



Introduction to Public-Private Partnerships

**IPD Academy
Web-based Course
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Introduction to Public-Private Partnerships

Today's Presenter

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Course Outline

- Lesson 1** What are P3s?
- Lesson 2** Benefits & Challenges of P3s
- Lesson 3** Types of P3s and Examples
- Lesson 4** Financing Tools
- Lesson 5** MAP-21 and Implications for P3s
- Lesson 6** Introduction to P3 Toolkit
- Course Summary and OIPD Role**



Course Objectives

After taking this course you should be able to:

- Explain what P3s are, and how they can play a part in project delivery
- Describe the benefits of P3s and challenges to their use
- List key USDOT project finance tools that work in conjunction with P3s
- Describe MAP-21 implications for P3s
- Access resources to learn more



Lesson 1

What are P3s?



What is a P3?

- Public-Private Partnership (P3)
 - P3s are contractual agreements between a public agency and a private entity that allow for greater private participation in the delivery of projects
 - More than Design-Bid-Build
 - FHWA's Office of Innovative Program Delivery (OIPD) focuses on P3s that involve private financing



Conventional vs. P3

| Conventional Projects (design-bid-build) | P3 Projects (design-build-finance-operate-maintain) |
|--|---|
| Public sector takes on most risks (except construction) | Risks shared between public and private sector |
| Public Financing (mostly) | Private Financing (mostly) |
| Lowest bidder | Best suited/best value |
| Operations and maintenance (O&M) and ongoing rehabilitation (if any) carried out by public agency once constructed | O&M carried out by private sector; ongoing rehabilitation overseen by public sector stewardship of P3 agreement |



Key Terms

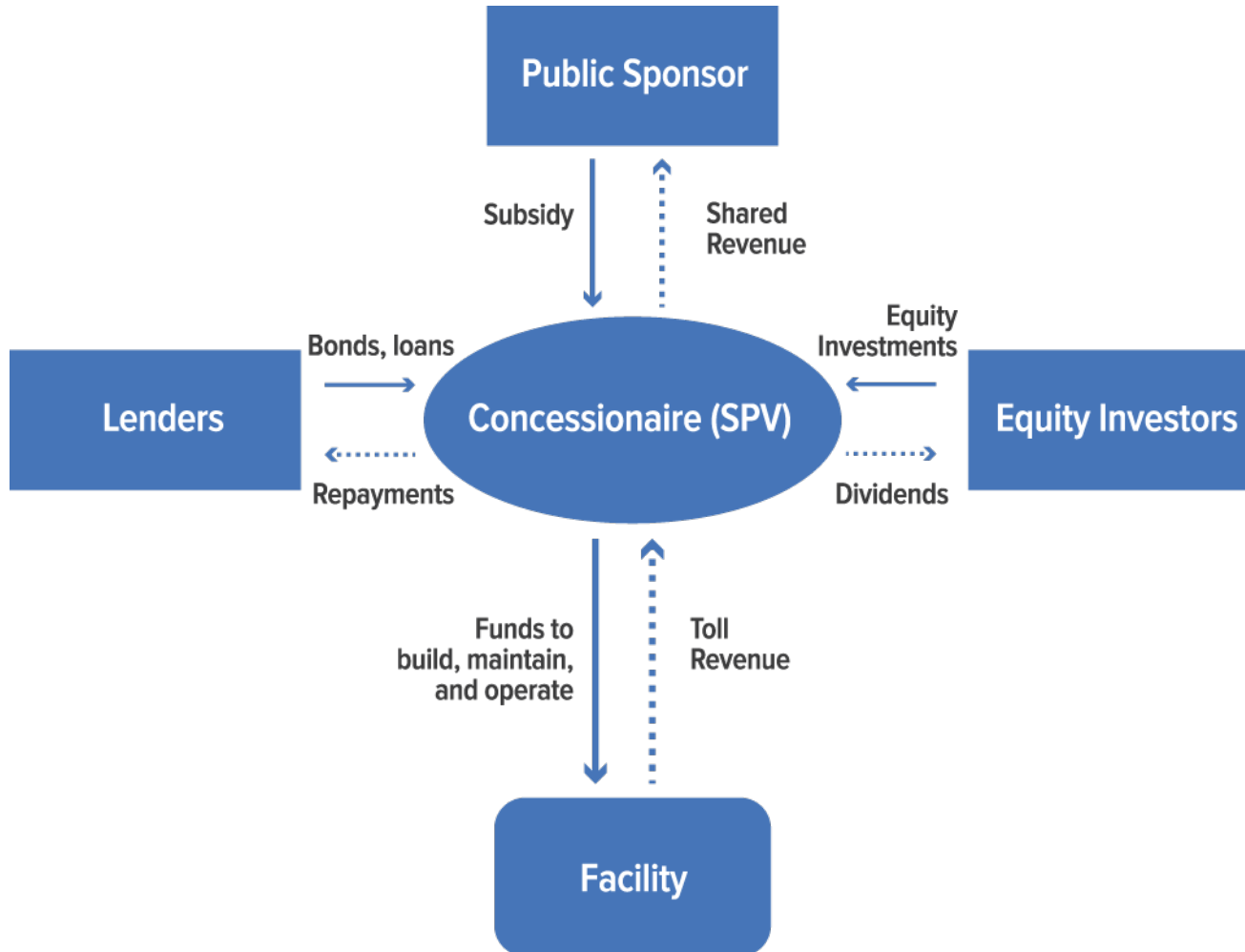
- A **Concession** is a long term lease of public facilities to a private party (concessionaire)
 - For new or existing facilities
- A **Special Purpose Vehicle (SPV)** is a legal entity created to fulfill narrow, specified tasks
 - Isolates the financial risks from the parent company or companies
 - SPV is insulated from financial risks of the parent companies



