FINANCE OVERVIEW & CASE STUDY FINDINGS

PFAL

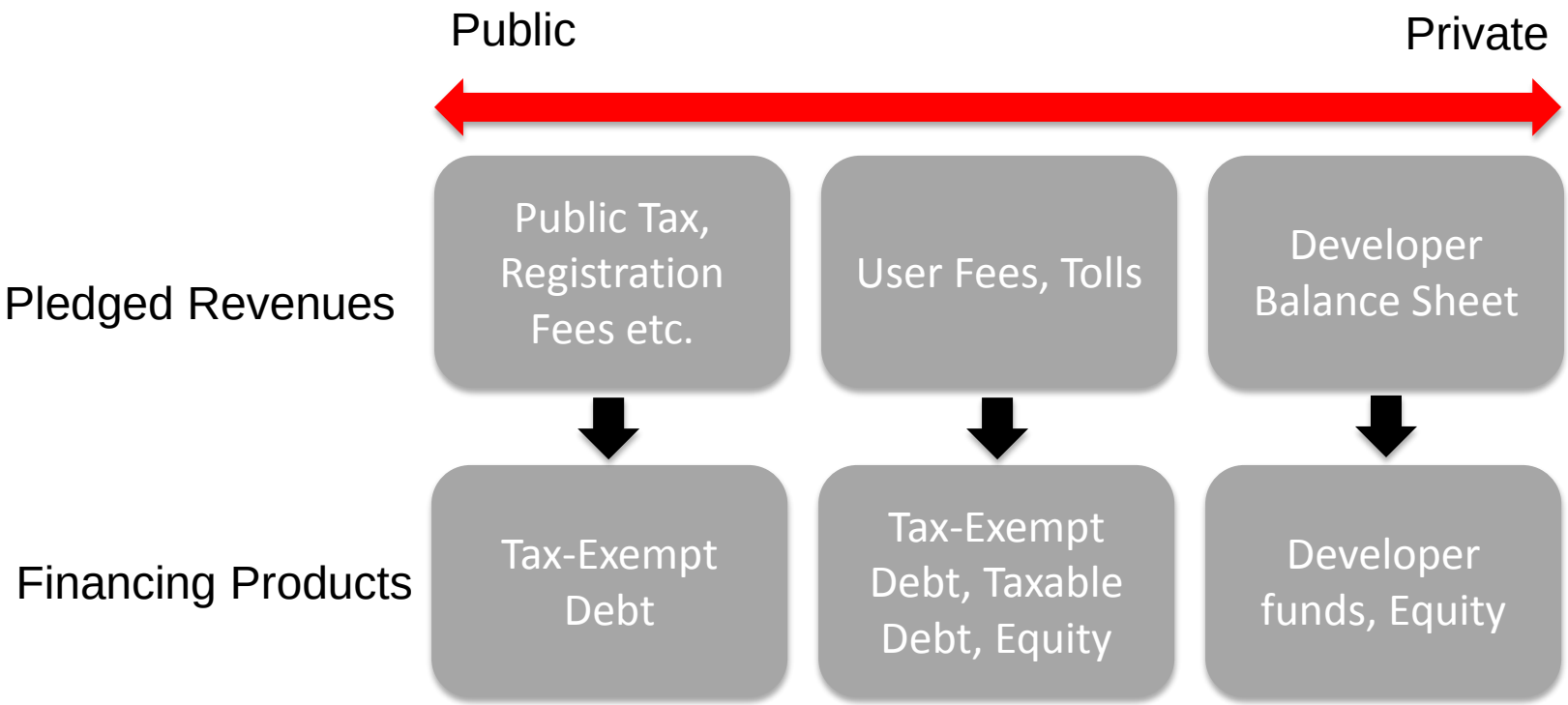
September 1 2016

AGENDA

1. Project Finance Primer
2. P3 Overview
3. U.S. P3 Market
4. Case Studies

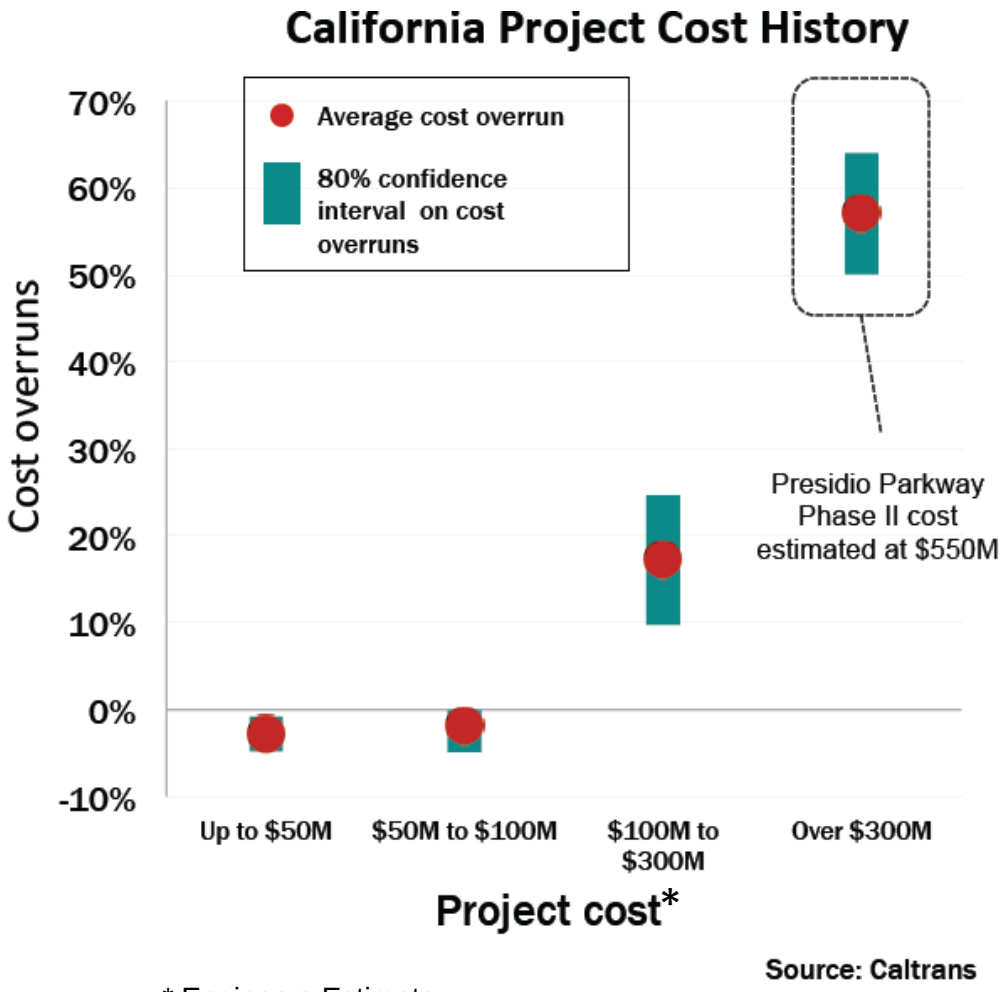
1 PROJECT FINANCE PRIMER

FINANCE STRATEGIES



PROJECT DELIVERY

- Historically, worst overruns on projects over $300M
- Figure illustrates Historical average cost overruns by project size (red)
- Range of likely cost overruns on future projects traditionally procured (blue)



* Engineers Estimate

2 PUBLIC-PRIVATE-PARTNERSHIP MODELS

