



Risk Assessment for P3s: *Homework Assignment Review*

P3-VALUE Webinar – October 4, 2013

Patrick DeCorla-Souza
P3 Program Manager
Office of Innovative Program Delivery

Co-Instructor: Aaron Jette, Volpe Center

Background

- This webinar is a follow-up webinar to review the homework assigned at the P3 Project Risk Assessment webinar presented on September 20
- Risk Assessment webinar recording is available at:
<https://connectdot.connectsolutions.com/p24lqmpujyo/>



Webinar Outline

Part 1

Overview of Risk Assessment for VfM

Part 2

Using P3-VALUE Risk Assessment Tool

Part 3

Demonstration of Homework Results



Webinar Objectives

After participating in this “office hours” webinar you should be able to:

- Use the P3-VALUE Risk Assessment Tool to conduct a risk assessment of a hypothetical P3 project
- Explain the risk assessment results from runs of the P3-VALUE Risk Assessment Tool



Part 1

Overview of Risk Assessment for Value for Money Analysis



Risk Assessment Overview

- The Risk Assessment Tool is designed to allow the user to:
 - Document individual risks that may impact a project
 - Qualitatively assess the cost and schedule impact of individual risks
 - Quantitatively assess the cost and schedule impact of individual risks using probabilistic analysis
 - Assess the allocation of risks to the public and private sector
 - Document mitigation strategies for individual risks



Probabilistic Analysis with P3-VALUE⁷

- Monte Carlo simulation
 - Simulation of large number of scenarios based on probabilities of risk occurrence and probabilities of magnitude of risk impact
- 1. Estimate probability that risk event will occur.
- 2. Select distribution type (triangular or uniform) for each risk's impact
- 3. Determine the impact levels (most likely, minimum, maximum)
- 4. Run Monte Carlo simulation
- 5. Determine aggregate risk valuation for desired confidence level



Risk Assessment for VfM

- Value for Money
 - The optimum combination of life cycle costs and quality of a good or service to meet the user's requirements
 - Expressed as cost difference (dollars or %) between conventional and P3 procurement
- Risk Assessment for Value for Money Analysis
 - Identify, monetize and allocate project risks
 - Apply risk values to expected cash flows over project lifecycle in the public sector comparator (PSC) and P3 option ("shadow bid")



Risk Assessment for VfM (Cont.)

- Key Risk Characteristics for VfM
 - In which phase of the project is each risk likely to occur?
 - Design-Build or Operations?
 - How will each risk be allocated in the P3 option?
 - What portion of a risk is retained vs. transferrable?
 - How will risks be managed differently under a P3 procurement than under a traditional (PSC) procurement?

Questions?

