Understanding Public-Private Partnerships

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Presentation Outline

- Background
  - Surface Transportation: Funding Models for Highways
  - Issues with the Traditional Highway Funding Model
- What are Public –Private Partnerships (P3s)?
  - Procurement Model
  - Project Arrangement
  - Economic Rationale
  - Advantages & Disadvantages
  - Project Evaluation
  - Financing P3s
  - Types of Government Support for Financing P3s
  - Project Risks
- US P3 Market Condition
- P3 Case Studies
- Critical Policy Discussion

Surface Transportation: Funding Models for Highways

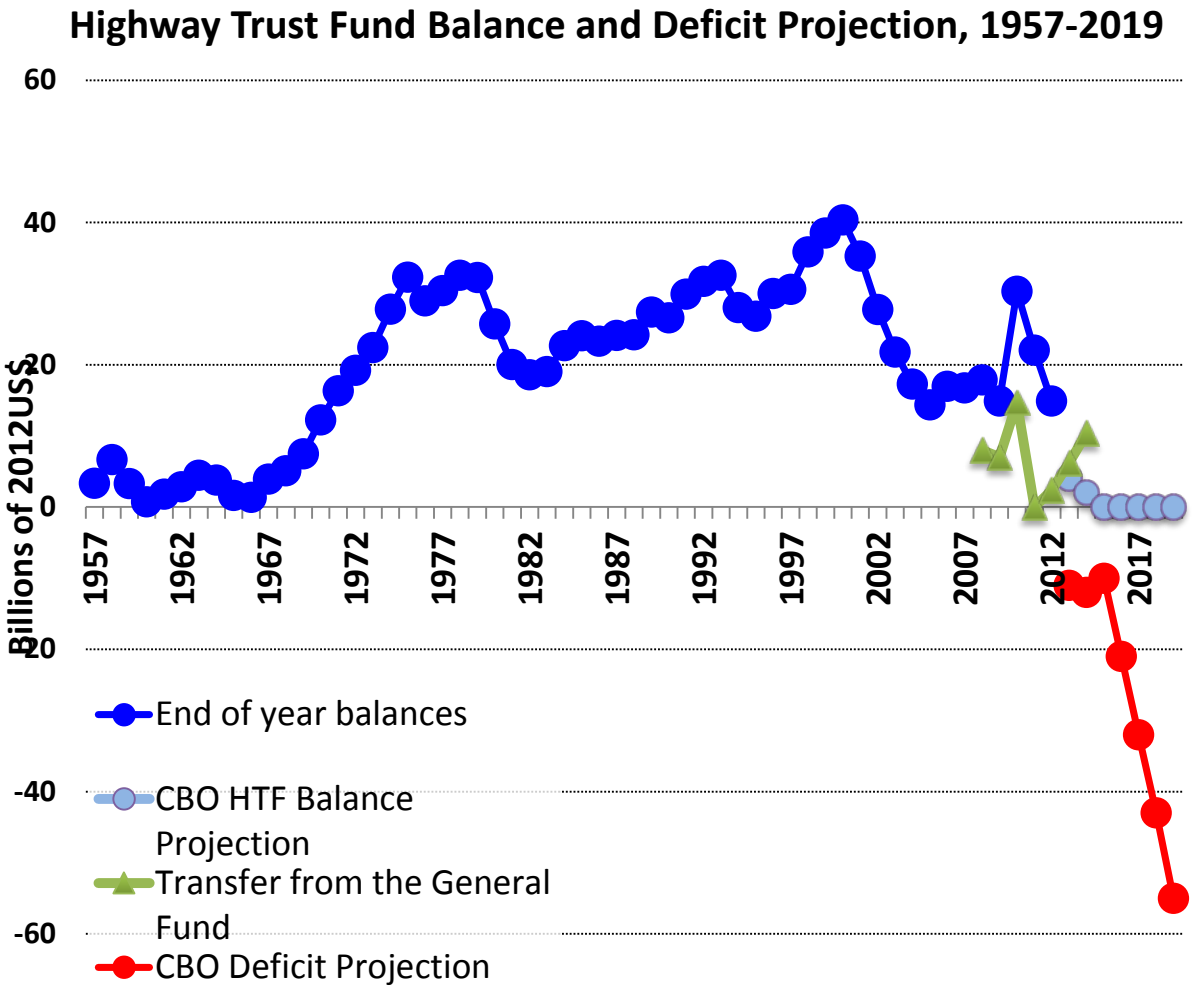
Revenue sources

- User fees
  - Excise tax on gasoline : Highway Trust Fund
  - Federal – 18.3 cents/gallon
  - Some states have their own gasoline taxes
  - Car registration fee (state)
  - Tolls (state / project)
- Non-user fees
  - Sales tax, etc. (state)
- Debt-Financing: Bonds issued by state and local governments
  - Tax-exempt municipal bonds
  - Various bond products (Private Activity Bond, GARVEE, ARRA, etc.)
- Debt-Financing: Loans for state and local governments