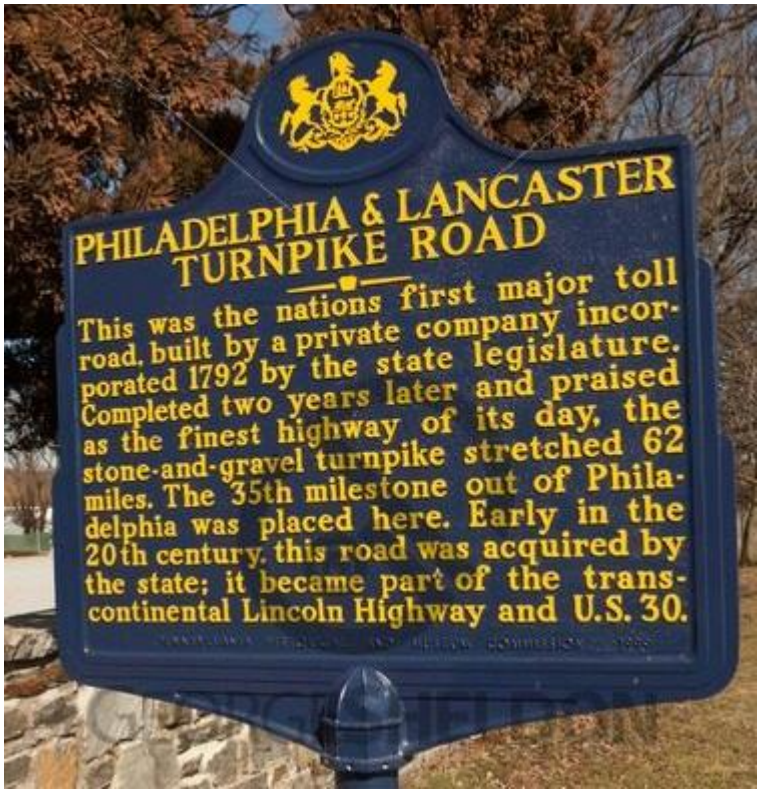
PFAL

FIRST P3'S IN THE U.S.

CITY LINE TOLL GATE, LANCASTER PIKE.

OUT LANCASTER PIKE.

From the earliest days of cycling hereabout, nearly two decades ago, L



1792, Philadelphia – Lancaster Turnpike, PA

WHAT IS A P3?

Public-Private-Partnership (P3)

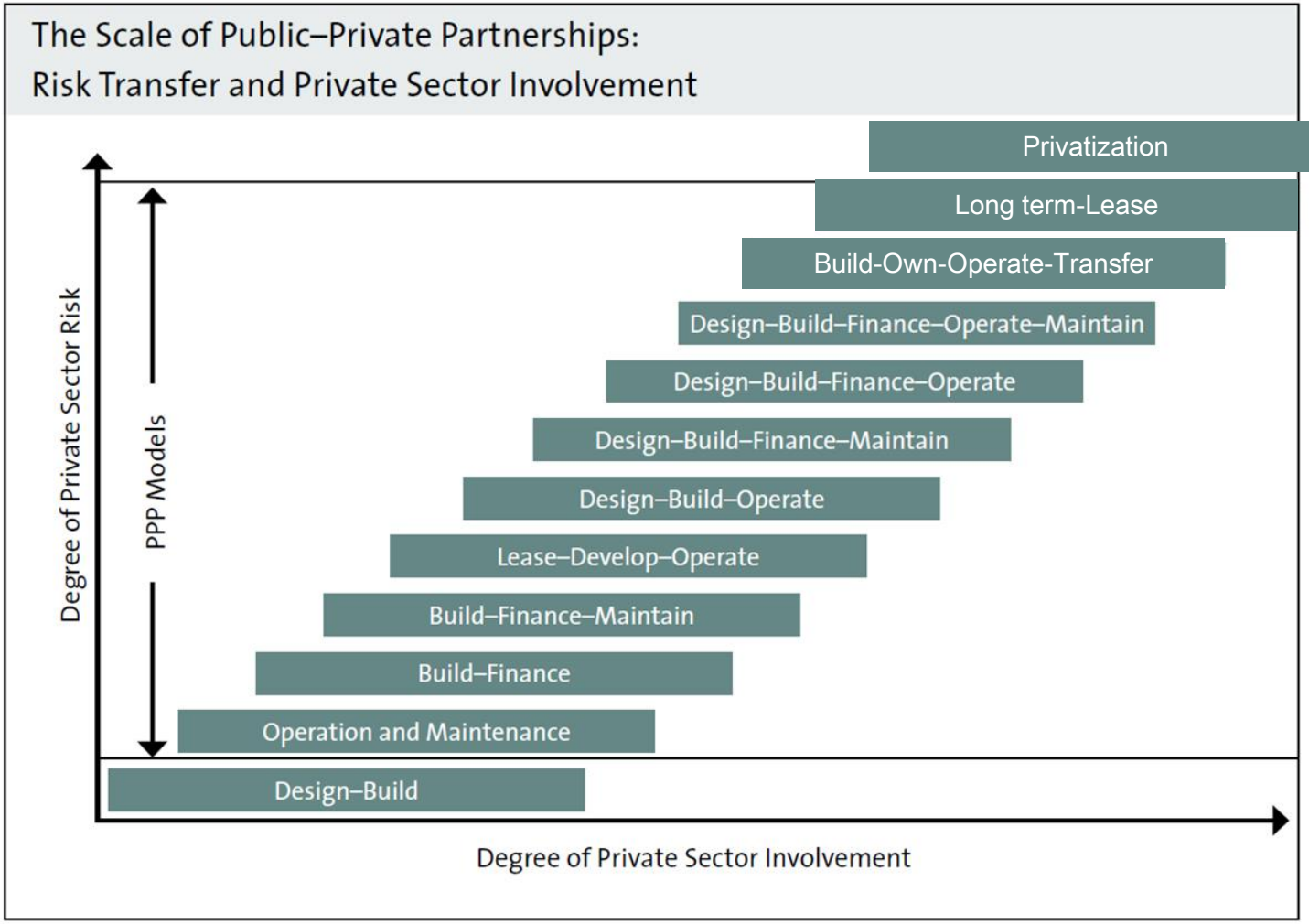
- P3s are long term contractual agreements between a public agency and a private entity that allow for greater private participation in the **delivery, financing and asset management** of projects

