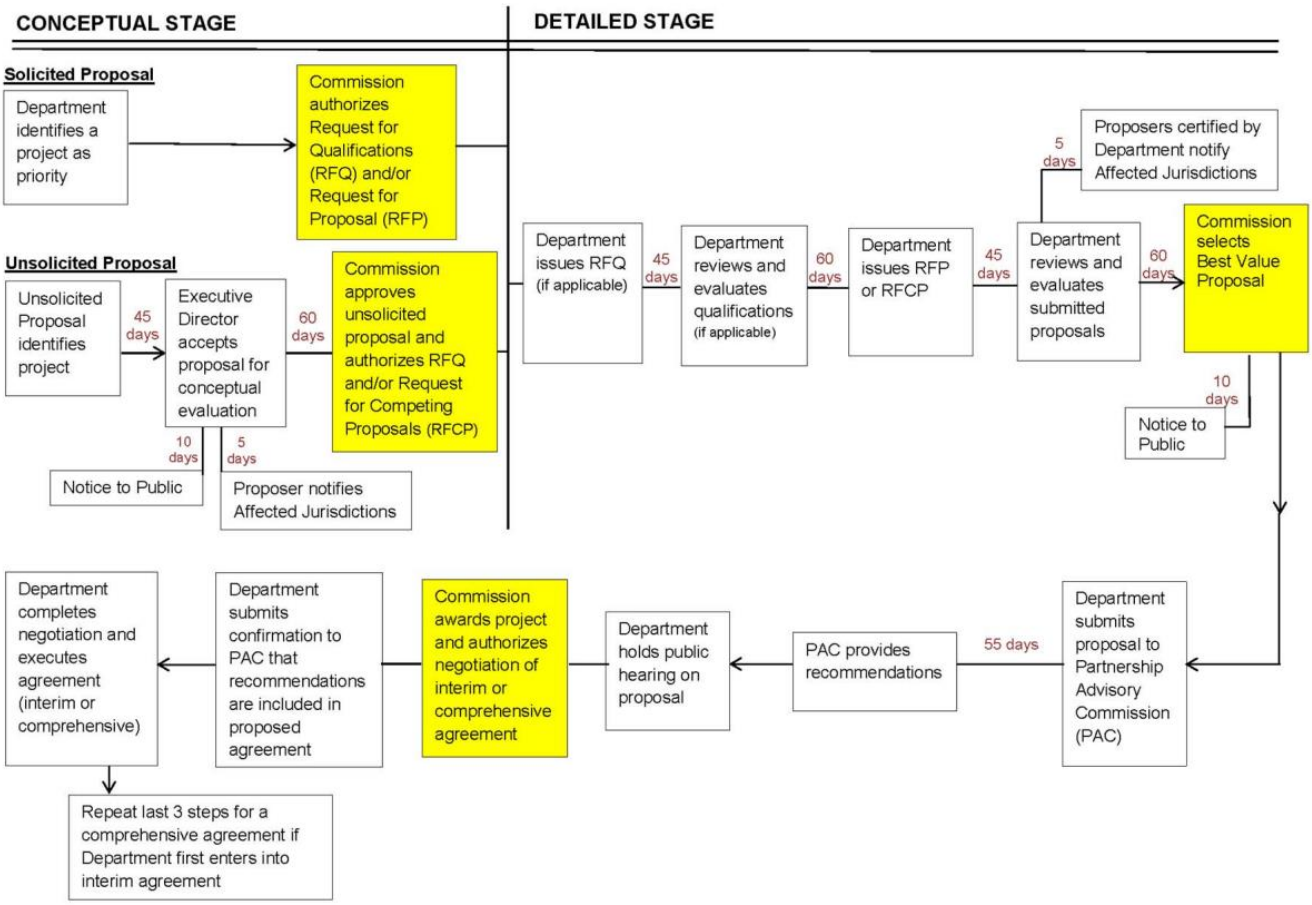

Figure 9 Texas guideline illustrative chart for decision points and their estimated timelines (TxDOT, 2012)

4.3.1.5 Virginia

4.3.1.5.1 Involved P3 Parties and their Roles

In Virginia, the main parties involved are the Virginia Department of Transportation P3 Office (VDOT P3), the Transportation Public-Private Partnership Steering Committee (PPTA steering committee), the Commonwealth Transportation Board (CTB), and the CEOs where at VDOT, the CEO is the Commissioner of Highways; at DRPT, the CEO is the Director. The steering committee decides whether to forward a P3 based on VDOT P3 recommendations which are composed of public representatives. VDOT P3 along with the relevant agency develops the P3 project. What is unique about Virginia is that VAP3 is involved in all of the project develop-

ment stages. However, VDOT P3 does not have any final decision-making power which still resides with the relevant agency. Also, the projects are presented to agency oversight boards at different stages of the program to increase oversight of the programs. Yet the relevant agency decides the final P3 project as well as the P3 implementation partner (VDOT, 2017).

Table 15 Summary of the main involved parties in the P3 implementation for VDOT

Party	Project Identification	Project Development	Project Approval	P3 Procurement Process
PPTA Steering Committee	X	X	X	X
CTB	Z	X		X
VDOT P3	X	X	Z	X

X- Primary role; Z- Advisory role

4.3.1.5.2 P3 Process

In Virginia, the process is divided into 3 parts as reflected in Figure 10. Given below are the details of the process. In the first part (Project Identification & Screening), prospective P3 projects are screened and short-listed. An analysis of the public funds available for them is conducted as well as a Public Sector Comparator to determine whether conducting them through P3 is more valuable than traditional procurement methods (VDOT, 2017).

In the project development phase, another public sector analysis and competition are conducted to determine whether or not a project provides more benefits when procured via Public-Private Partnership approach compared to a traditional method of delivery. Similarly, a finding of public interest is conducted to assess if the project is in the interest of the public. Likewise, draft documents for RFQ are developed, and private sector interest in the project is solicited through a request for information. Given below are the criteria that are used for deciding the best P3 projects. Overall, the criteria looks at whether the P3 project is financially feasible and whether it fulfills a demonstrated need in Virginia. It also looks at its consistency with federal legislation. Given below are the criteria used in Virginia to decide upon the P3 projects as stated in the PPTA implementation manual:

- Does the Proposal satisfy a public need for the timely development of a transportation facility?
- Does the Proposal conform to Virginia's transportation goals and the policy objectives of the administration?
- Does the Proposal address a demonstrated need as identified in a state, regional, and/or local transportation plans?
- Does the Proposal interface with existing and planned transportation systems?
- Is the Proposal at a sufficient level of development that a procurement process can be run including an element of price competition?
- Will the Proposal make the transportation facility available to the public in a more efficient and/or less costly fashion as compared to the traditional procurement method and procurement would be in the best interest of the public?
- Is the Proposal consistent with federal requirements and potential agreements for federal funding and/or approval for P3 projects?
- Is the Proposal not currently on the list of proposed Solicited Projects? (VDOT, 2017, p. 15)

In the project procurement stage, the RFQs are sent, and prospective projects are short-listed. The PPTA steering committee is informed about the short-listed candidates, and it also certifies that the project is in the public interest. After the certification and the short-listing, the final partner is chosen and a comprehensive agreement is executed. The CEO notifies the General Assembly about the project, as well as briefs the PPTA steering committee about the final confirmation process. A final public sector analysis is also done to update information about the

prospective costs and benefits to Virginia from the project. Given below are the details of the main P3 process in Virginia State.

As the project enters the project procurement stage, RFQ & RFQ proposers are sorted out. Then, the qualified RFQ proposers submit conceptual, financial proposals for the project which are then sent to the CEO. The CEO decides upon the matter. At this stage, the CEO is responsible for deciding upon the preferred delivery model for the project and for also shortlisting the RFQ proposers based on their financial proposals submitted in the last stage.

After the CEO's approval, CTB is then briefed regarding the delivery methods and the shortlisted RFQ proposers after which the PPTA steering committee gives its approval if it feels that the public interest is best served. Then, the RFP is formulated, and final proposals are submitted. The CEO then selects the best value proposal.

Then, the entire progress of the project goes under a statutory audit, and the CEO validates FOPI and submits to the Governor and the General Assembly a written certification. The CEO then briefs CTB regarding the decisions to execute the comprehensive agreement. Once all of these procedural requirements are completed, the project enters the execution stage, where the PPTA steering committee's briefing occurs regarding the final bids and evaluation of the final bids (VDOT, 2017).

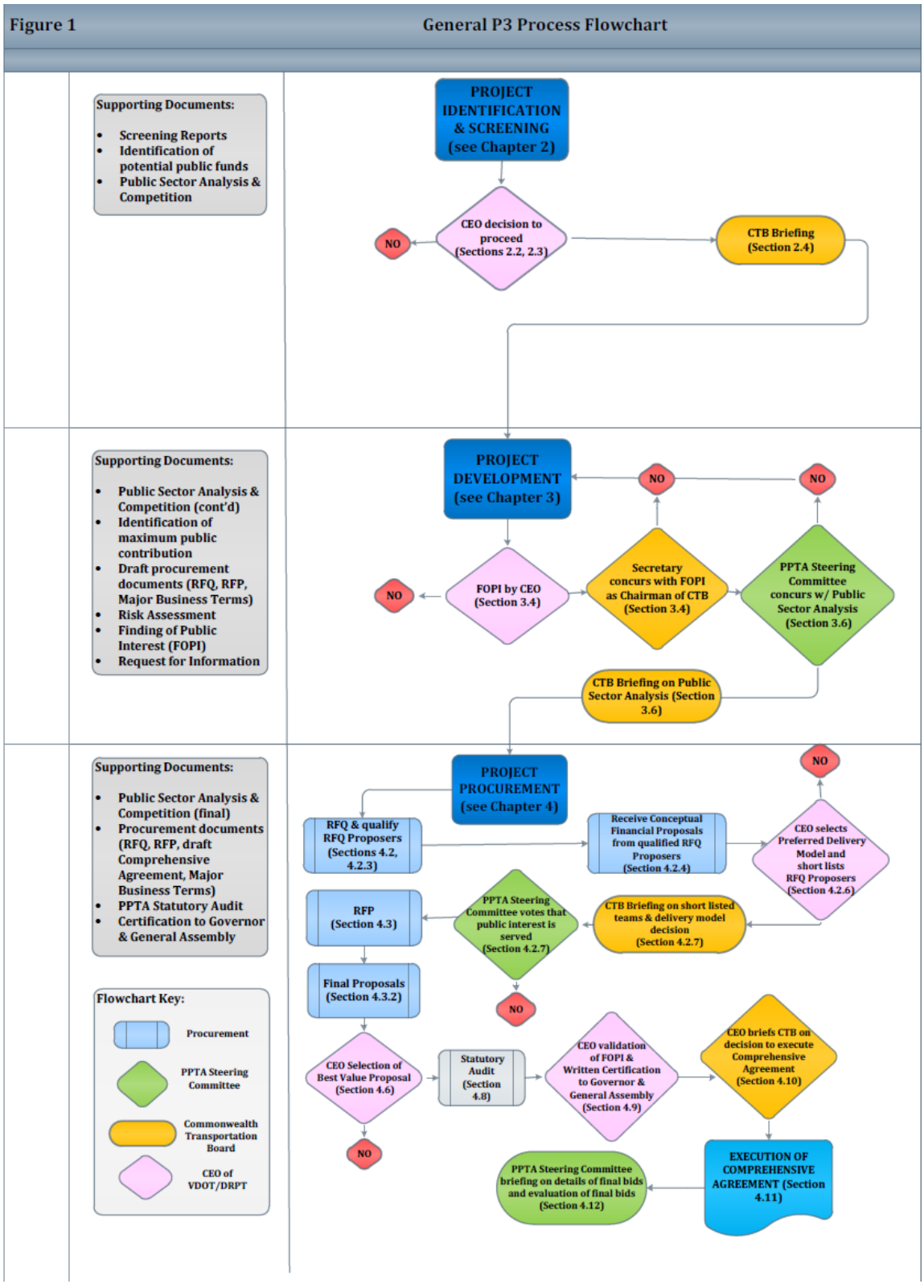

Figure 10 Decision making flow chart for VDOT (VDOT, 2017)

4.3.2 *P3 Differences and Commonalities between States*

Overall, the analysis of the decision-making in the states illustrates that decision-making is centralized. States have different P3 bodies, most of which lie within the DOT. In none of the states does the P3 unit have the final say on which project to select, meaning the specialists have an advisory role.

Public representatives also do not have a role in deciding P3 projects. Only in Virginia is the steering committee made up of public representatives given authority to decide which P3 projects should be decided. However, they are still involved primarily at deciding whether a project should be rejected if it does not meet the public interest. In other states, representatives of the state transportation (mainly the DOT) decide whether a project is feasible to be conducted. Having public representative oversight of the project increases public accountability to the project, but will also slow down the process of P3 vetting.

Conversely, in Colorado the P3 selection is conducted by a joint-team of HPTE/CDOT. It may, on the one hand, increase inter-departmental collaboration as only projects that are agreeable to both departments may be accepted. On the other hand, it may slow down the project as you have to negotiate and bargain to decide which projects are the most feasible.

In California, only one designated organization decides which P3 project to choose which expedites the process. It may also make it less accountable as the agency may put its agenda ahead in choosing P3 rather than building a broader consensus. The P3 selection process is also expedited and streamlined by keeping the decision-making in one organization, thus cutting excess costs.

Given below are the details of how the decision-making process varies by states. The researcher has divided the process based on three main stages: project identification, project selec-

tion, and project implementation. The information presented is derived from the decision flowcharts.

Overall, Virginia has the highest amount of agencies involved in decision-making (3). On the other hand, Colorado has a process where two agencies (CDOT and HPTE) collaborate in decision-making and project development. In other states, the process is also divided. For instance, in California and Texas, while DOT does the project processing, the final decision is made by other bodies (The Commission for Texas and CTC for California).

4.4 P3 GUIDELINES MAIN DECISION POINTS

Overall, the researcher has discussed the main decision-making process in P3s. However, before the decision-making can begin, research needs to be done to facilitate the process. Below, the researcher discusses the P3 research process. The review of the P3 guidelines covered the following main components and processes that institute a successful P3 implementation process:

- P3 Centralized Units/Offices
- Unsolicited and Solicited Proposals
- Public Involvement
- Termination Rights
- Incentives for the Private Sector
- Value for Money

4.4.1 *Dedicated P3 Units/Offices*

P3 projects are often very complicated projects to address. The delivery methods for P3 projects are very different from traditional methods, and this has often led to the need for P3 experts. A dedicated P3 unit is a unit that specializes in conducting and implementing P3 projects. Its scope can vary by state from training to implementation, to research, to decision-making. P3 units also can serve as centralized units for P3 implementation, thus possibly reducing departmental copying and increasing efficiency. Similarly, the public interest in P3 projects is often very difficult to calculate, which often leads to their failure. For instance, in Peru the transfer of an airport to P3 led to wide-scale press reporting about how transferring the P3 project to a private party was harming public interest, leading to the cancelation of the project.

Similarly, P3 involvement in building construction in France led to such complications that the government came on record to say that it will think very hard before using another P3 project (Eurodad, 2018). The Valley Urban Expressway for the 21st Century (VUE 2000) would have provided a necessary highway system with no tax increase required. The project was estimated to generate about 77 million in revenue and would have had a positive impact on the surrounding economy. However, due to public interference and poor public relations, the project was not passed and doomed for failure before taking off, according to ADOT officials and private developers of the VUE 2000 (Levy, 1996). It is in this context that there is a very strong need to have a dedicated P3 unit with adequate expertise to negotiate public interests in these projects.

The need for establishing P3 units has emerged over time. Initially, governments used P3s as an approach to attract private finance to public infrastructure delivery suffering from a shortage of public funding. However, governments have now established P3 units to provide certain capacities that were not available under the traditional public sector methods (WB 2006).

Overall, states vary by their P3 units. In the US, states have become more accepting of having separate P3 units. However, Aziz (2015) finds in their analysis that P3 transportation projects are delivered in the P3-enabled states through the internal resources of the departments of transportation without centralized government offices. Aziz also finds that it is better to have a P3 unit that is involved in both policy formulation and implementation rather than primarily for policy formulation (Abdel Aziz & Elmahdy, 2015). Overall, the states analyzed follow a similar pattern, as most of them have P3 offices that are part of the DOT. However, they vary among themselves with regards to the P3 unit policy implementation and formulation. Virginia and Colorado have separate specialized P3 units with implementation power. California has a specialized

P3 unit called PIAC but it only has advisory power. In Texas and Florida, different government branches are involved in P3 implementation, yet they do not have dedicated P3 units.

4.4.1.1 California

In California, P3 is managed internally by Caltrans through a P3 program. Caltrans' P3 program can be considered a P3 coordination office that implements P3s with the help of the finance and planning offices. Similarly, California has also created a dedicated P3 advisory office, the Public Infrastructure Advisory Commission (PIAC). PIAC has 20 commissioners from diverse backgrounds in academia, industry, and government. PIAC has several P3 roles and functions including promotion and training, technical support and screening, and policy guidance. However, its impact has been limited in scope. As concluded by the California Legislative Analysis Office, PIAC has not yet published any best practices, outsources P3 reports, and lacks members with experience in state finance, procurement, and labor issues. Similarly, PIAC is only an advisory body and can only advise Caltrans and the regional transportation authorities (RTAs) on P3 issues. The power to proceed with a P3 project is still with the relevant transportation agency (Abdel Aziz & Elmahdy, 2015; Caltrans, 2013).

4.4.1.2 Colorado

In Colorado, P3 is conducted by the Office of Major Project Development (OMPD), which was established as an integrated effort between HPTE and Colorado DOT. HPTE was created based on the Colorado P3 act in order to seek out opportunities for innovative and efficient means of financing and delivery of important infrastructure. OMPD/HPTE has certain roles, including policy formulation and coordination, developing best practices, assessing the feasibility of projects, managing project development, and providing technical assistance (Abdel Aziz & Elmahdy, 2015; RS&H & Clary Consulting, 2016).

4.4.1.3 Florida

In Florida, P3 is jointly administered by the Office of Construction and the Project Finance Office of the State DOT. The availability of a dedicated Project Finance Office has contributed to the advancement and implementation of P3s. It provides support, coordination, and oversight in the P3 areas of build-finance, DBF, and DBFOM. Yet there is no separate dedicated unit for P3 (Abdel Aziz & Elmahdy, 2015).

4.4.1.4 Texas

In Texas, the TxDOT has established a Strategic Projects Division to oversee policies of procurement such as right-of-way acquisition, and to support activities for P3 agreements known as Comprehensive Development Agreements (CDAs). The Division is a P3 Guidance and Coordination unit. Yet, P3 procurement management is still done by the DOT internal resources (e.g., planning, finance, construction, and procurement). The Public and Private Facilities and Infrastructure Act (S.B. 1048) was enacted in Texas in 2011, which provided the legislative basis for using P3 in nearly all public facilities (e.g., transit, power generation, water/wastewater facility, or other similar facility needed for public use). It is managed by the Texas Facilities Commission, which is the real estate representative of the State of Texas in the purchase of buildings, grounds, and property (TFC, 2015). However, there has not been a dedicated P3 unit that has been established.

4.4.1.5 Virginia

In terms of the P3 unit, Virginia is the most advanced. It has a separate P3 implementation unit that is involved in all aspects of P3, including training, procurement, and coordination. VDOT P3 is a dedicated public P3 unit that bears the responsibility of the development and implementation of a statewide program for transportation P3s. Virginia P3 reports to the Virginia

Department of Transportation (VDOT). It has a ten-member staff which is supplemented by consultants on a per need basis (Abdel Aziz & Elmahdy, 2015; USDOT, 2016).

4.4.1.6 Role of P3 Units in the Different States

The role of P3 units varies by state. Given in the table below are the roles of P3s by state. In California, the P3 units are involved in guidance, coordination and promotion outreach, and training. The Florida, Texas, and Colorado P3 units are also involved in the same practices in addition to procurement management and training.

Table 16 P3 offices in the United States developed by Aziz & Elmahdy (2015); updated by the researcher

States	Dedicated P3 Unit/Office	Office Functions	Reference
California	Public-Private Partnerships (PPP) Program	G, C, P	(Caltrans, 2013; Markd et al, 2015)
Colorado	High-Performance Technical Enterprise	G, C, P, PM	(Abdel Aziz & Elmahdy, 2015)
Florida	Office of Construction/Office of Project Finance	G, C, P, PM	(Abdel Aziz & Elmahdy, 2015)
Texas	Strategic Projects Division	G, C, P, PM	(Abdel Aziz & Elmahdy, 2015)
Virginia	Virginia DOT P3 (VDOT P3)	G, C, P, PM	(VDOT, 2017)

Table Key:
G - Guidance for policy formulation, and guidelines and best practice development,
C - Coordination among the relevant departments and/or with upper authorities or stakeholders,
P - Promotion, outreach, and training,
PM - Procurement Management and technical support, and

4.4.2 *Unsolicited and solicited proposals*

Solicited proposals are proposals that are submitted in response to an RFQ by a public agency to compete for a public project, while unsolicited proposals are submitted to the public agency by the private sector without a formal request for proposal or when there is not an official invitation to submit a proposal. Unsolicited proposals could be submitted even when a governmental agency identifies a need for a project but did not release an RFQ for technical or financial reasons (Abdel Aziz & Nabavi, 2014).

Different states have different approaches toward unsolicited proposals and the approval process in comparison with solicited proposals. Solicited bids outline the public sponsors' priorities and evaluation criteria, creating a predictable foundation for all those bidding for the P3 contract. Despite unsolicited proposals being a new thing in the US, many firms have already have had experience with them. The analysis shows that a significant percentage of the surveyed companies have already pursued, or have been shortlisted, or been awarded unsolicited P3 proposals (Abdel Aziz & Nabavi, 2014)

Despite their immense potential and utility, unsolicited proposals have a number of disadvantages to solicited proposals. Solicited proposals increase accountability and transparency by outlining the contract objectives and the impact that the project is expected to have on the community (Puentes & Istrate, 2001). On the other hand, the unsolicited proposal does not follow any submission criteria since there are no RFQ and no competing proposals; however, they provide new innovative ideas that could be beneficial for the public sector (Puentes & Istrate, 2001).

The cost of submitting an unsolicited proposal can also be prohibitive for the state and the private parties. For instance, California asks the proposer to pay for the whole cost of the filing process. In Virginia, the interested parties have to pay $50,000 for the proposal verification. On the other hand, the proposer has to pay only $1000 for the unsolicited proposal while the agency may ask for further money in writing. These different costs may reduce the possibility of receiving a solicited or an unsolicited proposal. For instance, if the cost of the unsolicited proposal is very high, it may discourage people from applying for it considering its high cost. This may discourage innovation. On the other hand, if it is too low, it puts the burden on the public for

unsolicited private sector proposals. Yet, it may strongly encourage people to put in unsolicited proposals that may be innovative.

Overall, most states allow unsolicited proposals. However, the level of competition and time allowed for submitting unsolicited proposals is not clear. Similarly, government guidelines about how to select unsolicited proposals are not clear, which gives the impression that unsolicited proposals lead to less competition and lack of transparency (Abdel Aziz & Nabavi, 2014). Therefore, states need to give more time for competing bids for unsolicited proposals, as well as provide more information about them to assuage the private sector's concerns. Given below is a summary of how solicited and unsolicited proposals vary by states.

4.4.2.1 California

California allows both solicited and unsolicited proposals. Caltrans is clear to assert that all costs associated with the preparation and submission of an unsolicited proposal are the burden of the proposer, "whether or not the Proposer is selected for negotiations, in developing the Proposal or negotiating an Agreement" (Caltrans, 2013, p. 16).

4.4.2.2 Colorado

Solicited as well as unsolicited proposals are allowed, though in general HPTE/DOT prefers the efficiency and reliability of a solicited proposal process. Those submitting an unsolicited proposal may be required to meet with the HPTE Director prior to submission to discuss ideas and pay a minimum fee of $1,000 to cover the cost of review. Additional fees may also be requested in writing, and the proposal will be rejected in the case that the proposal team fails to make payment. (RS&H & Clary Consulting, 2016).

4.4.2.3 Florida

Florida also allows submission of unsolicited proposals. The proposer has to pay $50,000 for the unsolicited proposal. The department can also ask for further money for the unsolicited proposal (The Florida Senate, 2018a).

4.4.2.4 Texas

Texas also permits solicited as well as unsolicited proposals. The party has to pay a fee of $100,000 with the unsolicited proposal. Other parties are also encouraged to compete for the unsolicited proposal, and the department posts details on its website to encourage competitive bids from interested parties.

One extra step is required in the unsolicited proposal. In the project identification process, an additional notice to the public is sent as well the need for the proposer to notify the affected jurisdiction (TxDOT, 2012).

4.4.2.5 Virginia

Solicited as well as unsolicited proposals are allowed. The P3 implementation guidelines by the Virginia Public-Private Partnerships (2014, p. 19) states that "Private Entities interested in submitting an unsolicited proposal are required to pay a non-refundable, non-negotiable Proposal Review Fee of $50,000 at the time of submitting the Unsolicited Proposal to the Agency." The decision-making follows the same decision-making structure as a solicited proposal afterward.

4.4.2.6 Summary

Overall, California, Colorado, Florida, Texas and Virginia currently allow unsolicited as well as solicited proposals as illustrated in Table 17. However, California does not ask for any fees while all other states have some sort of fees associated with reviewing unsolicited proposals. Some states are more encouraging than others towards unsolicited proposals and are ranked as

illustrated in the table below, based on the content analysis and the review of the current frameworks implemented in the studied states, where 1 is the most encouraging and 5 is the least encouraging.

Table 17 Summary of unsolicited proposals for each state

Unsolicited proposals	California	Colorado	Florida	Texas	Virginia
Allows unsolicited proposals	Yes	Yes, but prefers solicited proposals	Yes	Yes	Yes
Process compared to solicited proposals	One on one meeting with DOT officials to discuss the unsolicited proposal	One on one meeting to propose ideas to the HPTE Director	Goes through a public hearing then follows the same process	1- executive director conducts a conceptual evaluation 2- public notice 3-request for competing proposals	Submitted to the PPTA
Requires fees for review	$15,000 with unsolicited proposal plus an estimated detailed review fee	$1000 plus any fees for review	$50,000 plus any further expenses for review	$100,000 for review	$50,000 for review

4.4.3 *Public involvement*

Lack of accountability to the local public is one of the many dangers that P3 may face if there is no public education in the allocation of P3 projects. It has also emerged as an issue in P3 projects across the globe. For instance, a report compiled ten case studies worldwide about P3 and found that 90 percent of the projects that failed had no public feedback or transparency (Eurodad, 2018). This lack of transparency also creates doubts in the minds of the public behind the motives of the projects. For instance, a P3 project that did not inform the public about its work led to vast protests with 10,000 households filing objections against it. (Eurodad, 2018).

Surveys have consistently shown a lack of transparency as one of the major public concerns about P3 projects. However, the need for transparency is also offset by the need to keep

some confidentiality regarding bidders' proprietary information. And that is why states need to legislate how P3 partners' need for confidentiality is to be balanced by public's need for more information (Rall, Reed, & Farber, 2010).

In the states discussed, public representatives do not have any authority or final say in the P3 implementation process. However, in these states under consideration, public hearings are used to increase public participation in the P3 allocation process. Public hearings increase public involvement in the project and give a sense of ownership to the community, raising public trust in P3 projects.

Different states have public hearing requirements. Too few public hearings do not give enough time to educate the public while too many slow down the P3 process. For instance, California requires one mandatory public hearing, while Colorado requires three public hearings for the P3 process. Virginia allows the responsible public entity for the P3 to conduct a public hearing, but it is not mandatory; however, it must present its findings to its oversight board in a meeting that is open to the public. On the other hand, Florida does not require any public hearing. Table 18 summarizes the public involvement and transparency efforts for each of the studied states. California's records are subject to the California Records Act, however, the provided framework does not illustrate the mechanism for which the transparency would be implemented (Caltrans, 2013). The transparency mechanism is much clearer in Colorado, where most of the High-Performance Transportation Enterprise documents regarding the P3 process are open to the public and are available on the enterprise's website (RS&H & Clary Consulting, 2016). Texas P3 records are available after the interim agreement for public review upon public request (TxDOT, 2012). Virginia is similar to the Colorado transparency level and also provides the P3 public records online at different phases of the P3 project procurement process (VDOT, 2017).

