



Public-Private Partnerships and Innovative Finance for Infrastructure Projects

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Project Delivery Options Analysis, Tools, Innovative Structures and Public-Private Partnerships (P3s)



Sponsors of major projects are increasingly considering Project Delivery alternatives

- **What is Project Delivery?** The method of procuring and contracting for the delivery of project facilities and/or services, including design, construction, operations, maintenance and financing.
- **Project Delivery Options Analysis** is the process of choosing the optimal procurement method for infrastructure project development made by a government sponsor that takes into account overall costs, benefits, and risk-reward tradeoffs among various potential alternatives.
- **Public-Private Partnerships (P3s) should be among the options:** P3s include a wide range of contractual structures in which the delivery of traditionally public facilities/services is provided in whole or in part by a private sector entity
- **International P3 Experience:** The private role is more prevalent overseas
 - “Lifeline” infrastructure such as water and wastewater, toll roads, rail, airports and seaports, and social infrastructure such as schools, prisons, healthcare facilities, public housing, military facilities, etc.
 - National programs such as UK’s Private Finance Initiative (PFI) characterized by central management provide standardized processes, methodologies, and guidance.
- **P3 Experience in the United States:** U.S. infrastructure delivery is traditionally dominated by the public sector due to low cost tax-exempt debt, high political risk, and other factors.



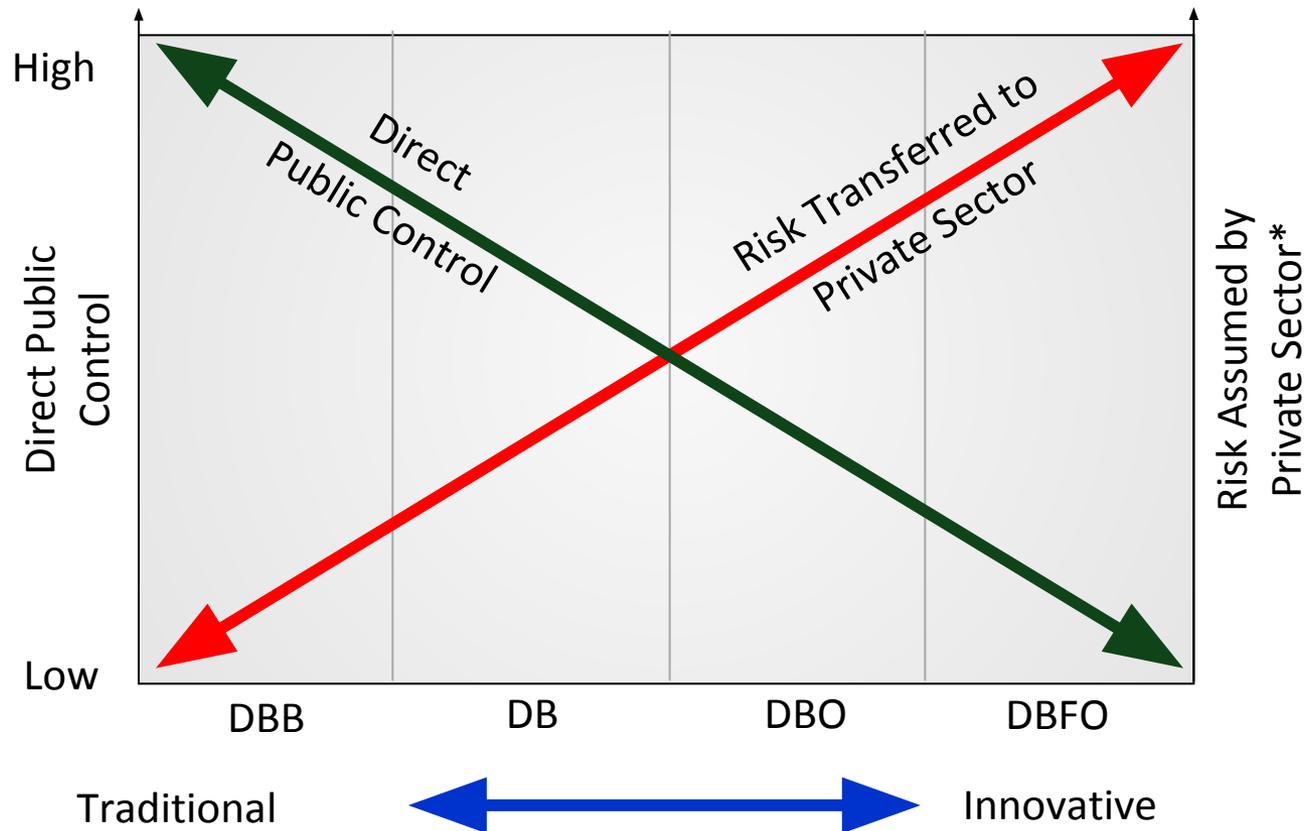
A variety of risks of varying severity will be part of any project