- More than Design-Bid-Build

P3'S ARE NOT …

- A funding mechanism, but a **PROJECT DELIVERY** technique
- Privatization of public infrastructure
- Privately owned or controlled toll roads
- Endless source of funds
- A suitable delivery method for all projects (typically >$100m with a healthy business case)

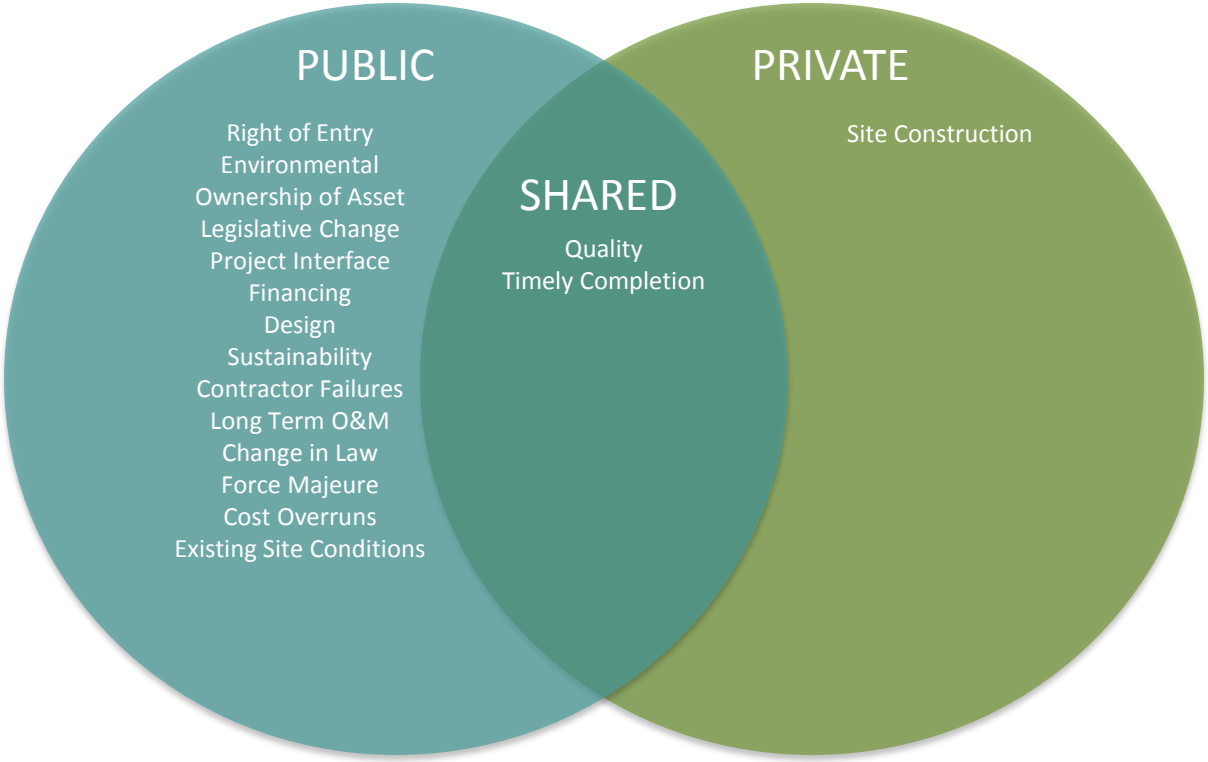
