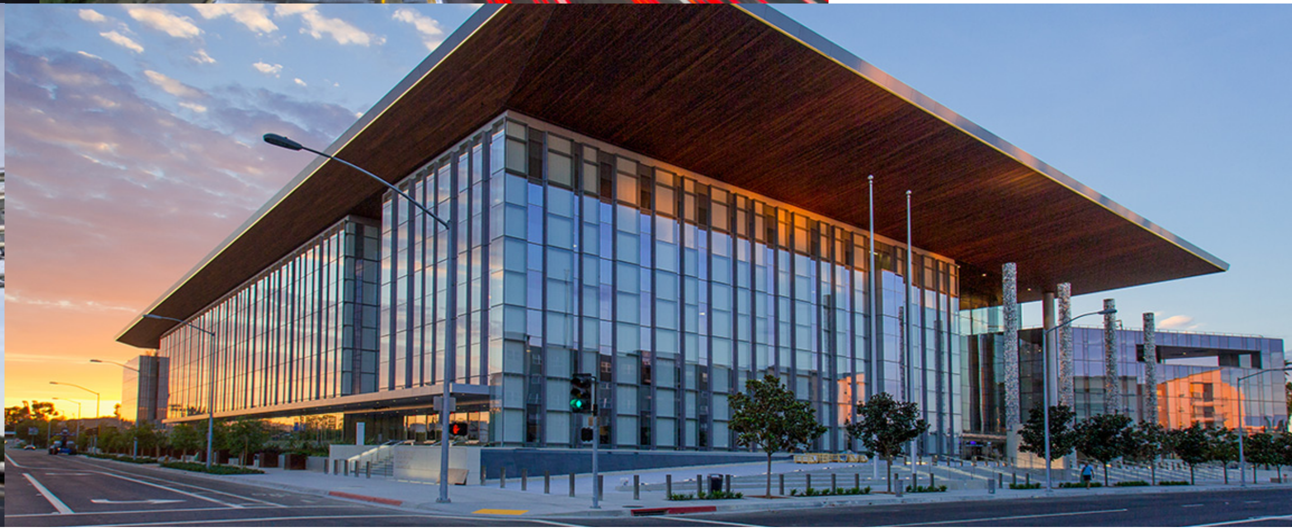

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Public-Private Partnerships (P3)

The Current State of US Infrastructure – D+

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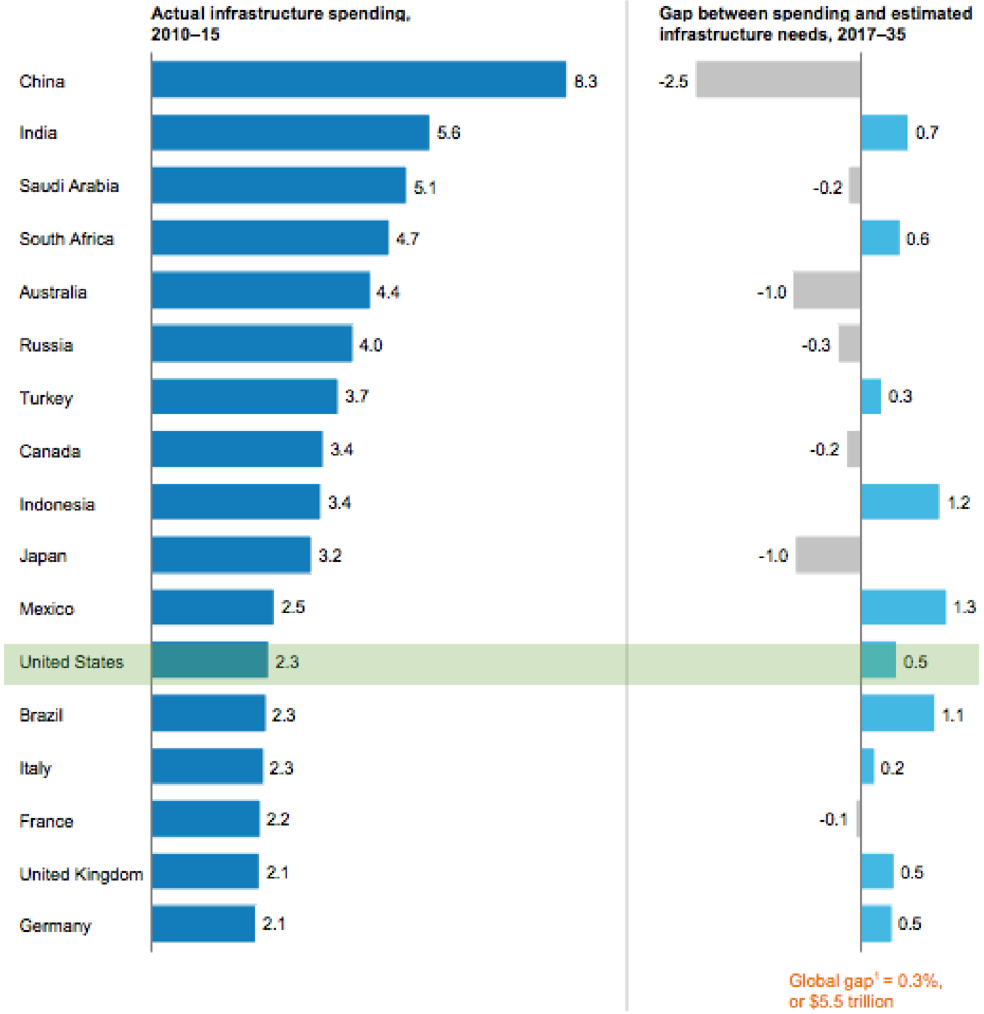
The Funding Challenge: Local, State, and Federal Governments Struggle to Fund Infrastructure Projects