- The degree and severity of risks vary by project as do the opportunity to determine who controls the risks
- Risk factors can impact cost and schedule of project delivery and, ultimately, access to funding
- Project risk categories may include:
 - Planning, permits, and approvals
 - Legislative, regulatory, and policy
 - Funding and financing
 - Environmental
 - Right of way (ROW) acquisition
 - Design and construction
 - Operations and maintenance
 - Demand and revenue
 - Force majeure

There is a trade-off between project risk and control



The public sponsor's willingness to transfer risk for the projects is dependent upon project structure and willingness to transfer control

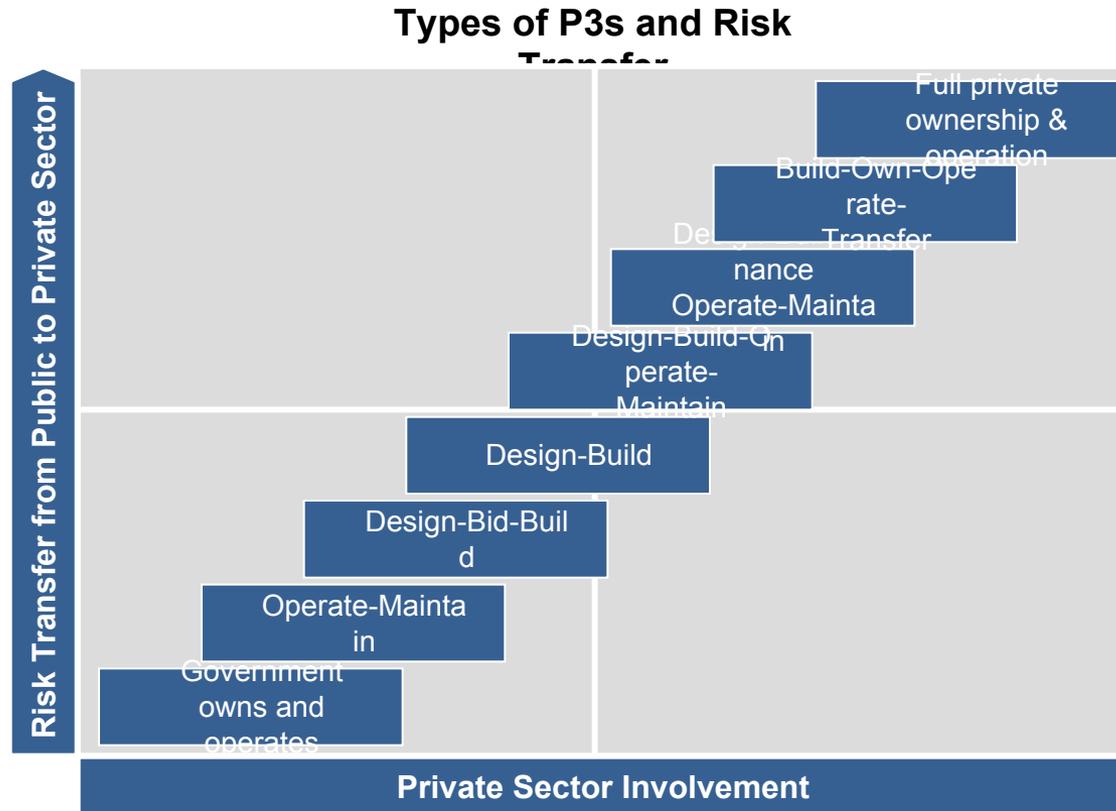


*Ultimate "ownership" of some risks cannot be fully transferred to a private party. This discussion refers to responsibility for managing risks.

Project delivery model types differ primarily in their degree of direct public involvement versus private participation



There is no consensus on what level of private risk transfer constitutes a P3.