Table 18 Public involvement by each of the study states

	California	Colorado	Florida	Texas	Virginia
Public involvement	One public hearing at the location of the project	Three public hearing	No public hearing required	One public hearing Prior to Interim agreement	Two public hearings: -Interim agreement -Prior to agreement execution
Transparency	All documents are subjected to the California Records Act.	All HPTE records are open to the public and available online	P3 projects are subject to Public Records	Records are available after interim agreement execution for public inspection upon request	Different phases of the project procurement process are posted online and open for public comments

4.4.4 *Termination Rights*

Termination provisions are an integral part of a P3's success, and are the core of the risk-sharing agreement between the public and the private sector (Lee, 2013). For instance, if the state has very weak power to terminate a project, the private party may be incentivized to be accountable to the state in its implementation as it may feel that it can do as it pleases without needing to incorporate the state's interests. On the other hand, allowing the states very strong termination rights gives too much power to the state and may undermine autonomy for the private partner in P3 implementation. It may also lead to over interference of the state in P3 implementation. Therefore, it is important to define termination rights. However, in most states, these termination rights vary project-by-project and are not centrally defined (Caltrans, 2013). Given below are the details of P3 early termination agreements by each state.

4.4.4.1 California

In California, the right for early termination is governed by the P3 agreement. According to a report by Practical Law, "The applicable public-private partnership agreement may be terminated early according to its own terms" (2017, p. 324). Thus, the early termination is adjudicated on a case by case basis.

4.4.4.2 Colorado

The Colorado P3 Management Manual does not delve into any details of termination rights. The right of termination is dictated by the P3 agreement (PL, 2017).

4.4.4.3 Florida

The Florida Department of Transportation Act does not allow the contractor or the government to terminate a P3 agreement, and requires provisions that clearly state what to do if the private entity defaults or if, for any other reason, the P3 is canceled. However, the general P3 Florida Act allows a responsible public entity to terminate a P3 agreement and requires provisions to be stated in the P3 agreement that specify public safeguards as well as the termination details for the private entity, and the shifting of the P3 project to a government entity or the local community for use (Pula, 2016).

4.4.4.4 Texas

In Texas, the law states that the interested P3 party has to inform the public entity of their conduct for the last 5 years, including any contract defaults and contract terminations that they may have suffered. (TFC, 2015). The frameworks also require the private party to provide a copy of all notices of default, termination, and any claims substantiated on previous projects in the past five years (TFC, 2015). This information enables P3 entities to better adjudicate if the private party is going to be a good P3 implementation partner based on their past experiences. There could be many lessons learned from these documents about how the private party conducts their disputes. However, The Texas guidelines do not cover their own way of processing the termination process for P3 projects.

4.4.4.5 Virginia

In Virginia, if the P3 project does not begin within two years of certificate issuance, the P3 commission has a right to hold a meeting to assess if the P3 rights should be revoked. Similarly, the contractor needs to provide the P3 commission with a full disclosure statement regarding all financial arrangements involved in the P3 (PL, 2017).

4.4.4.6 Summary

In California, termination rights are determined case-by-case by the relevant P3 agreement. A P3 agreement may also be canceled for the failure of parties to execute it properly. In Colorado, it is determined by the P3 contract. In Florida, it is governed by individual P3 agreements. In Virginia, the law requires that the P3 needs to be returned to a state entity in good condition. Otherwise, it is determined by individual P3 contracts. Overall, in all states, termination rights are determined primarily by individual P3 agreements.

Table 19 shows states that have termination clauses for P3 projects. As can be seen, all states except for Texas provide for early termination. Similarly, the renewal term also varies by state with California having the least concession period (35 years), followed by Texas (52 years). The rest of the three states (Virginia, California, and Colorado each have the same concession period of up to (99 years).

Table 19 Early termination provision for P3 by each state (Practical Law, 2017)

States	Maximum concession period (years)	Renewal terms	Early termination
California	**35**	**X**	**X**
Colorado	**99**	**-**	**-**
Florida	**99**	**-**	**X**
Texas	**52**	**-**	**-**
Virginia	**99**	**X**	**X**

4.4.5 *Incentives for the private sector*

Another issue that needs to be addressed regarding P3 projects is the incentives the private sector can get from getting involved in P3 projects. Ideally, the government wants to attract the best-equipped bidders to engage in P3 projects, and this often involves the need to give them adequate incentives to join the P3 project. Yet most of the current P3 frameworks are silent about what incentives they are giving to the private sector to get involved in the projects.

4.4.5.1 California

California provides all incentives except for labor incentives. In the California legislation, the P3 projects are considered public property and are therefore exempted from taxes. As an illustration, the California Act states that "Leases or concessions under Section 143 of the California Streets and Highway Code are deemed public property for a public purpose and are therefore exempt from leasehold, real property, and ad valorem taxation except to the extent that the property is used for ancillary commercial purposes" (PL, 2017, p. 387). The government can make contributions in kind but cannot provide any labor incentives. However, the California P3 Guideline only mentions that the incentive could be part of the contractual agreement while not illustrating any of the legislated incentives. It happens that the incentives are negotiated on a case by case basis.

4.4.5.2 Colorado

Colorado's P3 legislation does not deal with ways to make the projects more attractive to the private sector (PL, 2017).

4.4.5.3 Florida

The legislation states that P3 entities are exempt from property taxes "Ad valorem property taxes, to the extent the property is owned by the state or other government entity" (PL, 2017, p. 389). Likewise, P3 projects are exempt from "Excise tax on documents or obligations to pay money which arise out of the agreements to design, build, operate, own, lease, or finance transportation facilities" (PL, 2017, p. 390). However, there are no other provisions related to incentives that could be provided to the P3 partner.

4.4.5.4 Virginia

The P3 is exempt from taxes. The government can also provide other in-kind contributions and incentives as well as provide labor incentives (PL, 2017).

4.4.5.5 Comparison of Incentives

Given below is the summary of incentives in different states. As can be seen, California, Virginia, and Florida provide tax-breaks and contribution-kinds incentives. Texas provides other incentives which are not clear while Colorado does not provide any kind of explicit incentives. The explicit projects may be providing incentives on a case-to-case basis, but those incentives are not discussed in the laws.

Table 20 Summary of incentives by each state; developed based on data from Practical Law P3 review (2017)

States	Tax Breaks	Contributions in Kind	Labor Incentives	Other Incentives
California	**X**	**X**	-	-
Colorado	-	-	-	-
Florida	**X**	**X**	-	-
Texas	-	-	-	-
Virginia	**X**	**X**	-	-

4.4.6 *Value for Money Practice*

4.4.6.1 Introduction

A P3 agreement is fundamentally about risk allocation; that is, minimizing the cost of risks associated with a construction project through shared management with the public and private party (IPD, 2013). The VfM analysis may be used to assist in reducing P3 risk. As the P3 kit-tool developed by the Federal Highway Administration suggests that there are multiple ways to conduct the VfM analysis but they all share the same elements, involving (2012):

- Creating a Public Sector Comparator (PSC) which estimates the whole-life cost of procuring the project through the conventional approach, including operating costs and costs of risks, which are not typically considered in conventionally procured projects.
- Estimating the whole-life cost of the P3 alternative, either as proposed by a private bidder or a hypothetical Shadow Bid (SB) at the pre-procurement stage which attempts to predict the bidder's costs, financing structure and other assumptions (FHWA, 2012, pp. 1–2; IPD, 2013, p. 4)

The main issue regarding P3 implementation is calculating how useful P3 projects are in return for the amount of spending that the government may have to do in terms of paying the private sector for P3 project management as well as providing loans and funds to offset the cost of creating the project. In this case, the VfM analysis compares the aggregate cost and benefits of the P3 option in comparison to the traditional delivery method on a case by case basis (FHWA, 2012). The VfM analysis also assists in understanding and evaluating the project as a whole by analyzing the whole life cycle costs at the early stages of the project development, thus creating confidence for decision-makers to assess whether to use the P3 delivery system and whether it has a better value than other traditional options. In sum, VfM tries to identify the most suitable

projects for P3, the most suitable P3 procurement method and to select the most suitable P3 partner. The FHWA recommends using the VfM analysis to assist in:

- Development of the transportation investment program, by indicating which projects are potentially suitable for P3 delivery;
- Selection of a project's preferred procurement option, i.e., conventional procurement or P3, and assessment of its affordability;
- Selection of the preferred bidder and negotiations with the selected bidder (if negotiations become necessary) prior to finalizing the P3 agreement. (FHWA, 2012, pp. 1–2)

Overall, the VfM analysis enables the public agencies to decide whether a project is more conducive to be funded traditionally or through P3s, as well as to decide which P3 bids are the best value-for-money compared to other P3 bids. Its essential role in justifying the need for a P3 project is very important to consider. Most DOTs around the U.S. use VfM as a method to investigate the potential viability of P3 projects. The method is primarily used to examine the financial perspective of the public agency, and it could be used at many stages of the project but is mainly based on anticipated changes or activity in an economy phase of the project (Kweun, Wheeler, & Gifford, 2017).

Figure 11 illustrates how VfM analysis is conducted through PSC. As can be seen, the PSC analyzes the amount value of the cost of the project that is reduced for the government by allowing a competitive bidding process to occur, which reduces the overall P3 cost. In particular, it assesses the overall cost of the project by assessing the overall transfer of risk of the project to the private sector. It also attunes for competitive neutrality, which accounts for the inherent advantages the government has in the public sector. For instance, the government can get loans at a much lower rate than the private sector. These issues are adjusted through competitive neutrality

by attempting to put the private and the public sector on an even field (Zwalf, 2017). Thus the public sector comparator tries to account for the comparative advantage the government has in implementing a project as opposed to P3.

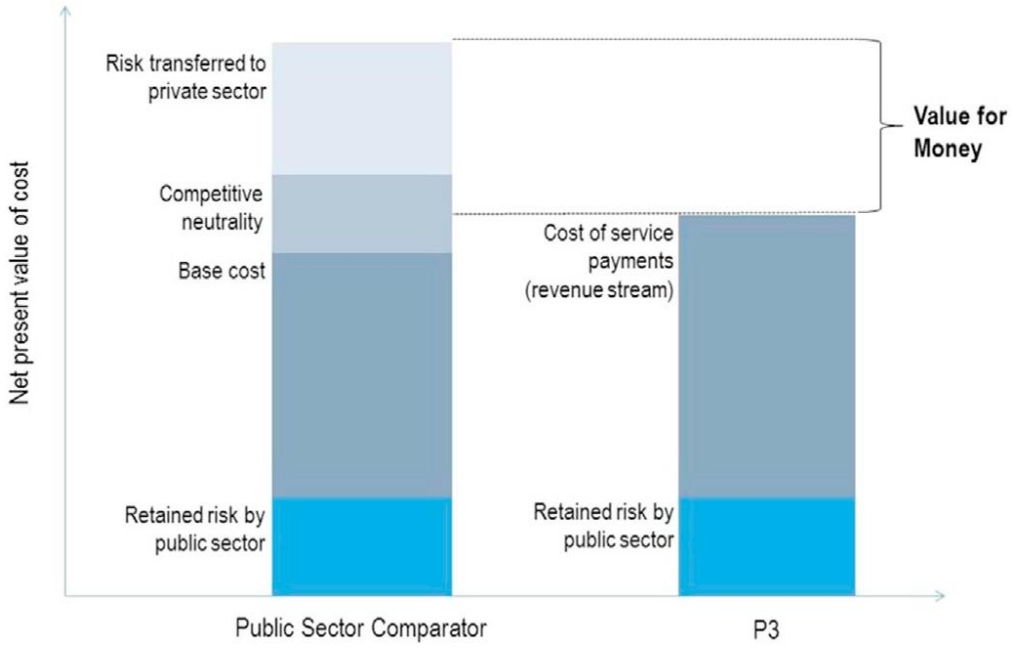

Figure 11 The PSC vs. the P3 model in the VfM approach (Kweun et al., 2017)

In addition to quantitative elements of a VfM analysis, there is also a need to evaluate the non-quantifiable aspects of the projects. The Federal Highway Administration has suggested examining the following qualitative components as important for VfM analysis: the speed that a project can be implemented, availability of institutional and public support for the P3, the public sector's ability to assess P3 performance as well as the financial benefits of the P3 projects and the current macroeconomic state of the economy to see if it could sustain P3 delivery (FHWA, 2012).

4.4.6.2 California Value for Money Practice

In California, despite passing key P3 legislation, there are no established guidelines to ensure proper VfM implementation. Value for money analysis is only mentioned once in the P3 guidelines and in a non-binding context. The guidelines suggest using a value for money analysis as a screening tool along with other undefined tools for the selection and screening process (Markd et al., 2015). The framework conducts the P3 at the project selection stage. They do not mention the VfM analysis in detail. An option of Public Sector Comparator is also discussed in order to conduct Value for Money analysis along with the completion of a reference case. This analysis is conducted at the project selection stage. VfM analysis is not stressed upon and the entire idea of financial comparison among different delivery methods and proposers remains rather ambiguous and less structured.

4.4.6.3 Colorado Value for Money Practice

Colorado conducts Value for Money analysis through public sector comparator by comparing how much the project would cost in a P3 as opposed to a traditional public sector funded delivery method. Colorado conducts VfM thrice and updates the initial VfM at every stage. The initial VfM analysis is conducted at the following steps: project development, prior to project selection, and prior to the financial close (RS&H & Clary Consulting, 2016).

4.4.6.4 Florida Value for Money Practice

Florida has a similar VfM to Virginia. The Florida Department of Transportation (FDOT) decides what a proposed project's cost-effectiveness and public benefit will be before beginning the procurement process. After looking over proposals, FDOT selects the proposal that they deem to most closely fit with the public, and its own, interests. Once a proposal is selected,

the analysis of cost-effectiveness and public benefit is then re-run to more closely reflect the terms of the contract in question. (FHWA, 2011)

4.4.6.5 Texas Value for Money Practice

Texas performs a shadow bid analysis. In this analysis, the costs incurred by the P3 estimates are compared to the P3 projects. However, the analysis also depends upon the nature of the project and TxDOT develops evaluation criteria based on the nature of the project (Barutha, 2016).

TxDOT also performs market evaluation, which estimates the revenue earned by a prospective project, by estimating the amount of money the private money would pay and subtracting it from public subsidies to the project. The flows estimated take into consideration both qualitative and quantitative aspects of the project in coming up with estimates. If the evaluation is beneficial for the state, then the P3 project is undertaken (FHWA, 2011):

4.4.6.6 Virginia Value for Money Practice

Virginia, on the other hand, conducts P3 by comparing its cost to other possibilities of implementing the project, including those traditionally done by the public sector. PPTA has issued guidelines in this regard. The prospective valuation of the P3 project is compared with its cost under traditional procurement methods (Chen, 2013). This initial VfM is further updated by PPTA after getting further feedback for the input proposals. The VfM methodology also varies by the project under consideration. Another update to the existing VfM is done later by the PPTA, comparing the VDOT's P3 evaluations with private parties' P3 proposals. In the end, the P3 proposals are evaluated to assess if they will benefit the state (FHWA, 2011).

4.4.6.7 Summary of VfM implementation by the States

Different states demonstrated some variation in their implementation of VfM analysis. Three of the states have a standard value for money practice: Virginia, Colorado, and Florida utilize a public sector comparator where the P3 bids are weighed against traditional public funding. In Texas, on the other hand, the P3 analysis is conducted through the shadow-bidding process whereby the government predicts how much the project would cost as a private contractor and compares this amount with the P3. In California, there is no clear mechanism at all for P3 Value for Money Analysis, meaning there is no standardized method to conduct it.

Both Virginia and Texas do different versions of VfM analysis. In Texas, a shadow bid proposer considers government making a prospective bid that government thinks a hypothetical private party is making. On the other hand, in traditional VfM analysis, the government compares the cost from P3 projects from other traditional methods of conducting the project like a complete government-managed P3 project. However, both of them in the end are attempting to compare if P3 projects are feasible compared to other prospective delivery methods.

4.5 SUMMARY OF P3 FRAMEWORK OVERVIEW

Overall in this chapter, the researcher discussed the P3 implementation framework in five states (Colorado, Florida, California, Texas, and Virginia). Overall the framework analysis suggests that state practices vary across the country. States vary with regards to their VfM practices, decision-making structures, amount of public involvement, solicited and unsolicited proposals as well as termination rights. Table 21 summarizes the P3 framework in terms of the critical decision-making points as well as the P3 implementation process. However, among these highly varying practices, the researcher seeks to assess which practices are better as a standardized practice. To assess this, in the next phase of the research, the researcher solicited opinions from the leading P3 experts from the public, private, and academic fields.

The P3 framework assists the researcher in developing survey questions that will evaluate the current P3 implementation process and help develop a more robust and efficient framework. Based on this framework, and an extensive literature review, the researcher developed survey questions to ask P3 policymakers about their perspectives about the P3 best practices. More details about the survey are discussed in Chapter 7, which details the survey questionnaire as well as the survey results.

Table 21 Table developed by the researcher from the content analysis of the five states' DOT frameworks (Caltrans, 2013; Department of Management Service, 2014; PL, 2017; Pula, 2016; RS&H & Clary Consulting, 2016; TFC, 2015; The Florida Senate, 2018b, 2018a; TxDOT, 2012)

	California	Colorado	Florida	Texas	Virginia
Decision Making	California Transportation Commission (CTC) makes P3 project selection in public meeting. CALTRANS/RTA makes final partner selection. Public Infrastructure Advisory Commission (PIAC) has an advisory role.	HPTE, CDOT, and Joint Team are responsible for decision making within the P3 implementation in Colorado. Depending upon the stage of the process, either HPTE or CDOT makes decisions. On other occasions, both of them combine for decision making	The main decision-maker is the governor of the state	The Planning and Real Estate Management Division are responsible for negotiating any interim or comprehensive agreement. Texas Facilities Commission Makes the final decision regarding P3 allocation at the public meeting with advice from Public Advisory Commission.	The steering committee decides whether to forward a P3 based on VAP3 recommendations. VAP3 with relevant agency develops the P3 project. The agency endorses the final proposer based on recommendations of the oversight committee.
P3 Unit	In California, P3 is managed internally by the Caltrans through a P3 Program. Caltrans P3 Program can be considered as a P3 Coordination office that implements P3 with the help of the finance and planning offices. Similarly, California also created a dedicated P3 advisory office, PIAC, but its impact is limited in scope as it only has an advisory role.	In Colorado, P3 is conducted by OMPD, which was established as an integrated effort between HPTE (Higher Performance Transportation Enterprise) and Colorado DOT.	Florida does not have a dedicated P3 office. However, the Office of Construction and Office of Project Finance jointly act as the P3 unit where they manage and procure P 3 projects	DOT has established a Strategic Projects Division to oversee procurement policies, right-of-way acquisition, and to support activities for public-private partnership agreements, CDAs, P3 Guidance and Coordination units. Yet, P3 procurement management is still done by the DOT internal resources. Texas Facilities Commission is responsible for using P3 in Public facilities	Virginia has a separate P3 implementation unit that is involved in all P3 aspects. Virginia P3 is a dedicated public P3 unit which is responsible for developing and implementing a statewide program for transportation P3s. Virginia P3 reports to the Virginia Department of Transportation (VDOT).
Transparency	Proposals will be confidential. Every person involved in the process shall sign a confidentiality and nondisclosure agreement. The Executive Summary may be made a public document and I have posted on the Department's P3 website.	Subject to the Colorado Open Records Act (CORA). State of Colorado makes it compulsory that at least 3 Public Hearings be held during the initial stages of the P3 project to ensure transparency in the process.	The transparency is insured in Florida in a slightly formal and systematic manner. The number of public offices involved and the emphasis on public interest act as a mechanism for transparency. The state allows public involvement, but it is not necessary.	Information needs to be put on the website except for only confidential information. Also available under freedom of information acts.	Different phases of the project procurement process are posted online allows for transparency of the awarding process.
Unsolicited Proposals	The private interested party will have to bear all the cost of the processing of the unsolicited proposal.	Unsolicited Proposals are also allowed. The HPTE Director may require that an additional fee, beyond the mandatory $1,000 be paid by the private team that submits the unsolicited proposal to cover the cost of providing the due diligence review of the unsolicited proposal.	Florida allows submission of unsolicited proposals. The proposer has to pay $50,000 for the unsolicited proposal. The department can also ask for further money for the unsolicited proposal	The proposing party has to pay $100,000 with the unsolicited proposal. Other parties are also encouraged to compete. The department posts details on its website to encourage competitive bids. The executive director conducts a conceptual evaluation and gives notice to the public before approval.	Private Entities interested in submitting an unsolicited proposal are required to pay a non-refundable, non-negotiable Proposal Review Fee of $50,000 at the time of submitting the Unsolicited Proposal to the Agency.
Payment Mechanisms	The CTC resolution G-09-13 authorize the finance of P3 project using the availability payment mechanism or the user fee, also known as the user-pay mechanism.	A variety of financing models including operating concession agreements, user fee-based project financing, availability payment, and design-build contracting, etc. are available.	The 2018 Florida Statute 334.30 permits that the private entity impose tolls, also known as user-pay as a payment mechanism. The statutes also allow the use of availability payments.	The Texas facility commission allows all revenue streams but do not specify the availability payment mechanism; however, it allows for user fee payments.	Tolls as well as government payments for programs that do not collect tolls
Levels of decision making and what decisions	CTC- Project Identification Caltrans- Project Development & Procurement.	CDOT- Screens and Selects P3 projects. HPTE- Selects the preferred project	The Governor has the final decision-making authority while the Department of Transportation is the central P3 implementation authority represented by the office of construction with the support of the Office of project finance	Texas Facilities Commission- Makes Final Decision. It's Planning, and Real Estate Management Division researches the P3 and makes any comprehensive agreement.	The Agency Administrator has the responsibility and legal authority to make decisions on commercial and contractual terms related to the P3 projects within the relevant transportation agency. Based on the results of the VAP3's Detail-Level Screening Report, the PPTA Steering Committee will make a recommendation on whether a project should advance to the P3 project development stage.

	California	Colorado	Florida	Texas	Virginia
How many agencies involved in making decisions	3 (California Transportation Commission) makes project selection. CALTRANS/RTA make decisions regarding implementing partners.	CDOT has ultimate responsibility for the project's scope. The HPTE Director, in coordination with the Region Director, will have ultimate responsibility for the day-to-day direction of the P3 Project Development Stage	None. As most of the process is administered by the state legislature and the Governor.	Texas Facilities Commission	VDOT P3 to finally vet the partner. Steering Committee to decide on the P3 projects.
Is it transportation only or open to all public facilities	Transportation Only	Transportation Only	All Public Facilities	All Public Facilities	Transportation Only
Value for Money Practices	Review of the proposal will identify whether the Proposer has shown that adopting the P3 approach will provide more financial advantage to the state in comparison to other delivery methods.	VfM analysis is done at all major steps during the process of the P3 project that is proposed. P3 approach will be compared with other methods to produce the best value analysis in order to establish whether the P3 delivery method is more beneficial and cost-productive in comparison to other methods,	Florida requires that the Florida Department of Transportation (FDOT) determine the proposed project's cost-effectiveness and public benefit prior to moving ahead with the procurement. FDOT will then evaluate the proposals and select the one that best serves FDOT's and the public's interests.	In, Texas the P3 analysis is conducted through the shadow-bidding process whereby the government predicts how much the project would cost as a private contractor and compares the P3 bids with it.	Virginia conducts P3 by comparing its cost to other possibilities of implementing project including that done by the public sector. The VfM estimate is updated at every step of the process to get a more accurate estimate of P3 cost.

Chapter 5. THE POLITICAL INFLUENCE ON P3 PROJECTS

5.1 INTRODUCTION

Politics plays a significant role in the implementation process of P3s. While financial issues do exist in P3 implementation, the main issue that they face today is that of political resistance to them (Kim, 2014). Unlike newly emerging developing countries where the system is highly fluctuating, the US has a stable democratic system where governments are rarely overthrown, and the governments only change through periodic elections. Moreover, most institutions like DOT continue to operate despite changes in the ruling party. However, even in countries like the US, political risks and interference still affect the P3 process (Steinmo & Tolbert, 1998). This chapter sheds light on some of these issues and gives some insights into possible ways to ameliorate these risks to ensure a robust and smooth implementation of P3 projects.

The political influence on P3 projects is one of the issues that is often mentioned throughout the literature review and the background over the implementation of P3 projects. A question about political influence in the survey Framework for the Implementation Process of Public-Private Partnerships (P3s) in Highway Projects, conducted in this research work, found that 57 percent of the respondents have agreed that P3 projects have been politicized and rejected even when they are a viable option.

Therefore, this chapter is based on a literature review of political issues, and has been supplemented by interviews of top managerial officials from nineteen states in the US who have experience conducting P3s as illustrated in Table 22.

Table 22 list of the participating states

Affiliation	State
Public	Alabama
Public	Alaska
Public	Arizona
Public	California
Private	Colorado
Public	Delaware
Private	Florida
Public	Georgia
Private	Maryland
Public	Michigan
Public	Montana
Public	New Hampshire
Public	New Jersey
Private	Pennsylvania
Public	South Dakota
Private	Texas
Public	Virginia
Public	Washington
Public	Washington, DC

5.2 P3 POLITICAL BACKGROUND

P3s' project implementations are often affected by politics. The integration of the private sector with the public sector often involves multiple stakeholders that are not used to working with the private sector. In particular, interest groups like labor unions may want to politicize P3 projects as they are directly affected by them (Marques, 2017). Similarly, P3 projects involve streamlining projects that have traditionally been done through public money. These projects are also large in scope, thus affecting multiple constituencies and leading to a higher likelihood that there would be politics involved in the P3 allocation process (Whiteside, 2012).

P3s are also often used by politicians to achieve their political gains as they help deliver short-term and highly visible P3 projects. Hellowell and Boardman (2016) argue that politicians are drawn to P3s for resolving short-term infrastructure crises. However, the lack of focus on

long-term financial feasibility of P3 projects often means that they can harm the government budget in the long-term (Willems, Dooren, & Hurk, 2017).

Likewise, very often, politicians refrain from engaging in P3 projects if they deem that these projects may hurt their political prospects. In particular, they may refrain from long-term investment and potentially profitable P3 projects if they believe that one of their main constituencies may become adversely affected by the project. (Bourne, 2017).

Therefore, politics affects P3s as on the one hand; politicians may end up opting for sub-optimal P3 projects for short-term political gains. They may also shun away from financially feasible projects if they affect their constituencies and thus affect their political position.

Depoliticization has been proposed as a method to keep politics away from P3 projects. Depoliticization includes the process of displacing decision making away from elected politicians as well as the increasing exercise of power by non-state actors. There are various definitions of depoliticization in the literature. It is defined by Flinders and Wood as "the denial of political contingency and the transfer of functions away from elected politicians" (2014, p. 135). Therefore, for them it is the removal of decision-making from politicians and giving it to government officials. Likewise, Hay (2014, p. 302) defines depoliticization as "the process of erasing the politically contested character of governing." Therefore, depoliticization removes the disagreements and contestations that are part and parcel of any political process from decision-making and makes it more of a technocratic as opposed to political decision. On the other hand, Peter Burnham (2001, p. 127) connects depoliticization to a particular governing strategy which "plac[es] at one remove the political character of decision-making." Thus he agrees with other definitions of depoliticization in that it removes the disagreements and political nature of deci-

sion making. Therefore, based on these definitions, the researcher defines depoliticization broadly as a method to remove politics from the selection of optimal P3 projects.

5.3 P3 Politics Survey Results

5.3.1 *Political Influence*

Interestingly, while it seems that political processes affect the P3 process, there is no clear consensus amongst the respondents about whether politicians should be removed from the P3 allocation process.

5.3.1.1 In favor of Political Influence

One respondent argued, "If the politicians are the ones providing the financing, i.e., Congress with federal funds, then yes they will expect and should have a say." Another respondent agreed that in the current system, which is based on public accountability, deciding the project only on economic analysis may not be practical ("Should leave that to be determined on economic analysis, but may not be practical."). Another respondent agreed that it might not be practical as "you cannot separate them due to the need for P3 laws and how infrastructure has become a political issue, both local and national." Another respondent argues that politicians are elected to represent their constituents, and they should have a say in anything that affects those constituents. Others thought that politicians should be educated more about P3 projects: "Politicians always have a say. They just need to be educated."