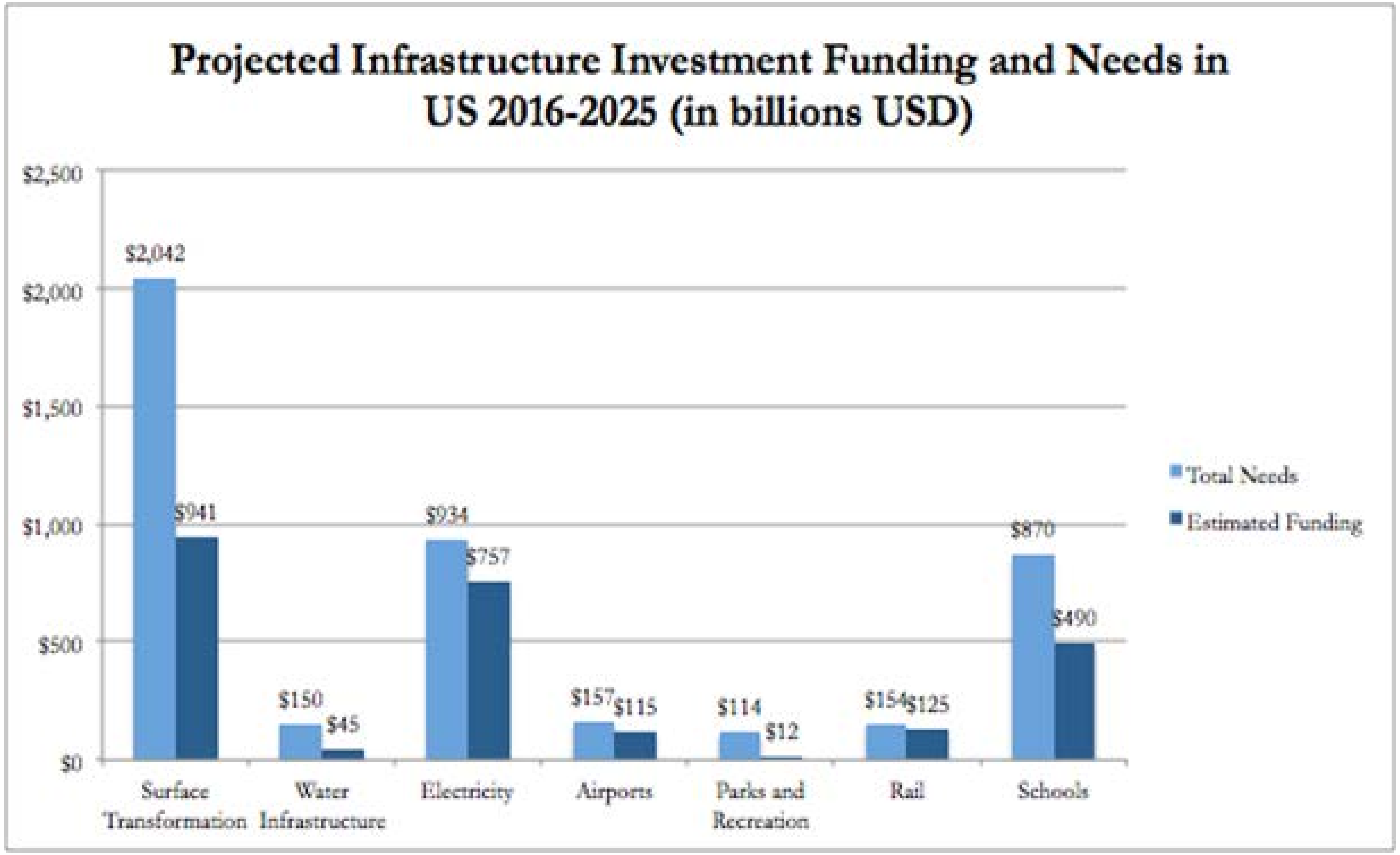


McKinsey & Co. released a report on global infrastructure spending in October of 2017.