  - Transportation Infrastructure Finance and Innovation Act (TIFIA) loan
  - State Infrastructure Bank loans
  - Private loans
- Equity investors

Issues with the Traditional Highway Funding Model

Funding Crisis:

- Increasing costs of construction
- Aging infrastructure = increasing costs of maintenance / renewal
- Improving fuel efficiency (e.g. electric vehicles do not pay a dime for the roads they use)
- Political inability to raise gas tax



Source: http://www.fhwa.dot.gov/highwaytrustfund/

Source: http://www.cbo.gov/sites/default/files/cbofiles/attachments/43884-2014-04-Highway_Trust_Fund.pdf

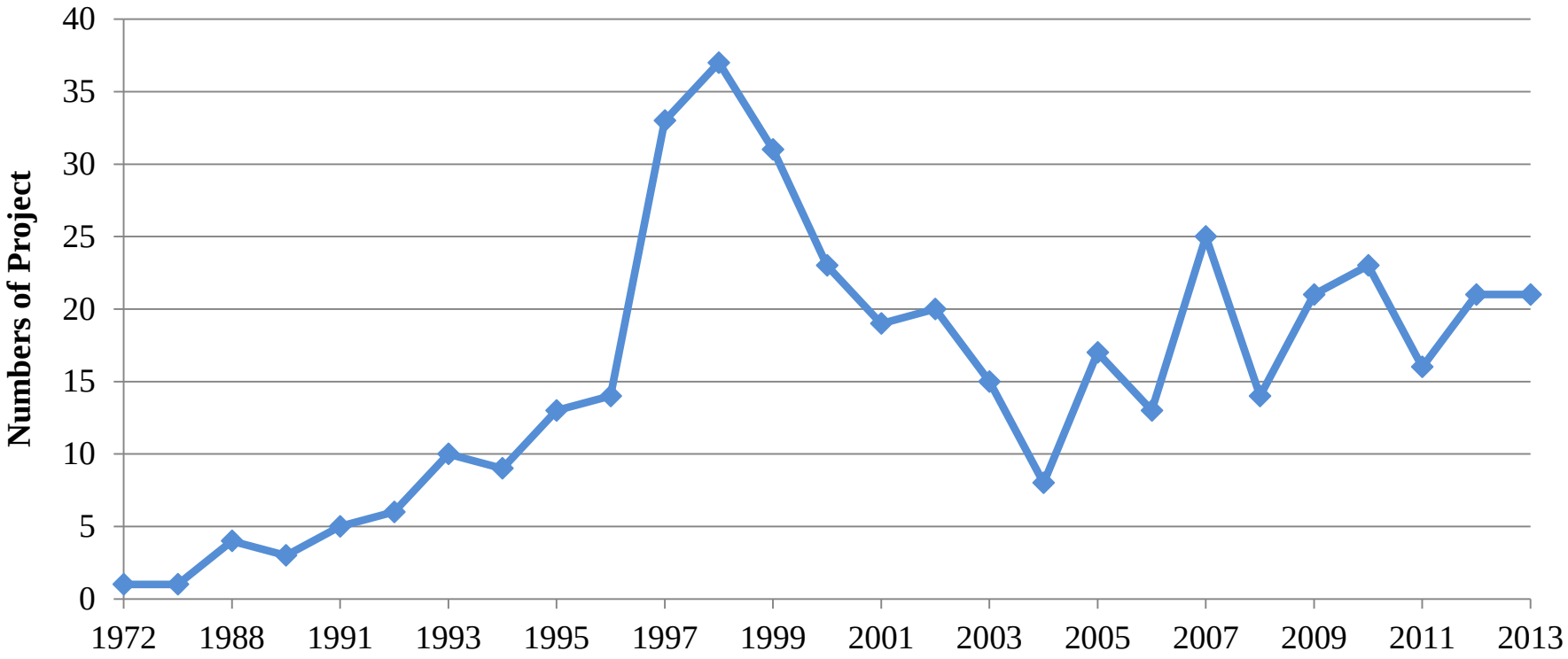
What are Public –Private Partnerships (P3s)

An emerging procurement model to address issues of public provision model

- P3s: long-term contractual agreement between public and private partners to provide services traditionally done by the governments
- A wide range of P3 contract types have been used
  - Design-Build
  - Design-Build-Finance
  - Design-Build-Operate-Maintain
  - Design-Build-Finance-Operate-Maintain
  - Build-Operate-Transfer
  - Lease, etc.