5.3.1.2 Against Political Influence

Others argued that the politicians should be involved in the legislation and the policy-making, but the P3 allocation process should be left to the government officials. One respondent said, "Politicians should provide guidance by statute and regulations, and ideally should promote

structures of governance that foster transparency and accountability. The staff leadership should be encouraged/afforded the latitude to be [sic] the best knowledge to the table, within their governance structure, and promote decisions that consider all the appropriate information, not just one area." Another respondent argued, "Politicians just need to pass laws making it legal and then get out of the way." Others agreed that it would be better if the politicians are not involved in the process, but before that can happen, it is essential to have a robust evaluation system established to evaluate P3 projects. They argued, "Yes, but only if a strong evaluation process has been established. Further, federal IRS regulations should require a P3 analysis for any capital project where municipal bonds are being considered." Another respondent argued, "There should be a fairly objective process in place to determine when P3 or any delivery tool is used. Value for money is one part of the selection process."

Therefore, overall the respondents agreed that as the P3 is overall an inherently political project where many different stakeholders and public money is involved, the politicians are likely going to be involved in the process in some manner. In the current US democratic system, it may be impractical to remove public representatives from the entire P3 allocation project.

5.3.2 *Depoliticizing P3s*

However, on the issues of depoliticizing P3s, while the respondents agreed that it might be infeasible to remove politicians from the P3 process entirely, attempts should be made to increase the depoliticization of P3s. For instance, one respondent argued that "It is unlikely that P3s will be completely de-politicized; however, processes can be implemented to minimize its impacts."

Overall, there was a consensus that steps can be taken to reduce the impact of politics on P3s. However, the respondents disagreed on what steps need to be taken to depoliticize P3s. One

respondent argued that establishing a centralized P3 unit can help in depoliticizing P3s. They argued, “I think P3 Units/Offices are established for this purpose, and they act on behalf of the public stakeholders to ensure such deals are in fact, beneficial to the public. I think they are meant to be bipartisan and to objectively evaluate projects with the public in mind. P3s are a strong focus because the needs are greater than the funding available to deliver and maintain vital infrastructure assets. P3s offer an innovative solution to this problem. As P3 offices and practices evolve, so will the clarity and effectiveness of such practices. Also, these P3 offices would benefit from sister offices throughout the country, as well as international."

On the other hand, other respondents argued that clear policies would help de-politicize the P3 process. One respondent explained, “Set up a selection process and criteria” and an “objective criteria to clearly evaluate the P3 process.” Another respondent argued that business leaders should be involved in the P3 adjudication process, while another suggested that the senior officials of the DOT should adjudicate the P3 process to depoliticize it.

Therefore, while the respondents agreed overall that P3 is inherently a political process and will, therefore, require some level of political involvement, they agreed that steps could be taken to reduce the overall influence of politicians in the process. They supposed that this could be achieved by creating a more robust and institutionalized P3 process system through dedicated P3 units as well as having more clear and objective criteria for selecting P3s, reducing the need for politics in the process.

5.3.3 *Lack of a Coherent Policy for P3s*

Previous literature suggests that there is often a lack of comprehensive legislation for P3s in the US, which often leads to the politicization of these projects. For instance, research suggests that there is often no coherent policy for P3s across the US (Kim, 2014). All 50 states have

different political cultures and regulations with regards to P3s, while many states do not currently even have a P3 regulatory framework. As a consequence, the states often engage in individual P3 projects without feeling the need to create a comprehensive P3 framework guideline (Bennon et al, 2018). There is also often a substantial disjuncture between the executive and legislative branches on P3 issues. Very often, there is no clear P3 enabling legislation in a state that clarifies the P3 protocols, the parties involved, and the proper methods to conduct P3s (Faegre & Miller, 2017).

This lack of coherence means that while one government can be very supportive of P3, the next government can curtail the same measures, thus increasing political risk and uncertainty about P3s among the implementation partners (Aon, 2018). The lack of legal frameworks may affect the stability of P3 programs as new governments may curtail the efforts of the previous regimes. Thus scholars suggest that more P3 legislation is required to make a comprehensive P3 framework, while also reducing the political risk in conducting P3s.

Interestingly, most respondents did not consider that more P3 legislation is needed to reduce the political risks of P3s. In fact, some of them thought that more legislation could negatively affect P3s. For instance, a respondent from South Dakota said “Limited. Again, with limited use - legislation may not be practical and could be deemed as a considered negative.” Others thought that there is sufficient legislation available but not enough political will to implement it. A respondent from Arizona said “Yes, Arizona has a very good P3 law, but no real support to implement.”

Other respondents suggested that there is always room for improvement of P3 legislation. For instance, a respondent from Washington argued that there is significant room for improve-

ment in the current legal framework. Another respondent suggested that one possibility to resolve this issue is to have more specific legislation to address the problems of P3s.

Thus, according to the respondents, there seems to be sufficient P3 legislation. However, there is always room for improvement, and therefore some additional P3 legislation may help in the process. It can be concluded that there are too many aspects that make it difficult to characterize the political influence on P3 and how it can be addressed. Legislation alone will not fix the problem as there should be education efforts to the general public and the public officials about the benefits of P3s to ensure a more robust and seamless P3 implementation process.

5.3.4 *Public Opinions about P3s*

P3 projects are still in their infancy in the U.S., and the general public is not often aware of their details. In general, public transportation has always been the government's forte in the US, and moving these projects to the private sector can be seen as an unwelcome change. Most respondents agreed that public opinions affect P3 implementation in the US. As a result of negative public opinions about P3s, politicians may not engage in a P3 project that is sound on paper.

Overall, respondents to the survey agreed that there is often negative public opinions about the P3s in the US. The respondent from Arizona argued, "Arizona has a number of possible P3 opportunities, but politically we have not moved forward with solicitations due to political and public negativity towards paying tolls/fees for infrastructure." Determination of funding or financing alternatives inherently requires political support. Another respondent argued, "Without political support for P3 projects that generate some of the revenue to construct, agency directors are not going to put themselves in jeopardy of losing their position by pushing for a comprehensive P3 program." A respondent from Washington State argues that "Certain Washington legislators are resistant to P3's if the project is perceived to have an adverse impact on their constit-

uency." A respondent from North Carolina similarly noted that a misunderstanding of project benefits and misuse of project facts by some in the local community led to a political stoppage of project I-77 North Carolina.

5.3.4.1 Reasons for Negative Public Opinions

One reason for resistance to P3 projects is the tradition of heavily subsidized public infrastructure projects in the US (PEW, 2015). Most consumers are accustomed to free transportation highways which are indirectly financed by their taxes. Thus, the public is often resistant to P3 projects if they have to pay tolls and public fees for using P3 projects (Henebery-Phelan, 2017). Consequently, there is often suspicion about the usage of P3s, and this suspicion often leads to staunch political opposition.

As an illustration, payment for tolls for the State Route 91 Express Lanes (SR91) led to considerable resistance among the public. It was the first P3 project launched in California (Ni, 2012). It is a freeway that spans from Riverside County to northern Orange County. It was envisaged as a P3 project to reduce traffic congestion (Gargan, 2000).

For the first year, the SR91 P3 project was widely considered a success with high public satisfaction. However, the project has faced several issues ever since. Tolls on the express lanes varied from $1.00 to $4.75 depending on the time, direction, and mode of travel. Since California historically has had free public highways, some citizens were not happy with having to pay tolls to use the project. This issue of tolls led to the creation of a widely utilized media narrative portraying P3 as a clash between greedy private interests and public interests. The state was accused of failing in its duty to protect the traveling public (Gargan, 2000). All of these media reports created greater suspicion about the utility of P3 projects to enhance public infrastructure in California.

Respondents to the Political Influence on P3s interview from Arizona, Washington, Virginia, Delaware, and Washington D.C. agree that tolls create negative reaction amongst the public. For instance, the respondent from Washington D.C. explains that "I-77 Managed Lanes P3 in the northern Charlotte, NC suburbs has been opposed by citizens who don't want to pay tolls. Although they may have criticized the P3 delivery approach (there's no downside to spreading fear of foreign investment when you're trying to raise opposition), the core of their anger has been stoked by the tolls." The tolls are one of the main reasons the general public have an adverse opinion about P3 implementations, and which needs to be addressed by more education and programs that shed light on the benefits that come from implementing the P3 option.

5.3.4.2 Anti-Privatization Sentiment

Another main reason for opposition to P3s is the issue of privatization in the US. While technically the government retains ownership of P3 projects, there is also a wide-scale perception that P3s also lead to the transfer of government responsibilities to the private sector, which is often deemed corrupt and more driven by profit than by the public interest. In particular, there is often resistance to P3 projects based on the framework that the government is contracting out essential infrastructure to the private sector for the next decade or so. The long concession periods means that the sovereignty of the state is being called into question (CDIAC, 2007). The respondent from Florida agreed that much of the opposition to P3 comes because it is deemed as a privatization of the transportation sector "Yes, it has been politicized as 'Privatization.' Good P3 is not....it includes all sectors." Another respondent from Delaware displayed this suspicion of the private sector, saying "It is always questionable what the private partners will leave to the public at the end of the agreement term. I have seen deals proposed that seem to be very heavy on public investment with most or all of the returns going to the private parties."

A good example of opposition to P3s on this ground is that of Georgia. There is a strong anti-privatization sentiment among the electorate in Georgia, making politicians hesitant to get involved in P3 projects as they consider it a risk to their political futures. As an illustration, the Georgia DOT in 2012 canceled the "West by Northwest" project, the first P3 toll road project for the state after nine years of work on the project. The reasons cited by Governor Nathan Deal for the cancellation were not about the merits of the P3 project, but rather that it was giving away Georgia's sovereignty to private contractors (Glynn, 2013).

This lack of awareness about P3 potential is also found in the DOT sectors who often have very little information about P3s. As a result, even the DOT officials consider that P3 could lead to the detriment of the transportation sector across the US; however, the surveys conducted in this research suggest that the public sector perspective about P3 as a delivery method has shifted to a more positive prospect, as was discussed in Chapter 4. As an illustration, a 2010 survey of local officials said that the state could do a better job of constructing infrastructure than P3s as the private sector may be more driven by profit than taking proper care of the P3s (Kim, 2014).

This issue of whether P3s serve the public interest as they give away some of the state's control to private entities is a common theme across the US. Like Georgia, Texas politicians have expressed similar concerns that P3s will hand over the states' control of vital resources to the private sector, with a particularly high level of anxiety about foreign ownership of P3 projects (Bialick, 2014).

Thus, there is still a high level of public suspicion towards P3 projects overall. In particular, general public opinion holds that the P3 project is leading to the privatization of public infrastructure projects. These anxieties get augmented in the case of foreign ownership of P3 projects.

This public opinion often makes politicians hesitant to implement P3 projects as they think about their political fortunes and are unwilling to undertake unpopular causes.

5.3.5 *Improving Public Opinion: Public Outreach*

Considering the importance the respondents put on public opinion about P3s, the next questions in the survey conducted by this research asked about how public opinions about P3s can be improved. Overall, the respondents varied in their answers, but overall three main themes emerged: 1) more education and public outreach, 2) more standardized and transparent P3 mechanisms, and 3) more public engagement in the P3 process.

Some respondents stressed that there is more need to educate the public about the P3 process. The respondent from Maryland argued "Consistent education and having people understand that P3s are an effective tool to implement project. Highlighting successful P3s is also important. Also, concessionaires must continue to engage in education and the legislative process during the full term of P3 projects." Another respondent from Washington State argued that officials need to "Revise the current statutes and educate public and politicians." Also, a respondent from Texas states that what is needed are "Political champions who are willing to discuss project benefits and educate the public to advantages of P3 in a way that motorists understand the advancement of travel choices and accelerating needed projects that would not exist otherwise." Thus, respondents argued that for better public opinions about the P3s, there needs to be more outreach to the general public.

Other respondents argued that similar to more public education, there should be more opportunities for the public to engage with P3 projects. For instance, the respondent from Virginia cited successful public engagement with P3s in their state: "In Virginia, the development of P3 projects includes numerous public engagement opportunities for stakeholder involvement during

the identification, development, procurement and implementation phases. This has proved to significantly positively impact the successful implementation of Virginia's P3 program and its wide acceptance as a procurement option. Stakeholders have a wide range of opportunities to provide input and comments during the entire lifecycle of a project, including opportunities specific to P3 projects." They suggested that a similar model of public engagement with P3 projects should be followed across the country to allow the public to better understand and engage with the P3 processes.

A third possible way that was suggested by respondents included having a more robust and transparent P3 implementation process with increased oversight. One respondent argued that "P3s might be more widely accepted politically if an appropriate oversight mechanism for user fees was crafted." Another respondent argued that P3s might get more public acceptance if there was "Legislative, financial, resources allocation, and procedural framework to promote and practice the P3." Another respondent also emphasized the need for greater transparency in the process, "Develop a robust process for project selection to ensure the correct projects are selected for this tool. An open and transparent procurement process would need to be implemented. Then demonstrate that the anticipated benefits of P3 have been achieved."

5.4 CONCLUSION

A summary of the main views regarding political influence from the perspective of the top public state officials can be stated as follows:

- As the P3 process involves multiple stakeholders and public money, public representatives cannot be completely barred from the process. Thus, there will be some level of political involvement in P3 projects.
- However, the overall political involvement in the day-to-day adjudication of P3 processes can be reduced. This can be best achieved by having a robust and transparent P3 system.
- Most respondents agree that sufficient P3 legislation exists. However, some respondents argued that there is always room for more P3 legislation.
- The main deterrent for politicians to engage with P3s is that of negative public opinion, which could be addressed by more public education, outreach, awareness, and involvement.
- The general public resists having to pay tolls for P3s. The public also thinks that P3 projects are a form of privatization, and thus, anti-privatization sentiment affects P3 projects.
- To encourage politicians to engage with P3s, public opinion about P3s need to improve. It can be achieved by more extensive public education, as well as engagement with the general public in different parts of P3 processes. Public trust can also increase by making the P3 process more robust and transparent.

Chapter 6. **SURVEY RESULTS AND STATS**

The researcher conducted a survey titled "Framework for the Implementation Process of Public-Private Partnerships (P3s) in Highway Projects," to help assess how experts in the industry, academia, and the private sector evaluate the recommendations for the P3 implementation framework. This chapter details the survey methodology, targeted demographics, and statistical analysis, followed by an in-depth analysis of the survey results.

6.1 SURVEY DESCRIPTION

This survey was a moderately long survey with 16 questions divided into four parts as follows:

1- Part one included a question about the participant's affiliation.

2- Part two covered the topic of P3 delivery perception and the acceptability of the P3 option amongst the different targeted demographics.

3- Part three delved in the legislation of P3 and what needs to be considered for a successful P3 implementation process from a legislative perspective.

4- Part four covered the P3 framework implementation and the main components of P3 units or P3 office functions. The survey had some other questions that covered different topics but did not go into extensive detail.

The survey respondents were asked to rate each question using a scale of 1-5 (1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree, and 5 Strongly Agree). The complete survey can be found in Appendix A, and Appendix B contains the supporting statistics for all demographics.

The survey was sent to the AASHTO Standing Committee on Highways, and the following Transportation Research Board (TRB) committees:

1- The TRB Standing Committee on Transportation Economics

2- The TRB Standing Committee on Revenue and Finance

3- The TRB Standing Committee on Construction Management

4- The TRB Standing Committee on Project Delivery Methods

The mailing list of the survey contained about 250 contacts, and the response rate was at approximately twenty-five percent, with almost sixty respondents.

6.2 SURVEY DEMOGRAPHICS

The survey was open for participation from April 2019 to mid-May 2019. The survey aimed to solicit and consolidate the opinions of educated experts in the industry on issues related to the development of an implementation framework for the use of P3 as an alternative project delivery system for a department of transportation.

A total of 58 respondents participated in the survey, of which two thirds (35) were from the public sector, (15) from the private sector, and (8) respondents were university-affiliated as illustrated in Table 23 below. As is apparent from Table 23, the largest proportion of respondents is from the public sector. This was done deliberately considering the leverage they have on the implementation of P3 highway projects.

Table 23 Survey general demographics

	Frequency	Percent
Academic	8	13.8
Private	15	25.9
Public	35	60.3
Total	58	100.0

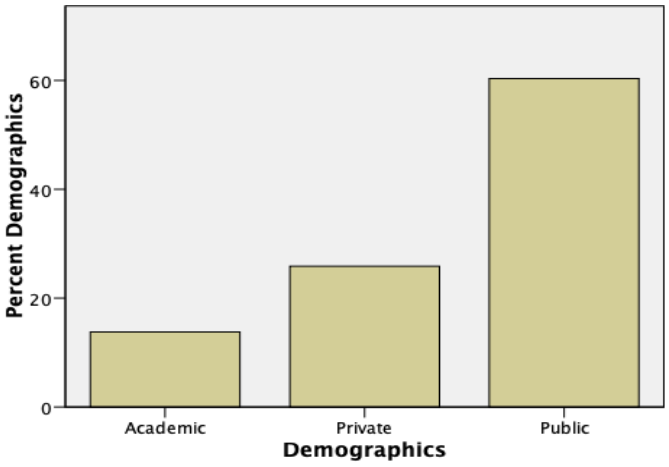

Figure 12 Demographic distribution

6.3 PILOT TESTING

Prior to sending out the survey, it was essential to test the questionnaire to assess how well it measures the tested factors and how the responses will be interpreted. Therefore, the researcher piloted the survey aiming to polish the survey questions, as well as assess their reliability and validity (Lyon, Möllering, & Saunders, 2012).

In the pilot stage, the researcher shared the survey with experts in the field of survey research and P3 projects, as well as 5 respondents from the public sector, to solicit their feedback about the survey. Furthermore, the researcher measured the survey's validity by asking these experts how well the survey questions measured the concepts in regards to the P3 implementation process (Lyon et al., 2012). Furthermore, the survey was sent to these experts to gauge whether they understood the intent of questions posed. If the experts gave an answer that was tangential to the point of a question, the question was re-worded accordingly until they measured the questions that they were meant to answer. For instance, the question of political impact was changed from "Do you think the P3 process is political?" to "Do you think that the P3 process is highly politicized?" Similarly, based on the pilot testing the scale of agreement level was modified from 1-15 to 1-5.

Overall, the respondents in the same sector (for instance public or private sector) did not vary to a high level on questions, which suggested that the survey was reliable. Likewise there was not extremely high variation in the overall responses, which also suggests that the questions were generally reliable (Litwin, 1995).

This survey questionnaire was validated by experts from the industry and academic scholars from the Department of Construction Management, and the Department of Civil & Environmental Engineering at the University of Washington. The respondents were asked to com-

plete the survey, clarify the areas of adjustment and comment on the clarity of the instruction as well as the level of the Likert test, where the survey started with 15 levels of the Likert test but was reduced based on the feedback to a five-level Likert test. Connelly (2008) states that extant literature recommends a pilot study should be about 10% of the targeted sample size for the parent study. Therefore, the pilot test was conducted based on the revised survey questionnaire which included seven participants, (more than 10% of the 50 targeted respondents for the parent sample study) whereas the parent study included 58 participants or respondents. The pilot test demonstrated that the survey was developed properly with no major problems in understanding the questions or instructions.

6.4 STATISTICAL ANALYSIS

The researcher conducted a descriptive analysis that shows the mean, mode, median, and the standard deviation for each of the survey questions. The descriptive analysis assisted in evaluating general trends, but it was not sufficient to evaluate if there were significant differences between the opinions of the surveyed groups (Public sector, Private sector, and Academic Scholars). Thus, the survey results were subjected to the Mann-Whitney U test. The Mann-Whitney U test analyzed the survey responses and showed significant differences in the responses between the public sector and private sector, and between the public sector and the academic-affiliated respondents.

6.4.1 *The assumption for conducting the Mann-Whitney U test*

The Mann-Whitney U test is a nonparametric test that is best used with an ordinal data set such as the Likert test that was used for the survey conducted by the researcher. The Mann-Whitney U test compares the significance of the difference between two independent populations if the dependent variable is ordinal, and the two are not normally distributed (Sheskin, 2004).

The survey data met all the requirements for using a Mann-Whitney U test; therefore, it was implemented. The Mann-Whitney U Test does not assume that the data is normally distributed, which is one of the main criteria for conducting T-Test. However, the Mann-Whitney U Test gives similar results to the T-test even when the data is normally distributed.

6.5 RESULTS BREAKDOWN

The survey aimed to solicit the input of experts on issues related to the development of an implementation framework for the use of a P3 in the Department of Transportation. As mentioned earlier, some states like Virginia, Florida, and Texas have developed an implementation framework for the P3 system. Currently, state DOTs vary in their use of P3 on several issues, including project delivery, private financing, decision-making, P3 centralization, and public involvement, among others. The following sections explore the survey respondents' perceptions and convictions regarding the P3 implementation of targeted issues.

In summary, there was a general consensus amongst the respondents as follows:

1- The P3 delivery system should be an option for state projects, and it should neither be discouraged nor prohibited.
2- Respondents strongly agreed that the DOT should be the decision-making body for P3s.
3- Strong agreement that P3 processes should be used for all kinds of projects and should not be limited to the transportation sector.
4- Respondents agreed that political processes affect the P3 implementation process.
5- Strong agreement that all kinds of public funds should be available for P3 projects.
6- Respondents agreed that a P3 unit should be involved in all aspects of P3 processes.

Overall, there was a strong agreement among the respondents that P3 projects should be encouraged. Similarly, there was also strong agreement that a centralized P3 body should be established to manage all aspects of P3 projects.

Given below is a detailed account of the different parts of the survey.

6.5.1 *Perceptions*

6.5.1.1 Selection and Value for Money (Q2 & Q3)

The first question (Q2) gauges the respondents' perceptions of P3 delivery systems. A very high number of respondents, 29 out of 58, strongly agreed that P3 should be part of the state DOT delivery system (4.34). There are minor differences between respondent groups, with academics agreeing the least (4.00) when compared to the private sector (4.53) and the public sector (4.34). Only one respondent from the public sector and one respondent from the academic demographic have responded negatively to the issue of Q2 as illustrated below.

The second question (Q3) assesses the respondents' perceptions of VfM. It should be noted that VfM is the method used to assess the feasibility of a P3 project by all the states selected in the current study. Moreover, some states like Virginia and Colorado use VfM at different program stages to update their analysis of the program. The questions in this part addressed several aspects of when a P3 system should be used, and the cases it would be a good option to use. Overall there is a great amount of agreement in almost all questions (mean greater than 4 out of 5).

In response to the use of the VfM as a selection tool (Q3), the respondents were mostly in agreement. The mean for the overall demographics is (4.17) and the standard deviation (0.861) as illustrated in the table below. The private sector respondents were in most agreement as the mean was (4.47) followed by the academic respondents with a mean of (4.25) and the public sector at the least agreement at a mean of (4.03). As the numbers reveal, the respondents agree that the value for money analysis as a selection tool for the implementation process for P3 projects should be part of the selection toolbox for DOTs when selecting a delivery method. It is worth noting that only four respondents from the public sector disagreed with this issue.

In summary, the overwhelming majority of respondents agree that P3s should be employed as part of the DOT delivery system toolbox and that they should be based on VfM analysis.

Table 24 Participant Responses on Selection and VfM (Q2 & Q3)

Questions	Demographics	Mean	N	Std. Deviation
Question 2.P3 as a delivery system should be part of the state DOT delivery systems toolbox; e.g., to be aligned with the design-bid-build (DBB), design-build (DB), and construction management at-risk (CMAR), when selecting a system for a proposed project.	Academic	4.00	8	1.309
	Private	4.53	15	.640
	Public	4.34	35	.838
	Total	4.34	58	.870
Question 3. The selection of a project for a P3 delivery should be based on a value-for-money analysis that compares the project under both P3 and the traditional design-bid-build (DBB) or design-build (DB) and considering the life cycle of the project and considering future operation and maintenance costs and future risks.	Academic	4.25	8	.886
	Private	4.47	15	.516
	Public	4.03	35	.954
	Total	4.17	58	.861

6.5.1.2 Selection and Funding/Financing (Q4, Q5, Q6, & Q7)

Questions 4 through 7 targeted the impact of funding and financing resources on the selection process. The respondents agreed that the financing mechanism alone should not determine whether a P3 delivery system is to be adopted or not. This conclusion was reached by analyzing the survey responses of each of the questions as follows:

The line of questioning started with Q4. The respondents agreed that the use of P3 should not be prohibited or restricted when public money is involved, such as TIFIA and Private Activity Bonds (PABs) as the overall mean of (4.05). However, there were minor disagreements between the respondents, where the public sector agreed the least (3.86) when compared to the private sector (4.47) and the academic sector (4.13). In fact, the public and private sector disagreed significantly ($U = 0.038$, $p \leq 0.10$) on the issue, thus illustrating that there is a significant level of disagreement on the question on the use of public finance between the public and the private sector.

In Q5, the respondents are also in agreement with the need to consider P3 under different circumstances, specifically when public funding is lacking, and the private sector can finance the

P3 project. The mean here is (4.09), and the standard deviation is (0.844). Most respondents (82.8%) agree that P3 delivery with private financing is a valid option for high priority projects with a mean of (4.09). The means amongst all demographics are on the side of agreement; however, it's worthy to note that the academic affiliated (4.38) respondents are the most in favor of this issue whereas the public sector (3.94) had the least favorable view of this issue.

In Q6, the respondents overall agreed that the lack of public funding should not be the only criteria for selecting P3 delivery, and other factors such as the speed of delivery, cost savings, and operational efficiencies should be considered. The total mean for this issue is (4.26), and it ranks as the second most agreed upon issue in this section. However, a closer look at the different demographic groups tells a different story, as the private sector respondents had the highest mean of all demographics with a (4.53), and about 80% answered as "strongly agree." The public sector came second with a mean of (4.26) and the academic sector came at the least agreement with a mean of (3.88). The Mann Whitney test has shown great significance in the responses between the public and private sector ($U= .036$, $p \leq .1$). Again this difference in perspectives may be explained by the private sector incentives to become involved in possible P3 projects.

On the other hand, public officials may be suspicious of private financing or users paying for the P3 projects. Q7 helped further explore the importance of private financing in the selection criteria by isolating this factor and simply ask: if public funds are available, should P3 delivery be considered at all? Q7 results show that respondents did not agree (2.52) on the notion that P3 should not be employed if the state can fund the project itself. This reflects that the respondents are aware that P3 can still be used even if the states have funds to deliver their projects, and that the availability of public funds need not restrict the use of P3 systems. That is because of the

possibility of using the availability payment mechanism, and also, the nature of the P3 delivery system offers advantages other than private financing, such as utilizing the innovative skillset of the private sector for some complex and large projects.

Overall, most respondents do not agree that P3s should be discouraged if they affected local market resources or DOT's control over the project. These findings suggest that there is an overall consensus over the benefits of adopting P3 projects in the states.

Table 25 Participant Responses on Selection and Funding/Financing (Q4, Q5, Q6, & Q7)

Questions	Demographics	Mean	N	Std. Deviation
Question 4. Public finance, if available, is typically cheaper than private finance, however, with the availability of less expensive federal credits means such as TIFIA loans, Private Activity Bonds, etc., the use of P3 system should not be restricted or prohibited	Academic	4.13	8	.835
	Private	4.47	15	.834
	Public	3.86	35	1.089
	Total	4.05	58	1.016
Question 5. If the state does not have enough funds to develop a high-priority needed project, it should allow for its delivery to be investigated using P3 with user-pay and private financing.	Academic	4.38	8	.744
	Private	4.27	15	.594
	Public	3.94	35	.938
	Total	4.09	58	.844
Question 6. The selection of a project for a P3 delivery should not be based only on the need for private finance, i.e., it should account for the speed of delivery, cost savings, operational efficiencies, along with private finance if needed.	Academic	3.88	8	1.356
	Private	4.53	15	1.125
	Public	4.23	35	.770
	Total	4.26	58	.965
Question 7. The selection of a project for a P3 delivery should not be made if the state can fund the project using current revenues, taxes, grants, or user-pay.	Academic	2.88	8	1.458
	Private	2.07	15	1.033
	Public	2.63	35	1.215
	Total	2.52	58	1.217

6.5.1.3 Restriction on P3 (Q8 & Q9)

Q8 and Q9 were framed to investigate the factors that restrict or prohibit the use of P3 delivery systems. The factors presented in both questions are as follows:

1- The total cost of the project

2- The impact on the current staffing use in the DOT

3- The impact on local market resources (e.g., labor)

4- The DOT oversight work during the operation period

5- The DOT's control over the project

In order to accurately capture the respondents' perception of these factors, Q8 asked if these factors *prohibit* the use of P3, whereas Q9 asked if these same factors *discourage* the use of P3. Q8 and Q9 also included open-ended questions for respondents to further expand their opinion regarding the prohibition and restriction of the P3 model.

