



# Evaluating P3 Options: An Overview

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**P3-VALUE Webinar – September 5, 2013**

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# P3-VALUE Webinars

- **P3:** Public Private Partnership
- **P3-VALUE:** Set of four integrated analytical tools to help practitioners understand processes used to quantitatively evaluate P3 options
- This is the first of four webinars on P3-VALUE
  - P3 Evaluation Overview (today)
  - Risk Assessment 201 (September 20, 2013)
    - Recording available at: <https://connectdot.connectsolutions.com/p37y72rl5je/>
  - Value for Money Analysis (January 23, 2014)
    - Recording available at: <https://connectdot.connectsolutions.com/p4jg5w4li0n/>
  - Financial Structuring and Assessment (March 13, 2014)
    - Recording available at: <https://connectdot.connectsolutions.com/p1b6ku8za83/>



# Course Outline

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- Lesson 1 Introduction to P3 Evaluation
- Lesson 2 P3 Financial Evaluation
- Lesson 3 Value for Money Analysis
- Lesson 4 FHWA's P3 Toolkit and P3-VALUE
- Summary



# Course Objectives

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**After taking this course you should be able to:**

- Identify the purpose of P3 evaluation
- Describe the P3 evaluation process
- Identify the challenges and limitations of P3 evaluation
- Explain the role of the P3-VALUE suite of tools
- Access the tools and supporting information



# Lesson 1

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## *Introduction to P3 Evaluation*



# Project vs. Procurement Evaluation

## ■ Project Evaluation:

- Is the project worthwhile for society?
  - Definition of “society” can vary

## ■ Procurement Evaluation:

- Would P3 procurement add value relative to conventional procurement?
- Which of several P3 options would add most value?

# Procurement Evaluation

## ■ Financial Assessment:

- Considers financial elements only, i.e., “cash flows”
- Focuses on costs and revenues; “benefits” to society (e.g., travel time savings from accelerated project delivery) not assessed quantitatively
- Perspective is that of the procuring agency
- Employs value-for-money (VfM) analysis

## ■ Economic Efficiency Assessment:

- Considers full range of costs and benefits to society
- May include financial elements, but some such elements may not be included, e.g., tolls
- Employs benefit-cost analysis (BCA)



# Financial Evaluation Questions

- Is the project affordable to the public agency?
  - Financial feasibility analysis
- Will P3 procurement enhance the financial position of the public sponsor?
  - Value for Money (VfM) analysis
- If P3 procurement is selected, is the *dollar value* that the private entity offers (or is willing to accept) a good value from the viewpoint of the public agency?
  - Asset valuation (for “net revenue” projects)
  - Subsidy and availability payment valuation (for “net cost” projects)





# Economic Efficiency Questions

- Does the project yield benefits to society that exceed the costs to society?
  - Assessment of the full range of economic costs, risks and social benefits
  - When should a project be undertaken?
  - What is the best project design alternative?
- Will a P3 option increase net benefits to society compared with conventional procurement?
  - P3 costs and benefits would be compared to conventional procurement costs and benefits
  - Goes beyond procuring agency's perspective
  - Considers externalities and user benefits
  - FHWA is conducting research to develop this approach



# Evaluating a P3 Option: Summary

Question	Analysis Approach
What are the financial consequences of the procurement option from the perspective of the agency's financial position?	Financial (VfM)
Which procurement method is better from society's perspective?	Economic (BCA)*

\* FHWA research is underway to develop this approach



# Test Your Knowledge

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## True or False:

Financial evaluation considers the full range of costs and benefits to society.

# Questions?

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Submit a question using the chat box



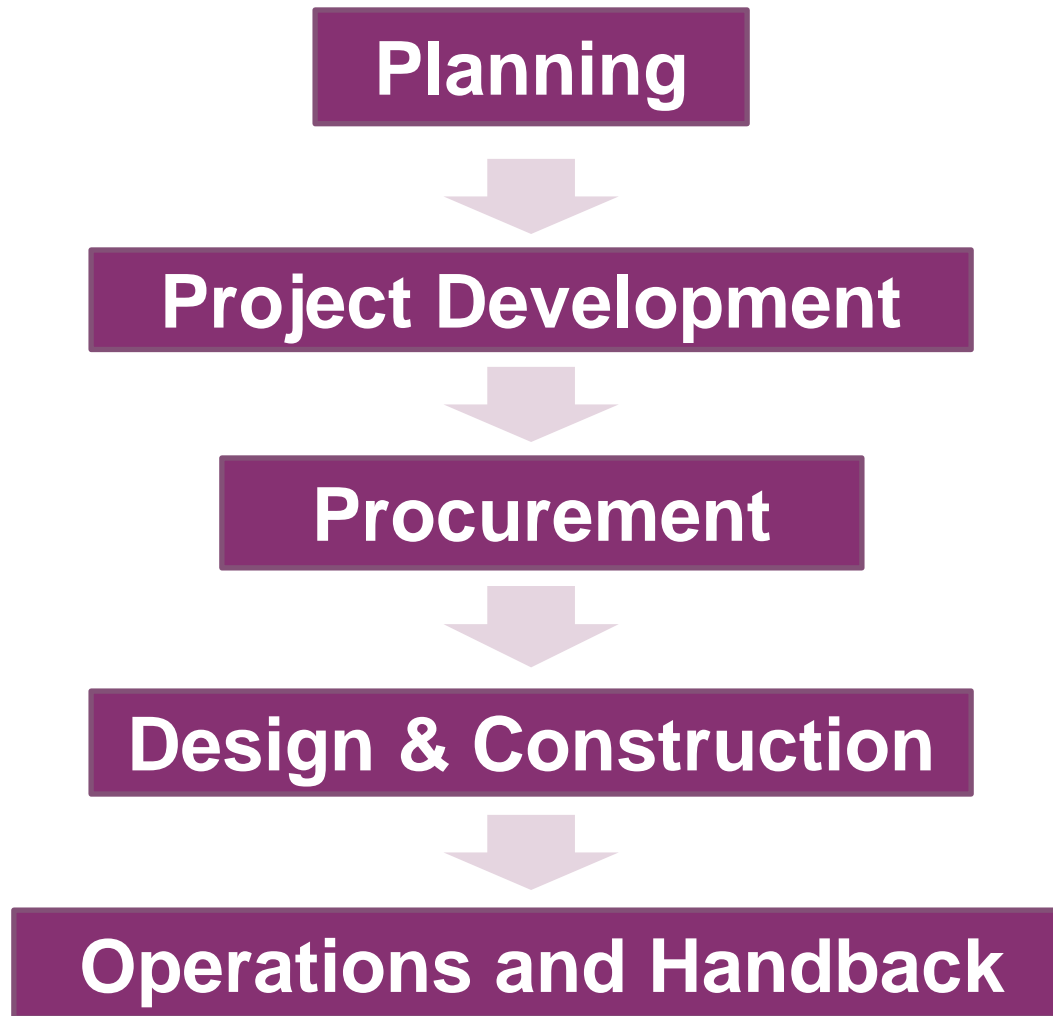


## Lesson 2

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# *P3 Financial Evaluation*

# Evaluation at Every Stage



# Planning Questions

## Project Screening

Is the project appropriate for a P3?

