Introduction to Public-Private Partnerships (P3s)

Today's Instructor

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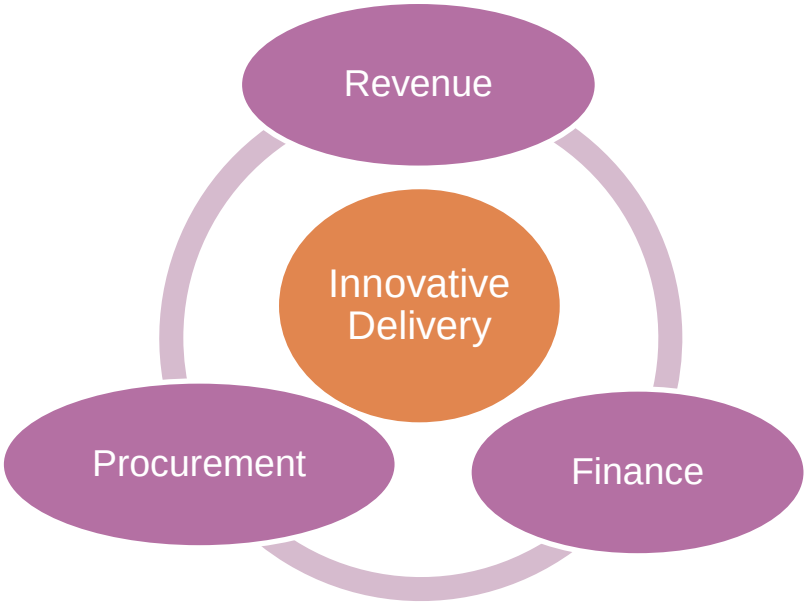
Course Outline

Course Objectives

- Learn what P3s are and how they can play a part in project procurement
- Identify instances where different P3 arrangements have been used for highway projects
- Understand the benefits of P3s and challenges to their use
- Identify key USDOT project finance tools that work in conjunction with P3s and be able to access resources to learn more

OIPD – Role in Transportation P3s

- **Technical Assistance**
- **Educate**
- **Facilitate P3s**



Lesson 1

Definitions

Did You Know?

Q. When were P3s first used in the United States?

A. In 1792, the first turnpike was chartered and became known as the Philadelphia and Lancaster Turnpike in Pennsylvania.

What is a P3?

- Public-Private Partnerships
  - P3s are contractual agreements between a public agency and a private entity that allow for greater private participation in the delivery of financing of projects
  - More than Design-Bid-Build

Project Procurement and Delivery

Conventional Projects (design-bid-build)	*P3 Projects* (design-build-finance-operate-maintain)
▪ Public sector burden with all risks	▪ Risk sharing
▪ Succession of separate (and multiple) contracts	▪ Integration of two or more project phases
▪ Public Financing	▪ Private Financing
▪ Lowest bidder	▪ Best suited
▪ Public sector project stewardship (incl. with contract management firm)	▪ Private sector project stewardship

P3's Are Not…

Easy

Privatization of public infrastructure

An endless source of funds

The answer to all State and local problems

Definitions – Terminology

- A **Concession** is a long term lease of public facilities to a private party (concessionaire)
  - Greenfield and Brownfield Facilities
- A **Special Purpose Vehicle (SPV)** is a legal entity created to fulfill narrow, specified tasks
  - Isolates the financial risks from the parent company or companies
- **Leveraging** is the degree to which an investor or business is utilizing borrowed money (debt)
  - If a project is leveraged at 70/30, 70% debt and 30% equity

Definitions – Terminology

- **Debt** is a bond or loan, with an obligation to pay interest and principal at a later date
  - Obligation has payment priority over equity
  - Includes Private Activity Bonds (PABs) and Transportation Infrastructure and Finance Act (TIFIA) loans
- **Equity** defines ownership interest in a corporation
  - Requires a higher internal rate of return than debt holders as equity interest is riskier
  - Can be lost in certain instances
- The **Internal Rate of Return** is the percentage return on investment.
  - Weighted average cost of capital (WACC) of project vs. return on equity

Definitions – Terminology

- Greenfield (New facility)
- Brownfield (Existing facility)
- Hybrid (Extension or expansion of existing facility)
- Availability Payments
  - Payments made by the public sector sponsor based on particular milestones or facility performance standards
- Shadow Tolls
  - Payments to the Concessionaire or private sector partner based on volume of traffic on a facility

Why P3s Now?