Overall, the academics were against prohibiting or restricting P3s. However, they had a higher mean agreement of (3.38) and (3.50) for the prohibition and restriction of the P3 option, respectively. The responses to the open-ended questions offer some insight into the main reasons behind such high mean as follows:

1- It reduces DOT control over the project.

2- Lack of transparency

The academic-affiliated respondents also stated that the P3 should not be prohibited nor restricted but that it should be dealt with on a case-by-case basis.

One of the private sector responses was surprisingly concerned with the bias of the private sector in their emphasis on the profit motive and not giving enough attention to its effect on the social environment or community harmony.

The results for Q8 and Q9 are very similar and show that the participants' perspective was slightly affected by the choice of words. Table 26 ranks the most restrictive (Q8) and prohibitive (Q9) factors.

Given the results shown in Table 26 and Table 27, the researcher will attempt to discuss the stats for both questions as a whole. The focus will be on Q8 since it is the extreme case. None of the factors is a major prevailing factor for the respondents to prohibit or discourage the use of P3 as a delivery method. However, the results show that there are some differences in the responses between the public and private perceptions. For example, when asked about reduced

DOT control as a prohibitive factor, the public sector has a more favorable view (2.37) compared to the private sector (1.73), indicating that they are more likely to see the use of P3 as a reducing factor for their ability to control the project, while the private sector is likely less inclined to think that it would be an issue.

Table 26 Participant Responses and rankings Restriction on P3 (Q8 & Q9)

Factor	Q8		Q9	
	Mean	Rank	Mean	Rank
reduces the DOT control over the project	2.34	1	2.43	1
negatively impact the use of local market resources (e.g., labor)	2.31	2	2.36	2
increase the total cost of the project	2.28	3	2.36	3
increases the DOT oversight work during the operation period	2.22	4	2.29	4
negatively impact the current staffing use in the DOT	2.12	5	2.28	5

It is worth mentioning that the researcher also observed a significant difference between the public and the academic sector, as the Mann-Whitney U test is (U=.003, p<.1) where they are on the opposite spectrum. The academic respondent's mean is (3.38), indicating that they think that the DOT's control of the project is reduced when using the P3 model. The Mann Whitney U test shows that the affiliated academic respondents have significant differences in all the factors from the public and the private sector (see Appendix B).

Table 27 Participant Responses on Restriction on P3 (Q8 & Q9)

Questions	Demographics	Mean	N	Std. Deviation
Question 8. The use of P3 for project delivery should be prohibited as it would: a. increase the total cost of the project	Academic	2.50	8	.756
	Private	1.93	15	.961
	Public	2.37	35	.942
	Total	2.28	58	.933
Question 8. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	Academic	2.88	8	.991
	Private	1.80	15	.775
	Public	2.09	35	.887
	Total	2.12	58	.919
Question 8. c. negatively impact the use of local market resources (e.g., labor)	Academic	3.13	8	.641
	Private	2.07	15	1.100
	Public	2.23	35	.843
	Total	2.31	58	.940
Question 8. d. increases the DOT oversight work during the operation period	Academic	3.13	8	1.246
	Private	1.87	15	.915

Questions	Demographics	Mean	N	Std. Deviation
	Public	2.17	35	.857
	Total	2.22	58	.992
Question 8. e. reduces the DOT control over the project	Academic	3.38	8	.518
	Private	1.73	15	.594
	Public	2.37	35	.843
	Total	2.34	58	.890
Question 9. The use of P3 for project delivery should be discouraged as it would: a. increase the total cost of the project	Academic	2.50	8	.756
	Private	2.07	15	1.033
	Public	2.46	35	1.039
	Total	2.36	58	1.003
Question 9. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	Academic	3.00	8	.926
	Private	1.87	15	.915
	Public	2.29	35	1.017
	Total	2.28	58	1.022
Question 9. c. negatively impact the use of local market resources (e.g., labor)	Academic	3.25	8	.707
	Private	2.20	15	1.146
	Public	2.23	35	.808
	Total	2.36	58	.950
Question 9. d. increases the DOT oversight work during the operation period	Academic	3.13	8	1.246
	Private	1.93	15	.961
	Public	2.26	35	.980
	Total	2.29	58	1.060
Question 9. e. reduces the DOT control over the project	Academic	3.50	8	.535
	Private	1.80	15	.676
	Public	2.46	35	1.010
	Total	2.43	58	1.011

6.5.1.4 Decision making (Q10)

In terms of decision-making, namely the governing body responsible for the go/ no go decision, most respondents agree that the post-VfM decision for a project should be the responsibility of the Department of Transportation (DOT). All demographics strongly disagree that the decision should be with the State Treasury Office (2.38). All demographics illustrated strong disagreement, with the public sector having the least agreement at (2.23), followed by the academics at 2.63 and the private sector at (2.93). A similar trend of low agreement was seen on the question of legislation office/committee (2.47) or a committee of treasury and DOT (3.26). These results show that the respondents are more oriented in considering the decision to be based on the technical and economic viability of the projects and to restrict the impact of treasury and legislation in making P3 decisions.

Table 28 Participant Responses Decision making (Q10)

Question 10. If the value-for-money analysis of a project concluded that P3 is a viable and good option, the ultimate decision of pursuing the project using the P3 system should be at the discretion of:	Demographics											
	Academic			Private			Public			Total		
	Mean	Rank	Std. Deviation	Mean	Rank	Std. Deviation	Mean	Rank	Std. Deviation	Mean	Rank	Std. Deviation
a. the state treasury office	2.50	4	.926	2.60	4	.986	2.26	3	.886	2.38	4	.914
b. the state DOT	3.88	1	1.126	4.00	1	.756	4.14	1	.944	4.07	1	.915
c. a committee of both treasury and DOT	3.75	2	.886	3.53	2	.990	3.03	2	1.200	3.26	2	1.133
d. a legislation office/committee	2.63	3	1.408	2.93	3	1.534	2.23	4	1.285	2.47	3	1.379

6.5.1.5 Political influence (Q11)

Q11 asked whether state politics influence P3 delivery decision making. The results show that the private sector is more likely to agree than the public sector ($U=0.057$, $p < 0.10$). These findings suggest that the private sector is more likely to think that political issues influence the adjudication of P3s than the public sector. In general, both sectors agree that the political environment can influence the P3 delivery selection; Chapter 5 discusses the political influence issues in depth.

Table 29 Participant Responses on Political influence (Q11)

Questions	Demographics	Mean	N	Std. Deviation
Question 11. It is generally believed that the approach to the use of P3 is highly politicized; e.g., a project that would be viable under P3 based on a value-for-money would still be rejected because of political gains/losses or political ideology.	Academic	3.75	8	1.282
	Private	3.80	15	1.082
	Public	3.20	35	1.052
	Total	3.43	58	1.110

6.5.2 *P3 Legislative Models (Q12)*

As states become more involved in P3s, more clear legislation regarding P3s is needed. It is particularly important to have laws that address the complexity of large-scale P3 agreements which cut across various public and private entities. These laws can establish the legal framework that governs P3 agreements between existing or newly created state agencies and private industry.

Q12 includes nine sub-questions designed to capture the respondents' perception of successful P3 legislation regarding the following factors:

1- The creation of a specialized P3 office within state DOTs
2- The importance of VfM analysis in assessing P3 projects feasibility and evaluating the contract length of the P3 agreement
3- P3 delivery models such as DBOM, DBFOM, and DBF
4- Acceptable funding resources and financial models (Public vs. Private)
5- Acceptable payment method, e.g., performance and non-performance payments, usage payments
6- Availability of local resources supporting P3 projects

The survey results, illustrated in Table 30, reaffirmed the consensus that P3 legislation should allow the use of all types of P3 models (4.05), and enable the use of public finances for P3 projects (4.00). On the other hand, there is weak agreement on the creation of a P3 office (3.59), the use VfM to assess P3 feasibility (3.76), the use of local resources, and allowing unsolicited proposals (3.55). Overall, the respondents agreed on most aspects of the P3 legislation except for the question of whether the P3 model of a project should be made by a committee of DOT, State/Treasury, and a legislative body for appropriation (2.88).

Table 30 Participant Responses on P3 Legislative Models (Q12)

Questions	Demographics	Mean	N	Std. Deviation
Question 12. A state legislation act for P3 should do the following:	Academic	3.88	8	.641
a. Require the creation within the DOT a state P3 office to work on P3 policy development, project business planning, project procurement process, and post-financial close functions (e.g., performance measurement), but not including project approvals.	Private	4.00	15	.926
	Public	3.34	35	1.235
	Total	3.59	58	1.124
b. Require public agencies to use value-for-money analysis to assess the project feasibility as a P3 project.	Academic	3.50	8	1.512
	Private	4.13	15	.640
	Public	3.66	35	.873
	Total	3.76	58	.942
c. Require that approvals for using P3 model for a project be made by a	Academic	3.25	8	1.035

Questions	Demographics	Mean	N	Std. Deviation
P3 Committee comprised of the DOT, State Treasury/Finance, and a legislative body for appropriations.	Private	3.47	15	1.246
	Public	2.54	35	1.197
	Total	2.88	58	1.244
d. Make it possible to use any P3 models, such as DBOM, DBFOM, DBF, if the project value-for-money analysis justifies that model.	Academic	4.13	8	.991
	Private	4.60	15	.507
	Public	3.80	35	.964
	Total	4.05	58	.926
e. Make it possible to use public finance, private finance, and/or federal credit assistance (e.g., TIFIA loans) if the value-for-money analysis justifies that use.	Academic	4.13	8	.641
	Private	4.33	15	1.047
	Public	3.83	35	1.150
	Total	4.00	58	1.076
f. Provide for P3 contracts to emphasize the use of local resources (e.g., labor, equipment, and material) when possible or justified and establish the mechanisms to do that.	Academic	3.13	8	.641
	Private	3.67	15	1.234
	Public	3.23	35	1.003
	Total	3.33	58	1.033
g. Make it possible to use unsolicited proposals under restricted assessment conditions that maintain public accountability, e.g., if the project is feasible, to require the issuance of RFQ/RFP to the general market.	Academic	3.25	8	1.035
	Private	3.73	15	1.387
	Public	3.54	35	1.039
	Total	3.55	58	1.127
h. Require that the length of the P3 agreement be determined based on the value-for-money analysis.	Academic	3.00	8	1.512
	Private	3.47	15	1.187
	Public	3.43	35	.979
	Total	3.38	58	1.105
i. Provide for the use of any of the various payment types, e.g., performance and non-performance payments, usage payments, as might be determined based on the value-for-money analysis and risk allocation.	Academic	3.50	8	1.309
	Private	4.00	15	.655
	Public	3.71	35	.926
	Total	3.76	58	.924

When looking at the responses of different demographic groups, some interesting trends can be deduced, especially when looking at the differences between the private and public sectors. The following is a summary of these trends:

1- In general, the private sector expressed more interest in establishing a legislative framework for P3 projects. The trend can be seen by comparing the means for both sectors.

2- The public sector responses show caution towards accepting additional responsibilities, e.g. establishing a dedicated P3 office.

3- The private sector leans toward more diversification of P3 funding, models, resources, and project procurement.

Table 31 Public and Private sector Responses on P3 Legislative Models (Q12)

Question 12. A state legislation act for P3 should do the following:	Private	Public
a. Require the creation within the DOT a state P3 office to work on P3 policy development, project business planning, project procurement process, and post-financial close functions (e.g., performance measurement), but not including project approvals.	4.00	3.34
b. Require public agencies to use value-for-money analysis to assess the project feasibility as a P3 project.	4.13	3.66
c. Require that approvals for using P3 model for a project be made by a P3 Committee comprised of the DOT, State Treasury/Finance, and a legislative body for appropriations.	3.47	2.54
d. Make it possible to use any P3 models, such as DBOM, DBFOM, DBF, if the project value-for-money analysis justifies that model.	4.60	3.8
e. Make it possible to use public finance, private finance, and/or federal credit assistance (e.g., TIFIA loans) if the value-for-money analysis justifies that use.	4.33	3.83
f. Provide for P3 contracts to emphasize the use of local resources (e.g., labor, equipment, and material) when possible or justified and establish the mechanisms to do that.	3.67	3.23
g. Make it possible to use unsolicited proposals under restricted assessment conditions that maintain public accountability, e.g., if the project is feasible, to require the issuance of RFQ/RFP to the general market.	3.73	3.54
h. Require that the length of the P3 agreement be determined based on the value-for-money analysis.	3.47	3.43
i. Provide for the use of any of the various payment types, e.g., performance and non-performance payments, usage payments, as might be determined based on the value-for-money analysis and risk allocation.	4.00	3.71

6.5.3 *P3 framework (Q14)*

One of the main success factors for P3 implementation is the availability of a structured P3 framework and a clear delineation of government authority and P3 roles (Aziz & Elmahdy, 2015; Zhang, 2005). This question delves into the major requirements for the development of a successful P3 framework.

A structured P3 framework is necessary as it clearly defines the roles and responsibilities of various public and private bodies. They also clearly lay out the guidelines for choosing P3s, as well as the decision-making bodies involved in the process. In addition, a P3 framework should take the public interest into account, as well as ask if and how the public representatives will be

involved in the process. Q14 includes six sub-questions designed to investigate the respondents' perception of a successful P3 framework. The following table summarizes the ranking, standard deviation, and the mean for each of the main requirement for a P3 framework:

Table 32 Participant Responses and rankings on P3 framework (Q14)

Q14. A framework for using P3 delivery system should provide the following	Academic			Private			Public			Total		
	Mean	Rank	Std. Deviation	Mean	Rank	Std. Deviation	Mean	Rank	Std. Deviation	Mean	Rank	Std. Deviation
a. A responsible public entity, e.g., state DOT P3 office, should be created to be responsible for the P3 delivery.	4.25	2	.707	4.20	2	.561	3.89	3	1.051	4.02	3	.908
b. The framework should be structured such that it would have phases with decision points to proceed or to stop at each phase, e.g., three phases: (1) identification and screening, (2) project analysis and procurement documents, and (3) project procurement	4.00	3	.535	4.20	2	.775	3.94	2	.873	4.02	3	.805
c. Arranged such that the decisions be made by the relevant body, e.g., value-for-money analysis by the DOT, and the phase approval by a P3 Committee.	3.63	5	.518	4.00	3	1.069	3.51	4	.853	3.66	4	.890
d. Require that the project stakeholders be advised of the project and their feedback acknowledged.	4.50	1	.535	4.47	1	.640	4.09	1	.702	4.24	1	.683
e. Require that the general public be acknowledged and their feedback be collected about any proposed P3 project.	4.25	2	.463	4.47	1	.516	3.86	3	.879	4.07	2	.792
f. Require that the general public is involved in the decision-making process regarding a P3 project.	3.88	4	.991	3.00	4	1.464	2.69	5	1.022	2.93	5	1.197

The respondents agreed that there is a need for a dedicated P3 unit responsible for P3 implementation; this is reflected by a total mean of (4.02) and a 3rd overall ranking amongst all demographics. The academics and the private sector are more in favor of establishing a specialized P3 office and give it a higher priority than the public sector (see Table 32). However, the Mann-Whitney U test does not show any significant differences in the responses between the public and the private sectors, nor between the public and the academic-affiliated respondents. In conclusion, this question reveals the need for establishing a P3 unit within state DOTs.

Overall, the respondents agree with the three-phase decision making for the implementation process. The respondents' feedback shows that the public and the private sector have ranked this requirement the same among other requirements. Both the public and the private sectors rank it at 2nd place with a mean of (4.20) for the private sector and (3.94) for the public sector. Therefore, it can be concluded that a phased approach to decision making is key for the successful implementation of P3 project, which leads to the following question: who is responsible for making these decisions at the end of each phase? The responses for Q14.c show a consensus for a need to clarify the stakeholders' roles and responsibilities during each decision making phase.

However, the level of agreement is not significant, with a total mean for all demographics of (3.66). The private sector has the most agreement with a mean of (4.00), followed by the academic-affiliated respondents with a mean of (3.63) and finally, the public sector mean of (3.51). The total ranking for this issue was 4th, while the ranking within each demographic is a bit different, as illustrated in Table 32. There is a significant difference in the responses between the public and the private sectors, as the Mann-Whitney U test is ($U=.063$, $p<.1$). The decision making should be indicated in the P3 framework as it would lead to a more robust and smoother implementation process for P3 projects.

The respondents, regardless of affiliation, encourage the active participation of all stakeholders as reflected by a mean of (4.24). This issue has gained the approval of all demographics and is ranked 1st amongst all three demographic groups, as illustrated in Table 32. There is a significant difference between the public and the private sector as the Mann-Whitney U test is ($U=.067$, $p<.1$); however, the data shows that both parties agreed on the issue, the only caveat being that 67.7% of public sector's respondents answered with "Agree" while 53.3% of the private sector answered with "Strongly Agree".

In Q14.***e*** and Q14. ***f***, the results show that the private sector is more likely to encourage the general public's feedback than the public sector (U=.063, $p < 0.10$). Similarly, they are more likely to agree (U=.063, $p < 0.10$) that the general public should be involved in the decision-making process (Q14.f). The reason behind this could be attributed to establishing transparency, as more transparency could increase the chances for the private sector to get involved in more P3 project investments. Similarly, academics are more likely to agree that the general public should be involved in the decision-making process than both sectors.

There is an overall strong agreement on most aspects of P3 framework. Most respondents strongly agree that P3 framework should provide a responsible public entity (4.02), have different phases with decision points (4.02), provide that project stakeholders are advised of the project and their feedback acknowledged (4.24), and require that the general public be acknowledged. There is less agreement on whether the framework should be arranged so that a phased approval is done by P3 committees and very low agreement on whether the framework should allow the general public to be involved in the P3 project decision-making.

Table 33 Participant Responses on P3 framework (Q14)

Questions	Demographics	Mean	N	Std. Deviation
Question 14. A framework for using P3 delivery system should provide the following a. A responsible public entity, e.g. state DOT P3 office, should be created to be responsible for the P3 delivery.	Academic	4.25	8	.707
	Private	4.20	15	.561
	Public	3.89	35	1.051
	Total	4.02	58	.908
b. The framework should be structured such that it would have phases with decision points to proceed or to stop at each phase, e.g., three phases: (1) identification and screening, (2) project analysis and procurement documents, and (3) project procurement	Academic	4.00	8	.535
	Private	4.20	15	.775
	Public	3.94	35	.873
	Total	4.02	58	.805
c. Arranged such that the decisions be made by the relevant body, e.g., value-for-money analysis by the DOT, and the phase approval by a P3 Committee.	Academic	3.63	8	.518
	Private	4.00	15	1.069
	Public	3.51	35	.853
	Total	3.66	58	.890
d. Require that the project stakeholders be advised of the project and their feedback acknowledged.	Academic	4.50	8	.535
	Private	4.47	15	.640
	Public	4.09	35	.702
	Total	4.24	58	.683
e. Require that the general public be acknowledged and their feedback be collected about any proposed P3 project.	Academic	4.25	8	.463
	Private	4.47	15	.516

Questions	Demographics	Mean	N	Std. Deviation
	Public	3.86	35	.879
	Total	4.07	58	.792
f. Require that the general public is involved in the decision-making process regarding a P3 project.	Academic	3.88	8	.991
	Private	3.00	15	1.464
	Public	2.69	35	1.022
	Total	2.93	58	1.197

6.5.4 *P3 Units functions (Q15)*

The P3 unit category questions the main functions of the P3 unit. In the P3 analysis of government implementation units, the authors suggest that the P3 units should entail the responsibilities listed below (Abdel Aziz & Elmahdy, 2015):

a- Guidance for policy formulation, and guidelines and best practice development

b- Coordination among the relevant departments and/or with upper authorities or stakeholders

c- Promotion, outreach, and training

d- PM Procurement Management and technical support

e- Quality assurance/control (Abdel Aziz & Elmahdy, 2015, pp. 301–305)

Q15 is intended to define the roles and responsibilities of the state DOT P3. The results show that overall, the respondents agree on the inclusion of all functions as part of the P3 unit or P3 office's roles and responsibilities. The overall mean is above 4 for all of the listed functions in the survey regardless of demographics. The Mann-Whitney U test did not show any significant differences between the different demographics. The mean for each demographic is illustrated in the following Table 34 (It should be noted that the functions are ranked based on the mean score for each function):

Table 34 Participant Responses and rankings on P3 Units functions (Q15)

Question 15. If a DOT P3 office is created to be responsible for the P3 delivery, the functions of such office should include:	Rank				Mean			
	Academic	Private	Public	Total	Academic	Private	Public	Total
a. Development of policy and guidance documents	1	2	3	1	4.50	4.53	4.26	4.36
b. Provide training on P3	3	4	2	4	4.13	4.33	4.29	4.28
c. Business planning (e.g., early screening, procurement options assessment, business case creation, and assessment)	3	3	1	2	4.13	4.47	4.31	4.33
d. Procurement management (e.g., draft and final RFQ and RFP, managing the procurement, reporting)	2	3	4	3	4.38	4.47	4.23	4.31
e. Post-agreement activities (e.g. performance analysis and measurement, operations phase advice)	2	1	5	5	4.38	4.60	4.03	4.22

There is strong agreement that a successful P3 unit should be involved in all aspects of P3 including policy and guidance (4.36), training (4.26), business planning (4.33), procurement management (4.31), and post-agreement activities (4.22).

Table 35 Participant Responses and rankings on P3 Units functions (Q15)

Questions Question 15. If a DOT P3 office is created to be responsible for the P3 delivery, the functions of such office should include:	Demographics	Mean	N	Std. Deviation
a. Development of policy and guidance documents	Academic	4.50	8	.535
	Private	4.53	15	.516
	Public	4.26	35	.886
	Total	4.36	58	.765
b. Provide training on P3	Academic	4.13	8	.641
	Private	4.33	15	.724
	Public	4.29	35	.987
	Total	4.28	58	.874
c. Business planning (e.g., early screening, procurement options assessment, business case creation, and assessment)	Academic	4.13	8	.835
	Private	4.47	15	.640
	Public	4.31	35	.718
	Total	4.33	58	.711
d. Procurement management (e.g., draft and final RFQ and RFP, managing the procurement, reporting)	Academic	4.38	8	.518
	Private	4.47	15	.640
	Public	4.23	35	.843
	Total	4.31	58	.754
e. post-agreement activities (e.g., performance analysis and measurement, operations phase advice)	Academic	4.38	8	.518
	Private	4.60	15	.507
	Public	4.03	35	.954
	Total	4.22	58	.839

6.6 Summary of the Differences of Opinion among the Sectors

6.6.1 *Public and Private Sector*

Overall, public and private sector representatives agree on most questions. However, there were some differences in the opinions of the public and private sector on some questions, which this section discusses.

Most differences in agreement occurred over the criteria of selecting and opting for a P3 project based on financing. For instance, the respondents agreed that the use of P3 should not be prohibited or restricted when public money is involved such as TIFIA and Private Activity Bonds (PABs), as the overall mean agreement was 4.05. However, there were disagreements between the respondents with public sector agreeing the least (3.86) when compared to the private sector (4.47) and academics at (4.17). The public and private sector disagreed significantly ($U = 0.038$, $p \leq 0.10$) on the issue, thus illustrating that there is a significant level of disagreement on the question of the use of public finance between the public and the private sector.

This difference in opinion may exist because the public sector may be more likely to be wary of using the government's funds for P3s. After all, one of the main perceived benefits for the public sector is that it frees up public funds. They may consider that they can conduct a traditional procurement if there are already public funds available instead of going for P3s. On the other hand, the private sector may be more supportive of government funding as it allows them easy access to government capital which is often given to them at lower interest than loans from other private sources.

The public (4.23) and the private sector (4.53) were also more likely to disagree on the question of whether factors other than the availability of private capital should be taken into consideration as a criterion for P3s ($U = .036$, $p < 0.10$). Again, the difference may be more to do

with the perceptions of P3s amongst the public and the private sectors. The public sector again may consider P3s as more feasible when it allows them to use private capital for public projects. On the other hand, the private sector may consider that P3s should also be allowed even when there is no need of private capital as they allow the government to use the leverage of private sector efficiency and other expertise in conducting a project.

There was also a significant difference in the public (2.37) and private sector (1.73) over the question of whether P3s should be discouraged as they may affect the DOT's control over a project ($U = 0.028$, $p < 0.10$). Again, the public sector is more likely to agree than the private sector as they may be afraid of losing their control over the transportation sector to the private sector because of P3s.

There was also a significant difference between the public (3.03) and private sector (3.53) as the private sector was more likely to agree that a committee of DOT and treasury should control the P3 projects than the public sector ($U = 0.018$, $p < 0.10$). Again this difference may also be because of the fear that the public sector may feel of losing control of the P3 process if other stakeholders are involved in the issue.

Interestingly, the private sector (3.83) is more likely to agree that the P3 project is highly politicized than the public sector (3.03) ($U= 0.018$, $p < 0.10$). This may show the active distrust of the private sector in the fairness and impartiality of the P3 projects. The private sector was also more likely to agree than the public sector that public feedback should be recognized, but not necessarily that the public should be involved in the decision-making process. This again may show that the private sector is less likely to support public involvement in the P3 process than the public sector. Again this may be because the public sector may feel that they are more likely to

have less control over the P3 process with involvement from the private sector. Similarly, they may think that more involvement of the private sector may slow down the P3 process.

6.6.2 *Public and Academia*

There was generally less disagreement between the public and academic sector. One question that they disagreed on was over why P3s should be discouraged. The academics were more likely to agree that P3s should be discouraged because they affect staffing in DOT (0.045), use of market local resources (0.003), increase DOT oversight during the operation period (0.049) and reduce the DOT control over the project. Overall it seems that the academics are more concerned about the effect of P3s on DOT than is the DOT itself. On the other hand, it may be possible that academics are more likely to agree with various factors that they think are important considerations to discourage P3s than the public sector.

The academic sector is also more likely to agree than the public sector that public involvement should be recognized but that the public should not be involved in the decision-making. This difference may exist because the public sector may be afraid that they may lose control of P3 if the general public is involved in the decision-making. They may also think that the process becomes slower and more cumbersome to implement.

6.7 CONCLUSION

Given below is a summary of the survey results. Overall, there was strong agreement amongst the respondents that the P3 delivery system should be an option for projects among the states and that they should not be discouraged nor prohibited. Respondents also strongly agreed that the DOT should be the decision-making body for P3s. There was some agreement that political processes affect the P3 implementation process. There was also strong agreement that P3 processes should be used for all kinds of projects and should not be limited to the transportation sector, and that all kinds of public funds should be available for the P3 projects. Similarly, most respondents agreed that P3 units should be involved in all aspects of P3 processes.

Thus, overall, there was a strong agreement among the respondents that P3 projects should be encouraged. Similarly, there was also strong agreement that a centralized P3 body should be established which should be involved in all aspects of P3 projects.

However, there were some disagreements over when to use P3s. The private sector was more likely to support P3s even in the case of the availability of public funds, as well as the use of more private sector expertise in the projects. Both of them agreed that public feedback should be acknowledged but that the public should not be made part of the decision-making process. Given below are the main conclusions from the chapter.

- There was a high level of agreement among the respondents that P3s should be encouraged in the US.
- There was a high level of agreement that a centralized P3 unit and the DOT should be the facilitating and decision-making bodies, respectively. There was also strong agreement that legislation should enable the use of P3s in all types of projects.

- The respondents agreed that there should be different decision points for P3s, and the P3 units should be involved in all aspects of P3s.
- There was some disagreement between the public and the private sector over when to use P3s. The private sector was more likely to agree than the public sector that P3s should be used when government funds are available.
- Respondents were more likely to agree that private sector expertise should be considered important when conducting P3s and that P3s should be considered even when private money is not needed, especially when the private sector is more capable of conducting a P3 project more efficiently than the public sector.
- Both the and private sector were more likely to agree than the public sector that public feedback should be encouraged and that members of the general public should be part of the P3 decision-making process

In the next chapter, the results from this chapter are utilized and incorporated into the framework as it relates to each of the discussed topics. The feedback from the survey results helped the researcher to develop a P3 implementation framework for highway projects.