Project risk and control are allocated along a continuum depending on the chosen delivery method



Depending upon the delivery method and project procurement structure risk is retained or transferred by the public sector

Typical Allocation of Major Project Risks

Delivery Method	Design	Construct	Operate	Maintain	Finance	Demand	Revenue
Design-Bid-Build	○	○	○	○	○	○	○
Design-Build	●	●	○	○	○	○	○
Design-Build-Operate-Maintain	●	●	●	●	○	○	○
Design-Build-Finance-Operate (Availability)	●	●	●	●	●	○	○
Design-Build-Finance-Operate (Shadow Tolls)	●	●	●	●	●	●	○
Design-Build-Finance-Operate (Full Concession)	●	●	●	●	●	●	●

KEY:

- Risk retained by public sponsor
- Risk transferred to private partner/developer

Traditional Financing Tools

Traditionally utilized financing tools for infrastructure financing

<i>Financial Tool</i>	<i>Public Subsidy or Support?</i>	<i>Mechanism for funding/financing</i>	<i>Flow of funds to infrastructure</i>	<i>Limitation on Usage?</i>
<i>General Obligation Bonds</i>	Yes	Dedicated source or general obligation pledge of taxing entity (e.g. municipality)	Directly to projects designated via program or referendum	Entity debt capacity
<i>Revenue bonds</i>	Not directly	Debt secured by specific revenue stream (fares, rents, etc)	Directly to projects designated	Based upon project credit, forecast, etc
<i>Sales Tax Revenue</i>	Yes	Financing secured by commercial sales within selected entity tax borders	Yes - can be directly to designated project (determined via referendum usually)	Based upon public appetite for tax and state law
<i>Property Tax Revenue</i>	Yes	Financing secured by property tax levies within selected entity tax borders	Yes - can be directly to designated project (determined via referendum usually)	Based upon public appetite for tax and county law
<i>Grant Anticipation Notes</i>	Yes	Debt secured by anticipated future federal grants	Directly to projects or program via grant	Limited by the value/parameters of federal grant
<i>State Infrastructure Bank</i>	Yes	Loan and Credit enhancements to sponsors of particular capital projects	Yes - to sponsors private and public	Limited by project type
<i>Tax Increment Financing</i>	Not directly	Financing secured by property tax revenues increases within specified area or district	Directly to infrastructure within designated area	Increase in tax base according to ordinance
<i>State Sources: SDFs and STOAs</i>	Yes	Funding programs designed to provide direct, designated investments from state DoTs to transit projects and programs. Usually outside of metropolitan transit agencies.	Directly to programs and projects	Limited by state-level determination on funding

Innovative Financing Tools

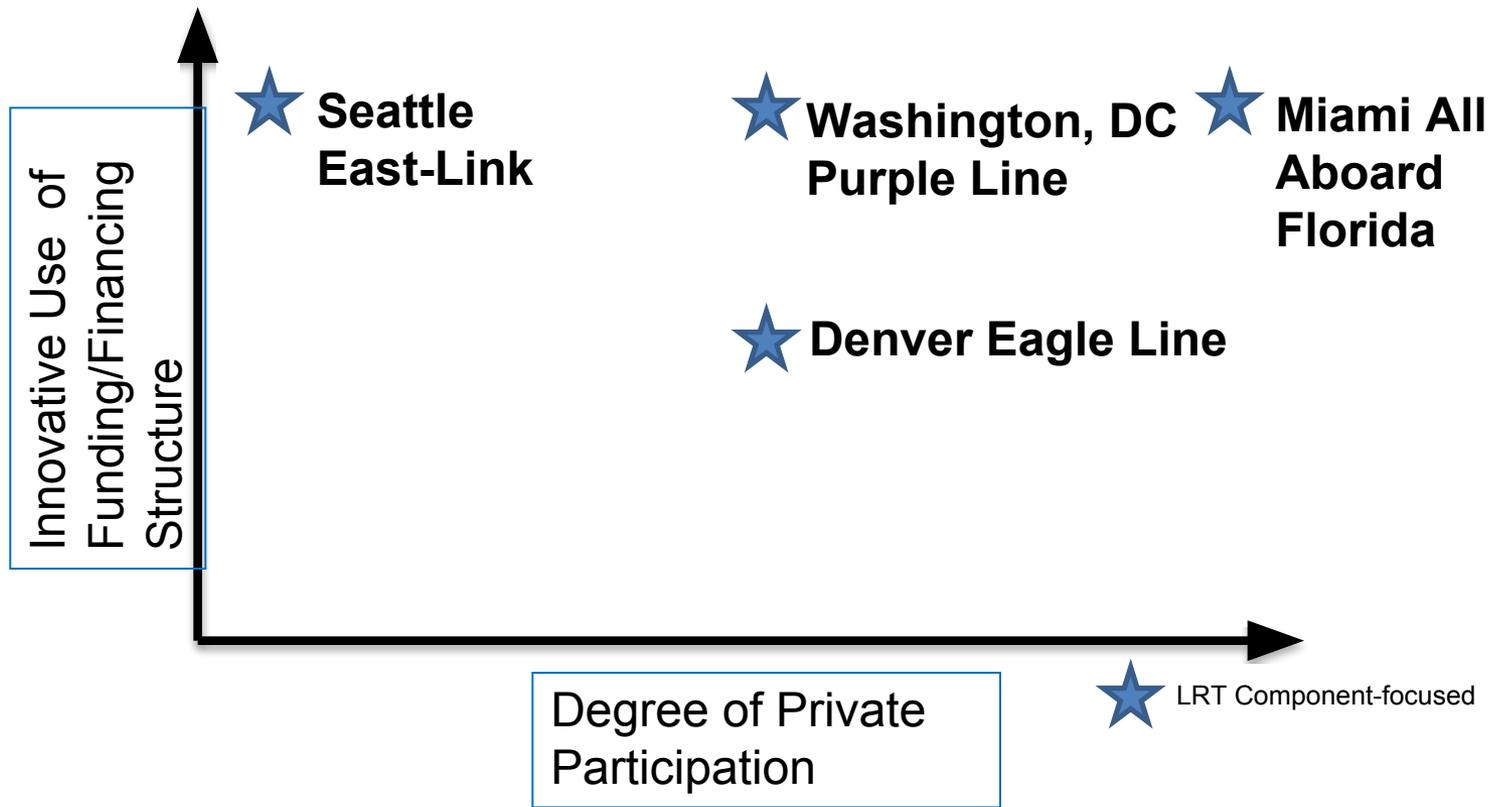
Innovative financing tools and structures for infrastructure financing