- Growing congestion
  - Need for new highway capacity
- Increasing costs to maintain system
  - Aging infrastructure
  - Increasing construction costs
  - Increasing operations and maintenance costs
- Mounting budget pressures
  - Revenue growth slowing
  - Voter resistance to tax increases
- Poor long-term system performance
  - Deferred maintenance

Why Undertake a Project as a P3?

Answer: When the public sector can get more value using P3 approach

- "Value" can be:
  - Lower construction and/or operation costs
  - Time savings in construction and/or delivery
  - Innovation -- cutting edge technologies or expertise
- Public Sector must assess "value":
  - Value for Money Analysis
    - Public Sector Comparator
    - Value of risks transferred to private partner
    - Potential for efficiencies
    - Qualitative factors

P3s: Procurement Approach

- Procurement methods may be proscribed by statute or state guidelines
  - If federal funds involved, may need SEP-14
- Solicited or unsolicited proposals
  - Either way, a competitive process typically results in best value
  - Post unsolicited proposals to invite competing bidders
- Selection options
  - Lowest NPV availability payment
  - Best overall value
  - Lowest public subsidy
  - Largest upfront payment to project sponsor

Test Your Knowledge

True or False:

P3s may be only be done on greenfield facilities.

Multiple Choice:

Among the considerations for entering into a P3 are…

- **Budget pressures**
- **Upgraded long-term performance**
- **Improved risk allocation**
- **All of the above**

Questions

Submit a question using the chat box

Or

*1 to ask a question by phone

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Lesson 2

Benefits and Challenges

P3 Benefits to Public Sector

- Expedited project delivery
- Protection against some risks
- Construction and operational efficiencies
- Increased investment in transportation assets where unmet needs are the greatest
- Opportunities for “new” money (i.e. from equity investors)
- Brings together multiple financing sources required for large-scale projects

P3 Benefits to Public Sector

- Enhanced cost control
- More certainty regarding cost and schedule
- Brings innovation
- Introduces life-cycle perspective – better quality up front and improved maintenance
- Improved customer focus
- Leverages each partner's strengths
- Conserves public sector debt capacity

P3 Benefits to Private Sector

- Private concessionaires are looking for a return on investment that is:
  - Long-term
  - Stable, predictable
  - Moderate risk
- Opportunity to increase return through efficiencies, innovation and managing risks
- But “profits” of private sector are generally more visible – and controversial – than the benefits to the public sector

Challenges in Use of P3s

- **Public acceptance**
- **Enabling legislation**
- **Organizational Capacity**
  - Knowledge gap
  - Different oversight/contract management approach required
- **High cost of private capital**
  - Limited access to low-cost PABs and TIFIA

Challenges in Use of P3s

- **Revenue constraints**
  - Federal and state toll restrictions
  - Revenue shortfalls due to lower tax receipts
- **Difficulty in predicting traffic and revenue**
- **Difficulty in identifying and pricing risk and proper risk allocation**
- **Long term nature of P3 Agreements**
  - Concern about loss of upside revenue potential to public
  - Inability to anticipate future performance issues or public needs
- **Private sector returns**

Summary: Key Questions for Considering a P3 Approach

- Is there the necessary legal and institutional framework in place to support a P3 arrangement?
- Does the project have a dedicated revenue stream?
- Does delivery of the project as a P3 represent a value proposition for the public sector?