P3s:US State of Affairs – Market Conditions (Cont)

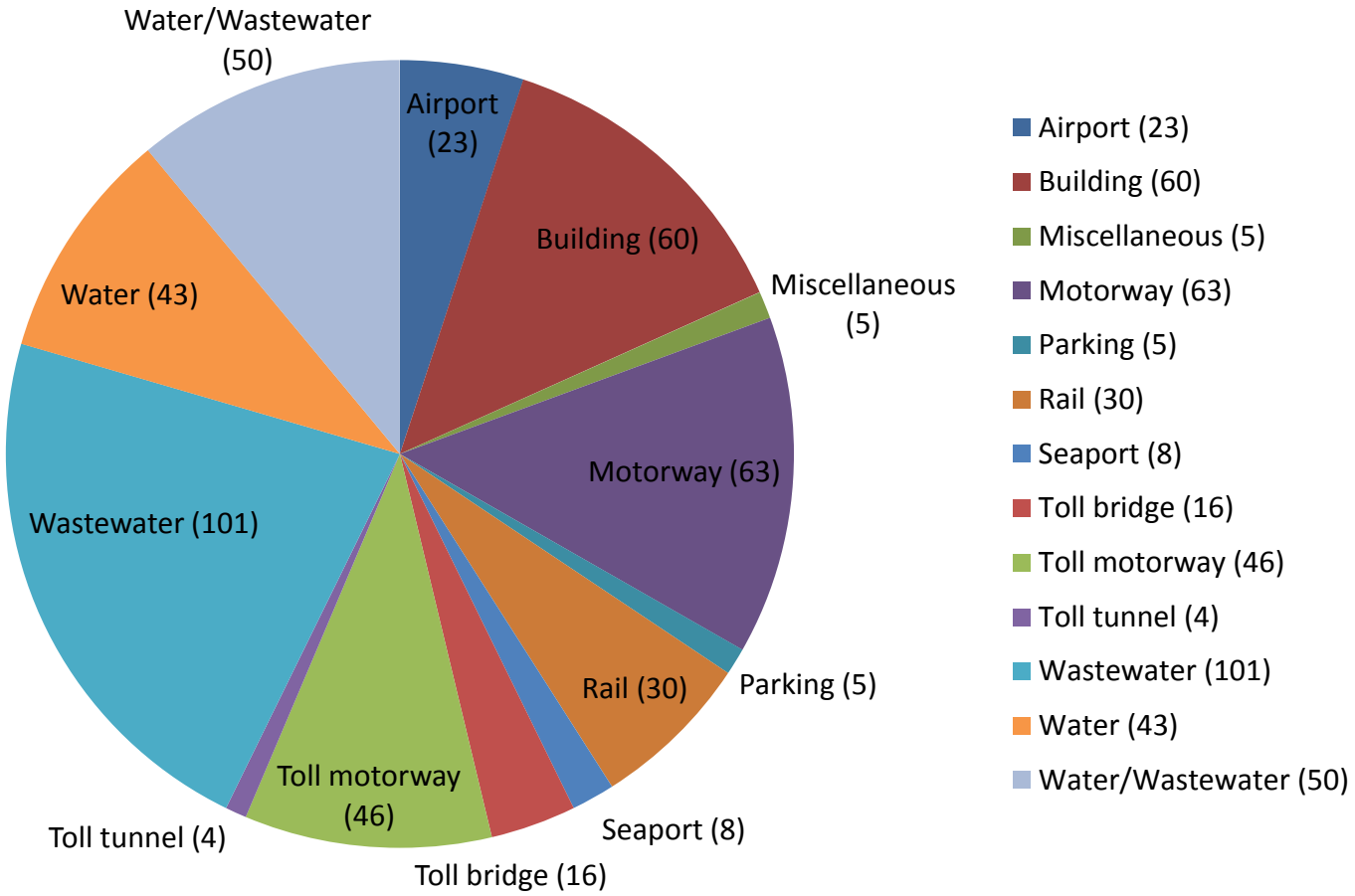
- U.S. Non-Military P3 Projects underway or Completed, 1986 -2013