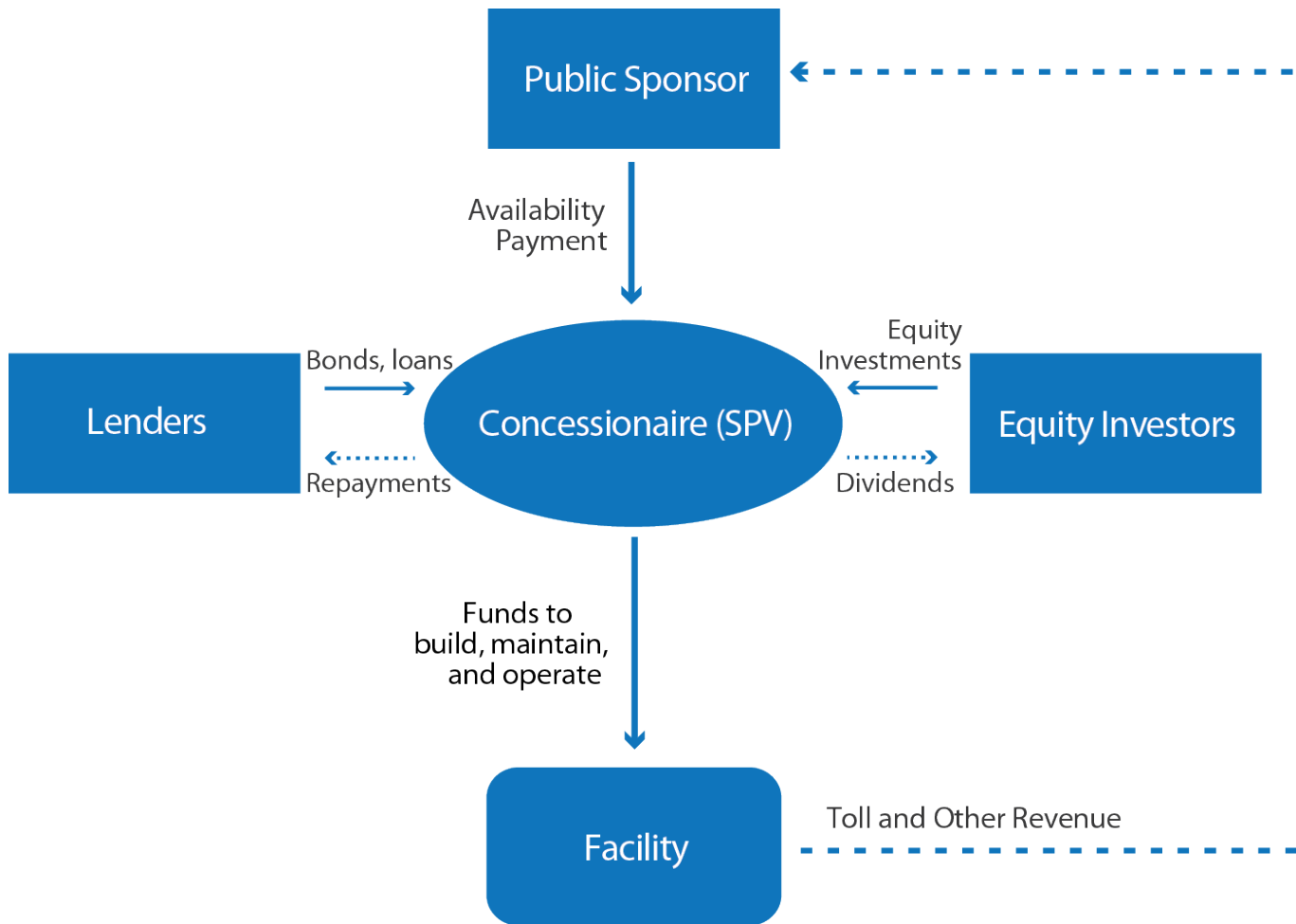
Key Terms (Cont.)