Test Your Knowledge

True or False:

Private capital generally has a lower cost than traditional public methods such as bonding.

True or False:

The private sector is more likely to enter into a P3 with a long-term return on investment than a short-term return.

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Lesson 3

Types of P3s and Examples

Types of P3s by Range of Risk Transfer

P3 Structure	Design Risk	Constr. Risk	Financial Risk	O&M Risk	Traffic Risk	Revenue Risk
Traditional Design-Bid-Build		X				
Design-Build (DB)	X	X				
Design, Build, Finance, Operate and Maintain (DBFOM)	X	X	X	X	Yes, if toll or traffic-based payment	Yes, if performance -based payment

Risks Associated with P3s

- P3s are designed to allocate different risks to the party best able to manage them
- Types of risk include:
  - **Environmental** – Permitting delays; unknown conditions
  - **Political** – Lack of public or political support leads to regulatory or financial barriers
  - **Demand** – Less than anticipated traffic
  - **Financing** – Access to capital and cost of capital
  - **Costs** – Construction and O&M
  - **Technology** – Failure of unproven tolling and enforcement technologies

Types of P3s by Payment Model

- **Toll Concession**
  - Toll Concession with revenue bands
  - Toll Concession with Net Present Value of revenue
  - Toll Concession with Revenue Sharing based on rate of return
- **Shadow Toll**
- **Availability Payment**
- **Others**

Types of P3s by Project Scope

- **Greenfield** – New facility construction
- **Brownfield** – Takeover of existing facility, possibly with future enhancement
- **Hybrid** – New construction involving extension (new segment) or expansion (new lanes) on existing facility

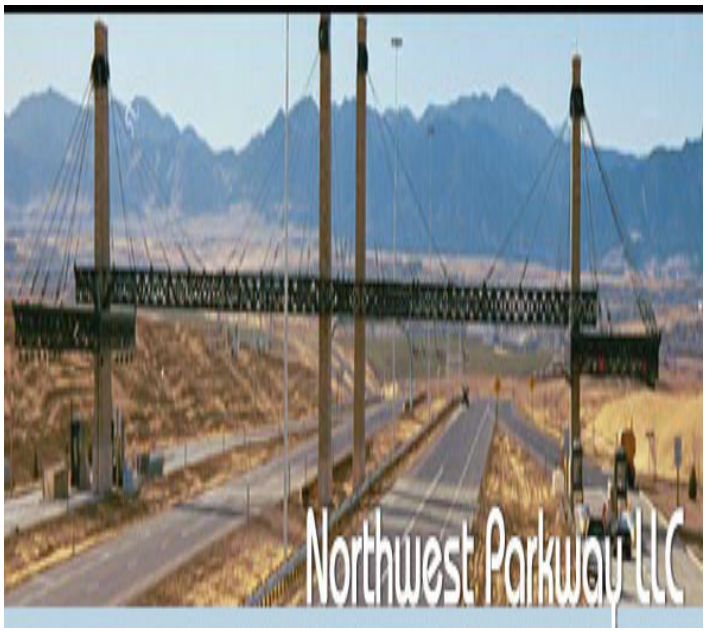
Greenfield Example

Dulles Greenway, Virginia

- 14-mile facility constructed for $350 million ($40 million equity)
- Opened in 1995, restructured debt in 1999
- Purchased in 2005 by Macquarie Infrastructure
- Group
- Features variably priced tolls

Brownfield Example

Asset monetization or long-term lease, involves the lease of existing, publicly-financed toll facilities to a private sector concessionaire for a prescribed concession period during which they have the right to collect tolls on the facility



Northwest Parkway, Colorado

- November 2007, agreement signed
- 99 years, $543 million to Public Highway Authority
- Responsible for O&M, receives all toll revenue

Hybrid Example

The project sponsor grants a private operator/developer a long-term lease to operate and extend or expand an existing facility

Pocahontas Parkway, Virginia

- Transurban acquired right to enhance, manage, operate, maintain, and collect tolls for 99 years on the existing facility.
- Defeased debt of development costs and committed to constructing Richmond Airport Connector, a 1.6 mile, 4-lane toll road.
- $60 million in equity, $150 million TIFIA loan

Test Your Knowledge

Multiple Answer:

Which of the following risks may be transferred in a P3 agreement?

