weftec 2017 CHICAGO
the water quality event™

Is a P3 Best for your Next Water Project

J Steven Paquette
WSP

Sanford Stokes

Kiewit

Worldwide Water/Environment P3s and Success Stories

- Worldwide P3 projects (pre-tender to completion) 2016/2017
  Source: inframationnews.com

Type	US	Non-US
Water	45	178
Transport	178	770
Other	390	1391

Water P3s Worldwide - What has Worked?

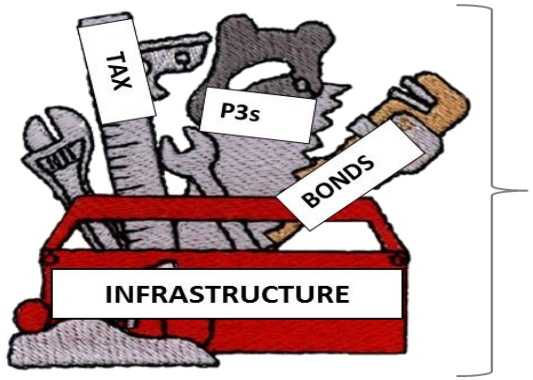
SUCCESS FACTORS

- Ready source of funds (user fees, etc.)
- Good capital return on investment
- Aligned political support
- Public Sector champion (high level, having political clout)
- Operating and maintenance inclusion in scope

GLOBAL EXAMPLES

- New water supply → Multiple plants
- Desal plants → Growing market
- Flood control (Fargo) → Advance project completion
- Specialized work (biosolids) → Resource recovery
- Countywide stormwater → Funded by local taxes (MD)
- Water recovery/irrigation → Arkansas

Why Consider a P3?



***P3s are an additional tool in the toolbox* to deliver and maintain infrastructure efficiently**

- Shared risk and, through surety bonding, assured economic and operational outcomes

Government Perspective…

1. Accelerate project delivery
2. Efficient transfer of risks
3. Life-cycle cost savings and price certainty
4. Retain ownership of public asset
5. Engage with the local community
6. Vehicle to get needed projects delivered

…Private Sector Perspective

1. Provides and investment opportunity
2. Complete management of project risks
3. Fosters innovation with performance based requirements
4. Competitive process and transparency
5. Secondary market opportunities
6. Vehicle to get needed projects delivered

Criteria for Viable P3 Projects

Not every project is suitable for P3!

Legislation	The owner has the appropriate legislative authority in place to undertake a P3 arrangement
Project Size	In general, projects with construction costs less than $50 million are not the best candidates for P3 arrangements with financing; however the use of bundling and other methods there are innovative ways to deliver projects
Project Complexity	In general, projects with higher technical complexity offer relatively higher opportunity for private sector innovation and integration of design, construction, financing, operations and maintenance
Project Duration/Asset's Life	The value added through a P3 arrangement can increase with a longer duration of the P3 arrangement.
Performance Characteristics	P3 arrangements are structured primarily around performance based contracts. It is important for owners to evaluate whether it is feasible to clearly define objective performance standards for the project.

P3 Financing Packages

TRADITIONAL GOVERNMENTAL FINANCE APPROACH

- Governmental Purpose Bonds – Qualified management contract requirement means limited private involvement
- Risk retention by the government
- State revolving funds – EPA
- Federal: WIFIA, USDA, CDBG, BOR, ACE and others

PUBLIC PRIVATE PARTNERSHIP APPROACH

- Equity 10-30%
- Debt 70-90%
- Shared risk

FORMS OF P3 DEBT

- Federal sources outlined above plus
- Private project finance market
- Tax-exempt Private Activity Bonds (PABs) – state cap allocation challenge
- EB5 1% money, repayable 7 years
- Club arrangements of banks

P3 EQUITY PROVIDERS ($300B AVAILABLE IN USA)

- Private Equity
- Life Insurance Companies
- Pension Funds

Essentials for Successful P3 Program

- Committed political champion(s)
- Legislation authority and strong regulatory framework
- Critical need for a public facility to be delivered on an accelerated basis
- Agency acceptance of value for money/risk transfer methodologies
- Credible analysis of delivery options
- Organized, fair and transparent procurement processes
- Key stakeholder support and alignment

Lessons Learned on P3 Projects

Key Ingredients

Appropriate Project Agreement

- Government defined service requirements
- Private sector design solution
- Appropriate risk allocation

Highly Motivated Government Sponsor

- Committed to project and process
- Politically supported
- Project champion
- Center of Expertise

Clearly Defined High Priority Project

- Well defined objectives
- Large capital investment
- Appropriate advisors

Project Predictability

- Pipeline of projects
- Driven by policy screen
- Certainty of completion once in the market