- Scale
- Long-term nature of service
- Complexity of risk profile
- Potential for innovation

Can the whole-life costs be reduced through integration of design, construction and operations?



# Planning Phase Screening

- **Project Characteristics:** Does delivery of the project as a P3 represent a value proposition\* for the public sector?
- **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?
- **Market Interest:** Are there a sufficient number of qualified bidders who are interested?

\* Value = cost and schedule efficiencies, innovation, budget certainty, accelerated delivery, etc.





# P3-SCREEN Screening Tool

- *P3-SCREEN* is a simplified P3 screening tool to assist in preliminary screening evaluation of the suitability of a highway project for a P3 option.
- Highlights key criteria and questions relevant to assessing the viability of delivering a highway project using a P3 approach.
- May be used in conjunction with the development of an Initial Financial Plan for major projects to assist in meeting the Federal requirements under *Moving Ahead for Progress in the 21<sup>st</sup> Century* (MAP-21).



# Project Development Questions

## Quantitative Analysis

Would a P3 add value?

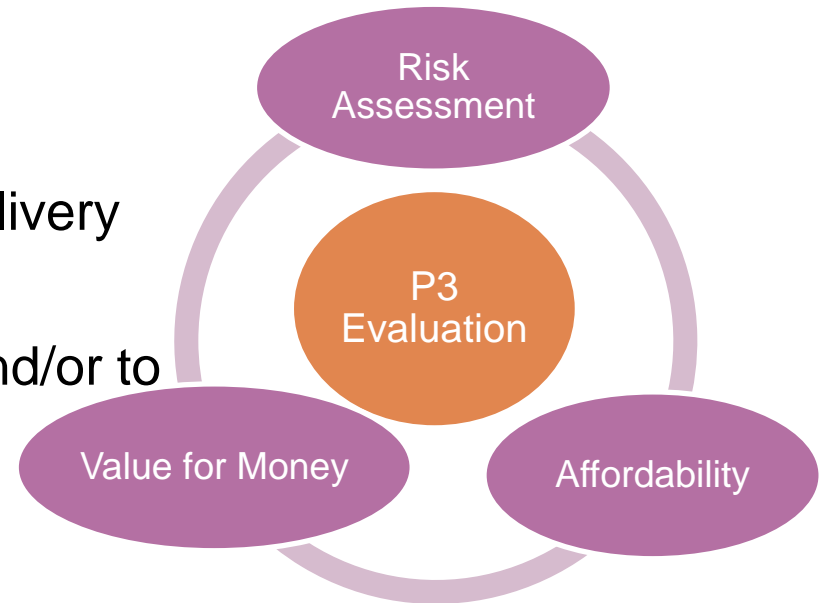
If so, what type of P3 is best?

Is the project worthwhile for a private entity to deliver? How much subsidy would be required?  
Is it affordable?

# Project Development Phase Evaluation

## ■ Detailed Evaluation:

- Traffic and revenue
- Cost estimates
- Risk assessment
- Comparison of P3 vs. public delivery (VfM)
- Affordability to public agency and/or to traveling public (i.e., for tolls)



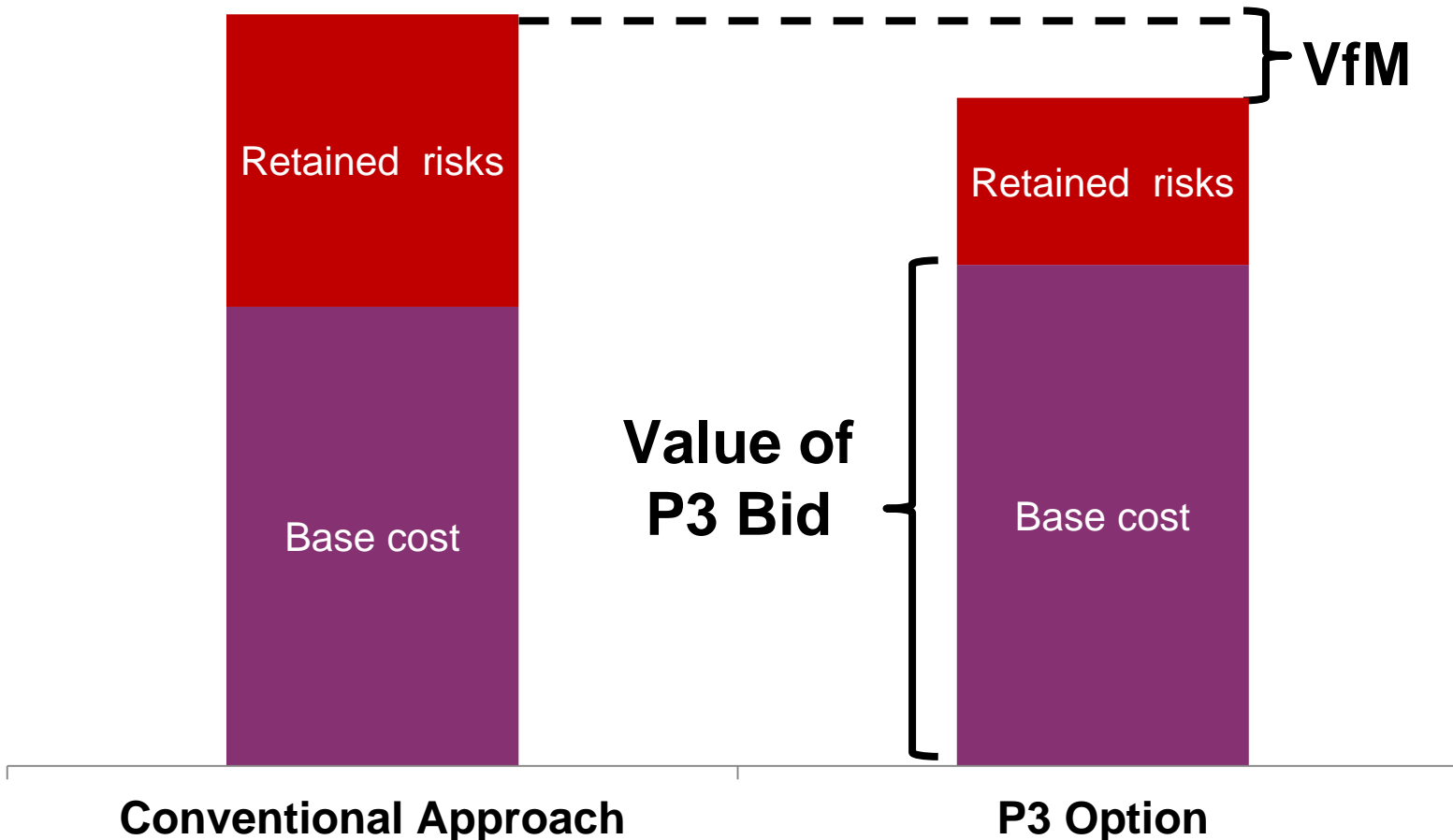
## ■ Market outreach:

- Market analysis
- Market outreach



# VfM Analysis in Project Development

- Is a potential P3 bid likely to generate value for money?