Chapter 7. FRAMEWORK FOR THE P3 IMPLEMENTATION PROCESS

Based on a holistic content analysis of current P3 frameworks, an extensive literature review, and the analysis of the P3 framework surveys conducted in the previous chapters, a framework for improving P3 processes is suggested in this chapter. Here the researcher discusses the main recommendations and gives a brief overview of implementation strategies.

7.1 CENTRALIZED P3 DECISION-MAKING

7.1.1 *Literature Review*

Decision-making is one of the most integral parts of the P3 implementation process, as it involves adjudicating and deciding the type of P3 project and the private partner that is the best for the state's interests. P3 projects are complex, involving multiple government bodies, and it is crucial to assess which bodies make decisions regarding P3s.

As has been discussed in the previous chapter, decision-making in the DOT usually involves the state DOT and the local metropolitan planning organization. Federal law mandates metropolitan organizations as well as state bodies to make their own transportation plans, but recently there has been an increase in decentralizing decision making by giving more autonomy to the metropolitan planning organization.

However, in the United States, most states that have conducted multiple P3 projects, including Texas and Florida, have found that centralizing P3 implementation into one P3 unit was beneficial. As an illustration, the Missouri Department of Transportation (MoDOT) has effectively centralized its delivery method, henceforth accelerating the delivery of the department's projects. The MoDOT also noted that the position creation of Director of Program Delivery had a noticeably positive effect on the acceleration of the process (Keck et al., 2010).

There are several benefits of P3 centralization (Secrest et al., 2012). These include:

- *Program consistency*: It allows for a more consistent approach across states.
- *Policy alignment*: It forces field staff to align their work with those of the department.
- *Cost savings*: It cuts extra costs.
- *Improved external and internal communication*: It allows consistent and clear communication regarding department priorities.

The US Department of Transportation also found that P3 centralization has been a success in the United States where the states that incorporated them have found them to be cost-efficient as well as standardized (USDOT, 2016). A P3 unit can also provide standardization to the process of implementing P3 projects and increase coordination on different projects. A centralized P3 unit will allow access to the details of previous projects and draw conclusions and lessons from those projects.

7.1.2 *Content Analysis*

Overall, the content analysis of the decision-making in the five successful P3 states that the researcher analyzed illustrates that decision-making is overall centralized. While the centralized P3 system varied by the states, all of the states possessed a centralized framework which illustrates that a centralized P3 center expedites the P3 process.

Similarly, there are a few decision-making points in all the states. In all the states discussed except Virginia, there is only 1 decision-making point in each phase (project identification, project development, and project procurement). On the other hand, Virginia has multiple decision points at all levels except for project identification. Given below are the details of the decision-making process in the states discussed.

Table 36 Decision points for each state

	Virginia	Colorado	California	Florida	Texas
Project Identification	1	1	1	N/A	1
Project Development	3	1	1	N/A	1
Project Procurement	3	1	1	N/A	1

Similarly, the number of decision-making bodies vary by state. Colorado has 1 decision-maker at project selection, 2 at project development, and 2 at project procurement. Florida has 2 decision-makers at each stage. Virginia has multiple decision-makers (3) at each stage. On the other hand, Texas and California have one decision-maker at each stage. Table 37 below gives the details of the decision-makers at each stage for each state.

Table 37 Decision makers and advisory role for reach state P3 implementation process

State	Project Selection	Project Development	P3 Procurement Process
California	• Caltrans (DM) • CTC (DM) • PIAC (AD) • PI (AD)	• Caltrans (DM) • CTC (AD) • PIAC (AD) • CTC (DM)	• Caltrans (DM) • PIAC (AD)
Colorado	• DOT (DM)	• DOT (DM) • HPTE (DM)	• DOT (DM) • HPTE (DM)
Florida	• Governor (DM) • OC-P3 (DM)	• Governor (DM) • OC-P3 (DM)	• OC-P3 (DM), • OPF (DM)
Texas	• TxDOT (AD) • TTC (DM)	• TxDOT (AD) • TTC (DM) • PI (AD) • PAC (AD)	• TxDOT (AD), • TTC (DM) • PAC (AD) • PI (AD)
Virginia	• PPTA (DM) • VDOT (DM) • CTB (AD)	• PPTA (DM) • VDOT (DM) • CTB (DM)	• PPTA (DM), • VDOT (DM), • CTB (DM)

DM: Decision-Makers
AD: Advisory Role

Overall, the content analysis suggests that most states except for Virginia have few decision-points (1 at each stage) and few decision-makers at each stage (around 2).

7.1.3 *Survey Results*

The necessity of having a centralized P3 unit is also agreed upon by a majority of the respondents in the survey. A majority of the respondents agree that the DOT should be responsible

for P3 decision-making. There is an overall consensus within the survey respondents that the DOT should have the final decision-making authority in the P3 process (82% of respondents agree that the decision should lie with the DOT). While the survey respondents were not asked about the decision-making of the separate unit, there is a high level of agreement over a centralized decision-making body.

7.1.4 *Recommendation*

Therefore, the researcher recommends that each P3 implementation state should have a centralized P3 decision-making structure within the state DOT. Instead of delegating this authority to lower levels for the government, the DOT in each state should make the final decisions regarding P3s.

Similarly, the number of decision-makers and decision-points should be reduced to 1 at each level (project selection, project development, project procurement) to ensure a faster process of P3 as well as reduce inter-departmental friction.

7.2 A Dedicated P3 Unit

7.2.1 *Literature Review*

In addition to centralized decision-making authority, a dedicated P3 unit also facilitates the P3 process. Dedicated P3 units are essential for each state as P3 projects are often very complicated to address. Their delivery methods are very different from other traditional methods, and this issue has often led to the need for P3 experts who have vast experience with P3 implementation (USDOT, 2016). Therefore, a centralized P3 unit in each state composed of P3 experts is better equipped to address the unique challenges posed by P3. The US Department of Transportation also recommends that each state should have a centralized P3 unit as according to their

findings all the states that have implemented them have found them to be cost-efficient (USDOT, 2016).

Likewise, Aziz and Elmahdy (2015) after analyzing various P3 units across the US also argued that there is a need for multipurpose P3 units that are involved in formulating policy as well as facilitating capacity building and project implementation.

Traditionally, the literature also suggests that the P3 unit should be involved in all P3 related implementation processes. A dedicated P3 unit can provide standardization to the process of implementing P3 projects and increase coordination on different projects. If not centralized, it would be harder to learn any lessons from previous P3 projects or even know about the key points of the implementation process. Furthermore, instituting a centralized and specific P3 unit indicates the seriousness and commitment of the government to the P3 model and thus increases the possibility of private investment.

7.2.2 *Content Analysis*

All the successful states studied by the researcher in the P3 implementation framework have a dedicated P3 unit or a centralized office dedicated for the P3 implementation in place, which suggests their importance in the P3 implementation framework. Table 38 illustrates the dedicated P3 units for each of the studied states and their functions. According Aziz and Elmahdy (2015, pp. 301–305), the P3 unit's suitable functions include the following: "G-Guidance for policy formulation, and guidelines and best practice development, C - Coordination among the relevant departments and with upper authorities or stakeholders, P - Promotion, outreach, and training, PM - Procurement Management and technical support, and Q – Quality assurance/control."

While the nature of the P3 units varied in terms of their authority as well as the work that they will be involved in, they did not have any approval authority.

Table 38 Dedicated P3 Unit for studied states

States	Dedicated P3 Unit/Office	Office Functions
California	Public-Private Partnerships (P3) Program	G, C, P
Colorado	High-Performance Technical Enterprise	G, C, P, PM
Florida	Office of Construction/Office of Project Finance	G, C, P, PM
Texas	Strategic Projects Division	G, C, P, PM
Virginia	Virginia DOT P3 (VDOT P3)	G, C, P, PM

7.2.3 *Survey*

A very high proportion of DOT proponents agreed that the P3 unit should be established and should be involved in all aspects of P3 implementation: a- P3 policies (93% agree), b- P3 training (92% agree), c- business planning (90% agree), d- procurement agreement (90%) e- and post-contract activities (90%). The survey demonstrates that most DOT respondents agree that the P3 units should be involved in all aspects of P3 delivery. Given below are the details of the survey results:

a. Development of policy and guidance documents

Developing a robust P3 policy is essential for ensuring long-term and effective policies for P3s to exist. The respondents were in agreement with the need for the P3 unit to have input in P3 policy and guidance documents as the results illustrate it has a total mean of 4.36 for all demographics.

b. P3 training

Training policymakers on P3 issues is essential for creating a cadre of P3 educated policymakers. The respondents were in agreement that P3 units should be involved in the training as the total

mean was 4.28. Overall, 88 percent of all demographics either agree or strongly agree that P3 units should be involved in training the training issue.

c. Business planning (e.g., early screening, procurement options assessment, business case creation, and assessment)

Business planning is an essential part of the P3 unit's function, and many P3 units cover these functions as mentioned in previous chapters such as the VDOT P3 Office in Virginia, the HPTE in Colorado, and Strategic Program Developer (SPD) at Texas DOT (USDOT, 2016).
The survey respondents were overall in agreement that the P3 units should be involved in business planning as the total mean for all demographics was (4.28). The respondents had an 88 percent rate of agreement with 44.8 percent agreed, and a 44.8 percent strongly agreed to include business planning as part of the P3 unit functions.

d. Procurement management (e.g., draft and final RFQ and RFP, managing the procurement, reporting)

Procurement management is essential for a robust P3 implementation process as it includes tasks that are essential for the proper implementation of P3 projects such as drafting the RFQ, the RFP, managing the procurement and reporting (Abdel Aziz & Elmahdy, 2015). Most respondents agreed that the P3 unit should be involved in procurement management. Overall, the total mean agreement for all demographics was high, with a mean of (4.31) and one of the lowest standard deviation (0.754). There were no significant differences between the three demographics in response to this issue as illustrated by the Mann-Whitney U Test. Procurement management had high-level confidence from all demographics with a colossal 88 percent approval rating.

e. Post-agreement activities (e.g., performance analysis and measurement, operations phase advice)

The post-agreement activities function had the lowest agreement score for the public sector at (4.03). However, it had the highest agreement score for the private sector at (4.60). Even though the total mean for overall demographics is a positive response with a mean of (4.22), it, however, ranked the least favorable function with the public sector. This probably stems from the fact that most DOT has offices for post-agreement activities and might not want to give this function away. The private sector scored it at the highest rank (4.60) and the lowest standard deviation of (SD=0.507) as they would want to deal with an entity that has a clear understanding of the P3 implementation and would rather work with the P3 units instead of the general DOT offices for post-agreement activities. The Mann-Whitney U test showed significant differences in the responses between the public sector and the private sector with a ($U=.036$, $p<.1$).

However, overall there was still a high level of agreement that the P3 unit should be involved in post-agreement activities.

7.2.4 *Recommendation*

Based on the literature review, content analysis, and survey results, the researcher recommends the creation of a centralized P3 unit in each state. These P3 units can also serve as centralized units for P3 implementation, thus possibly reducing departmental copying and improving efficiency. Ideally, these units should also be free from political interference to allow for the most optimum selection of projects that address P3 needs.

The researcher recommends a centralized P3 unit. These units should have a permanent staff of P3 experts taken from DoT and other relevant units. An effective P3 staff should have

"technical expertise, project management skills, procurement training, as well as commercial and financial backgrounds" (USDOT, 2016). Other staff should either be involved internally from other relevant P3 departments, such as finance and legal staff, or could be hired externally if the expertise needed for the project are not available internally. Typically, Table 39 below illustrates the typical role of a public agency in the P3 process. The researcher recommends that the envisaged P3 unit should include similar roles for the permanent and temporary consultant.

Table 39 Typical Roles for Public Agencies and Consultants in Administering

Role	Public Agency	Consultant
Program Direction	• Set overall program direction and project goals	
Project Selection	• Screens and selects projects	• Technically evaluates potential projects
Project Evaluation and Structuring	• Makes decisions regarding the structure of the agreement based on evaluation	• Prepares traffic revenue studies, ridership estimate, etc. • Conducts risk assessment, financial feasibility, value-for-money (VfM) analyses, and provides financial advice.
Project Procurement	• Sets requests for Qualification (RFQ) • Select partners and bids • Leads final negotiations	• Develops a language for RFQ and RFP • Advice on contract structure and risks • Assists final negotiations
Project Monitoring	• Monitors performance and administers the contract	• Assists with inspections and performance monitoring

Source (USDOT, 2016)

The P3 unit should be centralized within a State DOT. These units should be composed of members of all the relevant government agencies in the project. The dedicated P3 units should have the capacity to deal with P3 projects, meaning that the unit should have full-time staff to manage and implement the policy and guidelines of a proper P3 implementation process.

This step will improve inter-agency coordination as well as streamline the process. This step will also enable training of relevant P3 staff in government agencies, thus improving institutional knowledge and expertise in implementing P3 projects. Moreover, these P3 units should be

involved in all aspects of the P3 implementation process from P3 policy-making, training, business planning, and procurement agreement to post-contract implementation.

7.3 Public Transparency (Without Decision-Making Power)

7.3.1 *Literature Review*

A lack of public transparency can affect P3 projects. The issue of P3 transparency has emerged as a major issue in P3 projects across the globe. For instance, a report that compiled ten case studies worldwide about P3 found that 90 percent of the projects that failed had no public feedback or transparency (Eurodad, 2018). This lack of transparency creates doubts in the minds of the public about the motives behind the projects. For instance, a P3 project in an Indian town of Khadwa that did not inform the public about its work led to vast protests with 10,000 household filing objections against it (Eurodad, 2018). Therefore, it is important to have more transparent P3 projects to increase the public's trust in them.

Surveys have consistently shown a lack of transparency as one of the major public concerns about P3 projects. While the need for transparency is also offset by the need to keep some confidentiality regarding bidders' proprietary information, scholars suggest that the state needs to ensure that as much information about P3 projects is available transparently as possible (Rall et al., 2010).

There are two possible ways to increase public transparency: having most P3 records available for public viewing, as well as making P3 decisions in public meetings and allow for public communication and feedback. Thus, ensuring that large public projects are being conducted in a transparent process to ensure the public interest and maintain public support for such projects.

7.3.2 *Content Analysis*

All the states analyzed in the current framework have rules that allow posting of P3 contract details available for public consumption except for California, which restricted access to P3 records. Likewise, among the states under consideration, public hearings for P3 decision-making were required except for Florida. However, states vary in the number of mandatory public hearings that are required: Colorado requires three public hearings, Virginia require two, while only one meeting is required for both California and Texas. Table 40 below gives more details about the number of public hearings and transparency requirements of each state.

Table 40 Public involvement by each of the study states

	California	**Colorado**	**Florida**	**Texas**	**Virginia**
Public involvement	One public hearing at the location of the project	Three public hearing	No public hearing required	One public hearing Prior to Interim agreement	Two public hearings: -Interim agreement -Prior to agreement execution
Transparency	All documents are subjected to the California Records Act.	All HPTE records are open to the public and available online	P3 projects are subject to Public Records	Records are available after interim agreement execution for public inspection upon request	Different phases of the project procurement process are posted online and open for public comments

7.3.3 *Survey*

Survey respondents also agreed that the public should be acknowledged and that their feedback needs to be incorporated in the P3 process (85% agree). However, most of the DOT officials (60%) disagreed that the public should be involved in the P3 decision-making process. The survey, therefore, suggests that while public meetings and increased transparency should increase the public feedback, they should not be given final authority of adjudication of P3 frameworks.

7.3.4 *Recommendation*

All P3 documents should be made freely available to the public except for the bidders' proprietary information. This information should be available through websites as well as through documents. Likewise, all major decisions should be made in public meetings to increase the transparency about the project in front of the public. However, the public should not be involved in the final decision-making process.

7.4 ENCOURAGE UNSOLICITED PROPOSALS AND SOLICITED PROPOSALS

7.4.1 *Literature Review*

Unsolicited proposals can often be effective in finding solutions to transportation projects as they allow private parties to propose private projects. Yet they can also be an unnecessary expense on the state's exchequer as they may involve funding feasibility research on unnecessary projects. Therefore, a balance is required to encourage unsolicited proposals while also discouraging unnecessary unsolicited proposals. However, they currently suffer from two main issues. First, there is no transparent mechanism to assess whether they were selected on merit or not. This lack of transparency decreases trust, support, and enthusiasm for such projects among the private sector who are hesitant to submit unsolicited proposals, in particular with the high cost of submitting and processing these projects (Abdel Aziz & Nabavi, 2014).

Similarly, no current mechanism exists in the states discussed to give extra credit/weightage to the original unsolicited proposal proposer. While there is a need to give them their due credit by giving extra weightage to their proposal, at the same time there should be open competitive bidding for unsolicited proposals to get the best possible value-for-money for the state.

Unsolicited proposals are important because they enable private parties to propose innovative P3 methods to resolve the current infrastructure problems in the US. At times, the state has not considered these ideas, and therefore, they bring innovation into the P3 process. Yet, the cost of incurring an unsolicited proposal can also be prohibitive for the private parties. In most states, the cost of filing an unsolicited proposal is prohibitive. This high cost of the unsolicited proposal can discourage private parties from proposing unsolicited proposals (Abdel Aziz & Nabavi, 2014).

However, the cost of subsidizing for all unsolicited proposals can be prohibitive for the government. It may also encourage half-serious or not well-planned P3 project proposals, and thus would increase the cost of P3 soliciting. Therefore, a balance is needed to incentivize the private sector to introduce unsolicited P3 proposals, while also not increasing their cost prohibitively for the government.

7.4.2 *Content Analysis*

Overall, the framework studied did not discuss steps for increasing transparency for selecting unsolicited proposals. Moreover, none of them talked about any standardized practices in place to give extra credit to the original unsolicited proposal proposer without affecting the competitive nature of the P3 allocation process.

The frameworks primarily discussed the cost of unsolicited proposals incurred by the states. The cost of unsolicited proposals varied across the chosen state. For instance, California asks the unsolicited proposal to pay for the whole cost of the process. In Virginia and Florida, the interested parties have to pay $50,000 for the proposal verification. In Colorado, the interested parties have to pay $1000 for the proposal while the HPTE director can also ask for further funds

on a case-to-case basis to evaluate the unsolicited proposal. In Texas, the party has to pay a fee of $100,000 for the unsolicited proposal.

Table 41 Unsolicited Proposals fees by state

Unsolicited proposals	California	Colorado	Florida	Texas	Virginia
Requires fee for review	$15,000 plus an estimated detailed review fee	$1000 plus any fees for review	$50,000 plus any further expenses for review	$100,000 for review	$50,000 for review

7.4.3 *Survey*

In the survey, most respondents agree that unsolicited proposals should be allowed but with an adequate place for market competition (62% agreed). A majority of the respondents also agreed that unsolicited proposals should be included in the P3 process with adequate public accountability (61% agree).

7.4.4 *Recommendation*

Competition in unsolicited proposals should be encouraged by increasing transparency in the unsolicited proposal selection procedure. A standardized process needs to be introduced to give credit to the original proposer without affecting the competitive nature of the P3 process and confidence in the selection process among the private contractors. A transparent process will increase trust in the awarding of the unsolicited proposals, as the firms often feel that P3s suffer from a lack of transparency, which discourages private parties from engaging in them.

Likewise, a standardized process for giving credit to the original P3 proposer while allowing for the market competition will ensure that the P3 project is awarded to the best bid while also giving due credit to the original proposer.

States should subsidize the cost of submitting unsolicited proposals to encourage the private sector to submit proposals for unsolicited proposals on a case-to-case basis.

States should mark their priority regions, localities, and projects for P3 projects and subsidize the cost of unsolicited proposals in these areas. States should also look at the merit of the unsolicited proposal on a case-to-case basis and encourage quality unsolicited proposals by removing fees from them. Through this method, the state will encourage unsolicited proposals in their priority areas, as well as encourage high-quality unsolicited proposals.

7.5 VALUE-FOR-MONEY PRACTICES

7.5.1 *Literature Review*

Currently, most states have a mechanism for conducting Value-for-Money analysis. These processes include shadow bidding and VfM. However, current VfM practices suffer from a lack of sufficient data to assess the P3 risks (Martin, 2013). In particular, these VfM analyses do often do not use data from similar projects across the US to assess the risks in conducting P3 projects. The reason they are not able to conduct such a P3 analysis is that they do not have data from similar P3 projects that have been conducted across the US. As a result, their predictions for the P3 projects are often not as accurate because of a lack of sufficient data.

Another main issue with not having a VfM database is that it means that the VfM analysis has to be conducted from scratch every time a new P3 project is undertaken. This means that a lot of resources are wasted in conducting a P3 analysis from scratch.

Often an extensive VfM analysis is not necessary for multiple projects with a high level of overlap. Instead, a "test case" for a project can be conducted, and its results can be applied to similar projects. For example, the road development agency of the State of Madhya Pradesh, India used lessons from test projects and applied them to other similar projects, thus reducing their

VfM analysis time and cost substantially. Similar VfM practices can be applied in US states (Martin, 2013).

7.5.2 *Content Analysis*

While all the states discussed conduct extensive VfMs, no framework mentions a centralized database of P3 projects that can be used to conduct VfM analysis based on previous data across different states, and across different projects. Table 42 below provides details about the state of VfM practices in the states under discussion. Overall all states except Texas use public sector comparator. However, the amount of VfM details given in each DOT varies significantly with extensive details given in Colorado to low levels of details given in California, Texas and Florida. The Virginia DOT document provides a moderate level of details.

Table 42: VfM Content Analysis Details

	California	Colorado	Florida	Texas	Virginia
Type of VfM	Public sector comparator	Public sector comparator	Public sector comparator	Shadow-bidding	Public Sector Analysis and Competition
Which stage	- Selection stage	- Project Development Stage - Selection stage - Financial close stage	- Selection stage -Financial Close stage	- Selection stage	- Selection stage - Award stage
Level of details and directions	Low	Extensive	NA	Low	Moderate

7.5.3 *Survey*

While the respondents were not asked specifically about a database for P3 projects, most respondents in our survey agreed that the VfM is the optimal way to assess P3 implementation

frameworks' feasibility (90% Agreed). Therefore, there was a general consensus among the respondents that VfM should be used to assess a project's feasibility.

7.5.4 *Recommendation*

In this regard, the researcher proposes a federal P3 database to assess P3 risks to similar P3 projects. This database will be informed about future P3 projects. It will also expedite the P3 VfM process as the process will not have to start from scratch for every separate P3 project. Martin (2013) corroborates this interpretation that VfM analysis should not be necessary for similar projects; however, it should be implemented on the first project of a certain type as a "test case." This federal database will also be informative about the history of the P3 implementation partner across different states and different projects.

7.6 POLITICAL INFLUENCE

7.6.1 *Literature Review*

P3 project implementations are often affected by politics. Most P3 projects are massive undertakings that involve and affect multiple constituencies. They also often affect organized groups like labor unions and community welfare organizations (Marques, 2017).

In this regard, public opinion and politics surrounding P3s are very important to consider. There is often resistance against P3s as they entail the involvement of the private sector in activities that have traditionally been undertaken by the public sector. As a result, consumers do not often want to pay tolls for things that were traditionally paid for by the public (Whiteside, 2012).

Politicians often get involved in P3s as they affect their constituencies and their chances of getting re-elected. P3s are also often used to achieve short-term political gains for elected politicians who are eager to provide highly visible or high-profile infrastructure projects to their

communities. However, while P3s may be invaluable for short-term political gains, they may not be feasible for the long-term on tax budgets (Boardman & Hellowell, 2016, p. 1).

Likewise, very often politicians refrain from engaging in P3 projects despite their long-term benefits if they deem that these projects may hurt their political prospects. In particular, they may refrain from long-term investment and potentially profitable P3 projects if they believe that one of their main constituencies may become adversely affected by the project.

Therefore, politics affects P3s as on the one hand politicians may end up opting for sub-optimal P3 projects for short-term political gains, and on the other hand they may also shun away from financially feasible projects if they affect their constituencies and thus affect their political position.

7.6.2 *Content Analysis*

The framework in each of the states clearly displays that politicians or political appointees are involved in the P3 decision-making process. All of the studied states have included a public official at some stage of the approval process. In most cases, the governor's office or the legislative branch would have an authority for approval at some or many stages of the P3 process.

In California, the CTC consists of 11 members, 9 of which are appointed by the governor. The CTC has the authority to approve projects at early stages of the P3 implementation and selection process.

In Colorado, the HPTE is established as a government-owned subdivision in the CDOT. The HPTE has a seven-member board of directors, 4 of which are appointed by the governor. The HPTE and the CDOT share most of the decision-making and approval authorities through all stages of the P3 implementation process.

In Florida, the governor is directly involved in the approval process and has the final decision-making authority.

In Texas, the Texas Transportation Commission (Commission) consists of five members. The governor appoints the members for an overlapping 6-year term. The Commission has the approval authority for P3 implementation at various stages of approval.

In Virginia, the CTB consists of seventeen members, fourteen of which are citizen members appointed by the governor. The CTB makes recommendations in regards to the P3 projects to the VDOT and serves as an oversight committee but have no decision-making authority.

Therefore, the studied frameworks show that politicians and political appointees are involved in decision-making in all the states under study. Further details of political involvement in the states are given in Table 43 below.

Table 43 Political Appointees in the P3 Process

	California	**Colorado**	**Florida**	**Texas**	**Virginia**
Entity	CTC	HPTE	Governor	TTC	CTB
Governor Appointees/total	9 of 11	4 of 7	NA	5 of 5	14 of 17

7.6.3 *Survey*

The survey on political interference involved open-ended questions sent to policy-makers across the US. Thus, the researcher does not have statistics on the agreement level for them. However, the researcher found specific trends among the respondents which are discussed below:

- Most respondents agreed that the P3 process involves multiple stakeholders and public money; public representatives cannot be completely barred from the process. Thus, overall, there will be some level of political involvement in P3 projects.
- Most respondents agreed that the overall politicians' involvement in the day-to-day adjudication of P3 processes could be reduced. This can be best achieved by having a robust and transparent P3 system.
- Most respondents agreed that sufficient P3 legislation exists. While some respondents argued that there is always room for more, overall, they seem to be satisfied with P3 legislation.
- Respondents argue that the main issue that P3 faces that make politicians less willing to engage in them is that of negative public opinion, which could be addressed by more public education, outreach, awareness, and involvement.
- The general public is not aware of P3 projects and resists having to pay tolls for P3s. The public also thinks that P3 projects are a form of privatization, and thus, anti-privatization sentiment impedes P3 projects.
- To encourage politicians to engage in P3s, public opinion about P3s need to improve. This can be achieved through more extensive public education, as well as engagement with the general public in different parts of P3 processes. Public trust can also increase by making the P3 process more robust and transparent.

7.6.4 *Recommendation*

Based on these survey results, the researcher proposes introducing a more transparent and robust P3 process to reduce the politicians' role in the P3 process. The VfM needs to become

more robust, and the P3 unit should have more autonomy in deciding and selecting the most optimum P3 processes. While it is inevitable that there is going to be some political involvement in the P3 process, it can be reduced. The politicians' feedback should be taken with regards to the public interest as is currently being done in Virginia. Other processes should be taken care of by the experts in their respective domains. Sufficient legislation exists for now, and therefore, there is no need for more extensive P3 legislation.

Public involvement and public education about P3 projects need to increase. Currently, one of the main reason politicians are hesitant to engage in P3 projects is a negative public opinion about P3s. Overall, the public is hesitant to involve the private sector in a sector that has mostly been funded by the government. They are also hesitant to pay fees for P3 projects. Thus an outreach program that increases public awareness about P3 programs is essential to remove the public's misconceptions about them. Public outreach and transparency about P3 projects would increase the public's trust in the process, making P3s a less risky proposition for elected officials to engage with.

7.7 PROPOSED FRAMEWORK

Based on the content analysis and the survey results, the researcher has come up with a proposed holistic P3 framework for P3 projects, employing good practices from all the studied states. The researcher employed the skeleton of the Virginia framework as it is the most comprehensive framework among the states studied. In addition to the Virginia framework, it uses parts frameworks from other experienced P3 states. For instance, it follows California's practice of making decisions at public meetings, as well as Colorado's process of streamlining and reducing decision points. At the same time, changes have been incorporated based on the survey results

and other observations from other successful practices from other states P3 guidelines and frameworks.