- Design
- Environmental
- Construction
- Financial
- Operations & Maintenance
- Revenue

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Lesson 4

Financing Tools

USDOT Financing Tools Supporting P3s

Federal tools to address the risks inherent in private sector participation include:

- **TIFIA:** Flexible, low-cost lending that addresses challenges such as revenue and ramp up risk
- **PABs:** Lower-cost financing that addresses high interest rates generally paid by private sector
- **Other Innovative Financing Tools:**
  - State Infrastructure Banks
  - Section 129 Loans
  - Grant Anticipation Revenue Vehicles (GARVEEs)

Example: I-595 Corridor

- 10.5-mile managed lanes project in Southeast Florida
- Reconstruction and widening of I-595 and frontage roads and ramps
- Construction of 3 reversible express toll lanes known as 595 Express
- Variable tolls to optimize traffic flow, and will reverse directions in peak travel times.

I-595 Corridor

- **35-year concession for Design, Build, Finance, Operate, Maintain (DBFOM)**
- **First availability payment-based P3 in the US**
  - FDOT retains toll revenue and sets tolls, and provides oversight
  - Series of annual and monthly payments subject to adjustment based on performance
  - Project complete advanced 15 years
- **Substantial cost savings**
- **Successful financing despite economic crisis**

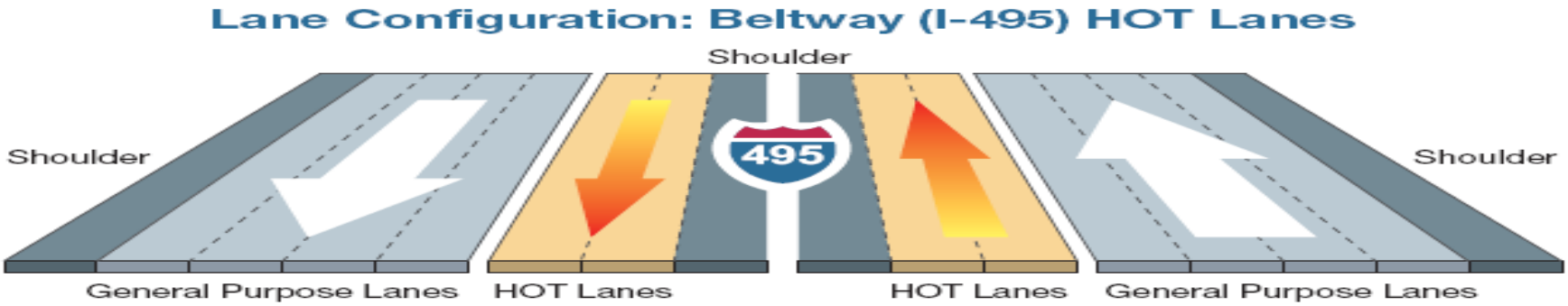
I-595 – Project Financing

Sources	Amount ($000s)
Tranche A – Senior Bank Debt	525,537
Tranche B – Senior Bank Debt	255,630
TIFIA	603,441
Equity	207,703
Revenues	10,374
TIFIA Capitalized Interest	74,881
Total Sources	1,677,567

Uses	Amount ($000s)
Construction Expenses	1,197,000
O&M Expenses	123,142
Transaction Costs and Fees	69,255
Interest during Construction	253,267
Reserve Funding	34,902
Total Uses	1,677,567