RANGE OF P3 MODELS



The Canadian Council for Public–Private Partnerships

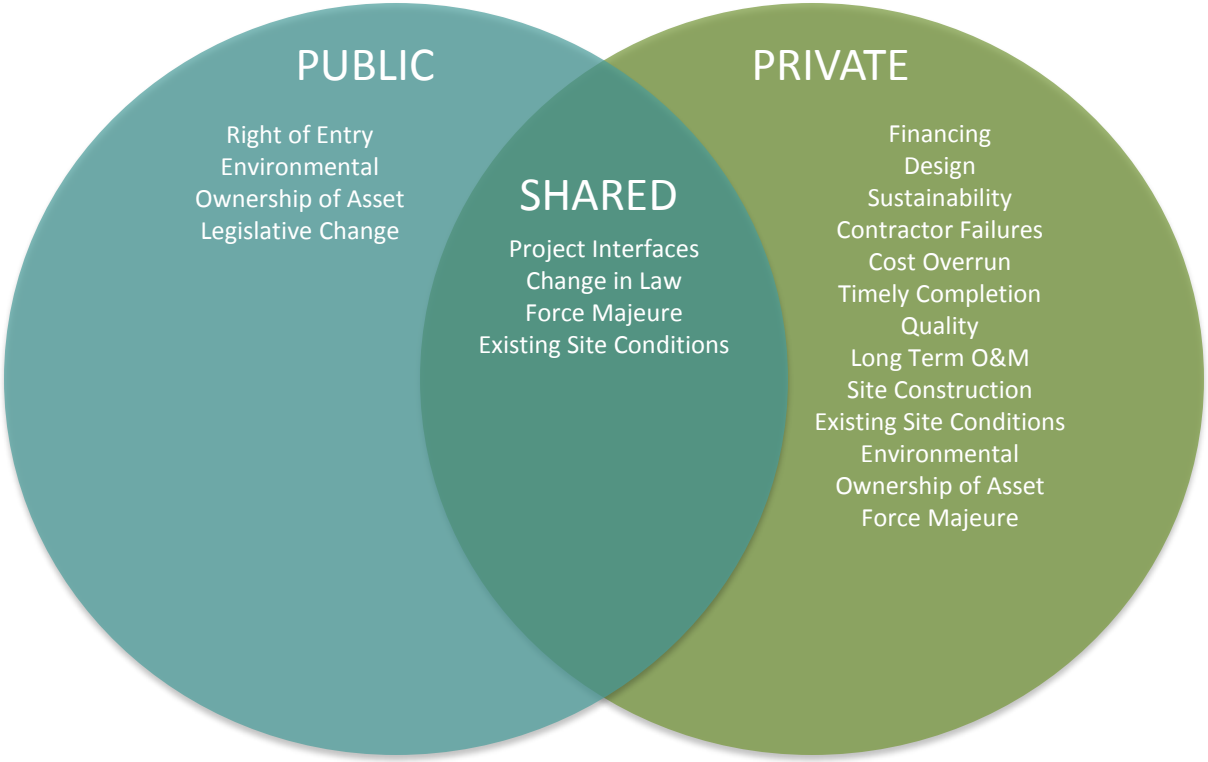
RISK TRANSFER

Design-Bid-Build Risk Allocation



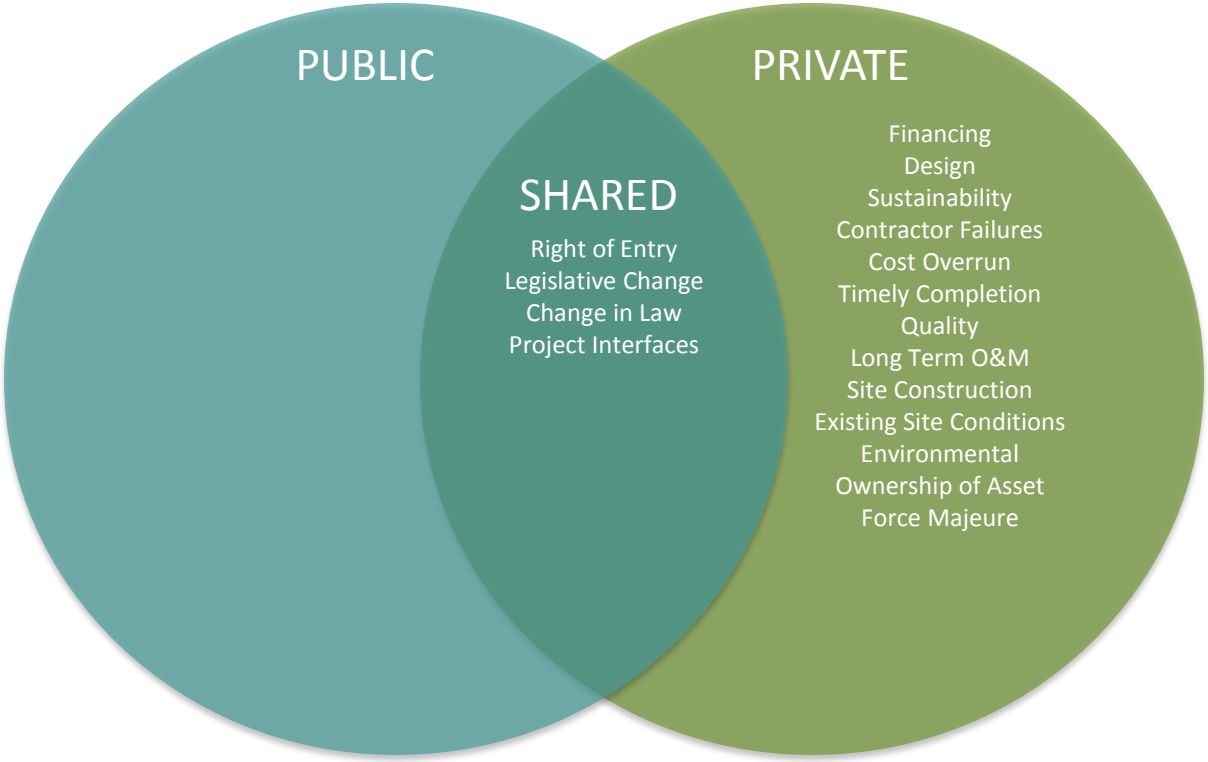
RISK TRANSFER

DBFOM P3 Risk Allocation



RISK TRANSFER

Full Privatization Risk Allocation



WHY USE P3?