# Procurement Questions

## Quantitative Analysis

Would the contract terms proposed in the RFP ensure value for money?

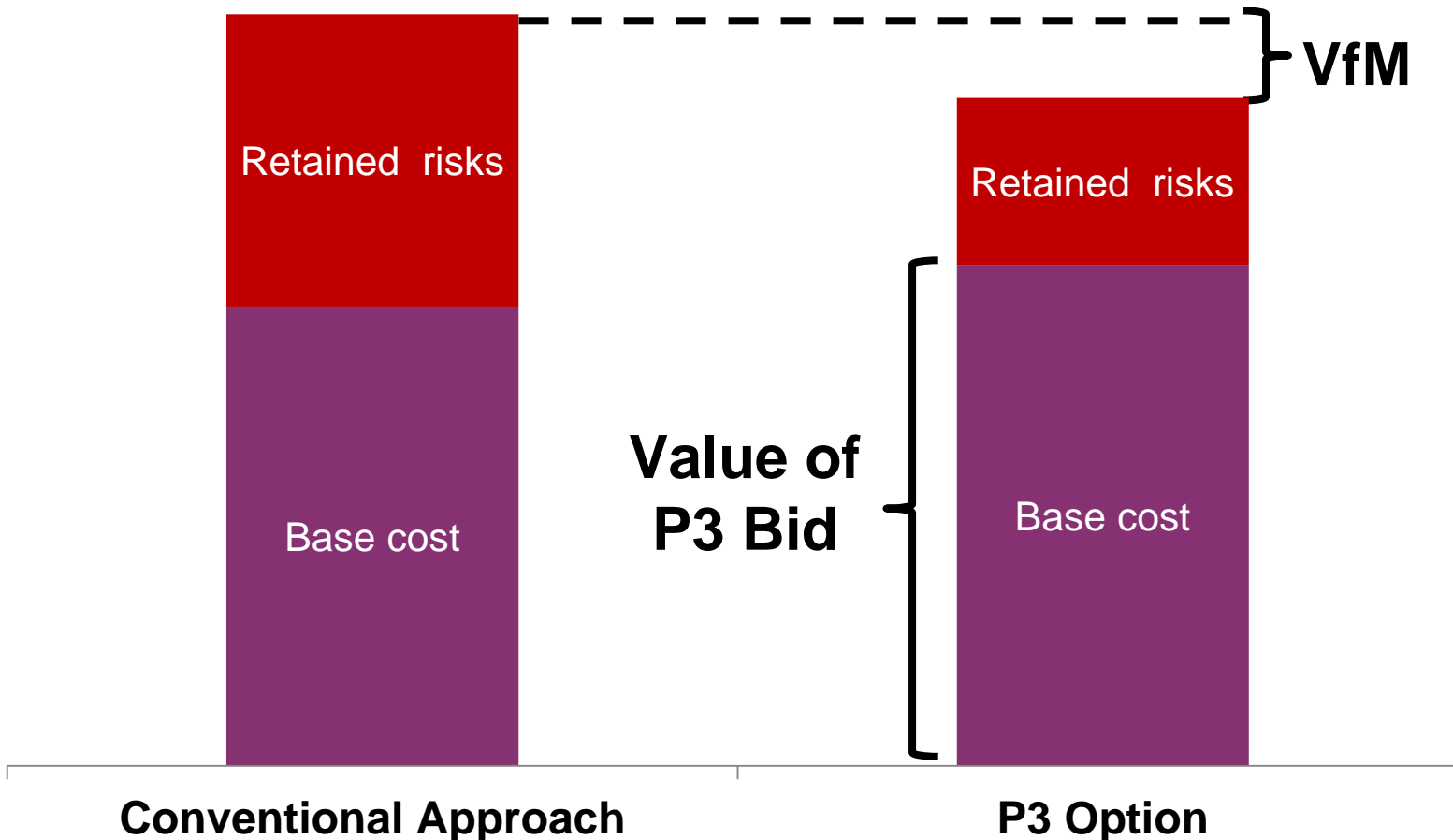
Does the *preferred bid* provide value?

Is the bid price reasonable and fair?

Does the *actual* P3 agreement add value?

# VfM Analysis in Procurement Phase

- Re-run VfM evaluation before RFP release and upon receipt of price proposals to ensure VfM is maintained.





# Procurement Transparency

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## Benefits to public sector:

- Offers legitimacy with facility users, elected officials and the general public

## Benefits to private sector:

- Makes process and rules of the game clear, builds confidence in reliability of getting to decision

# Maintaining Transparency

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- Establish process to review P3 proposals, incorporating transparency and public participation, e.g., VDOT process
- Be clear up-front about what type of information should remain confidential and provide an explanation as to why confidentiality is necessary during the proposal process.
- Temporary confidentiality could be balanced with full disclosure of selection criteria, scoring, and agreement terms



# Summary of Evaluation Process

## 1. Planning

- Apply high level preliminary screening criteria to all major capital investment projects

## 2. Project Development

- Develop quantitative and qualitative VfM assessment and gauge competitive interest through market sounding

## 3. Procurement

- Refine P3 contractual terms, revisit VfM analysis and evaluation as cost estimates are refined

# Evaluation in Implementation Phase

## 4. Design & Construction

Has the anticipated value been realized at construction completion?



## 5. Operations & Handback

Has the anticipated value been realized throughout the project's life?



# Test Your Knowledge

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## True or False:

Value for Money analysis may be used to help make a decision on whether to use a P3.