<i>Financial Tool/Program</i>	<i>Public Subsidy or Support?</i>	<i>Mechanism for funding/financing</i>	<i>Flow of funds to infrastructure</i>	<i>Limitation on Usage?</i>
<i>Private Activity Bonds (PABs)</i>	In some cases	Tax-exempt debt issued by state or agency to provide financing for a private entity	Directly to project/private entity for which bonds are underwritten	State debt capacity for PABs as designated by federal law
<i>Transportation Infrastructure Finance Innovation Act (TIFIA)</i>	Federal Subsidy	Subordinate loan (up to 49% of project) secured by the federal government	Directly to projects designated	Based upon project credit, forecast, etc
<i>FRA Railroad Rehabilitation and Improvement Financing (RRIF)</i>	Federal Subsidy	Subordinate loan (up to 100% of project) secured by the federal government. Specifically for rail infrastructure	Directly to project designated	Based upon project credit, forecast, etc
<i>Value Capture (Includes</i>	In some cases	Sponsorship or business partnership with private entity based upon perceived value of public asset	Directly to project designated	None

Case Study Examples

Innovative Funding/Financing Peer City Examples

Cities/Regions and Their Projects: Degree of Private Participation and Use of Innovative Funding/Financing Structures



Seattle, Washington – East Link Extension: Central Puget Regional Transit Authority (Sound Transit)

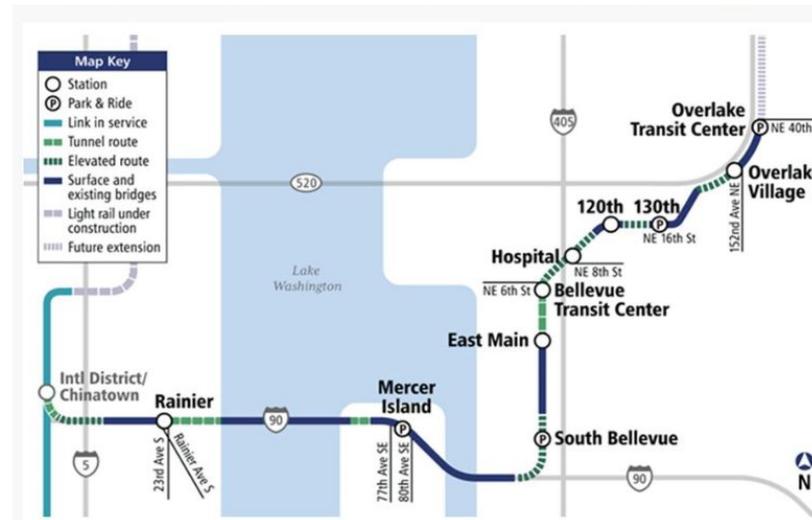
Innovative structure to finance 15 mile light rail transit extension and HOV lane expansion connecting population and employment centers.