The framework proposes a centralized decision-making mechanism for P3s at the DOT level. It further proposes a centralized P3 unit at the DOT that is involved in all levels of P3 development from identification to the execution of the agreement. This unit should be composed of P3 experts from DOT as well as other relevant P3 specialists. However, it will not have decision-making power. Rather they will forward their findings to the DOT, which will have the main decision-making power. The DOT will be responsible for both financial and technical decisions. These decisions will be made in public meetings to increase transparency.

Further, the P3 unit will be required to hold at least two public hearings from the affected P3 parties while formulating the Findings of Public Interest (FOPI) report. In the end, the details of the P3 project and the agreement will be posted online and will be freely available for public viewing.

The framework proposes centralizing decision-making by making the DOT responsible. It also proposes expediting and centralizing the work by having an expert centralized P3 unit involved in all the processes. It has also removed politically-appointed representatives from the decision-making as was originally conceived in the Virginia P3 framework. This removal of politically-elected representatives aims to reduce political involvement in the P3 decision-making process based on the survey results on that topic.

Similar processes should be used for processing both solicited and unsolicited proposals. The private sector should be charged for proposing unsolicited proposals; however, based on the review of the proposal and its need to the state, the fee for the unsolicited proposal could be reviewed on a case-to-case basis.

7.7.1 *Project Identification and Screening*

Project identification and screening will be conducted by a centralized P3 unit working in tandem with local organizations. The initial VfM analysis will be conducted to assess the value of the P3 project. It will send its feedback to the relevant department of the state DOT, which will make a decision based on the project identification and screening.

7.7.2 *Project Development*

After the initial screening, the project will be further developed by the P3 unit. The P3 unit will conduct a detailed VfM analysis, and its recommendations will be sent to the DOT.

The P3 unit will also conduct a Finding of Public Interest to assess whether and how the proposed P3 project will affect the local communities. For this FOPI, a minimum of two public hearings will be conducted to hear the perspectives of the local communities.

The P3 unit will pass along its recommendations to the DOT, who with any other relevant agency involved in the project will make decisions whether to proceed or not based at a public meeting.

7.7.3 *Project Procurement*

After the passing of the project, the P3 Unit will develop the request for proposal (RFP) and will propose it to interested parties. It will also hold regular meetings with the interested parties to assess and address their concerns and be able to mold the RFP accordingly. It will process the bids it receives and submits its recommendations to the DOT committee. The DOT committee will consist of the heads of the respective departments within the DOT involved in the P3 project. It would consist of the P3 unit as well as the respective DOT departments involved in the project. The DOT committee will decide on the best bid.

7.7.4 *Execution of Comprehensive Agreement*

The P3 Unit will develop the comprehensive agreement which it will pass on to the DOT committee. The DOT committee will decide upon the most feasible project at a public meeting. The P3 unit will be responsible for the execution of the P3 project.

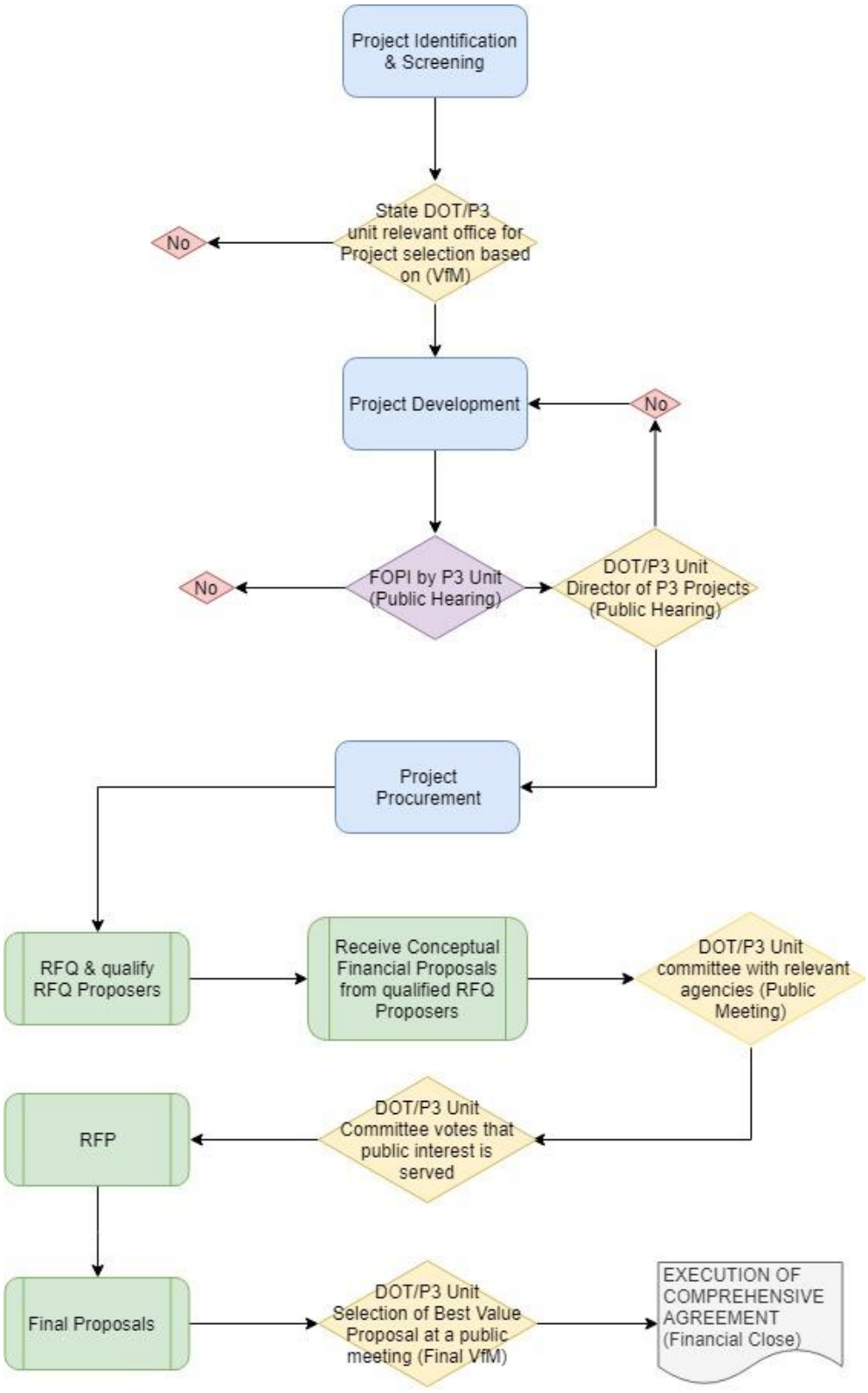

Figure 13 Proposed P3 Implementation Framework Flowchart

7.8 CONCLUSION

This chapter recommends changes in the current P3 frameworks. In particular, it suggests that more centralization needs to become part of P3s to streamline and expedite the process. It also suggests less decision-making stages and fewer decision-makers at each stage to streamline and expedite the P3 process.

In this regards, P3 units need not only to be established, but their capacity needs to be built up by involving them in all aspects of P3 processes. In the future, these P3 units can also be given the responsibility of deciding upon the best P3 projects, thus reducing political influence in P3 processes.

Similarly, it recommends that public knowledge of P3s needs to be increased; however, the final decisions should still reside with the DOTs and not with public representatives. This increased public participation could be achieved by making all major decisions in public meetings, as well as making all stages of P3 processes openly available to the public.

On the third level, it recommends increasing incentives for private sector participation by making unsolicited proposals more competitive, giving incentives to the private sector for submitting unsolicited proposals as well as making termination agreements more comprehensive.

On the fourth level, the researcher proposes that there needs to be more intensive research on P3s. This research includes incorporating VfM research units and repositories as well as improving the VfM research process. All of these steps will ensure that institutional knowledge is developed regarding the best possible P3 projects, which in turn will increase their probability of success.

Chapter 8. CONCLUSION

8.1 SUMMARY AND CONCLUSION

This dissertation aims to come up with a holistic framework for P3 implementation in the US that can be applied across states. It develops the framework by conducting a comprehensive literature review, complemented by surveys of experts in the field and a thorough content analysis of the current P3 implementation process based on the current P3 Guidelines from California, Colorado, Florida, Texas, and Virginia States' DOTs. The main research aim is to develop a P3 implementation framework guidelines that can address the main impediments faced in the P3 implementation process. This is achieved through the following four steps:

- Comprehensive literature of P3 best practices across the US and the globe.
- A holistic review of the P3 guidelines and a comparative analysis delving into the commonalities and differences between the different guidelines and the supporting legislation for each of the selected states.
- Developing a robust survey to solicit the public, private, and academic sector's feedback on best P3 practices.
- Developing a P3 implementation process framework based on literature review, content analysis and survey results.

This dissertation examined current P3 implementation across five pioneering P3 enabling states (California, Colorado, Florida, Texas, and Virginia). The investigation covered multiple topics that affect the implementation process of P3 projects and mainly answers the question of what needs to constitute a robust P3 implementation process through a mixed research method.

Given below is a summary of each chapter and how it facilitated in creating the overall P3 framework.

8.1.1 *Political Influence on P3 Implementation Process*

This chapter discusses how politics, besides financial constraints, plays a significant role in the implementation process of P3s. Political agendas may push back the adoption of P3s as a delivery system if it doesn't serve the politicians' best interest, especially when there is a lack of comprehensive legislation that ensures the interest of public money. This reluctance is typically a result of negative public opinion towards public-private partnerships, which is usually misapprehended as a form of privatization.

A summary of the main views regarding political influence from the perspective of the top public state officials can be stated as follows:

- Politicians' involvement is necessary for the P3 process due to the involvement of multiple stakeholders and public money.
- Public education, outreach, awareness, and the eradication of its well-established association with privatization can offer fertile ground for P3 implementation and lead to less political push back.

8.1.2 *Survey Results and Statistics*

In this chapter, the researcher conducts a survey to consolidate, evaluate and assess the opinions of educated experts in the industry, academia, and the private sector on issues related to the development of an implementation framework for the use of a P3 as an alternative project delivery system for a department of transportation. The survey addressed topics including, but not limited to, Value for Money, financing, legislation, restrictions and political influence.

Overall, there was a general consensus from the respondents that P3 should be considered as a viable delivery system and should be utilized in various projects and not be limited to the transportation sector. Similarly, there was also strong agreement that a centralized P3 body should be established & involved in all aspects of P3 projects while DOTs can act as a decision making body and a facilitator. On the other hand, variance only showed regarding the degrees of public versus private sector involvement when governmental funds are available; with the public sector leaning towards public sector expertise.

8.1.3 *The Framework for the Implementation Process*

Chapter 6 focused on translating the content analysis, survey results, and the preliminary developed framework to propose a robust P3 framework implementation process. The content analysis reviewed and investigated how P3 guidelines function and what areas they serve and provide guidance to the public transportation sector, mainly the DOTs. This was followed by the survey results, which solicited the opinions of about sixty P3 experts from various fields. The survey shaped the recommendation for the proposed P3 implementation process. The main recommendations for this chapter include:

1- Centralized P3 decision making

2- Dedicated P3 Units

3- Increase public transparency without any decision-making power

4- Encourage Unsolicited proposals

5- Value-for-Money practices

6- Political interference

The suggested P3 implementation process is recommended for any state DOT that is pursuing to implement the P3 delivery system. The framework contributes to the DOTs, where it provides a comprehensive P3 implementation process that would make the project more streamline for both parties, public and private.

8.2 Overarching Conclusions & Recommendations

This dissertation enriched the body of knowledge in the P3 framework process by comparing and evaluating the effectiveness of P3 frameworks in the five most successful P3 implementation states in the US. These conclusions may not only help these states to improve their P3 systems, but it can also serve as a framework for other states across the US that are kick starting the P3 process and want to learn the best practices of experienced P3 states. Overall, P3 projects involve various levels of public-private participation and are fairly flexible with its implementation. They tailor well into the American idea of leveraging the private sector's expertise and finance to achieve progress while reducing the load on the public sector.

Currently, the United States government suffers from a lack of funding and expertise to improve the deteriorating transportation infrastructure in the United States. In this regard, P3 can be a potential tool that will allow it to leverage the expertise and financial capacity of the private sector to improve the current infrastructure without making substantial public financial outlays. The government has already implemented P3 in various capacities with a mixed level of success. However, there is no comprehensive P3 implementation framework for highway projects in the United States. This leads to inefficient utilization of P3 potential with a lack of clear guidelines impeding its full potential.

The comprehensive P3 implementation process prepared through this project will allow for economization and increased efficiency in its implementation in the transportation sector. It

will also enable state department of transportation officials, contractors, and financial institutions to make more informed decisions regarding P3 allocations. This project's outcome will also enable achieving more efficient P3 project outcomes by reducing its implementation time and cost, as well as economizing and maximizing on the resources available to leverage its full potential. Similarly, it will also enable the various stakeholders to develop more robust ex-post evaluation frameworks to evaluate its success as well as learn from current projects.

In short, the outcome of this study will enable state departments of transportation, transportation planners, contractors, and financial institutions to make more data-informed decisions about P3 allocations which will economize on the resources, finances, and duration of P3 project as well as allow for better post-project evaluations regarding P3 effectiveness.

In the end, while the study is focused on the US, the learning outcomes from them can be applied across the world in countries with both extensive P3 experience like Canada and the UK as well as countries with limited P3 experience like the Kingdom of Saudi Arabia and other developing countries across the globe.

However, despite its attempt to be as comprehensive about the P3 process as possible, this study also suffers from some limitations that can be addressed in future research.
The recommendations for future work could be addressed from expansion on the following fronts:

- The researcher was limited to the implementation process up to financial close. However, a framework for the construction phase should be investigated on many topics:
    - Force Majeure provisions and how they affected some P3 projects
    - Termination rights and how to deal with termination in the realm of P3 projects

- Delving into more details about implementing P3 frameworks and future research could determine which selection matrix other than the VfM or variations of the VfM should be investigated and illustrate which selection method.
- Political determinants of P3 success: While this research has started the discussion on how politics and public opinions affect successful P3 implementation, future research may need to start looking more specifically into these issues. In particular, issues like improving public perceptions about P3s are an avenue of future research. Similarly, the question of how the P3 process can be less politicized should also be researched in the future.

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APPENDIX A

Survey A: Framework for the Implementation Process of Public-Private Partnerships (P3s) in Highway Projects

Introduction

This survey asks for your input on issues related to the development of an implementation framework for the use of a public-private partnership (P3) as an alternative project delivery system for a department of transportation (DOT). As an extension to the design-build (DB) delivery system, P3 allows other project elements to be included in the contract such as operation, maintenance, and/or project finance. Some states like Virginia, Florida, and Texas have developed an implementation framework for the P3 system. Currently, state DOTs vary in their use of P3 concerning several issues such as allowing P3 for project delivery, allowing private financing, making decisions at the various levels of project delivery, centralizing the P3 delivery in a unit, involving the public in the delivery process, among other issues. This survey solicits your opinion on the issues presented in the following sections/questions. The survey may take approximately 10 minutes. The survey data will only be used for research purposes. If you have any question regarding the results of the survey or any other relevant matter, please do not hesitate to contact Sohaib Gutub at smgutub@uw.edu or call (206) 832-7072.

Public-Private Partnership as defined by the United States Department of Transportation in its Condition and

Performance Report (2015)

"Public-Private Partnerships (P3s) are contractual agreements between a public agency and a private entity that allow for greater private-sector participation in the delivery and financing of transportation projects. Typically, this participation involves the private sector's assuming additional project risks, such as design, finance, long-term operation, maintenance, or traffic and revenue."

Section A: General Demographics

Question 1.

You are employed by what type of organization?

- o Public sector: State Department of Transportation, Federal Agency, etc.
- o Private sector: Contractor, P3 consultant, etc.
- o Other: please describe

Section B: P3 Delivery Systems Perception

For the following statements, please indicate your level of agreement or disagreement

Question 2.

P3 as a delivery system should be part of the state DOT delivery systems toolbox; e.g., to be aligned with the design-bid-build (DBB), design-build (DB), and construction management at risk (CMAR), when selecting a system for a proposed project.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 3.

The selection of a project for a P3 delivery should be based on a value-for-money analysis that compares the project under both P3 and the traditional design-bid-build (DBB) or design-build (DB) and considering the life cycle of the project and considering future operation and maintenance costs and future risks.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 4.

Public finance, if available, is typically cheaper than private finance, however, with the availability of less expensive federal credits means such as TIFIA loans, Private Activity Bonds, etc., **the use of P3 system should not be restricted or prohibited**

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 5.

If the state does not have enough funds to develop a high-priority needed project, it should allow for its delivery to be investigated using P3 with user-pay and private financing.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 6.

The selection of a project for a P3 delivery should not be based only on the need for private finance, i.e., it should account the t for speed of delivery, cost savings, operational efficiencies, along with private finance if needed.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 7.

The selection of a project for a P3 delivery should not be made if the state can fund the project using current revenues, taxes, grants, or user-pay.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 8.

The use of P3 for project delivery should be **prohibited** as it would:

Rows

a. increase the total cost of the project

b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)

c. negatively impact the use of local market resources (e.g., labor)

d. increases the DOT oversight work during the operation period

e. reduces the DOT control over the project

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 8-1.

The use of P3 for project delivery should be **prohibited** as it would:

Question 9.

The use of P3 for project delivery should be **discouraged** as it would:

Rows

a. increase the total cost of the project

b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)

c. negatively impact the use of local market resources (e.g., labor)

d. increases the DOT oversight work during the operation period

e. reduces the DOT control over the project

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 9-1.

The use of P3 for project delivery should be **discouraged** as it would:

Question 10.

If the value-for-money analysis of a project concluded that P3 is a viable and good option, the ultimate decision of pursuing the project using the P3 system should be at the discretion of

Rows

a. the state treasury office

b. the state DOT

c. a committee of both treasury and DOT

c. a legislation office/committee

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 10-1.

Do you like to add other entities for decision making on a P3 project? Please, elaborate.

Question 11.

It is generally believed that the approach to the use of P3 is highly politicized; e.g. a project that would be viable under P3 based on a value-for-money would still be rejected because of political gains/loses or political ideology.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

P3 Legislation

Question 12.

A state legislation act for P3 should do the following

a. Require the creation within the DOT a state P3 office to work on P3 policy development, project business planning, project procurement process, and post-financial close functions,, (e.g. performance measurement), but not including project approvals.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

b. Require public agencies to use value-for-money analysis to assess the project feasibility as a P3 project.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

c. Require that approvals for using P3 model for a project be made by a P3 Committee comprised of the DOT, State Treasury/Finance, and a legislative body for appropriations.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

d. Make it possible to use any P3 models, such as DBOM, DBFOM, DBF, if the project value-for-money analysis justifies that model.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

e. Make it possible to use public finance, private finance, and/or federal credit assistance,, (e.g. TIFIA loans) if the value for-money analysis justifies that use.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

f. Provide for P3 contracts to emphasize the use of local resources,, (e.g. labor, equipment, and material) when possible or justified and establish the mechanisms to do that.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

g. Make it possible to use unsolicited proposals under restricted assessment conditions that maintain public accountability, e.g. if the project is feasible, to require the issuance of RFQ/RFP to the general market.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

h. Require that the length of the P3 agreement be determined based on the value-for-money analysis.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

i. Provide for the use of any of the various payment types,, e.g. performance and non-performance payments, usage payments, as might be determined based on the value-for-money analysis and risk allocation.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 13

Please explain any further points that you see important to be included in a P3 legislative act.

P3 Framework & P3 Units

Question 14.

A framework for using P3 delivery system should provide the following:

a. A responsible public entity, e.g. state DOT P3 ,office should be created to be responsible for the P3 delivery.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

b. The framework should be structured such that it would have phases with decision points to proceed or to stop at each phase, e.g. three phases: (1) identification and screening, (2) project analysis and procurement documents, and (3) project procurement

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

c. Arranged such that the decisions be made by the relevant body, e.g. value-for-money analysis by the DOT, and the phase approval by a P3 Committee.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

d. Require that the project stakeholders be advised of the project and their feedback acknowledged.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

e. Require that the general public be acknowledged and their feedback be collected about any proposed P3 project.

- Strongly Disagree
- Disagree

- Neutral
- Agree
- Strongly Agree

f. Require that the general public is involved in the decision-making process regarding a P3 project.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 15.

If a DOT P3 office is created to be responsible for the P3 delivery, the functions of such office should include:

a. Development of policy and guidance documents

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

b. Provide training on P3

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

c. Business planning, (e.g. early screening, procurement options assessment, business case creation, andassessment)

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

d. Procurement management, (e.g. draft and final RFQ and RFP, managing the procurement, reporting)

- Strongly Disagree
- Disagree
- Neutral
- Agree

- Strongly Agree

e. post-agreement activities, (e.g. performance analysis and measurement, operations phase advice)

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Question 16

Please explain any further points that you see important for a P3 delivery framework

Questions or comments?

APPENDIX B

Survey A: Summaries

	Demographics	Mean	N	Std. Deviation
Question 2.P3 as a delivery system should be part of the state DOT delivery systems toolbox; e.g., to be aligned with the design-bid-build (DBB), design-build (DB), and construction management at risk (CMAR), when selecting a system for a proposed project.	Academic	4.00	8	1.309
	Private	4.53	15	.640
	Public	4.34	35	.838
	Total	4.34	58	.870
Quest ion 3.The selection of a project for a P3 delivery should be based on a value-for-money analysis that compares the project under both P3 and the traditional design-bid-build (DBB) or design-build (DB) and considering the life cycle of the project and considering future operation and maintenance costs and future risks.	Academic	4.25	8	.886
	Private	4.47	15	.516
	Public	4.03	35	.954
	Total	4.17	58	.861
Question 4.Public finance, if available, is typically cheaper than private finance, however, with the availability of less expensive federal credits means such as TIFIA loans, Private Activity Bonds, etc., the use of P3 system should not be restricted or prohibited	Academic	4.13	8	.835
	Private	4.47	15	.834
	Public	3.86	35	1.089
	Total	4.05	58	1.016
Question 5. If the state does not have enough funds to develop a high-priority needed project, it should allow for its delivery to be investigated using P3 with user-pay and private financing.	Academic	4.38	8	.744
	Private	4.27	15	.594
	Public	3.94	35	.938
	Total	4.09	58	.844
Question 6. The selection of a project for a P3 delivery should not be based only on the need for private finance, i.e., it should account the t for speed of delivery, cost savings, operational efficiencies, along with private finance if needed.	Academic	3.88	8	1.356
	Private	4.53	15	1.125
	Public	4.23	35	.770
	Total	4.26	58	.965
Question 7.The selection of a project for a P3 delivery should not be made if the state can fund the project using current revenues, taxes, grants, or user-pay.	Academic	2.88	8	1.458
	Private	2.07	15	1.033
	Public	2.63	35	1.215
	Total	2.52	58	1.217
Question 8. The use of P3 for project delivery should be prohibited as it would: a. increase the total cost of the project	Academic	2.50	8	.756
	Private	1.93	15	.961
	Public	2.37	35	.942
	Total	2.28	58	.933
Question 8. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	Academic	2.88	8	.991
	Private	1.80	15	.775
	Public	2.09	35	.887
	Total	2.12	58	.919
Question 8. c. negatively impact the use of local market resources (e.g., labor)	Academic	3.13	8	.641
	Private	2.07	15	1.100
	Public	2.23	35	.843
	Total	2.31	58	.940
Question 8. d. increases the DOT oversight work during the operation period	Academic	3.13	8	1.246
	Private	1.87	15	.915
	Public	2.17	35	.857
	Total	2.22	58	.992
Question 8. e. reduces the DOT control over the project	Academic	3.38	8	.518
	Private	1.73	15	.594
	Public	2.37	35	.843
	Total	2.34	58	.890

Question 8-1. The use of P3 for project delivery should be prohibited as it would:

Academic

1- Do satisfy fairly all the involved parties
2- P3 Could reduce transparency and could limit DOT control of project choices from the perspective of long-term ownership.
3- questions are too general - P3's should be prohibited on a case-by-case basis

Private

4- The PPP project designed by private sector may put more emphasis on the revenue making ability and pay not enough attention to its effect on social environment or community harmony.
5- ? It should not be prohibited for any reason, it should be studied in every case on a case by case basis and selected based on a value for money rationale.
6- If DOT wants more control over all phases of project development instead of compliance reviews/audits of design, construction, operations, maintenance and rehabilitation, over contract term.
7- “violate existing legislation; VfM (or cost/benefit) analysis indicates that P3 option has a higher whole life cost (including capital + O&M + financing) and doesn't provide socioeconomic benefits to public (i.e. build sooner, reduce congestion, local jobs, improved operations) superior to what the PSC could provide "
8- I can't think of a good reason to prohibit P3, especially if the public sector is properly informed and educated on what P3 really is and is not.
9- if its implementation is less effective for achievement of assigned tasks, considered as a single set, when any other way
10- if it does not provide value for money when compared to a design bid build approach. P3s should be evaluated regardless as long as the projects are over a certain threshold approach. P3s should always be in the tool box.

Public

1- (Do you mean "...should be prohibited if it would..."? That would change some of the answers above.)
2- While P3 projects a)increase cost, and potentially b)impact staffing, and c)local market resource, d) increase DOT Op oversight; this is not cause to prohibit P3 delivery, rather the DOT should adopt tools to manage these impacts (risks)
3- Illuminate how badly traditional public sector delivery performs
4- Turn public property over to private entities
5- P3 or other types of alternative delivery should never be prohibited. The particulars of each project should drive delivery.
6- If it's not in the best interest of the state.
7- "Exceed transportation debt financing thresholds.
8- It depends on many variables.
9- It should not be prohibited.
10- P3 projects should be prohibited in locations where the traffic will not provide enough toll revenues to cover the costs of the costs of the P3.
11- It should never be prohibited ..l maybe it should be required ... so quality of transportation services can improve
12- P3 should be prohibited if it would not fulfill public sector's long-term objectives.
13- raise the debt level (if P3 future costs are considered debt) if the state to a point of negatively impacting the performa.
14- No, in principle
15- N/A

	Demographics	Mean	N	Std. Deviation
Question 9.The use of P3 for project delivery should be discouraged as it would: a. increase the total cost of the project	Academic	2.50	8	.756
	Private	2.07	15	1.033
	Public	2.46	35	1.039
	Total	2.36	58	1.003
Question 9. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	Academic	3.00	8	.926
	Private	1.87	15	.915
	Public	2.29	35	1.017
	Total	2.28	58	1.022
Question 9. c. negatively impact the use of local market resources (e.g., labor)	Academic	3.25	8	.707
	Private	2.20	15	1.146
	Public	2.23	35	.808
	Total	2.36	58	.950
Question 9. d. increases the DOT oversight work during the operation period	Academic	3.13	8	1.246
	Private	1.93	15	.961
	Public	2.26	35	.980

	Demographics	Mean	N	Std. Deviation
	Total	2.29	58	1.060
Question 9. e. reduces the DOT control over the project	Academic	3.50	8	.535
	Private	1.80	15	.676
	Public	2.46	35	1.010
	Total	2.43	58	1.011

Question 9-1. The use of P3 for project delivery should be discouraged as it would:

Academic

1- P3 Could reduce transparency and could limit DOT control of project choices from the perspective of long-term ownership.

Private

2- ? It should not be prohibited for any reason, it should be studied in every case on a case by case basis and selected based on a value for money rationale.
3- The most important drivers would be relative whole life cost and benefits to public by building project much sooner in the capital program. DOT staffing and market resources shouldn't be major issues
4- I can't think of a good reason to prohibit P3, especially if the public sector is properly informed and educated on what P3 really is and is not.
5- I don't think they should be discouraged. They should be evaluated as one approach to delivery.

Public

6- Show how inefficient public sector delivery really is
7- Giving over control of a public asset to private entities.
8- P3 or other types of alternative should never be discouraged or encouraged. Large, complex, systemic, or bundled projects should be evaluated and a decision should be made based on an assessment of key factors, risks, and a VfM analysis.
9- Cost of user
10- It depends on many variables.
11- Use of P3 should not be discouraged. However, a State may consider their staffing, and control over project, and even the oversight needs, when making a decision on project delivery method, and ultimately chose the delivery method that best meets all of the States needs.
12- never discourage ... always encourage ... or require ... remove transportation from the world of politics
13- Should be discouraged where the expectations are for private funding (which is not an element of P3) vs. efficiency or risk transfer that could be gained.
14- It depends. Requires case by case analysis.