# Questions?

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Submit a question using the chat box





# Lesson 3

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## *Value for Money Analysis*

# Definitions

## ■ Value for Money (VfM)

- The optimum combination of life cycle costs and quality of a good or service to meet the user's requirements
- Generally expressed as the dollar difference or % difference between present value of costs for P3 vs. present value of costs for conventional project delivery

## ■ VfM Analysis

- Quantitative analysis to compare the financial impacts of procurement alternatives for a project
- Financial analysis
- Impact on balance sheet of the procuring agency
- Other benefits (e.g., to users) considered in qualitative assessment

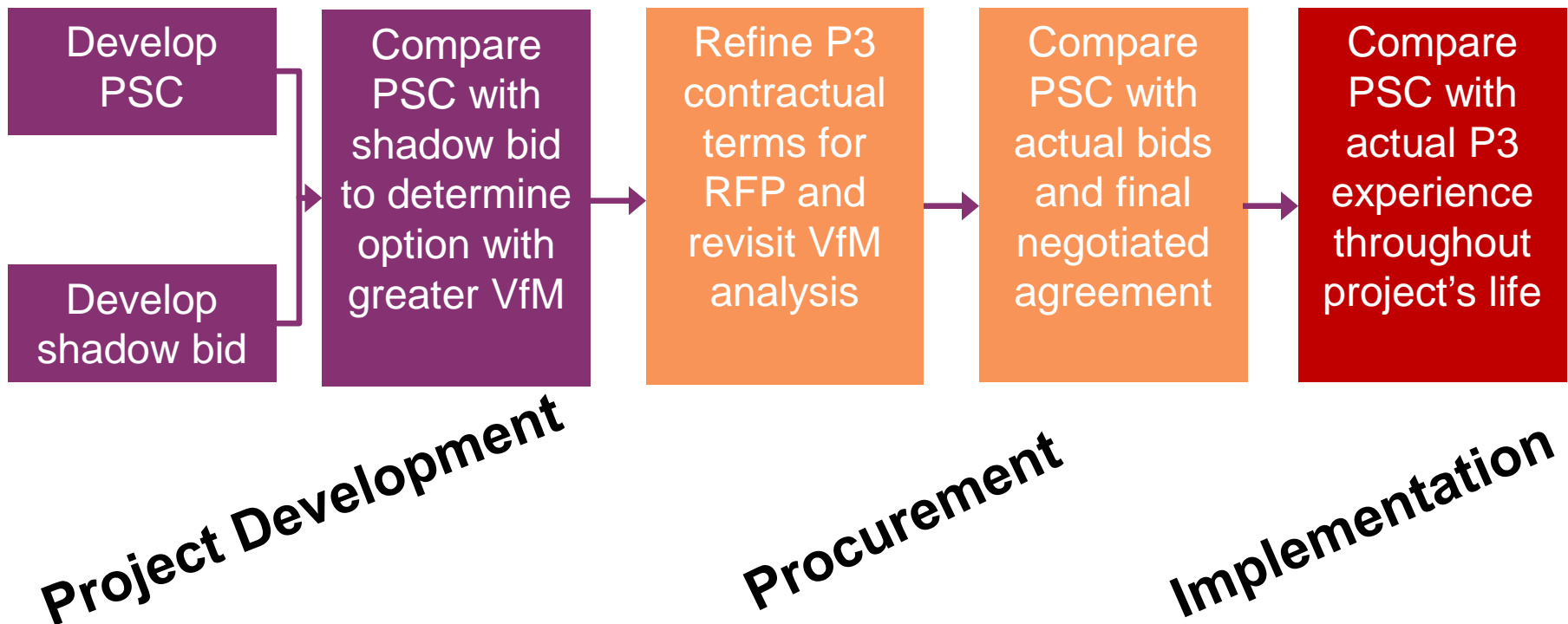
# Definitions (Cont.)

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- **Public Sector Comparator**
  - Conventional procurement's baseline cost against which P3 option will be compared
- **Shadow Bid**
  - Cost of P3 option
  - Includes estimated payments to private partner as well as other costs incurred by public sponsor

# Timing

- Agencies typically conduct VfM analyses once they decide to undertake a project and wish to assess delivery options







# VfM Analytical Process

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1. Identify potential procurement options
2. Identify, monetize and allocate project risks
3. Develop public sector comparator (PSC)
4. Develop P3 option (“shadow bid”)
5. Compare public sector comparator to P3 option
6. Consider qualitative factors (e.g., benefits to users from accelerated project delivery)



# 1. Identify Procurement Options

- **Conventional procurement options:**
  - Design-Bid-Build
  - Design-Build
  - Design-Build-Finance
  - Other (e.g., Contract manager at risk)
- **Common P3 procurement options:**
  - Design-Build-Finance-Operate-Maintain (DBFOM) with toll concession
  - Design-Build-Finance-Operate-Maintain (DBFOM) with availability payments
  - Design-Build-Finance-Operate-Maintain (DBFOM) with shadow tolls



## 2. Risk Assessment and Allocation

- **Risk identification**
  - All phases – design, construction, operation
- **Risk quantification**
  - Probability of occurrence
  - Range of cost and schedule impacts
- **Aggregate risk valuation**
  - Formula-based
  - Monte-Carlo simulation
- **Risk allocation**
  - Transferrable to private sector
  - Retained by public sector



## 3. Develop Public Sector Comparator

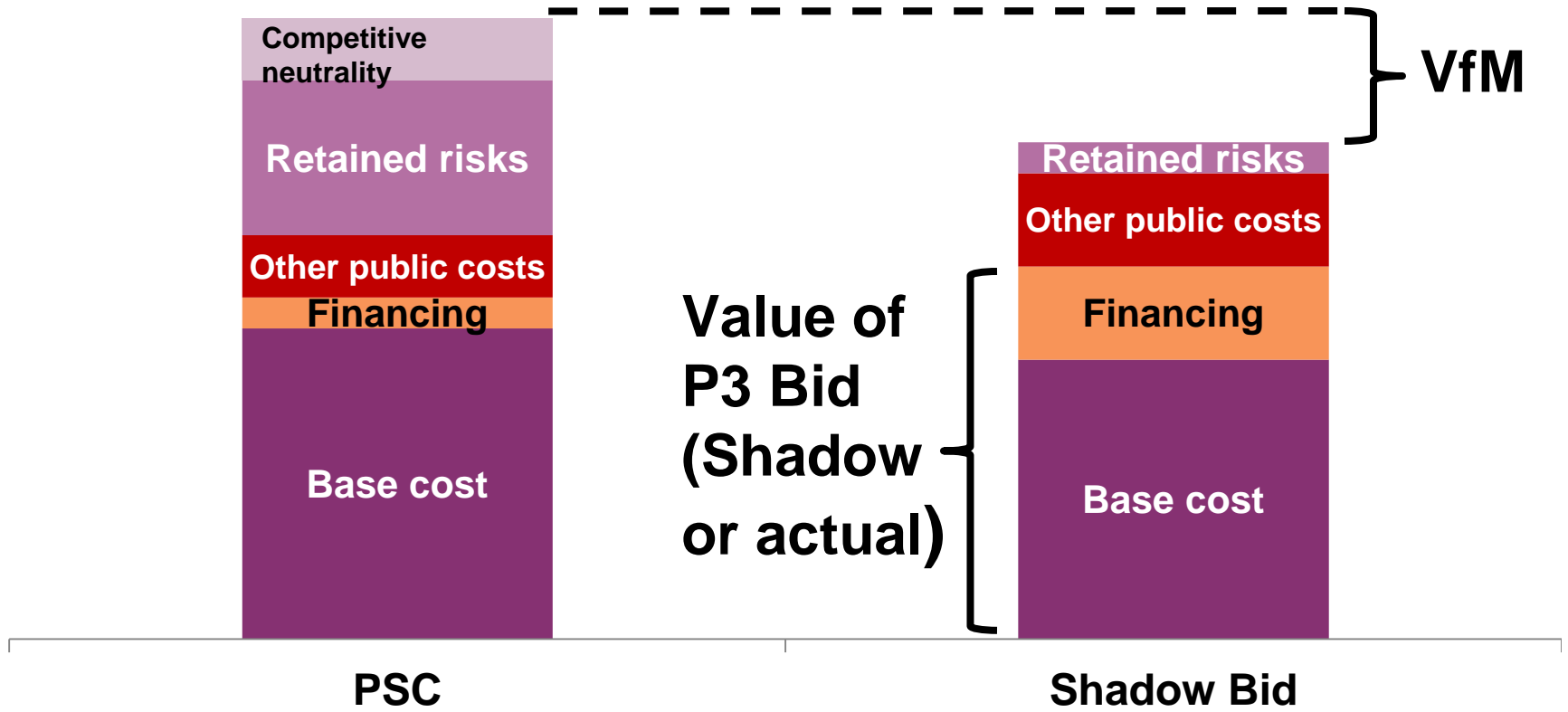
- Estimate the present value of hypothetical, risk-adjusted cost of a project delivered through the conventional approach:
  - Base costs
  - Financing costs
  - Cost impacts of risks (including financing)
  - Procurement and oversight costs
  - Competitive neutrality adjustments
- Assumes project can be completed to the same standards anticipated by P3 delivery
- Assumes same time frame, i.e., funding or financing issues will not delay conventional procurement