Submit a question using the chat box



Or



Dial *1 to call in your question by phone



Part 2

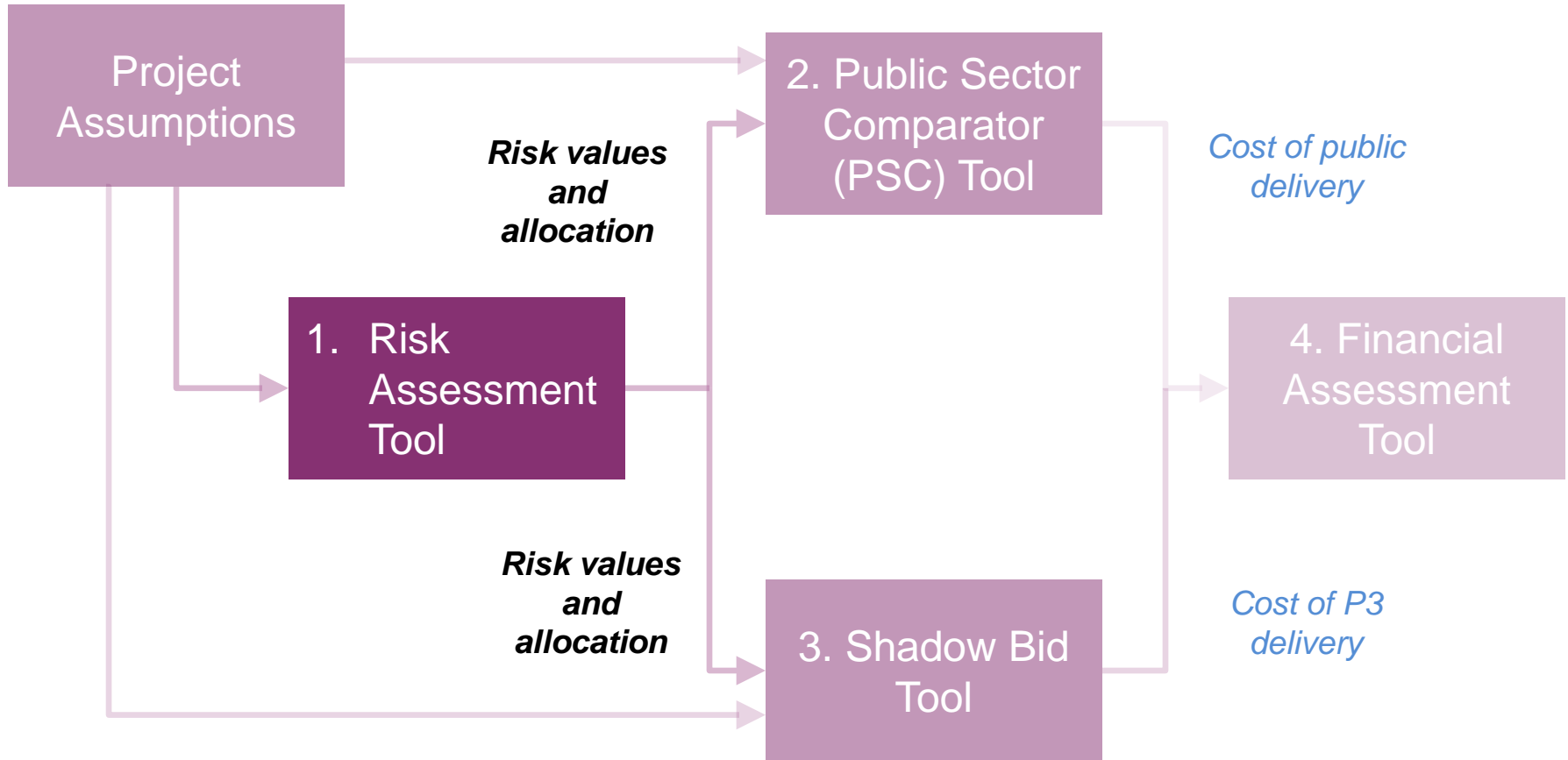
Using the P3-VALUE Risk Assessment Tool



Accessing the Risk Assessment Tool

- P3-VALUE tools posted to FHWA IPD website:
 - http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical_tools/index.htm
 - **Note:** To complete the risk homework assignment, an updated version of the tool was available for download on September 20 (and will be available at the conclusion of today's webinar as well)
- Users should refer to the relevant supporting documentation when opening and navigating the tool
- Send questions, comments, and requests for the updated Risk Assessment Tool to P3-VALUE@dot.gov

P3-VALUE Tools



P3-VALUE Tools are accessible at:

http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical_tools/index.htm



Supporting Documentation

- **Orientation Guide**
- **User Manual and Quick Start Guide**
 - *Risk Assessment Tool User Manual* provides technical guidance, including a two-page “quick-start guide” for exploring the tool
- **Primer**
 - *Risk Assessment for Public-Private Partnerships: A Primer* explains the basic concepts involved in risk assessment
- **FAQs and Troubleshooting Guide**
- **Guidebook (under development)**
 - *Risk Assessment & Allocation for Public-Private Partnerships Guidebook* will provide an advanced understanding of the practical applications and challenges of assessing P3 project life cycle risks



Risk Assessment Steps Using P3-VALUE

1. Determine project scope and delivery options for PSC and P3 Option.
2. Identify design-build phase risks
3. Assess design-build phase risks under PSC
4. Assess design-build phase risks under P3 Option
5. Identify operations phase risks
6. Assess operations phase risks under PSC
7. Assess operations phase risks under P3 Option

Detailed Steps

1. Enter project cost and schedule assumptions
2. Enter risk characteristics into risk register
 - Risk Identification
 - Risk Category, Phase, Type, and Description
 - Qualitative Risk Ratings (Probability/Cost)
 - Probability and Distribution (Uniform/Triangular)
 - Quantitative Schedule and Cost Impacts (Min, Max, Most Likely)
 - Allocation (Public/Private)
 - Mitigation Strategy
3. Run simulation
4. Review and record outputs
 - Aggregate risk valuation by phase
 - Aggregate risk allocation by phase

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Part 3

P3-VALUE Risk Assessment Tool Demonstration



P3-VALUE Demonstration

- We will now transition to a P3-VALUE demonstration to discuss the homework assignments
- We will view the Risk Assessment Tool and review the inputs and outputs for:
 1. Design-build phase risks under PSC
 2. Design-build phase risks under P3 Option
 3. Operations phase risks under PSC
 4. Operations phase risks under P3 Option

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Resources

IPD's P3 Website:

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

FHWA Risk Assessment Primer:

http://www.fhwa.dot.gov/ipd/pdfs/p3/p3_risk_assessment_primer_122612.pdf

FHWA Risk Valuation and Allocation Factsheet:

http://www.fhwa.dot.gov/ipd/pdfs/p3/factsheet_02_riskvaluationandallocation.pdf

P3-VALUE Website:

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

P3-VALUE Risk Assessment Tool:

http://www.fhwa.dot.gov/ipd/p3/toolkit/analytical_tools/index.htm

P3-VALUE Risk Assessment User Manual:

http://www.fhwa.dot.gov/ipd/pdfs/p3/p3_value_riskassessment_manual_v1.pdf



Upcoming P3-VALUE Training

- **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>

Contact Information

Patrick DeCorla-Souza

P3 Program Manager

Office of Innovative Program Delivery

Federal Highway Administration

(202) 366-4076

Patrick.DeCorla-Souza@dot.gov



Contact Information

Thay N. Bishop, CPA, CTP

Senior Program Advisor/Capacity Builder

Office of Innovative Program Delivery

Federal Highway Administration

(404) 562-3695

Thay.Bishop@dot.gov