The McKinsey Global Institute made the following estimates:

- Global gap is 0.3% of GDP or $5.5 trillion
- US Gap is 0.5% of GDP or $97 billion

Potential for Private Sector Involvement



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What is a Public-Private Partnership (P3)?

"A Public-Private Partnership (P3 or PPP) a contract between a public sector entity and a private sector entity that outlines the provision of assets and the delivery of services."

Drawn from document published by the Office of the Auditor General of British Columbia.

Three Project-Specific Components Essential to Making a P3 Work

1. The private sector partner needs an 8-12% rate of return.

2. Investors need to be compensated, either from a revenue stream (e.g. tolling) or through availability payments.

3. The local municipality must have a good credit rating because the bonds are often priced two notches below municipal bonds.

Financing a P3: There is no One-Size-Fits-All Model

Revenue Stream (i.e. tolling)

In a **revenue stream** payment scheme, the concessionaire receives compensation through obtaining the right to collect the tolls on the infrastructure asset that they construct.

Milestone and Availability Payments

According to the Federal Highway Administration, an **availability payment** is a fee paid by the [Public Sector Partner] to the Developer for making the highway (or other infrastructure asset) available to users at predefined standards.

In a **milestone payment** structure, the Public Sector Partner pays the Developer at certain predetermined milestones throughout the construction process.

Other Payment Schemes

The Public Sector Partner and the Developer may agree on a different payment scheme, which may involve a combination of tolling and availability payments or which may call on another source of money altogether.

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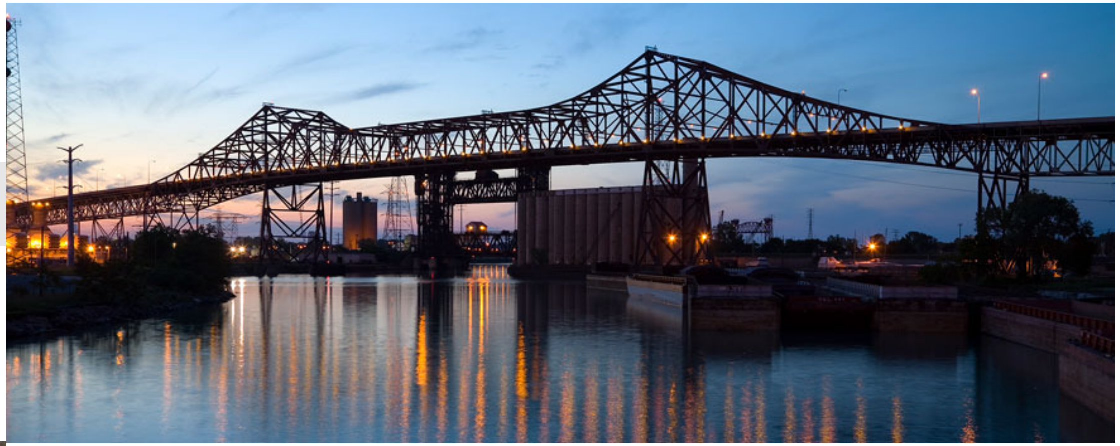
Example P3s: Revenue Stream (i.e. tolling)

Chicago Skyway Bridge – User-paid Tolls



Dulles Greenway – User-paid Tolls

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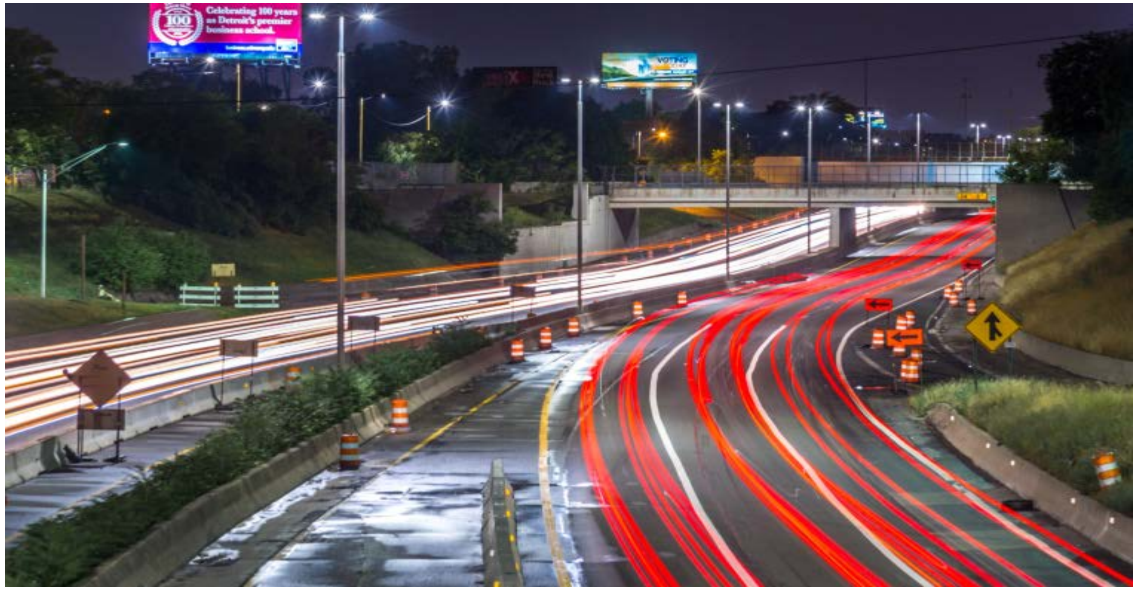
Example P3s: Milestone and Availability Payments