## 4. Develop a Shadow Bid

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- Estimate the present value of total costs *to the public agency* for delivering the same project as a P3
- Components include:
  - **P3 contract payment:** Amount that would be demanded by private sector to deliver the project based on its costs and desired rate of return
  - **Retained risks:** Value of risks retained by the public sector in P3 delivery structure
  - **Other project costs:** Costs incurred by the public agency to facilitate project delivery and oversight

# 5. Compare PSC with Shadow Bid



## 6. Qualitative Assessment

- Key qualitative considerations related to project goals:
  - User benefits from accelerated project delivery
  - Safety
  - Service quality
  - Reliability
- P3 contract-related considerations:
  - **Viability:** Ability to formulate a sound contract
  - **Performance:** Provides opportunity for innovation
  - **Achievability:** Accounts for public agency's capabilities and those of the private sector
  - **Flexibility:** Maintains ability of the public agency to coordinate regional network policies



# Hypothetical Illustration

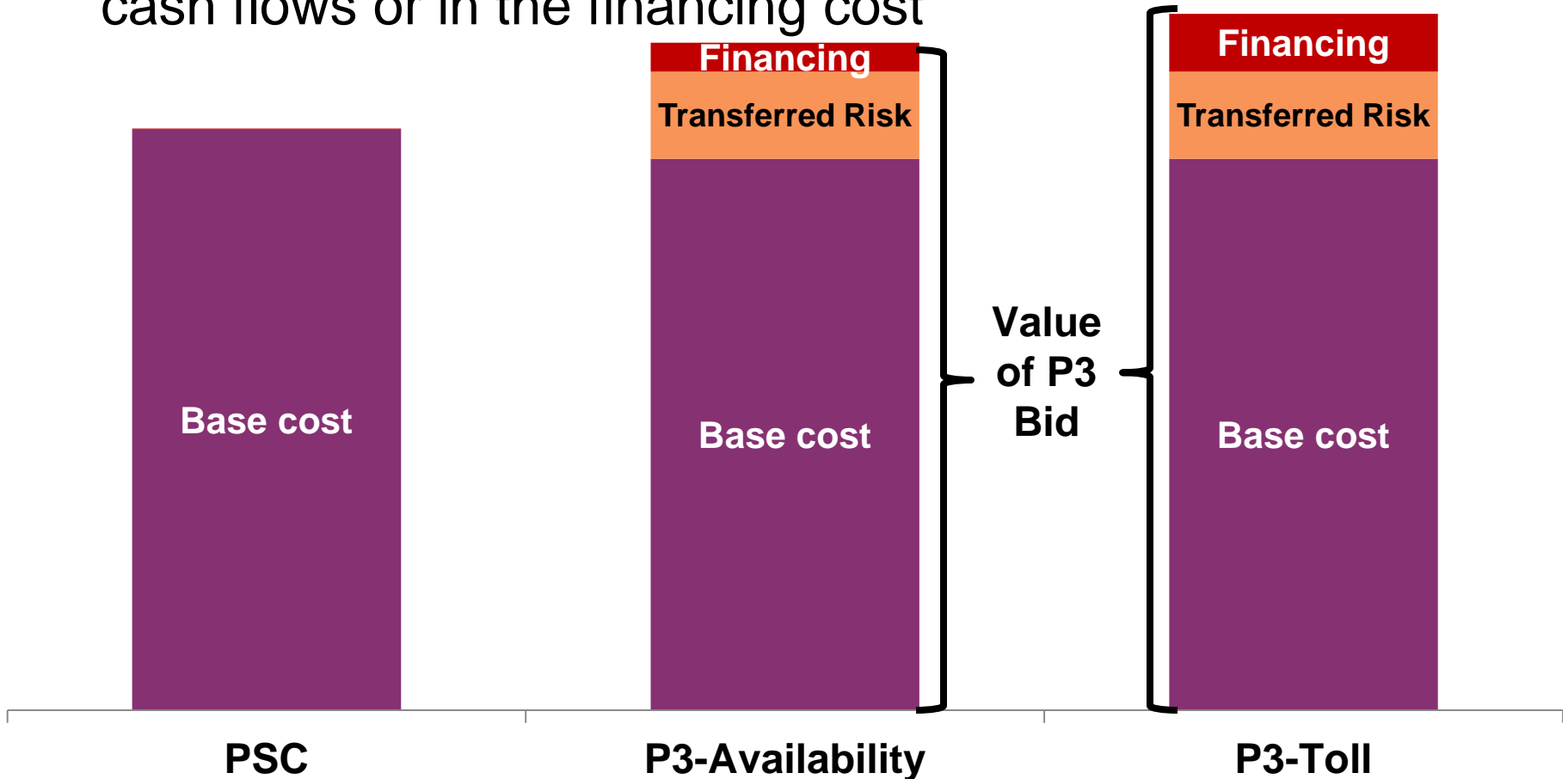
- Conventional procurement option – Design-Bid-Build
- P3 options: (1) Availability payment (2) Toll
- Illustrative assumptions:
  - P3 options reduce life-cycle costs
  - Risks transferred to P3 concessionaire are managed at lower cost
  - P3 concessionaire may increase toll revenue in a toll concession