- **Equity** defines ownership interest in a corporation
 - Requires a higher rate of return than debt holders as equity interest is riskier
 - Can be lost in certain instances
- **Debt** is a bond or loan, with an obligation to pay interest and principal at a later date
 - Debt has payment priority over equity
 - Includes Private Activity Bonds (PABs) and Transportation Infrastructure and Finance Act (TIFIA) loans
- **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

Example Toll Concession

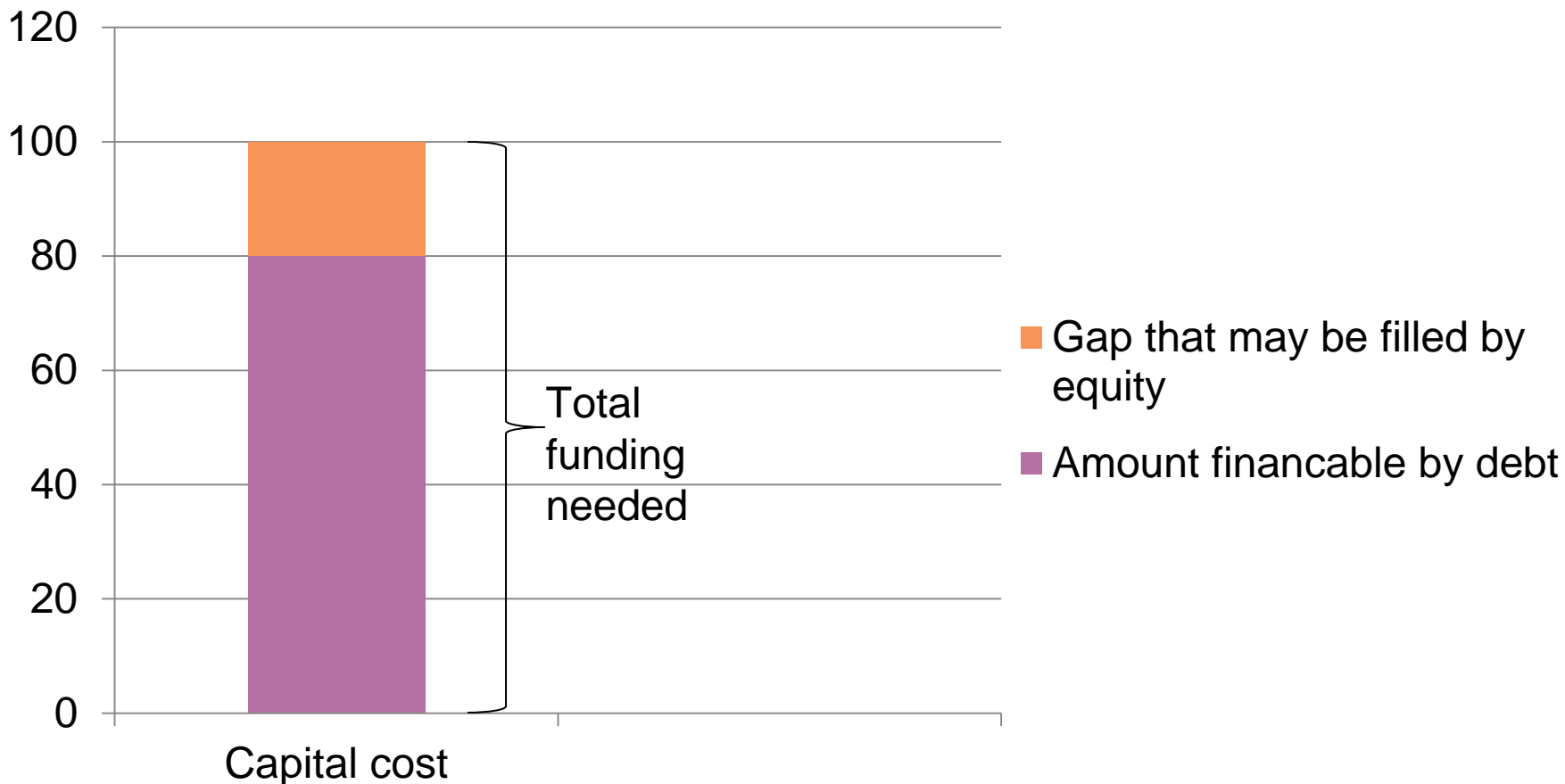


Example Availability Payment



The Role of Equity

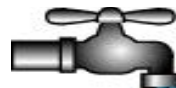
Equity can leverage additional funding from a project's revenue stream and help fill the funding gap



Typical Cash Flow Waterfall



Project Revenues



Revenue Fund

O&M fund

Rehabilitation & Reconstruction Reserve Fund

Senior Debt Service (Reserve) Fund

Subordinate Debt Service (Reserve) Fund

O&M Reserve Fund

Equity Distributions

P3s Are Not

- A source of revenue
- Privatization of public infrastructure
- A fit for every project
- The answer to all state and local problems
- Free to implement
- Easy
- Guaranteed to succeed





Test Your Knowledge

True or False:

Private equity provides new revenue.

Questions

Submit a question using the chat box



Or



*1 to ask a question by phone



Lesson 2

Benefits & Challenges



Why Undertake a Project as a P3?

When the public sector can get more value using P3 approach

- “Value” can be:
 - Potential cost savings
 - Accelerated project delivery
 - Innovation and cutting edge technologies
 - Transfer of risk
 - Budget and cost certainty
 - High and predictable service quality
 - Conserving public sector debt capacity



Other Potential P3 Benefits

- Brings together multiple financing sources required for large-scale projects
- Introduces life-cycle perspective – better quality up front and potential for lower maintenance costs
- Improved customer focus
- Leverages each partner's strengths



Potential 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 Using P3s

- Public acceptance
- Enabling legislation
- Organizational Capacity
 - Knowledge gap
 - Different oversight/contract management approach required
- High cost of private capital



Challenges in Using P3s (Cont.)