Source: Public Works Financing

P3s:US State of Affairs – Market Conditions (Cont)

- Types of US P3 projects that reached financial close, 1986-2013



Source: Public Works Financing

P3s: Economic Rationale

- Bundling of project components – reduce life-cycle costs
  - Example: pavement (upfront costs ↑ life-cycle costs ↓)
- Allocation of project risks to the parties best able to manage

Risk allocation example:

Risk	Govt	Private
Design		x
Environmental permitting	x	?
Construction cost		x
Geotechnical		x
Construction schedule		x
Revenue (demand)	x	x
Land acquisition	x	
Force majeure	x	
Political risk	?	?

P3s: Advantages & Disadvantages

Advantages

- Cost saving through innovative practices of the private sector
- On-budget, on-time delivery
- Utilization of private financial resources

Disadvantages

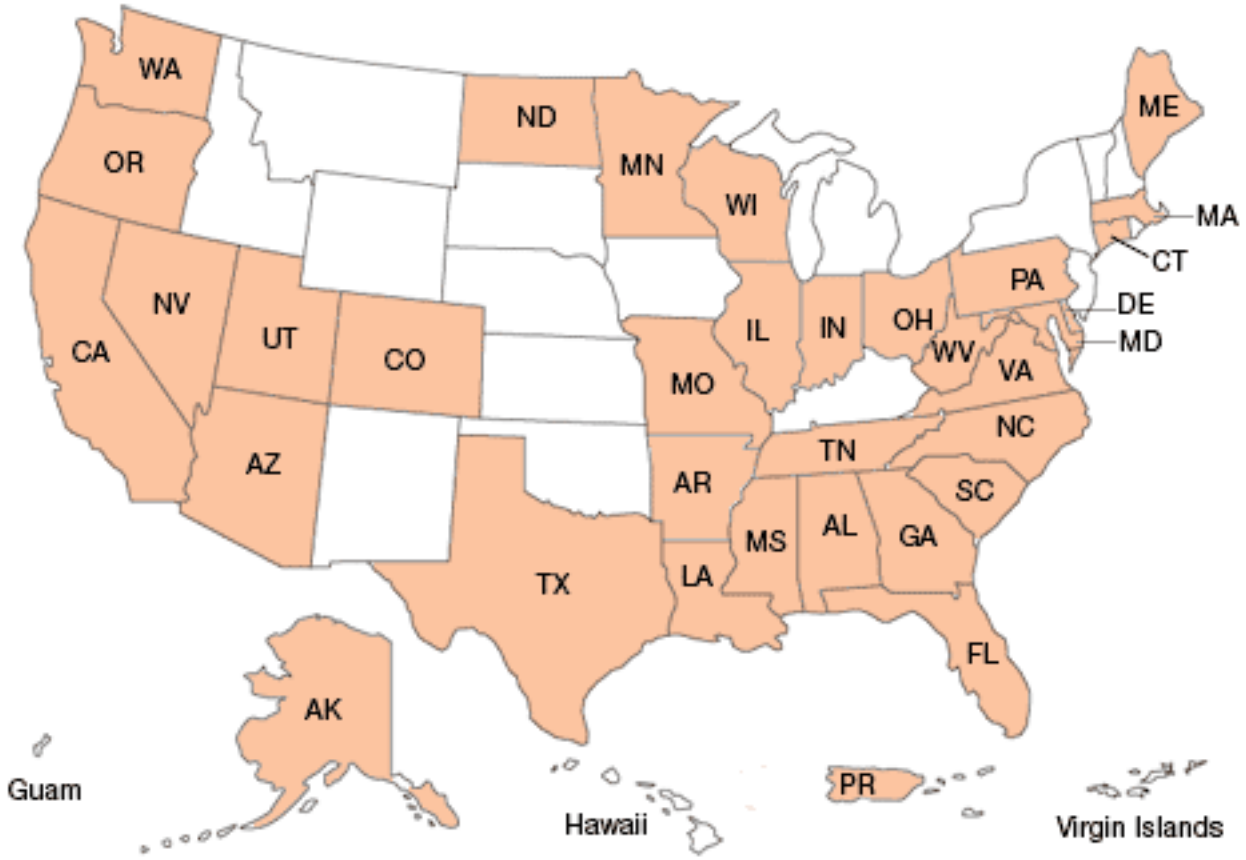
- Substantial transaction costs
  - Legal, financial and technical consulting service fees
  - Higher interest costs in cases of private debt-financing
- Complexity makes the projects more prone to risks