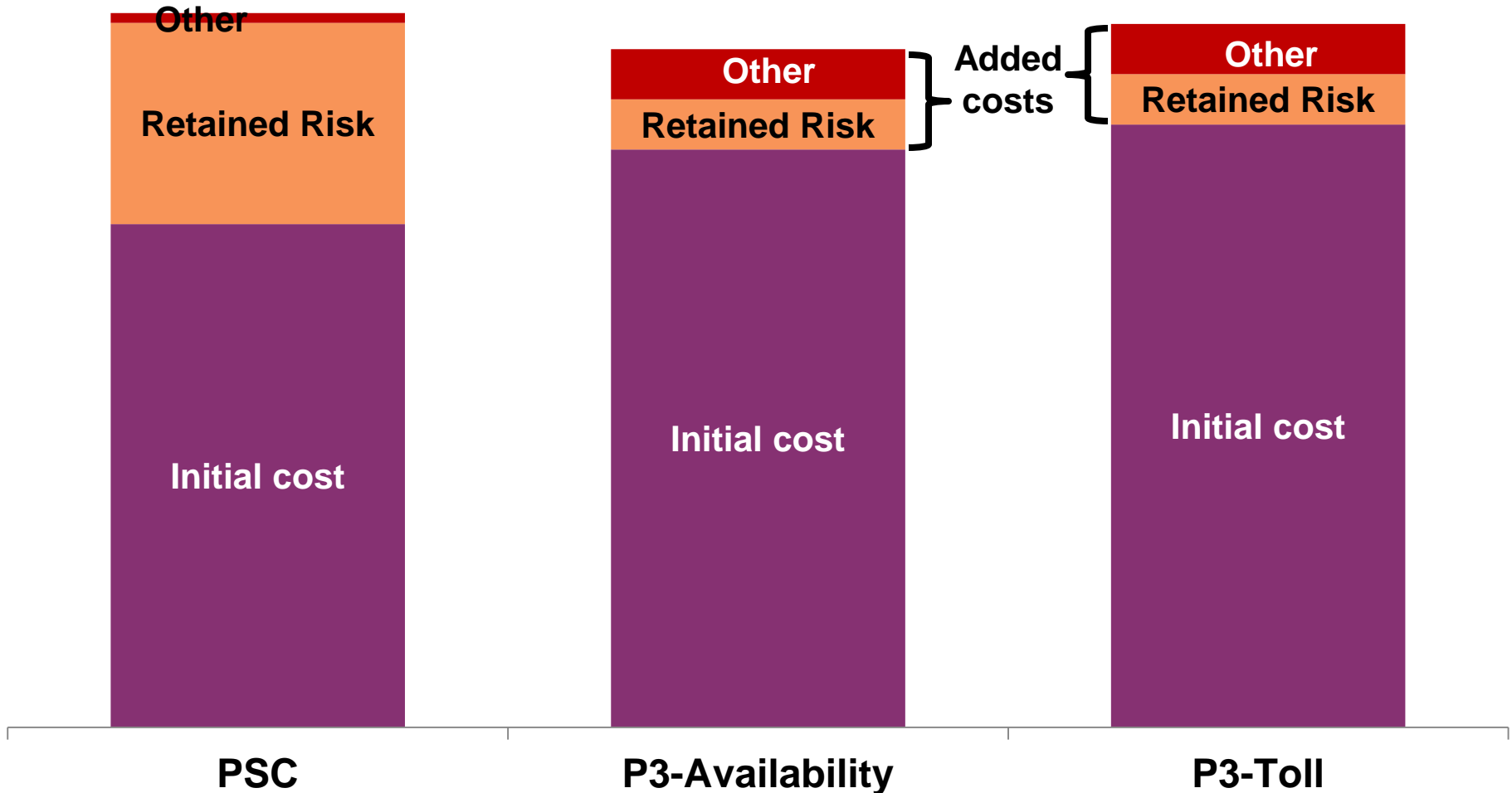
# 1. Initial Cost Estimate

- P3 costs may appear higher despite lower life cycle costs -
  - Transferred risks are accounted for either explicitly in cash flows or in the financing cost