Economically Viable

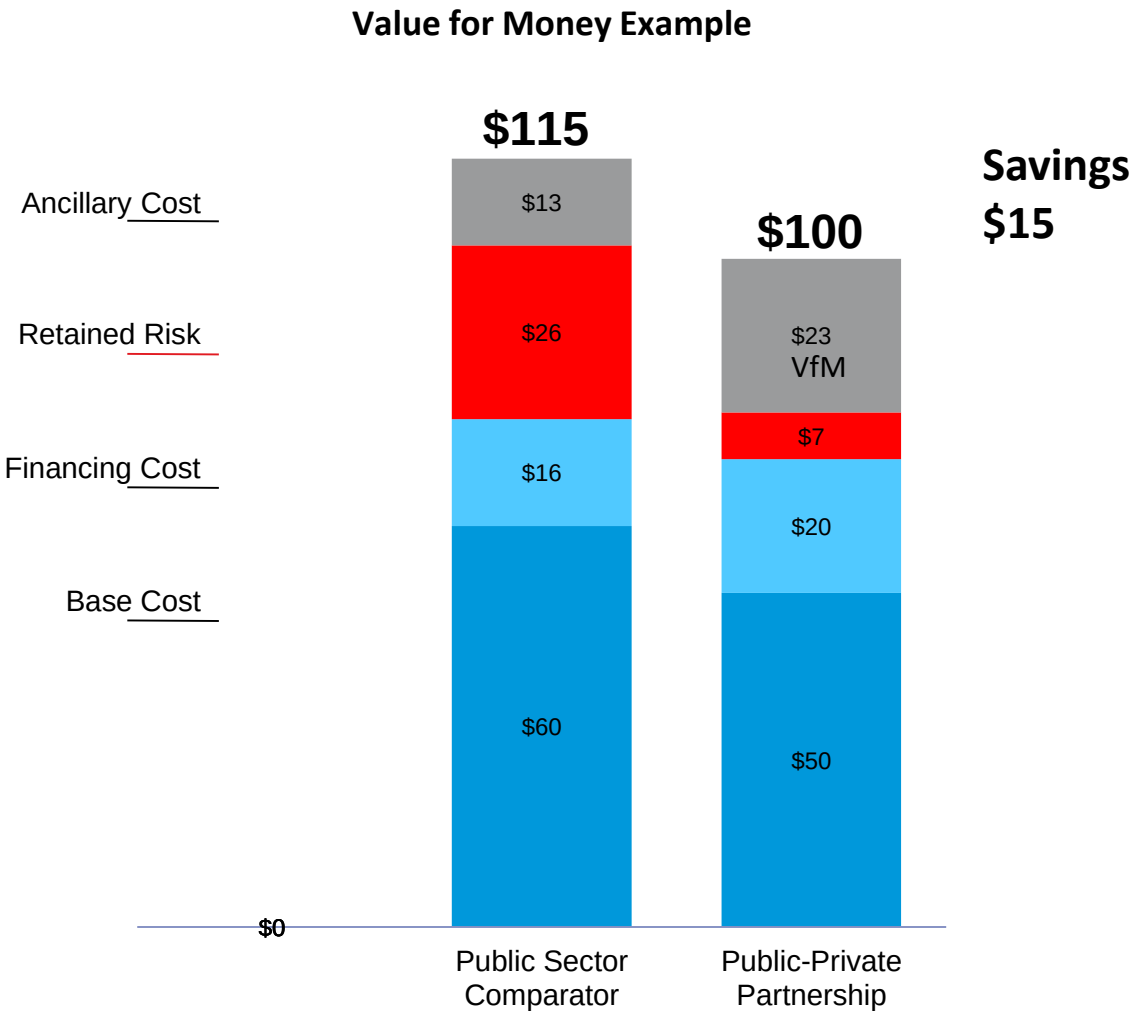
- Predictable source of cashflow
- User fee or availability payment