Readiness for Successful P3 Implementation

Factors for successful P3s (OECD Action Points)

- A credible pipeline of robust projects
- A legal and regulatory framework that commands confidence
- A capable public interface with the private operator
- Political will to use private sector operators
- Strong investor protection
- Project assessment and appraisal norms that focus on value for money
- Transparent budgeting practice to minimize sovereign fiscal risk

P3s:US State of Affairs – Market Conditions (Cont)



*Source: Federal Highway Administration Office of Innovative Program Delivery (retrieved: June 2014)

Evaluating Project Procurement Alternatives

- Value-for-Money (VfM) Analysis (Public Sector Comparator)
  - Compares the costs for public provision and P3 arrangement scenarios
  - VfM calculation enables the selection of the best method of project delivery among alternatives (i.e., traditional procurement vs. P3)
  - P3 agencies base their recommendations on a value for money basis: e.g., can the private sector better manage project's risks?
  - Not standardized in the US yet
- Limitations of VfM
  - Doesn't recognize benefit of early delivery (instead Benefit-Cost Analysis is used)
  - Doesn't recognize limited public budgets

P3s Are Not Free Money: Financing P3s

Revenue Sources

- Direct User Charges (Tolls, Transit Fares, User Fees)
- Shadow Tolls
- Public Subsidies
- Availability Payments

Debt & Equity Sources: repaid through revenue sources

- Private shareholder equity
- Non taxable bonds (private activity bonds)
- Taxable bonds
- Bank debt (senior and/or subordinate)
- State infrastructure bank loans
- Federal loans (TIFIA)

Types of Government Support for Financing P3s

Equity participation

- Direct or indirect government contribution to a project
- Assures public involvement in a project, supporting its implementation and operation
- Helps achieve a more favorable debt-equity ratio when other sources of equity capital are not available or limited

Types of Government Support for Financing P3s

Government loans

- Loans with favorable terms to reduce financing costs
- Example: TIFIA
  - Subordinated loans to transportation projects with e dedicated funding sources (e.g., tolls), but might not be fully financeable without assistance
  - Can account for no more than 49% of the project cost

Other policy tools

- Performance guarantees (e.g., revenue guarantee)
- Tax benefits
- Protection from competition (e.g. non-compete clause)
- Debt guarantee programs (e.g., infrastructure banks)