- 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



Key Considerations for P3s

■ Legal Framework:

- Is there the necessary legal and institutional framework in place to support a P3 arrangement?

■ Institutional Capacity:

- Does the agency have the organizational capacity to deliver a P3?

■ Project Characteristics:

- Does delivery of the project as a P3 represent a value proposition for the public sector?

■ Market Interest:

- Are there a sufficient number of qualified bidders who are interested?



Test Your Knowledge

True or False:

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

Questions

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Lesson 3

Types of P3s and Examples



Risk Transfer to Private Sector

| Procurement Structure | Design Risk | Construction Risk | Financial Risk | O&M Risk | Traffic & Revenue Risk |
|------------------------------|-------------|-------------------|----------------|----------|------------------------|
| Design-Bid-Build (DBB) | | Partly | | | |
| Design-Build (DB) | X | X | | | |
| Design-Build-Finance (DBF) | X | X | X | | |
| DBFOM w/Availability Payment | X | X | X | X | |
| DBFOM w/Toll Concession | X | X | X | X | X |



Risks Associated with P3s

- P3s are designed to allocate different risks to the party best able to manage them
- Efficient risk management by the P3 concessionaire can reduce the cost of risks transferred to the concessionaire, reducing overall cost and generating “value for money.”



VDOT Example Risk Allocation

| Risk | Traditional (Design-Bid-Build) | Design-Build | Design-Build Finance- Operate-Maintain |
|-------------------|-----------------------------------|--------------|---|
| Change in Scope | Public | Public | Public |
| NEPA Approvals | Public | Public | Public |
| Permits | Public | Shared | Private |
| Right of Way | Public | Public | Shared |
| Utilities | Public | Shared | Shared |
| Design | Public | Private | Private |
| Ground Conditions | Public | Public | Private |
| Hazmat | Public | Public | Shared |
| Construction | Private | Private | Private |
| QA/QC | Public | Shared | Private |
| Security | Public | Public | Shared |
| Final Acceptance | Public | Private | Private |
| O&M | Public | Public | Private |
| Financing | Public | Public | Private |
| Force Majeure | Public | Shared | Shared |