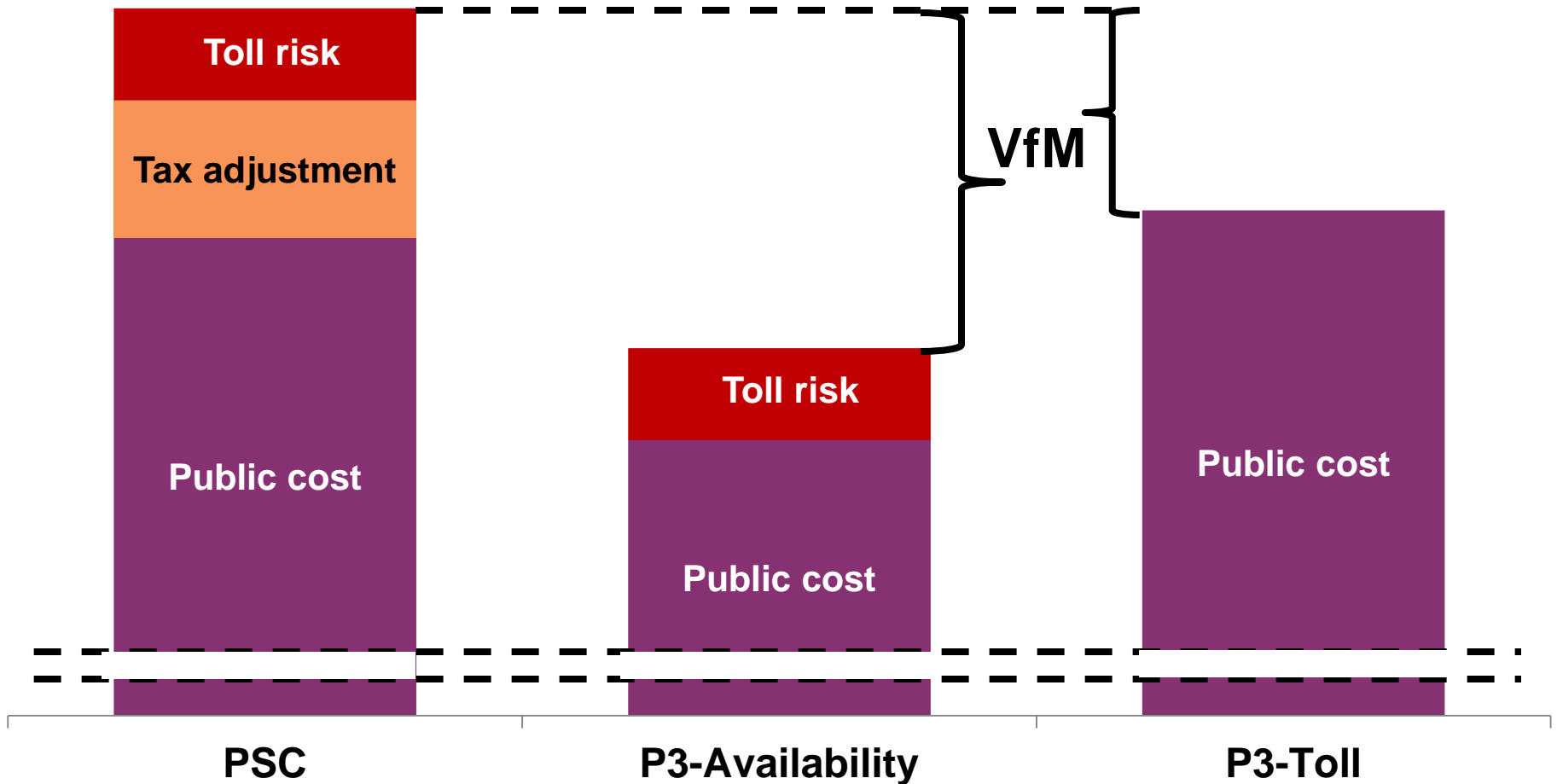
## 2. Total Cost to Public Agency

- Retained risk in PSC may increase cost relative to P3



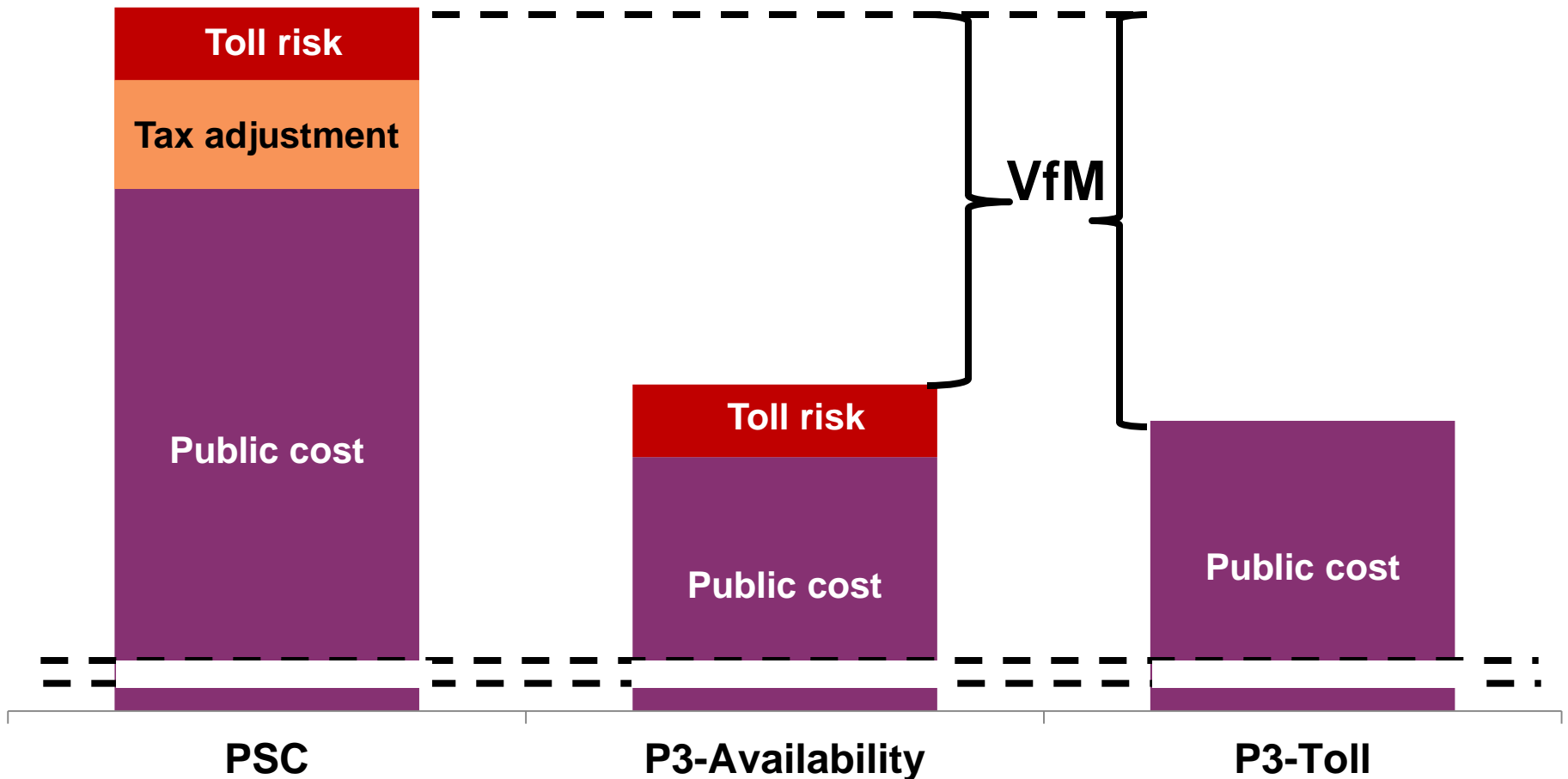
# 3. Adjusted Total Public Cost

- Adjustments for taxes and toll risk further increase PSC costs



# 4. Final Agency Cost

- P3-Toll may generate higher toll revenues, reducing the P3 bid price



# VfM Analysis Challenges

- Representing the conventional delivery option for comparison to P3
- Identifying and pricing risk
- Allocating risk to the party best able to handle it
- Predicting traffic and revenue
- Sensitivity of results to key assumptions (e.g., discount rates)
- Analytical process to assess costs and risks is resource-intensive and may require outside expertise

# VfM Analysis Limitations

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- Analysis results are entirely dependent on the assumptions, especially regarding risk transfer
- Choice of discount rate can skew the results – extreme care is needed to ensure risk costs are not double-counted in the discount rate
- Does not quantitatively assess non-financial costs and benefits of a project (e.g., benefits of project acceleration) – must be addressed in qualitative evaluation



# Test Your Knowledge

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## True or False:

The PSC assumes that the project can be delivered and operated to the same quality as the P3 option.

# Questions?

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Submit a question using the chat box







# Lesson 4

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## ***FHWA's P3 Toolkit and P3-VALUE***



# FHWA's P3 Toolkit

- P3 Toolkit provides educational tools and guidance documents to enhance the capacity of public sector decision-makers to analyze procurement options
- Will address four key phases of P3 implementation:
  1. Legislation and policy
  2. **Evaluation**
  3. Procurement
  4. Monitoring and oversight

# Legislation and Policy

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- *Public Policy Considerations in Public-Private Partnership (PPP) Arrangements.* Available at:  
[http://www.fhwa.dot.gov/ipd/pdfs/2009\\_public\\_policy\\_considerations\\_ppp\\_arrangements.pdf](http://www.fhwa.dot.gov/ipd/pdfs/2009_public_policy_considerations_ppp_arrangements.pdf)
- Working Draft of P3 Legislation available at:  
[http://www.fhwa.dot.gov/ipd/pdfs/legis\\_model\\_0610.pdf](http://www.fhwa.dot.gov/ipd/pdfs/legis_model_0610.pdf)

# Evaluation

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## Resources include:

- Fact Sheets
- Primers
- Guidebooks on Risk Assessment and VfM (*under development*)
- **P3-SCREEN**: P3 Screening Tool
- **P3-VALUE**: A suite of educational tools and accompanying user guides

# Procurement & Oversight

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- Educational model contracts (*under development*)
  - Toll concession
  - Availability payment concession
- Best Practices Guidebook (*under development*)
  - Legislation and policy
  - Evaluation
  - Procurement
  - Monitoring and oversight

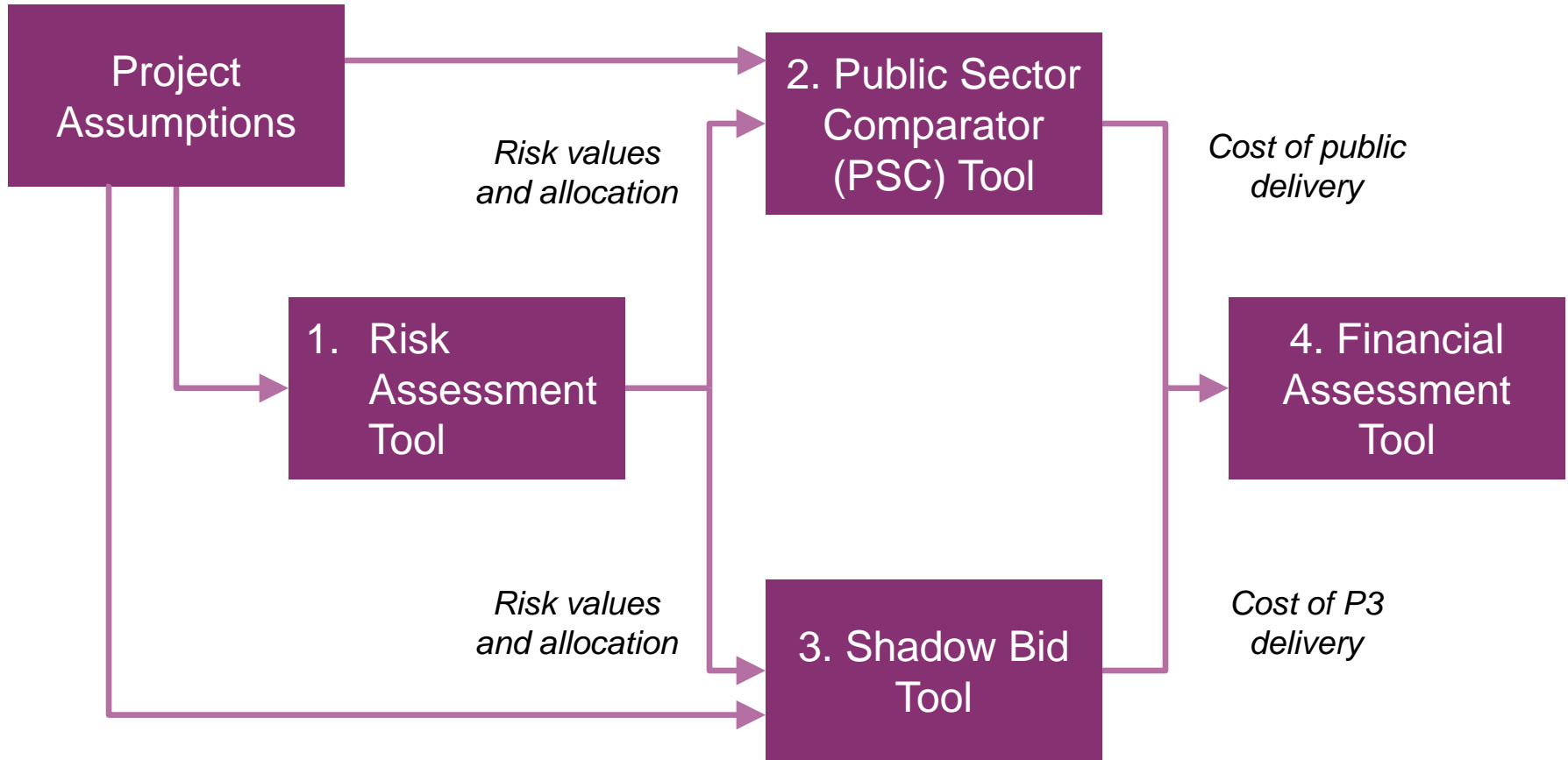
# What is P3-VALUE?

- A set of integrated analytical tools to help practitioners understand processes used to quantitatively evaluate procurement options
- Educates users so they can understand assumptions and results of analyses performed by experts
- Major component of FHWA's P3 Toolkit

# 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 Structure



P3-VALUE Tools are accessible at:

[http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical\\_tools/index.htm](http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical_tools/index.htm)



# P3-VALUE Limitations

- P3-VALUE is for educational purposes only and is not intended to guide decisions on actual projects
- Provides only a rudimentary measure of potential differences in financing costs
- Not applicable for brownfield or asset monetization P3s (i.e., P3s for existing revenue generating facilities)
- Financial analysis only in current version – a new version will include a benefit-cost analysis module



# Test Your Knowledge

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## True or False:

P3-VALUE is a learning tool and should not be used to evaluate actual projects.

# Questions?

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Submit a question using the chat box





# Course Summary

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# Course Recap

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- Lesson 1 Overview of P3 Evaluation
- Lesson 2 P3 Financial Evaluation
- Lesson 3 Value for Money Analysis
- Lesson 4 P3 Toolkit and P3-VALUE
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# Resources

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## **IPD Website:**

<http://www.fhwa.dot.gov/ipd/>

## **P3 Website:**

<http://www.fhwa.dot.gov/ipd/p3/>

## **FHWA Value for Money Primer:**

[http://www.fhwa.dot.gov/ipd/p3/toolkit/guidance\\_documents/index.htm](http://www.fhwa.dot.gov/ipd/p3/toolkit/guidance_documents/index.htm)

## **FHWA Financial Assessment Primer:**

[http://www.fhwa.dot.gov/ipd/p3/toolkit/guidance\\_documents/index.htm](http://www.fhwa.dot.gov/ipd/p3/toolkit/guidance_documents/index.htm)

## **FHWA Economic Analysis Primer:**

<http://www.fhwa.dot.gov/infrastructure/asstmgmt/primer05.cfm>

## **P3-VALUE Website:**

[http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical\\_tools/index.htm](http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical_tools/index.htm)



# Upcoming P3-VALUE Training

- **September 20:** Project Risk Assessment 201
- **October 29-30:** Advanced P3 Evaluation Pilot Training\*
- **January 23:** Value for Money Analysis 201
- **February 21:** Office Hours: VfM Homework Review
- **March 13:** P3 Financial Structuring & Assessment
- **April 18:** Office Hours: Financial Assessment Homework Review

***To register for the P3-VALUE webinars, please visit***

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

***\*To register for the two-day workshop, please visit***

***<http://152.122.41.186/IPDRegistration/regional.asp>***



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