Schedule Acceleration & Certainty

- Complete construction as soon as possible and as planned, to meet urgent community need

Cost Certainty

- Minimize potential for cost overruns during construction and operation & maintenance

Incentivize Quality and Sustainability

- Performance-based optimization to result in a high-quality, innovative, well-maintained facility that is well suited to public needs

Innovative Design

- Maximize potential for innovative designs that are context sensitive

Long-term Functionality

- Adaptable to technology advancement over time

Optimal Risk Transfer

- Reduce construction cost, schedule, financing and delivery risk for the public

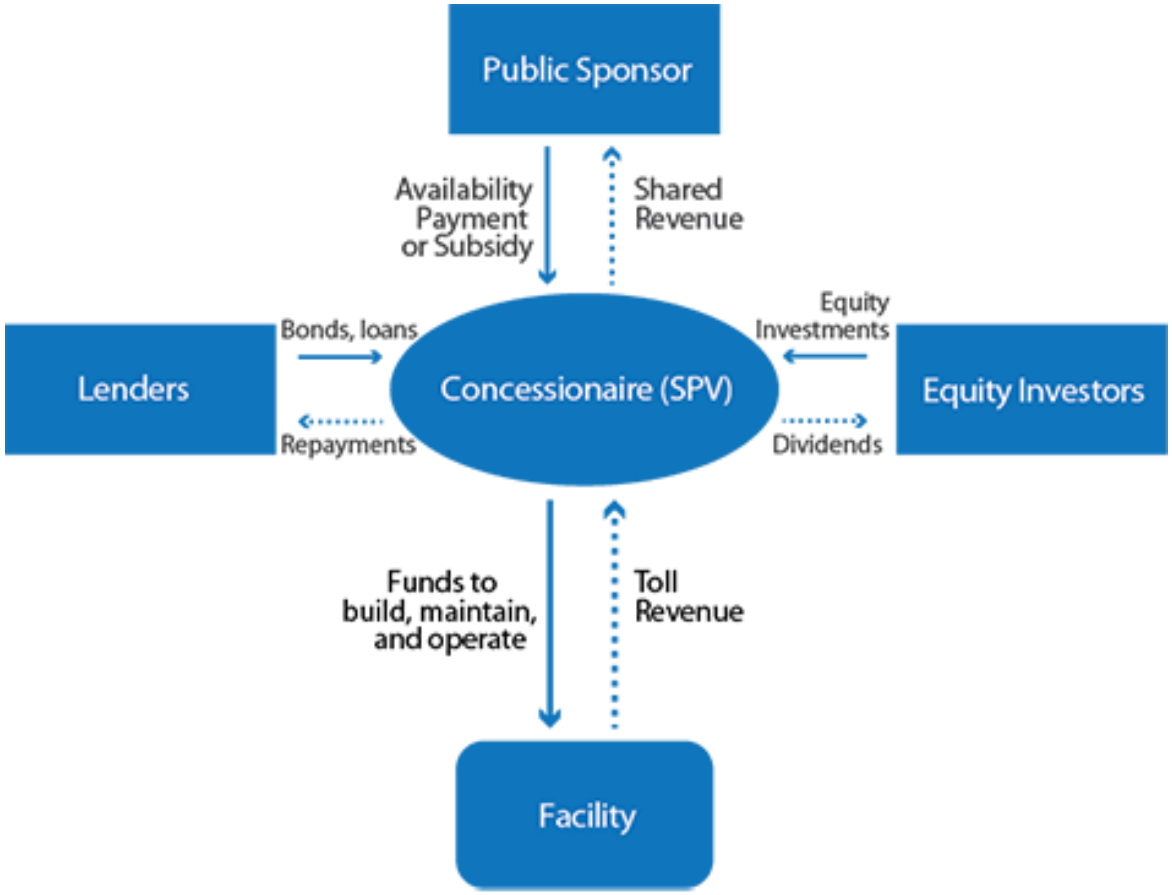
Maximized VFM

- Deliver optimal quality facilities and performance for the best price

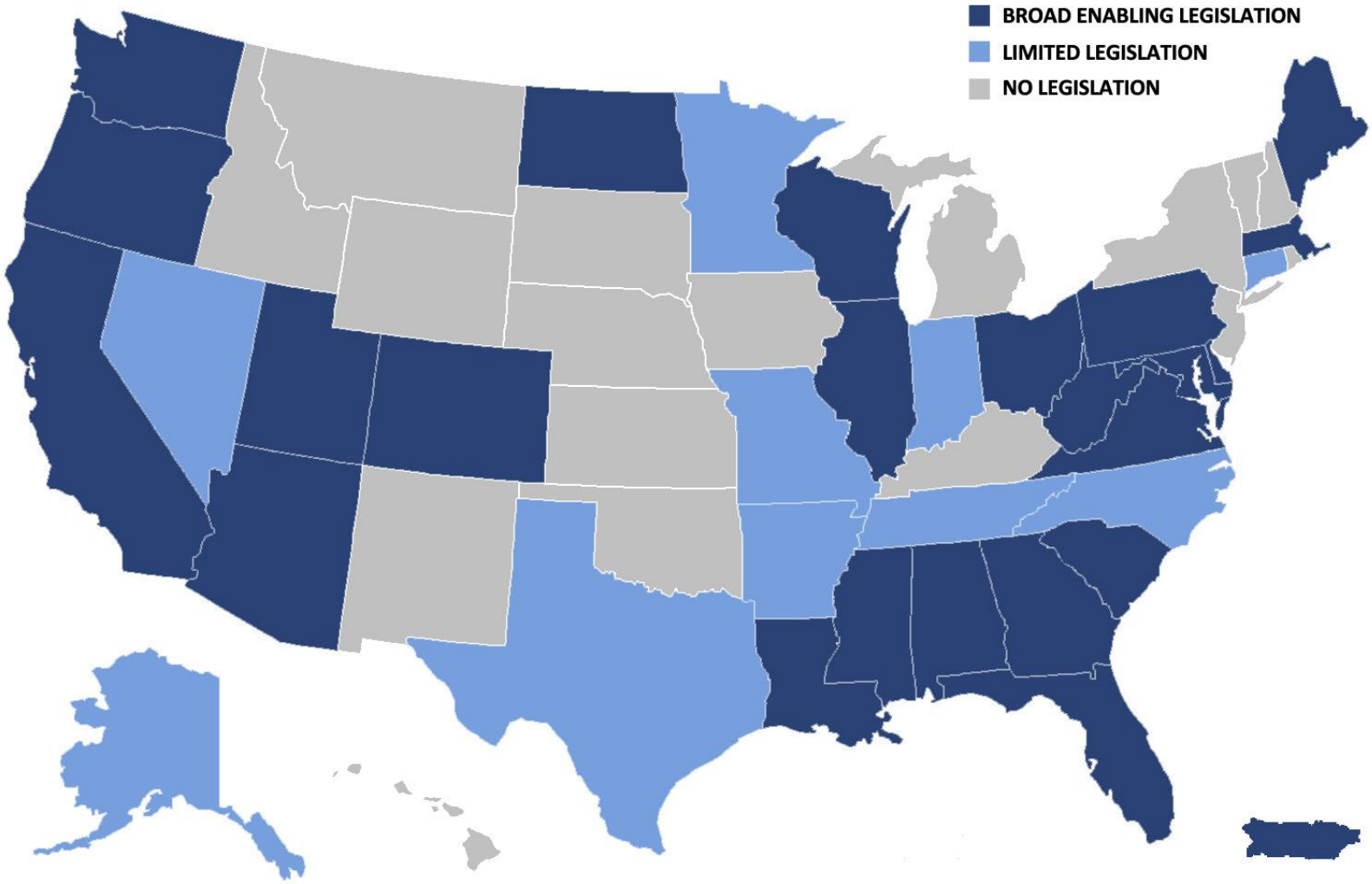
Optimized Use of Public Funds

- Leverage and optimize use of available funding to help deliver more projects with current resources