Clearly Defined Fair Process

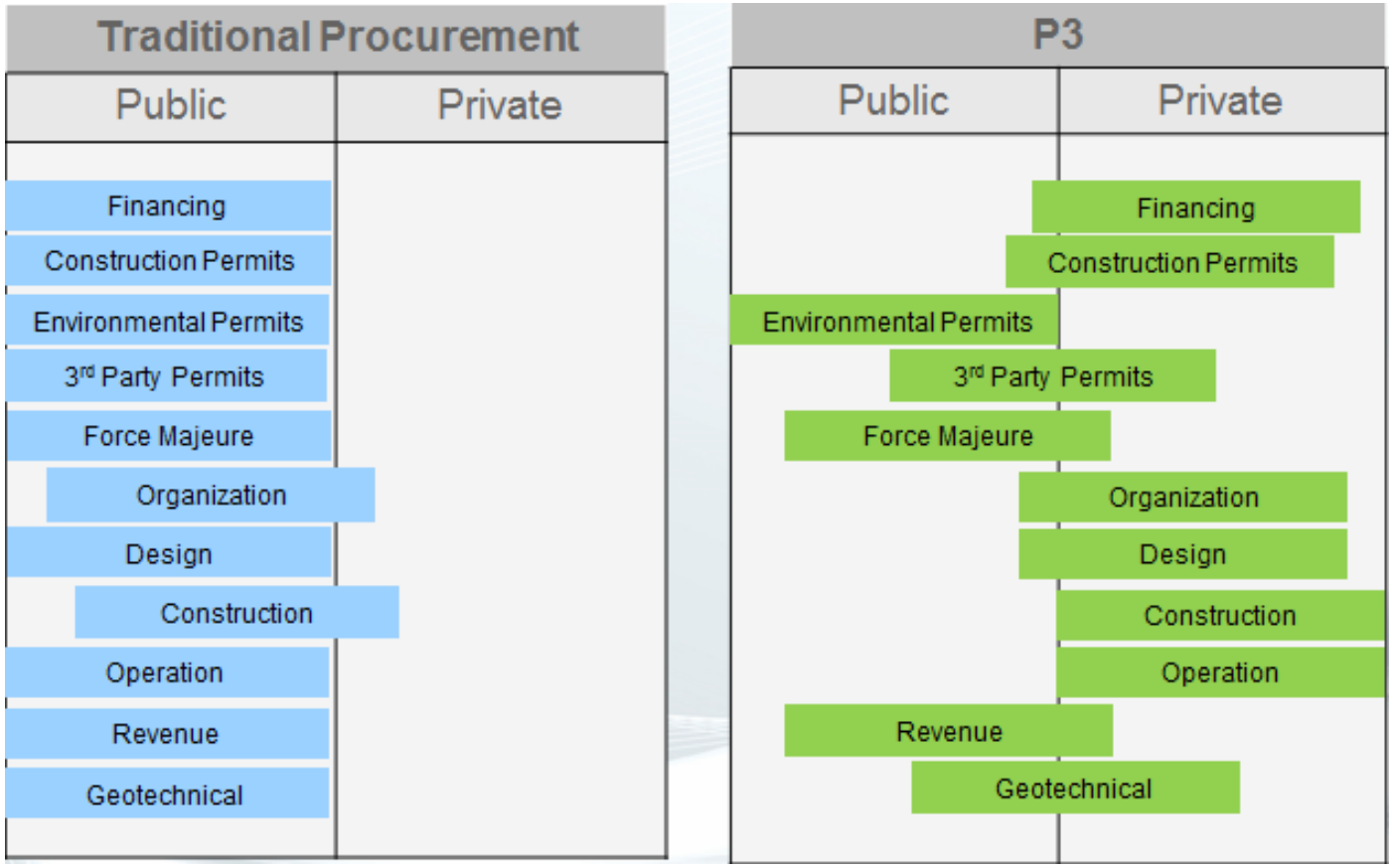
- Advanced preparation
- Realistic timetables
- Respect for process costs
- Transparent scoring and selection of winning team

Value for Money

- Value for Money (VfM) analysis is a process used to compare the financial impacts of a P3 project against traditional public delivery alternatives. The process to establish VfM includes:
  - Creating a Public Sector Comparator (PSC), which estimates the whole-life cost of carrying out the project through a traditional approach;
  - Estimating the whole-life cost of the P3 alternative (either as proposed by a private bidder or a hypothetical "shadow bid" at the pre-procurement stage); and
  - Comparing results.
- Value for Money is an industry-accepted decision driver.



Optimized Allocation of Risk



Each risk has a "Value". The optimized allocation of specific risks occurs when risk is assigned to the party, which can mitigate or manage the risk more efficiently.

P3 - Potential Areas of Benefits

Area of Benefit	
Budget Certainty (Construction as well as long-term O&M and life-cycle)	• Fixed price design-build contract • O&M and life-cycle costs are locked in for the entire contract period
Schedule Discipline & Accelerated Delivery (Accountability and incentive to perform)	• Project delivery schedule independent of the timing constraints of public bond issuances and availability of public funds in capital improvement plans • Robust security packages ensure delivery and performance • Private sector partner receives limited or no payment until construction complete => incentive to deliver on time • Client can influence construction schedule in accordance with project objectives
Potential Cost Savings	• Competitive bidding process drives down project costs • Integrated approach leads to optimized costs over the entire life-cycle • Long-term operational discipline avoids costs caused by deferred maintenance
Risk Transfer	• Transfer of risks and management responsibility to private sector • Leverages established investment structures for institutional investors to invest in local projects • Gives public sector option to aggregate demand, supplement revenues or assume volume risk
Innovation	• Functional specification approach allows design freedom • Integrated design/construction and operations approach

Resources Available

- Association for the Improvement of American Infrastructure (AIAI)
- United States Environmental Protection Agency (US EPA)
- State agencies