Types of P3s by Payment Model

■ Availability Payment

- Periodic payment tied to performance

■ Toll Concession

- Max. allowed toll rate by year of operation
- Revenue sharing based on rate of return
- Max. net present value (NPV) of revenue
- Revenue sharing based on forecast revenue vs. actual revenue



Example of Revenue Sharing: TxDOT

- **Revenue 0% to 15% above forecast**
 - Public share = 0%
- **Revenue 15% to 18% above forecast**
 - Public share = 12.5% of excess
- **Revenue 18% to 21% above forecast**
 - Public share = 25%
- **Revenue 21% to 23% above forecast**
 - Public share = 50%
- **Revenue more than 23% above forecast**
 - Public share = 75%



Types of P3s by Project Scope

- **Greenfield:** At least some new facility construction
- **Brownfield:** Takeover of operation/maintenance for an existing facility, possibly with future enhancement; a.k.a. “asset monetization”



Test Your Knowledge

True or False:

A private entity can manage all risks more efficiently than the public sponsor.

Questions

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Lesson 4

U.S. DOT Financing Tools



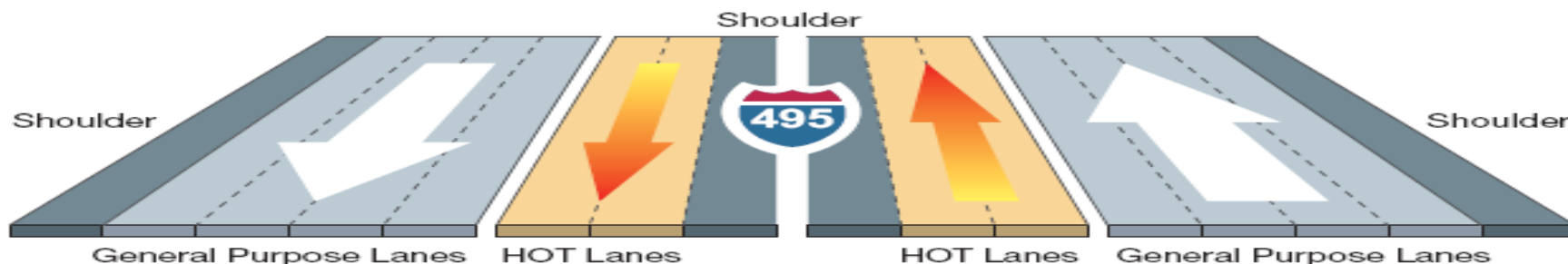
Financing Tools Supporting P3s

- **TIFIA:** Flexible, low-cost lending that addresses challenges such as revenue ramp up risk
- **PABs:** Allows private sector to participate in tax-exempt market
- **Other Innovative Financing Tools:**
 - Grant Anticipation Revenue Vehicles (GARVEEs)
 - State Infrastructure Banks
 - Section 129 Loans
 - Other U.S. DOT credit support programs

Example: Capital Beltway HOT Lanes

- 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, HOV3 free
- Congestion-free network for transit service
- Replacement of aging infrastructure, including more than 50 bridges and overpasses
- Used PABs and TIFIA loans

Lane Configuration: Beltway (I-495) HOT Lanes





Capital Beltway 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, Oversight & Other Administrative Costs | 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 |



P3s Transfer Significant Financial Risks

■ **Examples:**

- South Bay Expressway, San Diego, CA
- Pocahontas Parkway, Richmond, VA

■ **Impacts:**

- Equity holders absorb financial losses
- Traveling public and government sponsor were insulated from financial impact
- Two quality projects continue to serve users without interruption

■ **Lessons:**

- Toll forecasting is difficult
- P3s designed so that private partners accept financial exposure in exchange for their anticipated rate of return



Test Your Knowledge

True or False:

A P3 project may use financing from both PABs and TIFIA.