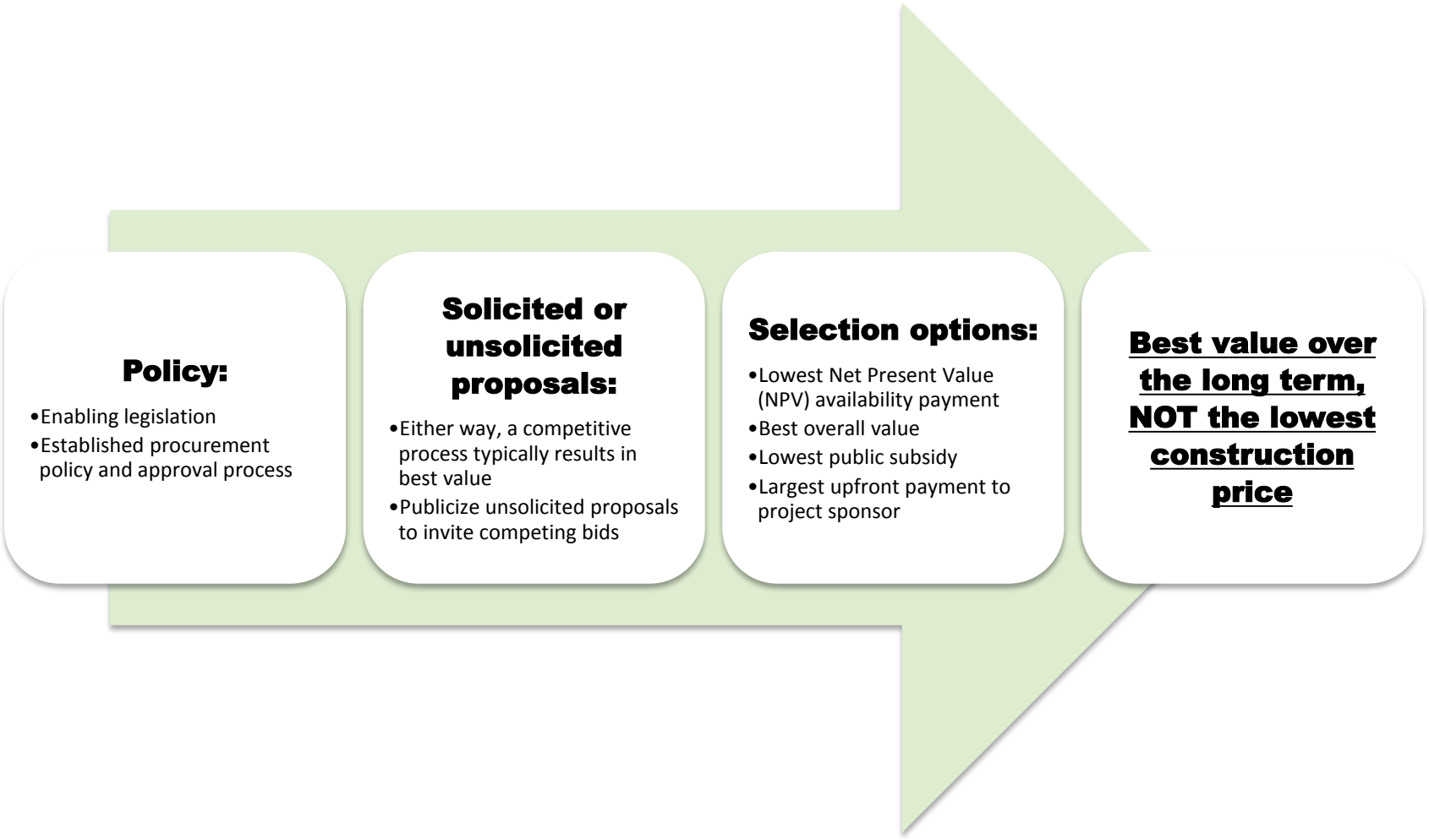
TYPICAL P3 STRUCTURE



U.S. P3 LEGISLATIVE MAP



PROCUREMENT PROCESS

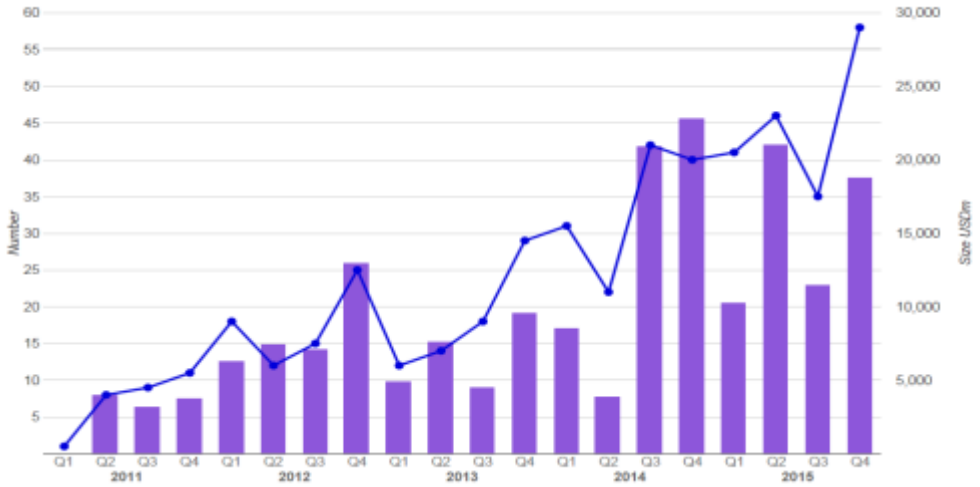


3 U.S. P3 MARKET OVERVIEW

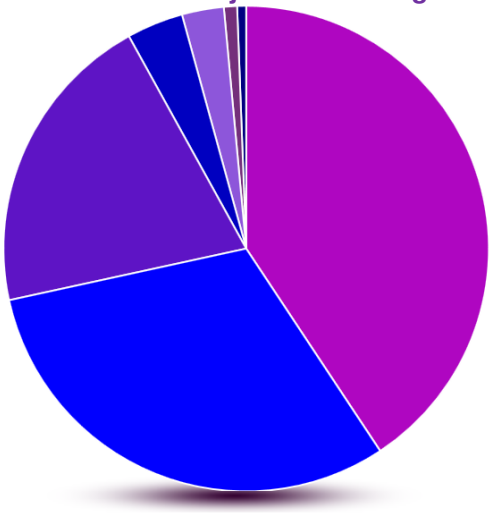
PFAL

U.S. MARKET ACTIVITY

Deals Reaching Financial Close by Quarter from 2011 Q1 to 2015 Q4



Sectors with Projects Reaching Financial Close from Jan. 2011 to Jan. 2016



Power	41%	$78b
Renewables	31%	$60b
Transport	21%	$39b
Environment	4%	$7b
Telecommunications	3%	$5b
Other	0.5%	$1.5b
Social Infrastructure	0.5%	$1.5b

Source: InfraDeals 2016

2015 HIGHLIGHTS

USD 900m
Pennsylvania Bridges

Financial close: 18 March 2015

Transaction launch to financial close: 464 days

Project: Comprises the replacement of 558 geographically dispersed, structurally deficient bridges across the Commonwealth.

Delivery model: DBFOM

Duration: 28 years

Winning consortium: Plenary (80%); Walsh (20%); Granite; HDR Inc; and Infrastructure Corporation of America (ICA)

Total equity commitment: USD 62.7m

PABs: USD 721m

USD 554m
Portsmouth Bypass

Financial close: 9 April 2015

Transaction launch to financial close: 665 days

Project: Comprises of a four-lane, limited access highway - 16 miles of new freeway around the City of Portsmouth, designated as State Route 823.

Delivery model: DBFOM

Duration: 40 years

Financing: TIFIA USD 209m; PABs USD 227.36m; and Milestone payments USD 41m

Winning consortium: Grupo ACS (40%); InfraRed Infrastructure III (40%); Star America (20%); Dragados; Star America Fund; Jurgensen; and The Beaver Excavating Co.

Total equity commitment: USD 49.25m

USD 655m
I-77

Financial close: 20 May 2015

Transaction launch to financial close: 1,065 days

Project: Development of 25 miles of High Occupancy Toll lanes over three sections of the I-77.

Procuring organisation: North Carolina Department of Transportation

Winning consortium: Cintra Infraestructuras (90%); and Aberdeen Infrastructure Partners II (10%)

Total equity commitment: USD 250m

Financing: USD 189m TIFIA loan; USD 91m Government Contribution; and USD 100m in PABs

USD 40m
Michigan Freeway Lighting

Financial close: 24 August 2015

Transaction launch to financial close: 531 days