Example: Capital Beltway HOT Lanes

Design, Build, Finance, Operate, Maintain



- 14-mile segment of beltway based on a fixed-price, fixed-time, design-build contract, 80-year concession
- Two new HOT lanes in each direction with variable tolls, HOV-3 free
- Congestion-free network for transit service
- Replacement of more than $260 million of aging infrastructure, including more than 50 bridges and overpasses
- Use of PABs and TIFIA loans
- Cost = $1.9 billion

Route 495 – Project Financing

Source	Amount ($000s)
PABs	589,000
TIFIA	588,922
VDOT Contribution	408,895
Equity	348,695
Interest Income During Construction	70,793
Total Sources	2,006,305

Uses	Amount ($000s)
Construction Costs, Oversight and Other Admin Fees	1,508,477
Development Costs	65,936
Net Financing Costs	152,798
Ramp up Reserve	30,000
Revenue Stabilization Reserve	50,000
Capex Reserve	19,000
Debt Service Reserve	58,900
Project Enhancement Fund	15,000
Contingency	106,193
Total Uses	2,006,304

Test Your Knowledge

True or False:

The Florida I-595 project is the first availability payment-based P3 in the U.S.

True or False:

The Capital Beltway HOT Lanes P3 concession agreement used financing from both PABs and TIFIA.

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Course Summary

Course Summary

- P3s are not a source of free money
- P3s don’t work for every project (best suited for large, costly projects)
- One size doesn’t fit all—every P3 is different
- Decisions are local and State, not Federal
- P3s are more like outsourcing than pure privatization
- P3s can result in greater cost and schedule certainty and delivery of high quality projects

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- **Technical Assistance**
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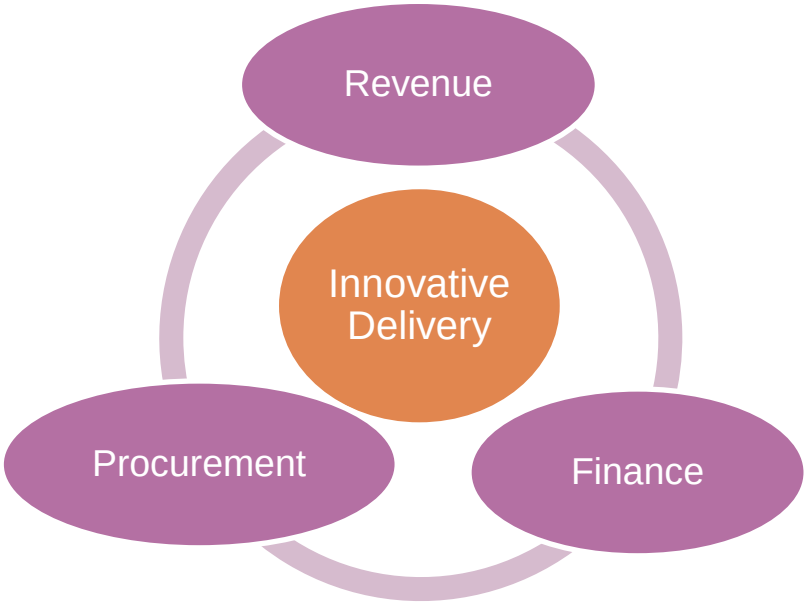

For More Information

IPD Website:
www.fhwa.dot.gov/ipd

IPD P3 Website:
www.fhwa.dot.gov/ipd/p3/

IPD Academy Staffnet Website:
http://staffnet.fhwa.dot.gov/ipd/academy.htm

AASHTO Center for Excellence in Project Finance:
www.transportation-finance.org

By Email:
Thay.Bishop@dot.gov

Upcoming IPD Academy Webinars

- February 23: SIBs 201
- March 14: GARVEEs and SIBs Office Hours
- March 21: Intro to TIFIA
- April 4: TIFIA Application Processes
- April 11: GARVEEs 101
- April 18: TIFIA Portfolio Monitoring
- May 9: TIFIA Q&A “Meet the Experts”

Contact Information

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