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Lesson 5

MAP-21 Legislation and Implications for P3s



MAP-21 Implications

- Programs
 - TIFIA: Expanded availability of low cost federal loans with flexible terms
 - Major Projects: Demonstrate consideration of P3 procurement option in Finance Plan
- Tools and Guides
 - Model P3 contracts
 - Best practices to deliver value and protect the public interest
- Technical assistance
 - U.S. DOT direct assistance
 - Center for Excellence in Project Finance – training and sharing of best practices



TIFIA

- TIFIA is a federal lending program for credit assistance to transportation projects
 - Low interest rates and flexible terms
- Prior to MAP-21 TIFIA budget would have supported about \$1b. per year in lending
- MAP-21 funding allows about \$17 b. in lending over two years



Major Projects & P3s

- Major Projects are projects with costs larger than \$500 million receiving federal grants.
- Project owners are required to demonstrate consideration of the “appropriateness of P3s in delivering the project”
- FHWA has developed a P3 Screening Tool called P3-SCREEN available at:
<http://www.fhwa.dot.gov/ipd/p3/toolkit/checklists/index.htm>



Model Contracts

- By April 1, 2014 develop Model P3 Contracts for the most popular types of P3s
- States will be encouraged to use Model Contracts as a template in their own contracts
- FHWA initiated the model contract effort with a “Listening Session” to hear views on what should be in these contracts
- Models will be educational



Best Practices

- FHWA is required to post on its website “best practices” in the P3 area to:
 - Consider how public officials and the private sector can work together in the development of P3 projects
 - Include policies and techniques to protect the interests of the traveling public and State and local governments in P3 transactions.
- FHWA is developing a Best Practices Guidebook



Technical Assistance & Center for Excellence

- FHWA may provide technical assistance to State and local governments regarding P3s
 - Including assistance in whether P3s provide value as compared to traditional procurements
- MAP-21 directs the creation of a “Center for Excellence in Project Finance”
 - Center to provide assistance, information, training, and best practices in project finance



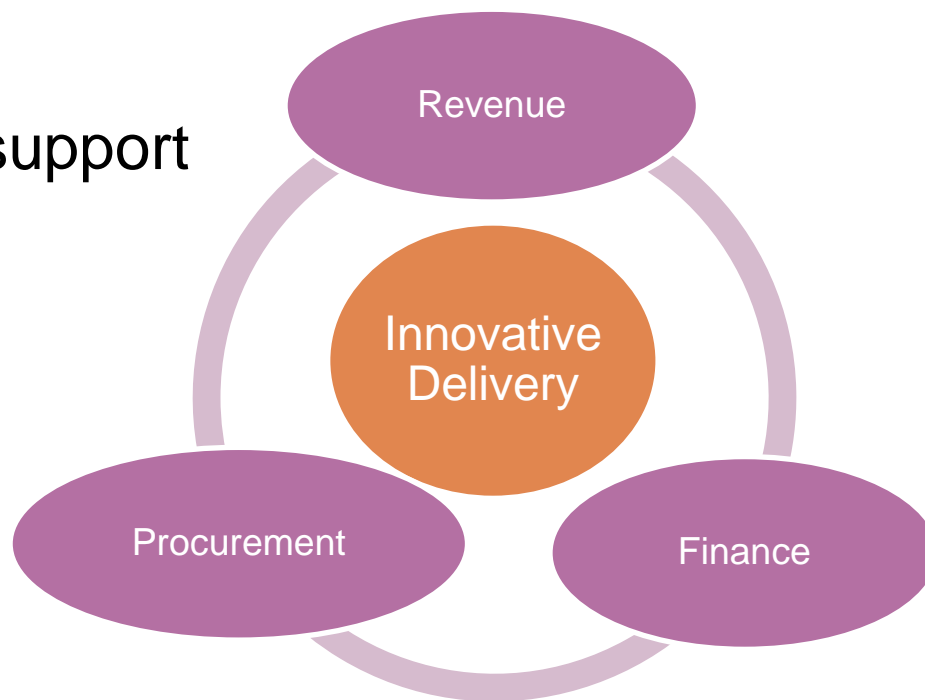
Lesson 6

P3 Toolkit



OIPD's Role in Transportation P3s

- Tools, technical resources and training
- Technical assistance
- Facilitate P3s
- TIFIA Federal credit support





P3 Toolkit

- Legislation and Policy
 - Catalog of State experience in protecting the public interest while attracting private investment
- Planning, Evaluation and Development
 - Educational tool – P3 Value for Money Analysis to Learn and Understand Evaluation (P3-VALUE)
 - Screening tool – P3-SCREEN
- Procurement
 - Standardized contracts, best practices
- Monitoring and Oversight
 - Best practices