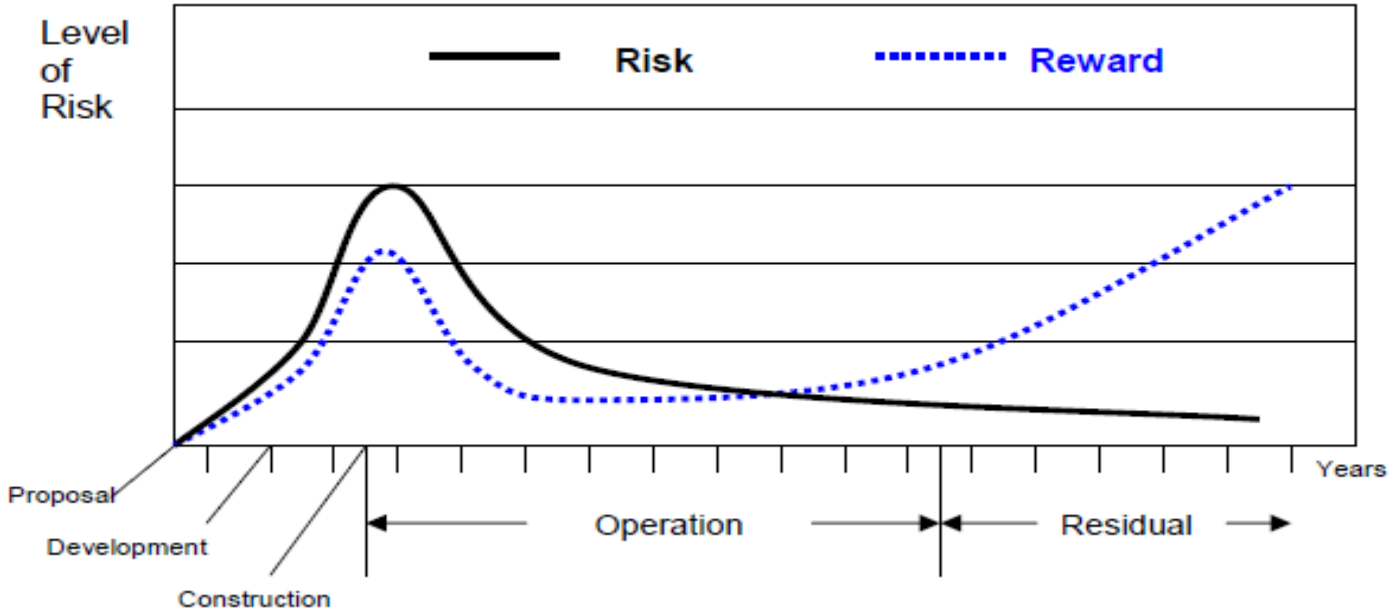
P3 Project Risks

Broader Sets of Risks for the Developer/Contractor

- Political
  - Project politicizing / approval risk
  - Changes in law (e.g., environmental regulation)
  - Changes in elected leaders
  - Lawsuits
- Capital Expenditures
  - Project schedule overrun
  - Inflation / material and labor costs
- Revenue
  - Lower than projected traffic and toll revenue/income
- Operation & Maintenance (O&M)
  - Performance risk
  - Operating cost overrun
- Financing
  - Spread between O&M and revenue growth rates

P3 Project risks (Cont)

Project Development Cycle
Risk vs. Reward



Source: Gawlick, Sonia. 2007. "Public-Private Partnership: A Financier's Perspective." United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). Cited in Nima Attar, Infrastructure Business Models: Research and Analysis. Presentation for ASCE, August 13th, 2012.

PSs: Case Study I: I495 Capital Beltway Express Lanes Project

- Original concept: a study by VDOT of HOV lanes (1994)
  - Excessive costs: $2.68-3.25B, 170 acre of right of way to displace 300 residences, 32 commercial properties and 8 public parks
  - Not approved
- Fluor Corporation: unsolicited proposal of HOT lanes, less costly design features
- 14-mi stretch of Express Lanes, $1.7B total cost
- Design-Build-Finance-Operate-Maintain
- 75 year concession
- Construction
  - Construct Express Lanes
  - Rebuild existing 14-mile freeway, over 50 bridges and overpasses, and upgraded 12 key interchanges
  - Completed on-time, on-budget
- Began operation in November 2012
- Lower than projected traffic in the 1st year: projected 66K/weekday vs. actual 37K/weekday
- Traffic level increasing (2014 2nd Quarter 36.3% higher than 2013 2nd Quarter), average 38K workday trips,

http://www.vamegaprojects.com

P3s: Case Study II – VA SR895 Pocahontas Pkwy

- Original concept: developed in 1980s
  but no available funding then
- Concept developed in 1980s but no funding
- Fluor Daniel and Morrison Knudsen submitted an unsolicited proposal (1995)
  - Design-Build-Finance-Operate-Maintain
  - 8.8-mi highway with a 675'-high bridge
  - $354M tax exempt bond issued by the non-profit project company (a "63-20" corporation), with toll revenue dedicated for repayment

Source: www.pocahontas895.com

- Opened in 2002, but traffic and revenue was lower than projected
- Transurban submitted an unsolicited proposal in 2004 for a 99-yr lease, total funding of $611M
- In June 2012, Transurban wrote down the asset value to zero, after severe losses

Critical Policy Discussions: How are P3s Actually Doing?

Both successes and failures:

- Are they really achieving value for money?
- Failures (e.g. bankruptcy) are more visible than successful continuing operation
- Small Number of US P3 concessions that have reached maturity
- Comprehensive analysis is difficult : US P3 market highly fragmented
  - Diverse legal & Policy Institutions across states
- Relationships between the states' P3 institutions and their usage of P3s

Summarize: Readiness for Successful P3 Implementation

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Center for Transportation Public-Private Partnership Policy at George Mason University School of Public Policy

- Conducting P3 Case Studies
- White Papers
  - Research & policy issues white paper
  - Best practices white paper
- Co-sponsoring National Conference on P3s
- Planning Graduate & Executive Education Activities
- Conference Participation & Outreach Activities
- Center Website: p3policy.gmu.edu

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