Project: Replacing approximately 13,000 freeway lights using high-pressure sodium or metal halide fixtures with energy-efficient LED lights.

Delivery model: DBFOM

Procuring organisation: Michigan Department of Transportation (MDOT)

Winning consortium: Aldridge Electric, Star America

Total equity commitment: USD 5m

Financing: Private placement priced on Aug 17 and was acquired by Allianz

USD 275m
Kentucky Broadband

Financial close: 3 Sept 2015

Transaction launch to financial close: 239 days

Project: The project brings high-speed internet connectivity to every corner of the Commonwealth and will consist o 3,000 miles of fiber.

Procuring organisation: State of Kentucky

Winning consortium: First Solutions (10%), Ledcor (15% Macquarie NG-KIH Holdings (75%)

Total equity commitment: USD 21m

Financing: Capital market financing consisting of 1 public and 2 private placement bonds, with an average coupon of 4.65%

Source: InfraDeals 2016

2016 HIGHLIGHTS

Highway, Bridges & Tunnels

Transaction Name	State	Sub-Sector	Capex $(m)
Chicago Skyway Sale	Illinois	Bridges and Tunnels	$2,836
Corridor H	West Virginia	Highways	$209
Detroit River Tunnel Replacement	Michigan	Bridges and Tunnels	$400
I-285/SR 400 Improvements P3	Georgia	Highways	$1,056
I-395 Corridor P3	Florida	Highways	$620
I-70 East	Colorado	Highways	$1,170
SH 288	Texas	Highways	$820
State Street Redevelopment	Indiana	Highways	$80
Transform 66	Virginia	Highways	$2,100
			$9,291

Source: InfraDeals 2016

4 CASE STUDIES

PFAL

1. **South Bay Expressway, CA**
2. **U.S. 36 Managed Lanes, CO**

Next meeting:

3. Presidio Parkway, CA
4. I-4 Ultimate P3, FL
5. South Norfolk Jordan Bridge, VA
6. President George Bush Turnpike Western Extension, TX

PROJECT FEATURES

	COMPETITIVE PROCUREMENT PROCESS	TOLL REVENUE	AVAILABILITY PAYMENT	CONNECTOR ROAD	PRIVATIZATION	PUBLIC FINANCING	PRIVATE FINANCING	COMPLEX CONSTRUCTION	MANAGED LANES	CALIFORNIA PROJECT	TIFIA LOAN	>$1 BILLION
SOUTH BAY EXPRESSWAY, SAN DIEGO	✓	✓					✓	✓		✓	✓	
U.S. 36 MANAGED LANES, COLORADO	✓	✓				✓	✓	✓	✓		✓	
PRESIDIO PARKWAY, SAN FRANCISCO	✓		✓			✓	✓	✓		✓	✓	
I-4 ULTIMATE P3, FLORIDA	✓	✓	✓			✓	✓	✓	✓		✓	✓
SOUTH NORFOLK JORDAN BRIDGE, VIRGINIA		✓			✓		✓	✓				
PRESIDENT GEORGE BUSH TURNPIKE WESTERN EXTENSION, TEXAS	✓	✓		✓		✓	✓					✓