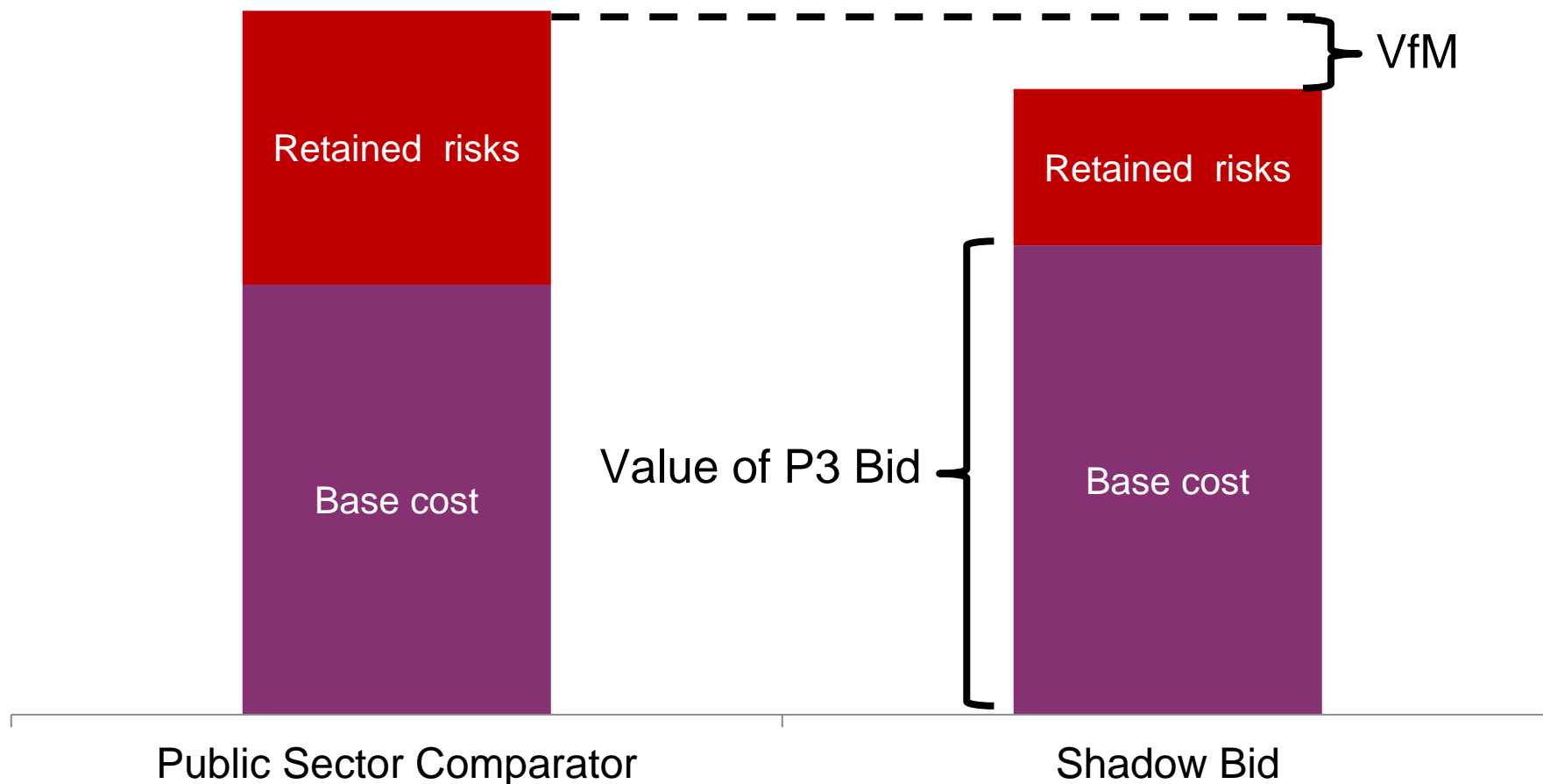


Types of Tools

- Fact sheets
 - Succinct information on topics of interest
- Primers and Guides
 - Primers – High-level information
 - Guides – Detailed information for practitioners
- Educational Tools
 - To help learn the evaluation concepts – P3-VALUE
- Accessible at
<http://www.fhwa.dot.gov/ipd/p3/toolkit/index.htm>

P3-VALUE Analytical Process

Value for Money (VfM) Analysis: Financial impacts from the perspective of the procuring agency





P3-VALUE Tools

■ Risk Assessment Tool

- Assists in identifying risks, risk allocation, mitigation strategies, potential cost and schedule impacts