	Demographics	Mean	N	Std. Deviation
Question 10.If the value-for-money analysis of a project concluded that P3 is a viable and good option, the ultimate decision of pursuing the project using the P3 system should be at the discretion of: a. the state treasury office	Academic	2.50	8	.926
	Private	2.60	15	.986
	Public	2.26	35	.886
	Total	2.38	58	.914
Question 10. b. the state DOT	Academic	3.88	8	1.126
	Private	4.00	15	.756
	Public	4.14	35	.944
	Total	4.07	58	.915
Question 10. c. a committee of both treasury and DOT	Academic	3.75	8	.886
	Private	3.53	15	.990
	Public	3.03	35	1.200
	Total	3.26	58	1.133
Question 10. d. a legislation office/committee	Academic	2.63	8	1.408
	Private	2.93	15	1.534
	Public	2.23	35	1.285
	Total	2.47	58	1.379

Question 10-1. Do you like to add other entities for decision making on a P3 project? Please, elaborate.

Academic

1- A dedicated P3 Agency that supports infrastructure development across sectors (not just transportation).
2- question 10 should consider the public, and extensive public participation
3- As the DOT is responsible for long-term ownership and maintenance, all final decisions must be left in their hands.
4- Experts on these type of projects

Private

5- Local governmental entities if the project will have tolls
6- Political commitment is critical for P3 Projects Development and delivery successes... Procuring Authority's P3 Framework should be robust and P3 Process adopted should be aligned to public interest and not political interest...
7- It might involve a state Transportation Commission or a joint legislative committee (as is case in WA State). Absolutely would involve the State Budget Office and DOT Executive Staff
8- A legislative committee should be struck with the mandate to approve / reject P3 options, but such approval / rejection should be done before the procurement is initiated, with ability to reject in later stages only if the procurement does not meet parameters which were set prior to procurement start.
9- The question of who makes the decision is less important than a transparent process so that bidders know who is making the decisions and when. Bidders should not be expected to go through the entire procurement and then have the procurement canceled.
10- The committee should also include representatives of local people or members of local community affected by the project.

Public

11- Specialized PPP departments with appropriate expertise are desirable
12- The use of a State Transportation Board, if it exists, in concert with the State DOT is the option utilized in the State of Virginia.
13- Public vote
14- Obviously, collaboration with federal partners must be part of the consideration.
15- "Director of the Office of Management and Budget
16- Controller General"
17- No
18- appropriate local agencies
19- Community should be involved - and it should help fulfill objectives.
20- Decision should be made by DOT but there should be some guidelines/limitations for the DOT to work within to make the decision, which would most likely be established by the legislature and/or governor.
21- A stakeholder's representative committee
22- Note VfM analyses can easily be "cooked" to show a desired outcome, so reaching a conclusion that "P3 is a viable and good option" is not always representative of the facts at hand.
23- In addition to committees of both treasury/finance and the DOT, it would be prudent to add a committee representative of the state legislative body who has appropriations authority.

	Demographics	Mean	N	Std. Deviation
Question 11. It is generally believed that the approach to the use of P3 is highly politicized; e.g. a project that would be viable under P3 based on a value-for-money would still be rejected because of political gains/loses or political ideology.	Academic	3.75	8	1.282
	Private	3.80	15	1.082
	Public	3.20	35	1.052
	Total	3.43	58	1.110
Question 12. A state legislation act for P3 should do the followinga. Require the creation within the DOT a state P3 office to work on P3 policy development, project business planning, project procurement process, and post-financial close functions (e.g. performance measurement), but not including project approvals.	Academic	3.88	8	.641
	Private	4.00	15	.926
	Public	3.34	35	1.235
	Total	3.59	58	1.124

	Demographics	Mean	N	Std. Deviation
Question 12. b. Require public agencies to use value-for-money analysis to assess the project feasibility as a P3 project.	Academic	3.50	8	1.512
	Private	4.13	15	.640
	Public	3.66	35	.873
	Total	3.76	58	.942
Question 12. c. Require that approvals for using P3 model for a project be made by a P3 Committee comprised of the DOT, State Treasury/Finance, and a legislative body for appropriations.	Academic	3.25	8	1.035
	Private	3.47	15	1.246
	Public	2.54	35	1.197
	Total	2.88	58	1.244
Question 12. d. Make it possible to use any P3 models, such as DBOM, DBFOM, DBF, if the project value-for-money analysis justifies that model.	Academic	4.13	8	.991
	Private	4.60	15	.507
	Public	3.80	35	.964
	Total	4.05	58	.926
Question 12. e. Make it possible to use public finance, private finance, and/or federal credit assistance (e.g. TIFIA loans) if the value-for-money analysis justifies that use.	Academic	4.13	8	.641
	Private	4.33	15	1.047
	Public	3.83	35	1.150
	Total	4.00	58	1.076
Question 12. f. Provide for P3 contracts to emphasize the use of local resources (e.g. labor, equipment, and material) when possible or justified and establish the mechanisms to do that.	Academic	3.13	8	.641
	Private	3.67	15	1.234
	Public	3.23	35	1.003
	Total	3.33	58	1.033
Question 12. g. Make it possible to use unsolicited proposals under restricted assessment conditions that maintain public accountability, e.g. if the project is feasible, to require the issuance of RFQ/RFP to the general market.	Academic	3.25	8	1.035
	Private	3.73	15	1.387
	Public	3.54	35	1.039
	Total	3.55	58	1.127
Question 12. h. Require that the length of the P3 agreement be determined based on the value-for-money analysis.	Academic	3.00	8	1.512
	Private	3.47	15	1.187
	Public	3.43	35	.979
	Total	3.38	58	1.105
Question 12. i. Provide for the use of any of the various payment types, e.g. performance and non-performance payments, usage payments, as might be determined based on the value-for-money analysis and risk allocation.	Academic	3.50	8	1.309
	Private	4.00	15	.655
	Public	3.71	35	.926
	Total	3.76	58	.924

Question 13. Please explain any further points that you see important to be included in a P3 legislative act.

Academic

1- Again -- I prefer a government P3 agency that has a broader mandate than just transportation.
2- "value-for-money analysis is not a reliable measure of P3 viability or specifications.

public participation, education and engagement, should drive P3 project selection, not politicized and highly subjective criteria like VFM"

3- Any legislation to support P3 must also include providing funding to the DOT for additional personal or time to support the projects. Otherwise, P3 becomes an unfunded mandate.
4- The performance monitoring regulation in operation stage and quality requirement, procedure in transfer stage at the end of concession period.

Private

5- There needs a alignment at all government levels, i.e., federal commitment, state initiative and municipal emphasis, to make an effective P3 projects delivered... this should be in the legislative act as the underlined P3 framework...
6- "-Use a flexible best-value procurement process with off-ramps. Don't be prescriptive regarding evaluation criteria, price/technical weightings, selection method, and payment methods. Allow for competitive negotiations and/or trade-off analysis in selection decision.
7- -Allow for an unsolicited proposal process
8- -Use ATC process and "Approval for P3 should be granted prior to commencement of P3 procurement; Whole of life approaches should be included in any analysis; All aspects of ownership costs should be considered in any analysis, not just cost of financing; P3 should not be considered only for DOT; other ""social"" programs should be able to avail themselves of this procurement approach. e.g. schools and universities, justice facilities, state health, labs, etc."
9- P3 should be a finance option that only competes with public financing by the agency in the analysis.
10- The timing of the approvals is critically important. It is important to have all decision makers on board before a procurement process is launched.

Public

11- Ability to replace surety bonding with financial instruments such as letters of credit
12- Don't support one.
13- The environment in some states may make the "ideal" P3 law less viable. Any legislative move to encourage the use of more alternative delivery, even less restrictive design-build laws, is a step in the right direction. Laws that require legislative approval prior to project approval may actually do more harm than good. A "slimmer" law that encourages use of analysis and gives the DOT authority might be a better starting point.
14- Difficult because each state has different constraints.
15- P3 legislative act should also include traditional Design Build as well.
16- as I stated above, transportation would do better when extricated from the irrational world of politics. Therefore, I favor any and all movement in the direction of P3 ... and for that matter we should go to privatization as rapidly as possible.
17- Require some kind of independent analysis in addition to that funded by the DOT.
18- c. There is a need for a P3 oversight committee to review decisions and provide transparency, however requiring a legislative body to be a part of that could be a problem in our state since most P3s have a time-critical component to them and it is often difficult to get fast response from legislative bodies who have many other issues on their agenda, especially in states with part-time legislatures.
19- Any necessary legislative approval should come in the early stages of the project development or procurement. Allowing the legislature to approve final contract award is considered poor practice by the industry because this could derail the project after substantial investments by all parties.
20- The DOT office should be able to approve projects.
21- require the issuance of a finding of public interest that P3 procurement is in the best interest of the public based on solid business/commercial terms as established from the outset of the procurement, and an affirmation of such finding of interest prior to commercial close of the P3 delivery option, approved and affirmed by heads of the DOT, legislative body and treasury/finance, including risk assessment.

	Demographics	Mean	N	Std. Deviation
Question 14. A framework for using P3 delivery system should provide the following a. A responsible public entity, e.g. state DOT P3 office should be created to be responsible for the P3 delivery.	Academic	4.25	8	.707
	Private	4.20	15	.561
	Public	3.89	35	1.051
	Total	4.02	58	.908
Question 14. b.The framework should be structured such that it would have phases with decision points to proceed or to stop at each phase, e.g. three phases: (1) identification and screening, (2) project analysis and procurement documents, and (3) project procurement	Academic	4.00	8	.535
	Private	4.20	15	.775
	Public	3.94	35	.873
	Total	4.02	58	.805
Question 14. c. Arranged such that the decisions be made by the relevant body, e.g. value-for-money analysis by the DOT, and the phase approval by a P3 Committee.	Academic	3.63	8	.518
	Private	4.00	15	1.069
	Public	3.51	35	.853

	Demographics	Mean	N	Std. Deviation
	Total	3.66	58	.890
Question 14. d. Require that the project stakeholders be advised of the project and their feedback acknowledged.	Academic	4.50	8	.535
	Private	4.47	15	.640
	Public	4.09	35	.702
	Total	4.24	58	.683
Question 14. e. Require that the general public be acknowledged and their feedback be collected about any proposed P3 project.	Academic	4.25	8	.463
	Private	4.47	15	.516
	Public	3.86	35	.879
	Total	4.07	58	.792
Question 14. f. Require that the general public is involved in the decision-making process regarding a P3 project.	Academic	3.88	8	.991
	Private	3.00	15	1.464
	Public	2.69	35	1.022
	Total	2.93	58	1.197
Question 15. If a DOT P3 office is created to be responsible for the P3 delivery, the functions of such office should include: a. Development of policy and guidance documents	Academic	4.50	8	.535
	Private	4.53	15	.516
	Public	4.26	35	.886
	Total	4.36	58	.765
Question 15. b. Provide training on P3	Academic	4.13	8	.641
	Private	4.33	15	.724
	Public	4.29	35	.987
	Total	4.28	58	.874
Question 15. c. Business planning (e.g. early screening, procurement options assessment, business case creation, and assessment)	Academic	4.13	8	.835
	Private	4.47	15	.640
	Public	4.31	35	.718
	Total	4.33	58	.711
Question 15. d. Procurement management (e.g. draft and final RFQ and RFP, managing the procurement, reporting)	Academic	4.38	8	.518
	Private	4.47	15	.640
	Public	4.23	35	.843
	Total	4.31	58	.754
Question 15. e. post-agreement activities (e.g. performance analysis and measurement, operations phase advice)	Academic	4.38	8	.518
	Private	4.60	15	.507
	Public	4.03	35	.954
	Total	4.22	58	.839

Question 16. Please explain any further points that you see important for a P3 delivery framework

Questions or comments?

Academic

1- The DOT is ultimately responsible for maintenance when the private entity has completed its' contract. All construction under the contract must meet existing standards or have variances approved by the DOT. Accepting sub-par construction to save money is ultimately not a cost savings.

Private

2- (1) Nonpolitical intervention in the decision process is an important factor at all phases of project development and delivery...
(2) The framework should also encompass what means P3 Project Failure, as this will determine the level of risks public exposed to...
(3) The framework shall determine also, what level of risks to be shared between public and private sectors, in a P3 project and at what cost to determine effective transfer of risks with appropriate remuneration...
(4) The framework shall also include Auditor General and/or equivalent to evaluate pre- or post-contract audit to ensure compliance to public procurement guidelines of P3 projects...

3- FHWA is in process of developing a decision framework (tool) for selection of Alternative Delivery Methods (incld. P3). Stay tuned!

4- While these questions relate to DOT, I see no reason why the procurement body could not be used for any P3 procurement for assets other than DOT (ie social infra projects). The actual asset type should be irrelevant if a fair value for money analysis is conducted. DOT is but one type of asset that could be procured. Yes, the procurement office should have subject matter experts, but legal, finance, process, etc. functions are essentially agnostic on asset type.

Public

5- "Expert advice (financial, legal and technical) is required to develop PPP processes. PPP delivery works best when allowed flexibility to innovate. DBB specifications will not result in a high quaity value for money PPP"
6- P3 office should support O&M oversight of the delivered P3 project, rather than lead such oversight. Suggest that the District Operations group (counterpart would be Private Operators Operations group) in which the project/s are located be the authorized representative and single point of contact for all of the Day to Day and routine functions associated with oversight of the facility.
7- Stakeholder outreach may be more important if tolls or user fees are involved. Other types of P3s don't seem to matter as much to the public. Other stakeholder groups, like local municipalities or the construction/contracting industry, should be included in the process, but should not drive the process. It should be clearly stated in any document that all project are P3 candidates. A P3 project should only advance after extremely careful consideration is given taking into account need, project cost and user cost.
8- allow the private partner the opportunity to be the owner of the project.
9- Understanding of risk allocation. Many DOTs don't understand the risks they currently manage very well (financial and otherwise).
10- d. procurement documents must be compiled by project staff. A P3 office can guide, but the region and management of the project must lead the effort for procurement docs. Regarding 14d/e/f: the federal NEPA process for project approval already requires input from these parties, so it is duplicative for a P3 framework to require this input as well.

Mann-Whitney Test

Public vs Private	Mann-Whitney U	Asymp. Sig. (2-tailed)	Exact Sig. (1-tailed)
Question 2.P3 as a delivery system should be part of the state DOT delivery systems toolbox; e.g., to be aligned with the design-bid-build (DBB), design-build (DB), and construction management at risk (CMAR), when selecting a system for a proposed project.	232.000	.469	.264
Question 3.The selection of a project for a P3 delivery should be based on a value-for-money analysis that compares the project under both P3 and the traditional design-bid-build (DBB) or design-build (DB) and considering the life cycle of the project and considering future operation and maintenance costs and future risks.	202.000	.161	.095
Question 4. Public finance, if available, is typically cheaper than private finance, however, with the availability of less expensive federal credits means such as TIFIA loans, Private Activity Bonds, etc., the use of P3 system should not be restricted or prohibited	169.500	.036	.018
Question 5. If the state does not have enough funds to develop a high-priority needed project ist, it should allow for its delivery to be investigated using P3 with user-pay and private financing.	220.500	.329	.193
Question 6.The selection of a project for a P3 delivery should not be based only on the need for private finance, i.e., it should account for speed of delivery, cost savings, operational efficiencies, along with private finance if needed.	173.000	.036	.018
Question 7.The selection of a project for a P3 delivery should not be made if the state can fund the project using current revenues, taxes, grants, or user-pay.	193.500	.131	.069
Question 8. The use of P3 for project delivery should be prohibited as it would:a. increase the total cost of the project	194.500	.127	.071
Question 8. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	217.500	.313	.169
Question 8. c. negatively impact the use of local market resources (e.g., labor)	221.000	.352	.164
Question 8. d. increases the DOT oversight work during the operation period	207.000	.213	.118
Question 8. e. reduces the DOT control over the project	148.500	.010	.004
Question 9. The use of P3 for project delivery should be discouraged as it would: a. increases the total cost of the project	204.500	.194	.106
Question 9. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	199.500	.161	.087
Question 9. c. negatively impact the use of local market resources (e.g., labor)	245.500	.703	.383
Question 9. d. increases the DOT oversight work during the operation period	213.000	.271	.138

Public vs Private	Mann-Whitney U	Asymp. Sig. (2-tailed)	Exact Sig. (1-tailed)
Question 9. e. reduces the DOT control over the project	164.000	.028	.014
Question 10.If the value-for-money analysis of a project concluded that P3 is a viable and good option, the ultimate decision of pursuing the project using the P3 system should be at the discretion of: a. the state treasury office	217.500	.310	.161
Question 10. b. the state DOT	224.500	.390	.215
Question 10. c. a committee of both treasury and DOT	190.500	.115	.059
Question 10. d. a legislation office/committee	192.500	.125	.065
Question 11. It is generally believed that the approach to the use of P3 is highly politicized; e.g. a project that would be viable under P3 based on a value-for-money would still be rejected because of political gains/loses or political ideology.	177.000	.057	.029
Question 12. A state legislation act for P3 should do the followinga. Require the creation within the DOT a state P3 office to work on P3 policy development, project business planning, project procurement process, and post-financial close functions (e.g. performance measurement), but not including project approvals.	185.000	.085	.043
Question 12. b. Require public agencies to use value-for-money analysis to assess the project feasibility as a P3 project.	188.000	.077	.046
Question 12. c. Require that approvals for using P3 model for a project be made by a P3 Committee comprised of the DOT, State Treasury/Finance, and a legislative body for appropriations.	154.500	.018	.009
Question 12. d. Make it possible to use any P3 models, such as DBOM, DBFOM, DBF, if the project value-for-money analysis justifies that model.	127.500	.002	.001
Question 12. e. Make it possible to use public finance, private finance, and/or federal credit assistance (e.g. TIFIA loans) if the value-for-money analysis justifies that use.	181.500	.066	.037
Question 12. f. Provide for P3 contracts to emphasize the use of local resources (e.g. labor, equipment, and material) when possible or justified and establish the mechanisms to do that.	194.500	.136	.071
Question 12. g. Make it possible to use unsolicited proposals under restricted assessment conditions that maintain public accountability, e.g. if the project is feasible, to require the issuance of RFQ/RFP to the general market.	215.500	.294	.150
Question 12. h. Require that the length of the P3 agreement be determined based on the value-for-money analysis.	254.500	.858	.442
Question 12. i. Provide for the use of any of the various payment types, e.g. performance and non-performance payments, usage payments, as might be determined based on the value-for-money analysis and risk allocation.	223.500	.358	.198
Question 14. A framework for using P3 delivery system should provide the followinga. A responsible public entity, e.g. state DOT P3 office should be created to be responsible for the P3 delivery.	232.500	.474	.249
Question 14. b.The framework should be structured such that it would have phases with decision points to proceed or to stop at each phase, e.g. three phases: (1) identification and screening, (2) project analysis and procurement documents, and (3) project procurement	225.000	.358	.161
Question 14. c. Arranged such that the decisions be made by the relevant body, e.g. value-for-money analysis by the DOT, and the phase approval by a P3 Committee.	180.500	.063	.033
Question 14. d. Require that the project stakeholders be advised of the project and their feedback acknowledged.	185.000	.067	.039
Question 14. e. Require that the general public be acknowledged and their feedback be collected about any proposed P3 project.	160.500	.016	.012
Question 14. f. Require that the general public is involved in the decision-making process regarding a P3 project.	229.500	.469	.237
Question 15. If a DOT P3 office is created to be responsible for the P3 delivery, the functions of such office should include: a. Development of policy and guidance documents	224.500	.366	.224
Question 15. b. Provide training on P3	252.000	.806	.427
Question 15. c. Business planning (e.g. early screening, procurement options assessment, business case creation, and assessment)	234.000	.501	.278
Question 15. d. Procurement management (e.g. draft and final RFQ and RFP, managing the procurement, reporting)	226.500	.402	.223
Question 15. e. post-agreement activities (e.g. performance analysis and measurement, operations phase advice)	171.000	.036	.022

Public vs Academic	Mann-Whitney U	Asymp. Sig. (2-tailed)	Exact Sig. (1-tailed)
Question 2.P3 as a delivery system should be part of the state DOT delivery systems toolbox; e.g., to be aligned with the design-bid-build (DBB), design-build (DB), and construction management at risk (CMAR), when selecting a system for aroposed project.	122.000	.533	.284
Question 3.The selection of a project for a P3 delivery should be based on a value-for-money analysis that compares the project under both P3 and the traditional design-bid-build (DBB) or design-build (DB) and considering the life cycle of the project and considering future operation and maintenance costs and future risks.	123.000	.570	.292

Public vs Academic	Mann-Whitney U	Asymp. Sig. (2-tailed)	Exact Sig. (1-tailed)
Question 4.Public finance, if available, is typically cheaper than private finance, however, with the availability of less expensive federal credits means such as TIFIA loans, Private Activity Bonds, etc., the use of P3 system should not be restricted or prohibited	125.000	.622	.339
Question 5. If the state does not have enough funds to develop a high-priority needed project, it should allow for its delivery to be investigated using P3 with user-pay and private financing.	104.500	.233	.130
Question 6.The selection of a project for a P3 delivery should not be based only on the need for private finance, i.e., it should account for speed of delivery, cost savings, operational efficiencies, along with private finance if needed.	126.000	.636	.337
Question 7.The selection of a project for a P3 delivery should not be made if the state can fund the project using current revenues, taxes, grants, or user-pay.	125.500	.642	.346
Question 8. The use of P3 for project delivery should be prohibited as it would:a. increase the total cost of the project	118.000	.463	.247
Question 8. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	76.000	.037	.019
Question 8. c. negatively impact the use of local market resources (e.g., labor)	60.000	.008	.005
Question 8. d. increases the DOT oversight work during the operation period	73.500	.030	.016
Question 8. e. reduces the DOT control over the project	50.500	.003	.001
Question 9.The use of P3 for project delivery should be discouraged as it would: a. increase the total cost of the project	124.000	.596	.308
Question 9. b. negatively impact the current staffing use in the DOT (e.g., less work for engineers, construction managers, etc.)	78.500	.045	.022
Question 9. c. negatively impact the use of local market resources (e.g., labor)	51.500	.003	.002
Question 9. d. increases the DOT oversight work during the operation period	79.500	.049	.028
Question 9. e. reduces the DOT control over the project	54.000	.005	.002
Question 10.If the value-for-money analysis of a project concluded that P3 is a viable and good option, the ultimate decision of pursuing the project using the P3 system should be at the discretion of: a. the state treasury office	118.500	.477	.268
Question 10. b. the state DOT	121.000	.528	.295
Question 10. c. a committee of both treasury and DOT	89.000	.101	.047
Question 10. d. a legislation office/committee	115.500	.427	.226
Question 11. It is generally believed that the approach to the use of P3 is highly politicized; e.g. a project that would be viable under P3 based on a value-for-money would still be rejected because of political gains/loses or political ideology.	93.000	.123	.070
Question 12. A state legislation act for P3 should do the followinga. Require the creation within the DOT a state P3 office to work on P3 policy development, project business planning, project procurement process, and post-financial close functions (e.g. performance measurement), but not including project approvals.	111.000	.337	.190
Question 12. b. Require public agencies to use value-for-money analysis to assess the project feasibility as a P3 project.	138.500	.960	.483
Question 12. c. Require that approvals for using P3 model for a project be made by a P3 Committee comprised of the DOT, State Treasury/Finance, and a legislative body for appropriations.	89.500	.104	.050
Question 12. d. Make it possible to use any P3 models, such as DBOM, DBFOM, DBF, if the project value-for-money analysis justifies that model.	107.500	.271	.157
Question 12. e. Make it possible to use public finance, private finance, and/or federal credit assistance (e.g. TIFIA loans) if the value-for-money analysis justifies that use.	128.500	.699	.364
Question 12. f. Provide for P3 contracts to emphasize the use of local resources (e.g. labor, equipment, and material) when possible or justified and establish the mechanisms to do that.	132.500	.804	.414
Question 12. g. Make it possible to use unsolicited proposals under restricted assessment conditions that maintain public accountability, e.g. if the project is feasible, to require the issuance of RFQ/RFP to the general market.	117.500	.453	.240
Question 12. h. Require that the length of the P3 agreement be determined based on the value-for-money analysis.	121.500	.541	.268
Question 12. i. Provide for the use of any of the various payment types, e.g. performance and non-performance payments, usage payments, as might be determined based on the value-for-money analysis and risk allocation.	138.000	.945	.480
Question 14. A framework for using P3 delivery system should provide the following a. A responsible public entity, e.g. state DOT P3 office should be created to be responsible for the P3 delivery.	117.000	.429	.223
Question 14. b. The framework should be structured such that it would have phases with decision points to proceed or to stop at each phase, e.g. three phases: (1) identification and screening, (2) project analysis and procurement documents, and (3) project procurement	134.000	.812	.524
Question 14. c. Arranged such that the decisions be made by the relevant body, e.g. value-for-money analysis by the DOT, and the phase approval by a P3 Committee.	135.500	.875	.486
Question 14. d. Require that the project stakeholders be advised of the project and their feedback acknowledged.	96.000	.119	.102
Question 14. e. Require that the general public be acknowledged and their feedback be collected about any proposed P3 project.	109.000	.270	.173
Question 14. f. Require that the general public is involved in the decision-making process regarding a P3 project.	57.500	.007	.004
Question 15. If a DOT P3 office is created to be responsible for the P3 delivery, the functions of such office should include: a. Development of policy and guidance documents	124.000	.576	.378
Question 15. b. Provide training on P3	108.000	.272	.158
Question 15. c. Business planning (e.g. early screening, procurement options assessment, business case creation, and assessment)	121.000	.514	.289
Question 15. d. Procurement management (e.g. draft and final RFQ and RFP, managing the procurement, reporting)	135.000	.864	.490
Question 15. e. post-agreement activities (e.g. performance analysis and measurement, operations phase advice)	115.500	.408	.261

APPENDIX C

Survey B: Political Influence on Public Private Partnerships implementation

This survey aims to understand the political factors that affect effective P3 implementation in the US. It aims to understand political issues that policymakers need to address to ensure effective implementation in the US. You have been chosen because of your extensive experience in P3 implementation. The survey is completely voluntary, and you can choose not to answer any question that you do not feel comfortable with. It will take about 10 minutes of your time.

Your participation will ensure that political issues affecting the P3 implementation can be addressed in the future. If you have any question regarding the results of the survey or any other relevant matter, please do not hesitate to contact Sohaib Gutub at smgutub@uw.edu or call (206) 832-7072.

Please provide the following contact information

Name
Position
Employer
US state in which you are employed

Q1. Do you think P3 has been politicized, used for or against attaining some political gains? Please elaborate if possible.

Q2. Do you think there is room that a financially-viable P3 would be rejected because it has some political ramifications or consequences? Please elaborate if possible.

Q3. Can you cite or give some examples of how politics might affect P3 projects?

Q4. With the fear of the public not accepting P3s, how can we get the public to be receptive about P3s?

Q5. Do you think sufficient legislation exists regarding P3 in your state? Is there a room for improvement?

Q6. Are there particular negative issues related to the implementation of P3s in your state?

Q7. In your opinion, what would be the needed steps to successfully implement P3 and getting it to be widely accepted?

Q8. Should politicians have a say in deciding whether the P3 delivery system should be used or not, or should we leave that to be determined based on economic analysis (value for money)?

Q9. In your opinion, what could be done in order to de-politicize P3s?

APPENDIX D

Survey B: Summaries

US state in which you are employed

1- Pennsylvania
2- Florida
3- Virginia
4- Georgia
5- Montana
6- South Dakota
7- New Hampshire
8- Arizona
9- Washington
10- Alabama
11- Maryland
12- Michigan
13- Texas
14- Colorado
15- New Jersey
16- Alaska
17- Washington, DC
18- Delaware
19- California

Q1- Do you think P3 has been politicized, used for or against attaining some political gains? Please elaborate if possible.