Regional Information

- 2016 Estimated MSA Population: 3,798,902
- 2010 Census MSA Density: 586 persons/square mile
- METRO (Heavy Rail) – first section opened in 2009; monorail in 1962

Background Information

- The Seattle/Bellevue region featured growing sales and income tax bases that were able to support rail projects, but the overall scale of this project was too large for the debt profile for Sound Transit or the surrounding cities.
- Sound Transit could, however, serve as the counterparty for a TIFIA loan from the federal government and utilizing the region's tax base. Loan analysis would be up to USDOT.



Financing & Funding Approach

- Total Project Size: \$4.03bn
- Private Investment: None
- TIFIA loans: \$1.33bn
- Sound Transit Tax Revenues: \$1.086bn
- Bond Proceeds: \$1.06bn
- Cash Contribution: \$281mm
- Grant Revenue: \$89mm
- City of Bellevue: \$184mm

Stakeholders Participating

- Project Sponsors: Sound Transit; USDOT; City of Bellevue
- Lenders: US Department of Transportation; Sound Transit

Washington DC/Maryland – Purple Line Project - Maryland Transit Authority (MTA)

P3 with Federal Funding: Contracted agreement to design, build, operate, finance and maintain 16-mile light rail system connecting counties

Regional Information

- 2016 Estimated MSA Population: 6,131,977
- 2010 Census MSA Density: 1,084 persons/square mile
- METRO (Heavy Rail) – first section opened in 1976; continuously expanded

Background Information

- Montgomery and Prince George's Counties for decades were designated for a single light rail line connecting the two and providing a transit link between the two.
- Prohibitive costs for a potential project, combined with limited bonding capacity for MTA and the state of Maryland made this potential project difficult via traditional finance.



Financing & Funding Approach

- Total Project Size: \$5.6bn
- Private Investment: \$138mm
- TIFIA loans: \$875mm
- Private Activity Bonds: \$313mm
- Note that Silver Line extension of WMATA included the development of a special tax district for counties within the lines path.

Stakeholders Participating

- Project Sponsors: Maryland Dept. of Transportation, Maryland Transit Agency
- State lender: US Department of Transportation
- SPV: Purple Line Transit Partners, LLC

Denver Regional Transit Department: Eagle Rail Project

Private, Federal and Local Tools: Complicated and Innovative Funding and Financing of Light Rail Project Connecting Downtown to Airport

Background Information

- 2016 Estimated MSA Population: 2,812,732
- 2010 Census MSA Density: 305 persons/square mile
- RTA Lines C D E F H R W (light rail; regional/metro service)– first section opened 1994
- RTA Lines A B (light rail; regional/commuter service) – first section opened 2016

Background

- Denver RTD realized the need to finance a rail line from the airport to its downtown. As the region entered into a P3 to finance the downtown train station, a P3 was also being considered for the rail.
- The cost of the rail line was prohibitive for RTD to do alone, a combination of private and federal support would need to be utilized.



Financing & Funding Approach

- Total Project Size: \$1.64bn
- Public Sources of Funding:
 - TIFIA Loan
 - Regional Sales Tax (two .4% increases)
 - \$44mm from Denver RTD
 - Includes TIF District for Union Station Metropolitan District based on .4% sales tax increase
- Private Sources of Funding:
 - \$54mm in equity from private investor

Stakeholders Participating

- Project Sponsors: Denver Regional Transit Department
- Private Investors: Fluor-led consortium
- Regional towns and the City of Denver; Denver International Airport

Miami, Florida: All Aboard Florida

Entirely privately financed light-rail project connecting Orlando to Florida

Background Information

- 2016 Estimated MSA Population: 6,066,387
- 2010 Census MSA Density: 1096 persons/square mile
- METRO (Heavy Rail): Metrorail (heavy rail; metro service) – first section opened 1984; Metro-mover (automated transit; district service) – downtown, first opened 1986

Background Information

- FDOT has long identified an opportunity in connecting the populous cities along the Atlantic Coast/I-95/Florida Turnpike of Florida by light rail.
- The costs for an innovative and effective rolling stock and rail project were prohibitive, along with the complexity of procurement via traditional methods.



Financing & Funding Approach

- Total Project Size: \$2.5bn
- Private Investment: Over \$1billion in cash equity including ROW land purchases; \$345 in cash equity in project
- All Aboard will be participating in all passenger revenues
- Project includes Miami Central Station, a private real estate project including 11 acres and 3 million sq/ft of retail and office space above and beneath the rail tracks.

Stakeholders Participating

- All Aboard Florida (A private entity consisting of investors and developers including Fortress Fund); US Department of Transportation; FDOT; Cities along rail route including Miami and Orlando

Thoughts, Questions

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