■ Public Sector Comparator (PSC) Tool

- Calculates risk-adjusted life cycle costs of conventional procurement

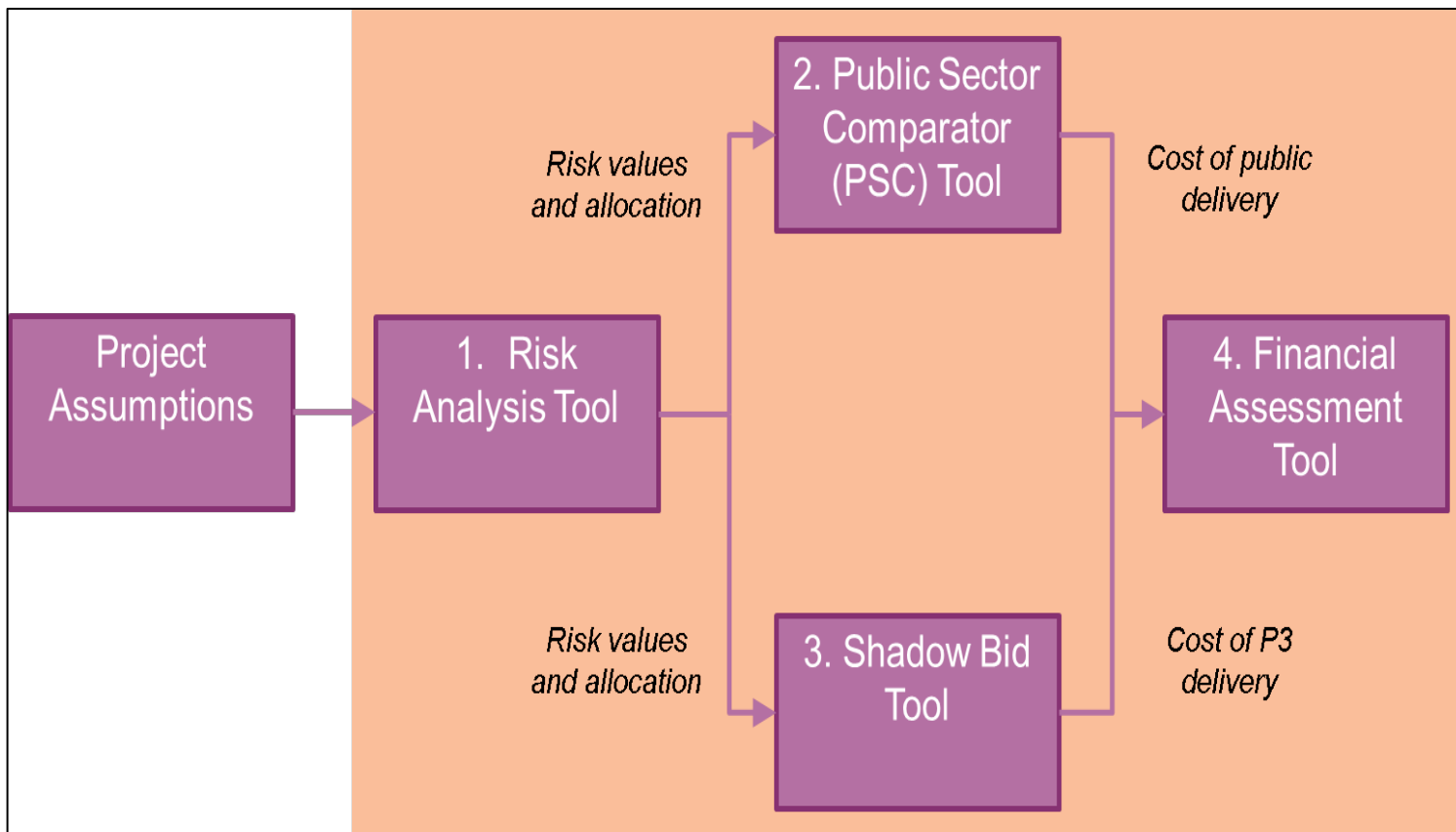
■ Shadow Bid Tool

- Calculates costs of P3 procurement, including payments to private partner

■ Financial Assessment Tool

- Compares PSC and Shadow Bid costs to calculate value for money

P3-VALUE Tool Integration



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Course Summary



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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>





Upcoming P3 Webinars

- **Sept 5:** P3 Evaluation Overview
- **Sept 20:** Project Risk Assessment 201

To register, please visit

<http://www.nhi.fhwa.dot.gov/resources/webconference/eventcalendar.aspx>



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