South Bay Expressway \\\ San Diego, CA

- ✓ Toll Revenue
- ✓ Private Financing
- ✓ Complex Construction
- ✓ California Project
- ✓ TIFIA Loan
- ✓ Environmental Sensitivity

DESCRIPTION OF THE PROJECT

The SBX Project was the first P3 in California, developed pursuant to California's AB 680 legislation passed in 1989. This is the first toll road in San Diego County and the first road P3 in California and a number of notable "lessons learned" were achieved during project construction and start-up in operations. The project was restructured via bankruptcy when the combination of protracted litigation between the borrower and contractor and the economic downturn made the project's costs and revenue streams unsustainable.

Interesting features of the delivery/financing

- Under a franchise agreement, the private developer raised capital for the Project and constructed the road in exchange for a 35-year toll concession. Caltrans owns the highway, but leases the road back to the franchisee. Currently, the San Diego Association of Governments (SANDAG) has the franchise, under an amended agreement executed when the toll road was sold to SANDAG in December 2011. Control will revert back to Caltrans in 2042.

Financial Close	23 May 2003
Opened to Traffic	Nov 2007
Delivery Method	DBFOM, 35 years

Capital Value	$635 million
Financing	Private – Toll Revenue
Project Type	New Build Highway

SBX: LESSONS LEARNED

Primary Lessons

1. Define project goals and objectives
2. Balanced and commercially reasonable risk allocation maximizes benefits of competitive process
3. High risk projects have higher equity return requirements
4. Allow flexibility for a range of project funding and financing sources
5. Effective stakeholder engagement throughout procurement and development processes
6. Advance environmental approvals to avoid surprise costs and delays
7. Adopt legislation that offers flexibility for alternative procurement approaches

- ✓ Toll Revenue
- ✓ Public Financing
- ✓ Private Financing
- ✓ Complex Construction
- ✓ Managed Lanes
- ✓ TIFIA Loan

U.S. 36 Managed Lanes: Phase 1 & 2 \\\ Denver Metro Area, CO

DESCRIPTION OF THE PROJECT

The US 36 Express Lanes Project is a multi-modal project led by the Colorado Department of Transportation (CDOT) and the Regional Transportation District (RTD) to reconstruct US 36 from Federal Boulevard to Table Mesa Drive in Boulder.

The Project built an express lane in each direction on US 36, in addition to the two free general-purpose lanes. Additionally, the project replaced several bridges, built a commuter bikeway, added BRT improvements, and installed Intelligent Transportation Systems (ITS) for tolling, transit and traveler information, and incident management. The project opened to the public winter 2016.

Interesting features of the delivery/financing

- Phase 1 was delivered under a design-build contract while Phase 2 was delivered as a DBFOM.
- Phase 1 was transferred to the Phase 2 concessionaire after toll revenue had been established.

Fiscal Year Approved	2011
Opened to Traffic	Mar 2016
Delivery Method	Phase 1: Design-Build Phase 2: DBFOM, 50 years

Capital Value	$497 million
Financing	Public / Private – Toll Revenue
Project Type	Managed Lane

US-36: LESSONS LEARNED

Primary Lessons

1. Ensure a dedicated project champion to drive process
2. Educate key decision makers early in the process
3. Adopt an independent and/or shared oversight function during planning and implementation
4. Document effective cooperation and funding agreements with multi-agency involvement
5. Engage all necessary stakeholders effectively and early in the process
6. Equitable revenue sharing mechanism that benefits the local agencies, critical for project support and approval
7. Enabling legislation and defined approval process

SAMPLE OF COMMON THEMES

Theme	SBX	US-36
Project Delivery Performance	• 12 year delay	• On-time
Toll Rate Setting Control	• Private sector sets toll up to 18.5% cap on equity return	• Private sector sets dynamic toll to achieve specified service requirement
Revenue Control	• Shared with public sector beyond a defined limit	• Shared with public sector beyond a defined limit
Established Traffic History	• No • Greenfield	• Yes • Expansion
Competitive Procurement Process	• Partial (RFQ only)	• Yes
Environmental Approval Process Responsibility	• Private sector, initiated post award	• Public sector, substantially completed prior to procurement

KEY SUCCESS FACTORS

Well-defined goals/objectives + project positioning
Clear communication + approval process
“Bankable” + credit worthy structure
Dedicated revenue + funding/finance alternatives
Market appetite + balanced risk allocation
Competitive + transparent procurement process
Value-driven performance requirements
Market-tested asset management costs

The information contained in this presentation is being provided for discussion purposes only and cannot be construed as a recommendation, proposal or offer of any sort. No representation or warranty, expressed or implied, is made, or responsibility of any kind accepted by PFAL, their directors, agents or employees with respect to the completeness or accuracy of information, conclusions and opinions provided herein. This presentation may incorporate information which is either non-public, confidential or proprietary in nature and is being furnished on the express basis that this information will not be used in a manner inconsistent with its confidential nature or be disclosed to anyone other than as may be required by law or to those who have been informed of the confidential nature of this presentation. This document and its contents are confidential to the persons to whom it is delivered and should not be copied or distributed in whole or in part or disclosed by such persons to any other person. To the maximum extent permitted by law, PFAL, their directors, employees or agents, nor any other person accepts any liability for any loss arising from the use of this presentation or its contents or otherwise arising in connection with it, including, without limitation, any liability arising from fault or negligence on the part of PFAL, their directors, employees or agents.
This document is private and confidential and is intended only for the information of the addressees. It may not be copied or distributed without our prior written consent.

Please note that our findings do not constitute recommendations as to whether or not to proceed with any potential investment or activity.
We do not accept responsibility for the reliability of information provided.