1- (NO) Not sure what this question is asking.
2- (YES)Yes it has been politicized as "Privatization". Good P3 is not....it includes all sectors.
3- There are various stakeholders who are opposed to P3 transportation project agreements. These stakeholders posit that P3 projects agreements contain provisions that may prohibit or frustrate the construction of non-tolled transportation facilities as alternative to tolled facilities through economic disincentives are against public policy. A bill was offered in the 2019 General Assembly legislative session (HJ704).
4- (YES) In my opinion, there is a lot of misunderstanding on what P3 can do, and therefore, like many complex vehicles for public agency delivery, is susceptible to being picked up and used for shallow political gain regarding a particular agenda. It has been used across the country as arguments 'for' and 'against' certain public policy debates, resulting in some degree of "spin". When the "spin" created is not synonymous with true principles and tradeoffs afforded by P3 options, it can set back potential valuable public policy decisions for many years, resulting in public not getting the benefits it could be receiving.
5- (NO) Not in Montana
6- (NA) P3's in my State are really scarce due to the many different factors but primarily because our low traffic volumes.
7- (NO) No
8- (YES) Yes. In Arizona a number of private stakeholders have lobbied the Governor and Legislature to approve a comprehensive P3 law with the argument that there is billions of private capital available for transportation infrastructure. Arizona has passed a very good P3 law, but to date has not used it in any meaningful way due to the lack of public and political support for tolling/fee generating P3 contracts.
9- (YES) Yes, in the State of Washington the legislative obstinacy of certain legislators served to block the use of P3's for years.
10- NO
11- (YES) Unfortunately several years ago it seemed like P3s were a Republican idea that Democrats opposed based on unions not being in support of P3s. I think that is slowly changing and both sides are supportive. That being said, projects are always political!
12- (YES) Since most P3s are typically major public works investments, and typically encumber the public entity to either a long term obligation (like availability payments) or relinquishing some degree of control on levying user fees, they are inherently the subject of policy debate, both for and against. I have not seen anyone use P3s for “political advantage” per se, but there are definitely differing political views on the merits of P3s as mechanism to advance public works.
13- (YES) Definitely has been politicized by those interested in maintaining the status quo of having taxpayers on hook for paying for public works projects. P3 has been politicized mostly by contractors afraid of a new model of business, and

one they refuse to compete within versus their traditional system. Some in industry prefer a system where they construct roads with taxpayer funds because they deal with a state DOT's they know well and where they do not have to bring equity to advance a project. Some large contractors ironically prefer to not allow new private money into their states to build needed roadways and will even stop projects to do so even at the expense of many sub contractors who would benefit, much less the traveling public demanding new roadways.

14- (YES) "The use of ""P3"" delivery methods, be it a design-build to a design-build-finance-operate-maintain, objectively, are quite well thought out decisions nowadays. The factors influencing that decision are interrelated and complex. The resources to ensure the public gets the best value for money from that decision to deliver a project as a P3 have improved significantly, and if the appropriate party (public or private) has the expertise to objectively conduct an analysis to determine the best project delivery method to implement, the analysis is valuable. However, just like any public infrastructure project of significant magnitude, the the political forces behind, that make or break a project, will always be associated with each and every project regardless of delivery method. On a more broader perspective, the legislative power that enables P3s is definitely politicized, and every state is different (in the US), political shifts could change or limit P3-enabling laws."
15- (NO) I don't think so.
16- (NA) State of Alaska has not done a P3 yet.
17- (YES) "I don't believe the ""P3"" lens provides much insight for analysis. Large public works -- the kinds of projects for which the P3 model is most relevant -- have always engendered controversy due to their outsize impact. Such projects can be delivered via many means. The Alaskan Way Viaduct Replacement Tunnel, for one, has been hugely controversial on its own merits. Had the Washington State DOT selected a P3 delivery model (Design-Build-Finance-Operate-Maintain) instead of Design-Build, I would hope we would appreciate that the political issues, which are public policy issues, were driven by the project objectives and not by its delivery method."
18- (YES) Every transportation project is politicized. P3 arrangements are no different, except they may help projects move forward that would not otherwise compete well for funding because they include some amount of private capital.
19- (NA) No opinion

Q2- Do you think there is room that a financially-viable P3 would be rejected because it has some political ramifications or consequences? Please elaborate if possible."

1- Again I find this question very vague and unclear. Projects of all types face political considerations, particularly large projects, projects with environmental impacts and/or user fees. Likewise any P3 can be viable if the government provides funding - eg through availability payments. But I'm not sure the distinction you're trying to get at or the question you're trying to ask.
2- "Good P3 requires good outreach to the community. Value of money and risk assumption is fundamental."
3- There are various stakeholders who are opposed to P3 transportation project agreements. These stakeholders posit that P3 projects agreements contain provisions that may prohibit or frustrate the construction of non-tolled transportation facilities as alternative to tolled facilities through economic disincentives are against public policy. A bill was offered in the 2019 General Assembly legislative session (HJ704).
4- P3 options are significant State level commitments demanding that Public Officers make decisions within their respective stewardship directives and decision making guidance. Political ramifications are always present no matter what, so yes, it is possible that a financially viable P3 could be rejected because of a particular reason that has roots in a political consequence, but P3 is not exclusive to this principle. As with all complex undertakings, full and true understanding by decision makers is best.
5- Yes. Depends on issues
6- See answer to Question 1.
7- Yes, Any project, even if financially viable, needs public support and acceptance
8- Arizona has a number of possible P3 opportunities, but politically we have not moved forward with solicitations due to political and public negativity towards paying tolls/fees for infrastructure.
9- Absolutely, but it is hard to elaborate on this as it subjective to a legislators position on a specific issue. Further, it is dependent on the type of P3 being considered - transportation or social.
10- N0
11- There is always the chance that because procurements take a long time, there can be a change in political leadership that can result in a canceled project. Case in point is the Indianapolis Court House P3. Also, Maryland's Traffic Relief P3 is changing because of lack of local political support for the project.
12- There is always potential, but again I haven't specifically seen it. Any major investment project will have advocates and opponents; the rejections of a project would probably have more to do with their beliefs about the project's need and impacts more so than if it was a viable P3 or not.
13- Absolutely. The I-35 in Austin Texas is demonstrated to be potentially delivered at no cost to the state taxpayers but contractor lobby does not want private investment in Texas for P3 because they prefer tax payers to pay for projects through traditional state procurements where they believe they have more advantages.

14- Yes. Even if a P3 is a better option for the public (faster delivery, long-term life cycle benefits, etc), a project could be used as a political tool for or against existing politicians, particularly during heated election seasons. Getting a project through/started during an administration is more likely to happen than during a transition.
15- No Comments.
16- Yes, if the P3 was unpopular with the community being impacted
17- Of course. The most controversial ramification or consequence is often tolling, which despite the micro-economic theory of the rational decision maker is hugely unpopular among voters. Again, a public agency is just as able as a private concessionaire to collect tolls.
18- Yes. If the P3 arrangement involves divestiture of a public asset, like a major toll highway that offers a source of funding to the State. This was proposed and rejected by the State of Delaware about 20 years ago.
19- No opinion

Q3- Can you cite or give some examples of how politics might affect P3 projects?

1- Again, I've never seen a major project, p3 or non p3, which isn't the subject of politics. Ultimately politicians represent constituents and constituents can have differing views of the same project. P3s can be more complex and harder to explain so sometimes there is confusion - or projects opponents can introduce additional misinformation willfully or unintentionally. A strong and engaged political champion conversely can help any type of project advance.
2- Unions. Bonding capacity
3- There are various stakeholders who are opposed to P3 transportation project agreements. These stakeholders posit that P3 projects agreements contain provisions that may prohibit or frustrate the construction of non-tolled transportation facilities as alternative to tolled facilities through economic disincentives are against public policy. A bill was offered in the 2019 General Assembly legislative session (HJ704).
4- An overtly "anti-government" type of agenda could oversell the benefits of a Public Private Partnership, if not set up for proper controls and risk transfer. An over aggressive desire for private sector revenue can push P3s that ultimately are not in alignment with the other facets of the operating government, if not properly vetted. An overly aggressive highly political push for infrastructure delivery without due consideration of long-term commitment can result in short term win but long term pain.
5- No
6- No
7- Determination of funding or financing alternatives inherently require political support
8- Without political support for P3 projects that generate some of the revenue to construct, agency directors are not going to put themselves in jeopardy of losing their position by pushing for a comprehensive P3 program.
9- Certain Washington legislators are resistant to P3's if the project is perceived to have an adverse impact on their constituency.
10- NO
11- Indianapolis Court House P3 was canceled due to new elections for City Council. Project Neon in Nevada was changed from a P3 to a DB because it could not get the political support to move forward. MD Traffic Relief P3 scope for the first P3 contract is changing now.
12- See Q2 above.
13- Misunderstandings of project benefits by local community - North Carolina I-77. Misuse of project facts by a local community to elicit a political stoppage of project I-77 North Carolina.
14- It is well-known that most P3 projects become cost-effective the larger (cost-wise) the project, and hence P3s are typically significantly large projects that likely have a very significant impact on the region and communities/stakeholders near the project. Everyone of these projects (which takes many years to shape up) is typically associated with a strong "project champion" that maintains that continuity (could be a local grassroots supporter, or a public agency director) to move a project forward. The political environment can be favorable to the project is they support it, or it could make a project "cold" (not a priority), hence not allowing projects to make progress.
15- If the purpose and need of the project or program is exclusively serves or meets the expectations of only particular targeted stakeholders.
16- An effort was made to use a P3 on a recent bridge project and due to a lack of support from the impacted community, the project was shelved.
17- Keeping with my theme, the tremendously controversial I-77 Managed Lanes P3 in the northern Charlotte, NC suburbs has been opposed by citizens who don't want to pay tolls. Although they may have criticized the P3 delivery approach (there's no downside to spreading fear of foreign investment when you're trying to raise opposition), the core of their anger has been stoked by the tolls.
18- Politics can move a low-priority project forward for reasons unrelated to transportation and commit the required public funds, which is troublesome at times because it may not be the best investment of public dollars. P3 can also be touted at a way to expedite a popular project, which isn't necessarily true, but may be a way to secure public dollars. Who is to blame when the promised schedule isn't delivered?
19- No opinion

Q4- With the fear of the public not accepting P3s, how can we get the public to be receptive about P3s?

1- I don't see this as the overriding issue.
2- Again....value of money. Is it worth it. Good quality P3 that assumes risk on large complex projects makes the most sense.
3- The Commonwealth of Virginia created the Public-Private Transportation Act (PPTA) in March 1995, allowing the Virginia Department of Transportation (VDOT) to work with the private sector to consider design, construction, finance, operation and maintenance of transportation facilities (Code of Virginia 33.2-1800). It is important for stakeholders to be aware of opportunities for public engagement during transportation planning and programming in order to fully benefit by shaping and influencing potential transportation solutions according to their needs and priorities at an early stage. During project development, environmental review processes can present further opportunities for public engagement. The public and other stakeholders review and comment on the alternative design concepts and analyses through public information meetings, public hearings, and other communication opportunities. The 2015 and 2017 legislative changes to the PPTA sets out requirements for: (1) Finding of Public Interest (FOPI) by the VDOT Commissioner (Va. Code §33.2-1803.1). The FOPI is to include; (a) statement of benefits, (b)statement of risks, liabilities, and responsibilities assumed by the private sector, (c) determination of high, medium, or low project delivery risk; and (d) rationale for using competitive negotiations (when used). Further, the VDOT Commissioner must certify the FOPI remains valid to the Governor and General Assembly before entering into a Comprehensive Agreement (Va. Code §33.2-1803(D)). The stakeholders involved in the PPTA (P3) framework could include but not be limited to the Governor of the Commonwealth, members of the U.S. Congress, members of the Virginia General Assembly, members of applicable oversight boards (e.g. Commonwealth Transportation Board), various federal and state elected officials, MPO's, PDC's, city or town councils, county boards, planners and researchers of various government offices. Community leaders and members of the public that are interested in the P3 framework are considered stakeholders as well.
4- Develop messaging that covers the realities, benefits, and mechanisms and develop/execute a strategic communication plan that is broad and can transcend administrations.
5- More education.
6- For P3's to be accepted, the public needs to be able to see the benefit they will realize through the partnership. Trust is always gained - not automatic. Therefore, pilot projects would be a start to gain that trust.
7- Emphasizing the benefits of getting things done that would not be otherwise
8- Great questions, don't know.
9- We can do a much better job educating the public and politicians. One of the largest knowledge gaps is a lack of understanding/appreciation regarding life cycle cost for a P3 project.
10- NA
11- Getting unions and AGCs on board because P3s create jobs is critical. Educating elected officials about the benefits of P3s is critical. Having broad support for the project in the first place is critical.
12- P3s are really just a financing technique. Once it is explained to the public or media, my experience is that they are pretty accepting of it, especially because, like bonding, they are able to realize the benefits of the project sooner. In our few examples, the public likes the long term maintenance responsibility that the private partner assumes.
13- Public wants large scale roadways build and choices in travel as well as reduction in tax payer cost of building projects. P3 accomplishes all of this. But public entities and politicians need to educate public.
14- Large projects will always get more attention from those stakeholders being impacted by the project (during construction or after completion in the long term). And rightfully so, stakeholders should have a say on the matter. The solution comes from the P3 office implementing or managing P3s, to proactively engage project stakeholders earlier on, and educating the communities on the meaning of P3s, without making them feel lost. The "black box" perspective can be eliminated for a project with early engagement and education to ensure transparent processes are used.
15- We must demonstrate the transparency, and clearly display the objective of the project that must be in the interest of the public first, and also in interest of the key sponsoring stakeholders.
16- Better information, accurate facts, reputably presented.
17- First, the public sponsor must be an agency that has earned public trust. Then, the case for the project must be made clearly. We live in a democracy, thank goodness, so all large public works projects will have opponents. Again, it's all about the project, not the delivery method.
18- P3's need to show a strong commitment to public use and long-term public good. It is always questionable what the private partners will leave to the public at the end of the agreement term. I have seen deals proposed that seem to be very heavy on public investment with most or all of the returns going to the private parties.
19- Public needs to see a benefit to them in order to support a P3. Education and clear explanations of the benefits is necessary to obtain public support of any project or delivery method.

Q5- Do you think sufficient legislation exists regarding P3 in your state? Is there a room for improvement?

1- My focus is not purely local - I have an Americas role. PA does have p3 legislation. We don't comment on clients.
2- All is good!

3- The Commonwealth of Virginia created the Public-Private Transportation Act (PPTA) in March 1995, allowing the Virginia Department of Transportation (VDOT) to work with the private sector to consider design, construction, finance, operation and maintenance of transportation facilities (Code of Virginia 33.2-1800). This program has matured significantly since its inception.
The first transportation projects delivered under the PPTA did not contain financing components; rather they allowed for Design-Build (DB) delivery between private sector proposers and VDOT for selected projects (e.g. 895 Pocahontas Parkway, Rt. 288, Rt. 58, etc.). During the development and implementation of these early projects, "lessons learned" were integrated into the Code of Virginia that served to continuously improve the PPTA delivery method over time.
By 2000, VDOT PPTA projects began to have innovative financing incorporated into the deal structure. As private debt and equity became a focus of various PPTA proposals, VDOT used the industry standard, "Value for Money," methodology to determine, at a high level, which proposal provided value to the commonwealth.
2015 and 2017 legislative changes included improvements in PPTA process transparency and accountability for the public's interests. This included briefings of the public, elected officials, the Commonwealth Transportation Board (CTB), and a newly created PPTA Advisory Committee. The changes also included creation of a Finding of Public Interest (FOPI; Virginia Code 33.2-1803.1). Significant refinements were included in the 2017 legislative changes to the PPTA (Code of Virginia 33.2-1800 et al). The FOPI is to include; (a) statement of benefits, (b)statement of risks, liabilities, and responsibilities assumed by the private sector, (c) determination of high, medium, or low project delivery risk; and (d) rationale for using competitive negotiations (when used). Further, the VDOT Commissioner must certify the FOPI remains valid to the Governor and General Assembly before entering into a Comprehensive Agreement (Va. Code §33.2-1803(D)). These legislative changes and other programmatic improvements continued to incorporate project lessons learned and industry best practices into the PPTA framework.
4- Yes, and yes.
5- Good in Montana
6- Limited. Again, with limited use - legislation may not be practical and could be deemed as a considered negative.
7- yes and yes
8- Yes, Arizona has a very good P3 law, but no real support to implement.
9- No! There is significant room for improvement.
10- YES
11- Maryland P3 legislation is pretty good.
12- We have sufficient legislation to allow us to do P3s for transportation projects, but not for other public infrastructure, like institutional facilities. There have been attempts to pass legislation, but it has met with resistance from conservatives who have concerns about user fees and lack of government oversight on setting of those fees.
13- Sufficient legislation exists in most states. Sufficient political leadership is not always the case.
14- "There will always be room for improvement, and a lot of this improvement will come from lessons learned. There's a very unique case in Colorado, the US-36 project, in which the Governor vetoed a Bill that was put together after much criticism of the project. It required more public scrutiny of P3 projects in the future, but it also limited the what P3s are meant to do, increase innovation and incentivize the private sector to be competitive. See: https://www.denverpost.com/2014/06/04/hickenlooper-vetoes-bill-intended-to-create-transparency-in-road-deals/"
15- It's in the developmental phase. Yes, there is always a room for improvement.
16- Yes, what is written is enough
17- NA.
18- Delaware has adequate laws on the books to allow P3's. FHWA needs to change its regulations pertaining to rest stops on the freeways. Retail development is currently prohibited and that limits P3 options that could otherwise be pursued in those spaces.
19- No. We do not currently have authority for P3

Q6- Are there particular negative issues related to the implementation of P3s in your state?"

1- I'd defer to others to offer you a view on that. We don't comment on clients or specific projects typically.
2- Well thought out process that is agreeable to the elected and selected leaders is good. There needs to be an agreement that the P3 is the best approach....before the RFQ, not after
3- There are various stakeholders who are opposed to P3 transportation project agreements. These stakeholders posit that P3 projects agreements contain provisions that may prohibit or frustrate the construction of non-tolled transportation facilities as alternative to tolled facilities through economic disincentives are against public policy. A bill was offered in the 2019 General Assembly legislative session (HJ704).
4- Not really negative, however P3 agreements tend to outlast election cycles, prompting decision reconsideration that causes doubt in the industry.
5- No
6- Not at this time.
7- No
8- A conservative state that doesn't support new taxes/fees.

9- Current legislation makes it impossible to implement a P3.
10- NO
11- Maryland need to do a better job building consensus for projects.
12- See Q5 above.
13- Misrepresentations of P3 bankruptcy as it relates to SH130 in Austin Texas. There was no impact at all to the state of Texas, roadway runs as always under the contract, developer lost equity and Texas got a new road for free that is being utilized by thousands daily. But P3 opponents otherwise characterize SH130 as a bad deal for the state somehow.
14- "One of the largest P3s currently on-going in the US is here in Colorado, the Central 70 project. There are many arguments for and against the project. Although I am, and have not been involved with this project at all, from the public perspective, it has received a lot of criticism related to the expansion of ""mega highways"" when the city should look for more ""multi-modal"" solutions. There are also a lot of issues regarding ""equity"" as the project goes through a historically marginalized community in the city. You may be able to find a lot of articles in the matter."
15- To gain the consensus, and find the right project are always the challenging part.
16- Community lack of trust of anything coming out of our political process
17- NA.
18- Nothing specific to Delaware, but more specific to transportation P3's in general. It is difficult to find transportation projects that offer enough profit potential to interest private parties to invest their capital. Transportation hubs tend to offer the best options because investors can incorporate private commercial/retail/residential development into those centers. Rest stops on the freeways would be a good untapped resource for P3's if it were allowed. They could also offer cross-modal connections which could be a boon to nearby local communities.
19- NA

Q7- In your opinion, what would be the needed steps to successfully implement P3 and getting it to be widely accepted?"

1- That's a very broad question. EY works with clients in the public and private sector to help find the right approach for each unique project and to then successfully implement their preferred approach. We believe the project should drive the deal structure not the other way around.
2- I will attache the recommendations from the P3 task force that I chaired in Miami Dade County Florida
3- In Virginia, the development of P3 projects includes numerous public engagement opportunities for stakeholder involvement during the identification, development, procurement and implementation phases. This has proved to significantly positively impact successful implementation of Virginia's P3 program and its wide acceptance as a procurement option. Stakeholders have a wide range of opportunities to provide input and comments during the entire lifecycle of a project, including opportunities specific to P3 projects. The stakeholders involved in the P3 framework could include but not be limited to the Governor of the Commonwealth, members of the U.S. Congress, members of the Virginia General Assembly, members of applicable Oversight Boards (e.g. Commonwealth Transportation Board), various federal and state elected officials, Planning District Commissions (PDC's) and Metropolitan Planning Organizations (MPO's), city or town councils, county boards, planners and researchers of various government offices.
4- Foster bipartisan engagement for the benefits and tradeoffs with trusted leaders who are credible and can attest their knowledge.
5- Not likely for transportation in Montana
6- The end result is key. Again, if the public feels there will be a public benefit to the project and trusts that their interest - both short term and long term is taken into consideration, they will be accepting of P3's.
7- I don't know
8- No opinion.
9- Revise the current statutes and educate public and politicians.
10- NA
11- Consistent education and having people understand that P3s are an effective tool to implement project. Highlighting successful P3s is also important. Also Concessionaires must continue to engage in education and the legislative process during the full term of P3 projects. An excellent example is Transurban's work in Northern Virginia.
12- P3s might be more widely accepted politically if an appropriate oversight mechanism for user fees was crafted. Adequacy of revenue streams will be necessary to greatly expand their use too.
13- Political champions who are willing to discuss project benefits and educate the public to advantages of P3 in a way that motorists understand the advancement of travel choices and accelerating needed projects that would not exist otherwise.
14- Related to Q5, I think there needs to be a fine balance between allowing the public to be engaged and allow for more transparency, but also not limiting some of the benefits of P3s.
15- Legislative, financial, resources allocation, and procedural framework to promote and practice the P3.
16- Minimize the political involvement
17- See my answer to question 4. Perception is reality.
18- The build-finance-maintain-operate model is very limited and offers little profit incentive if we are only talking about building roads and bridges. P3 projects have to be combined with commercial/retail/residential development. Offer

something private citizens would invest in and private developers will come to the table. I can't sell them a bridge however much I'd like to.

19- Develop a robust process for project selection to ensure the correct projects are selected for this tool. An open and transparent procurement process would need to be implemented. Then demonstrate that the anticipated benefits of P3 have been achieved.

Q8- Should politicians have a say in deciding whether the P3 delivery system should be used or not, or should we leave that to be determined based on economic analysis (value for money)?

1- The question is overly simplistic as there are many types of P3s and the first question is whether or not a project itself is desirable. Then how best to deliver it. Value for money is most appropriate for deciding whether or not to use an availability payment based P3 or conventional delivery and funding (as in both cases the governments is the sole funding source). Please also note that VfM is not a pure economic analysis. It is entirely dependent on the assumptions regarding risk volatility, costs under different delivery methods and financing costs among others - all of which must be estimated fora VfM years before a project actually is financed and in construction,and often in places where there is no history of similar P3s that can inform estimates. To me, VfM is better understood as a sensitivity analysis. "

2- Both

3- "Virginia's P3 program underwent significant legislative changes during the 2017 General Assembly Legislative Session. The 2017 session established the Transportation Public-Private Partnership Steering Committee (the Committee) to evaluate and review financing options for the development and/or operation of transportation facility or facilities. The make-up of the Committee consists of: two members of the Commonwealth Transportation Board; the staff director of the House Committee on Appropriations, or his/her designee, and the staff director of the Senate Committee on Finance, or his/her designee; a Deputy Secretary of Transportation who shall serve as the chairman; the chief financial officer of either the Department of Transportation or the Department of Rail and Public Transportation, as appropriate; and a non-agency public financial expert, as selected by the Secretary of Transportation.
This Committee is charged with the responsibility to meet and review the public sector analysis and competition developed pursuant to § 33.2-1803.1:1 and concur that: (1). the assumptions regarding the project scope, benefits, and costs of the public sector option developed were fully and reasonably developed; (2) the assumed financing costs and valuation of both financial and construction risk mitigation included in the public sector option are financially sound and reflect the best interest of the public; and (3) the terms sheet developed for the proposed procurement contains all necessary elements.

4- Politicians should provide guidance by statute and regulations, and ideally should promote structures of governance that foster transparency and accountability. The staff leadership should be encouraged/afforded the latitude to being the best knowledge to the table, within their governance structure, and promote decisions that consider all the appropriate information, not just one area.

5- No

6- If the politicians are the ones providing the financing, i.e. Congress with federal funds, then yes they will expect and should have a say. The issue is more related to ensuring there is not a conflict of interest with the politician and the project. Projects should be selected based on BCA's.

7- Should leave that to be determined on economic analysis , but may no be practical. see Q3

8- I don't know that you can separate them due to the need for P3 laws and how infrastructure has become a political issue, both local and national.

9- Yes, but only if a strong evaluation process has been established. Further, federal IRS regulations should require a P3 analysis for any capital project where municipal bonds are being considered.

10- Politicians are elected to represent their constituents. They should have a say in anything that affect those constituents. The decision, however, rests with the governor or authority that is responsible for the infrastructure to be addressed by the P3.

11- Politicians always have a say. They just need to be educated. The Canadian system will not work here.

12- It would be unreasonable to expect elected officials from not having some say or oversight for major investment decisions, whether delivered by P3 or not.

13- You will never separate politicians from inherently political leadership decisions. Value for Money comparisons help a politician make a decision and otherwise help sell a project.

14- In theory, it should be objective. In practice, the decision is made by stakeholders that can be politically motivated, particularly for large and significant projects."

15- It would be more appropriate to start with the determination based on economic analysis.

16- No

17- This question is offensive! We live in a democracy, thank goodness. and our elected officials represent us. Studies of economic value are much too easily manipulated for the public to accept their results.

18- Politicians just need to pass laws making it legal and then get out of the way.

19- There should be a fairly objective process in place to determine when P3 or any delivery tool is used. Value for money is one part of the selection process.

Q9-In your opinion, what could be done in order to de-politicize P3s?

1- Creating a policy for when to use P3s might make it easier to then more quickly decide on the delivery method (whether right or wrongly). But I don't view the P3 aspect of a project as what typically politicizes the given project. So I don't really agree with the premise of the question.
2- No such thing. Good P3's are the answer.
3- It is unlikely that P3s will be completely de-politicized; however processes can be implemented to minimize its impacts. Early and continuous stakeholder engagement is key in gaining traction towards achieving this goal.
4- Make unbiased educational material available.
5- Set up a selection process and criteria.
6- Key in on the public benefits and help the public understand that unless they agree to raise the revenue, the private investments need to be used to help enhance our facilities to improve their quality of life.
7- to minimize the politicization , as will as to insulate the DOT, we have established an oversite committee. While they are politically appointed,
8- No opinion.
9- Create an IRS policy requiring all capital projects where tax-exempt bond financing are being used an analysis and discussion regarding use of a P3 also be posted (management discussion) in the bond documents.
10- NA
11- Focus on the projects and not necessarily the delivery.
12- See Q7.
13- Public comparisons of what a state needs by way of new congestion relieving roadways, versus how P3 can help accelerate delivery. On individual project basis, a public comparison of cost to taxpayers under traditional model, versus the comparison under a P3 to help demonstrate value for money and benefits to taxpayers per individual projects. Must include entire lifecycle including operations and maintenance.
14- I think P3 Units/Offices are established for this purpose, and they act on behalf of the public stakeholders to ensure such deals are in fact beneficial to the public. I think they are meant to be bipartisan and to objectively evaluate projects with the public in mind. P3s are a strong focus because the needs are greater than the funding available to deliver and maintain vital infrastructure assets. P3s offer an innovative solution to this problem. As P3 offices and practices evolve, so will the clarity and effectiveness of such practices. Also, these P3 offices would benefits from sister offices throughout the country, as well as international."
15- Public agency Senior Leadership should decide the application and feasibility of P3.
16- Make business leaders take the lead.
17- See my answer to question 4. Perception is reality.
18- Every project I work on is political. P3's are no different. However, P3's often tout unrealistic public benefits, which any reasonably informed person can see through. Unrealistic claims become detrimental to getting approvals to move forward. Sometimes those claims energize politicians who force P3's to move ahead that later become a boondoggle. That dynamic is detrimental to the P3 concept. Having an agreed upon (generally accepted standard) economic analytical model might help sort through which projects have merit and which do not. Such an analysis should be required prior to garnering political and public support.
19- Utilize an objective evaluation process to select projects.