Metro Region Freeway Lighting –
Availability Payments

Port of Miami Tunnel –
Milestone and Availability Payments

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Example P3s: Other Payment Schemes

Goethals Bridge Replacement
User-paid Tolls and Availability Payments

Long Beach Courthouse
Service Fees and Availability Payments from AOC, Lease Revenue from LA County, Parking and Retail Revenue

Northwest Corridor - Atlanta
User-paid Tolls and State Motor Fuel Taxes

Portland Airport MAX Red Line
Airport Passenger Facility Charge and TriMet General Funds

San Juan Airport
Airport Parking, Concessions, and Fees

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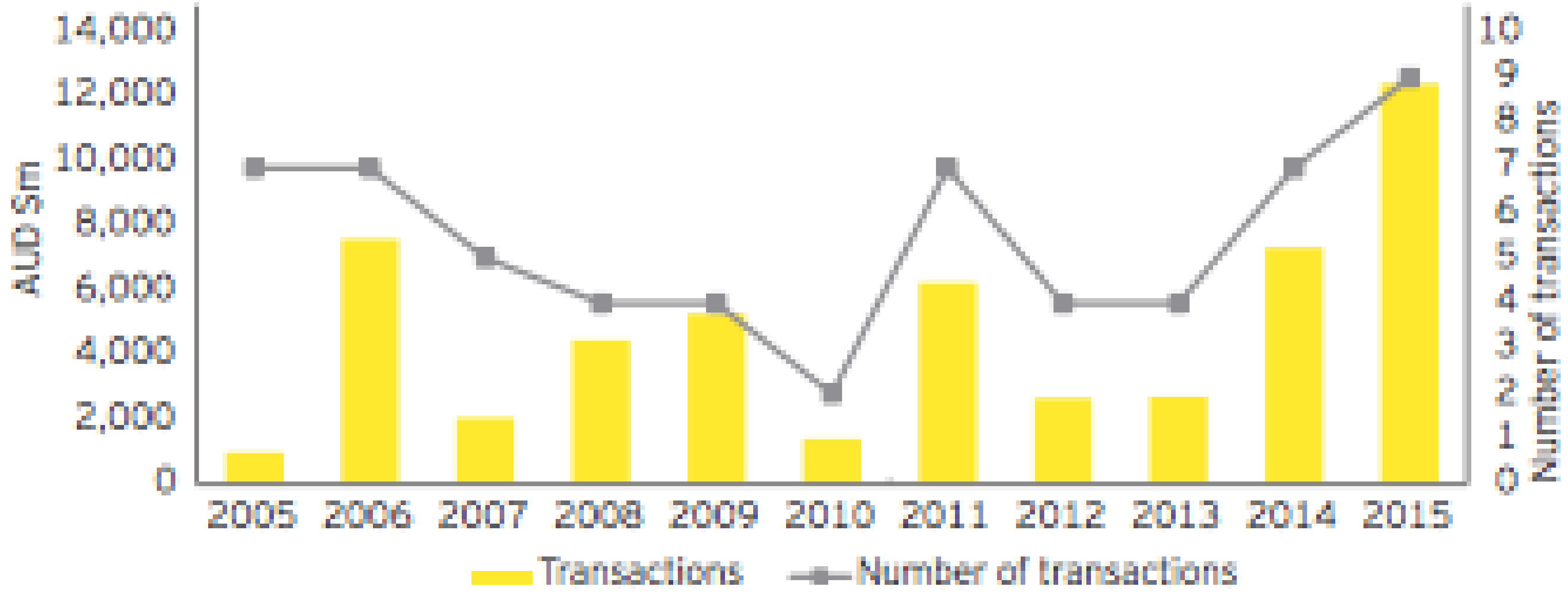
In Canada: 36% of Infrastructure is Built via P3s

Australia Leverages P3s for Infrastructure Overhaul



PPPs are vital to the development of infrastructure in Australia and have played a key role in driving cost and time efficiency in infrastructure delivery.

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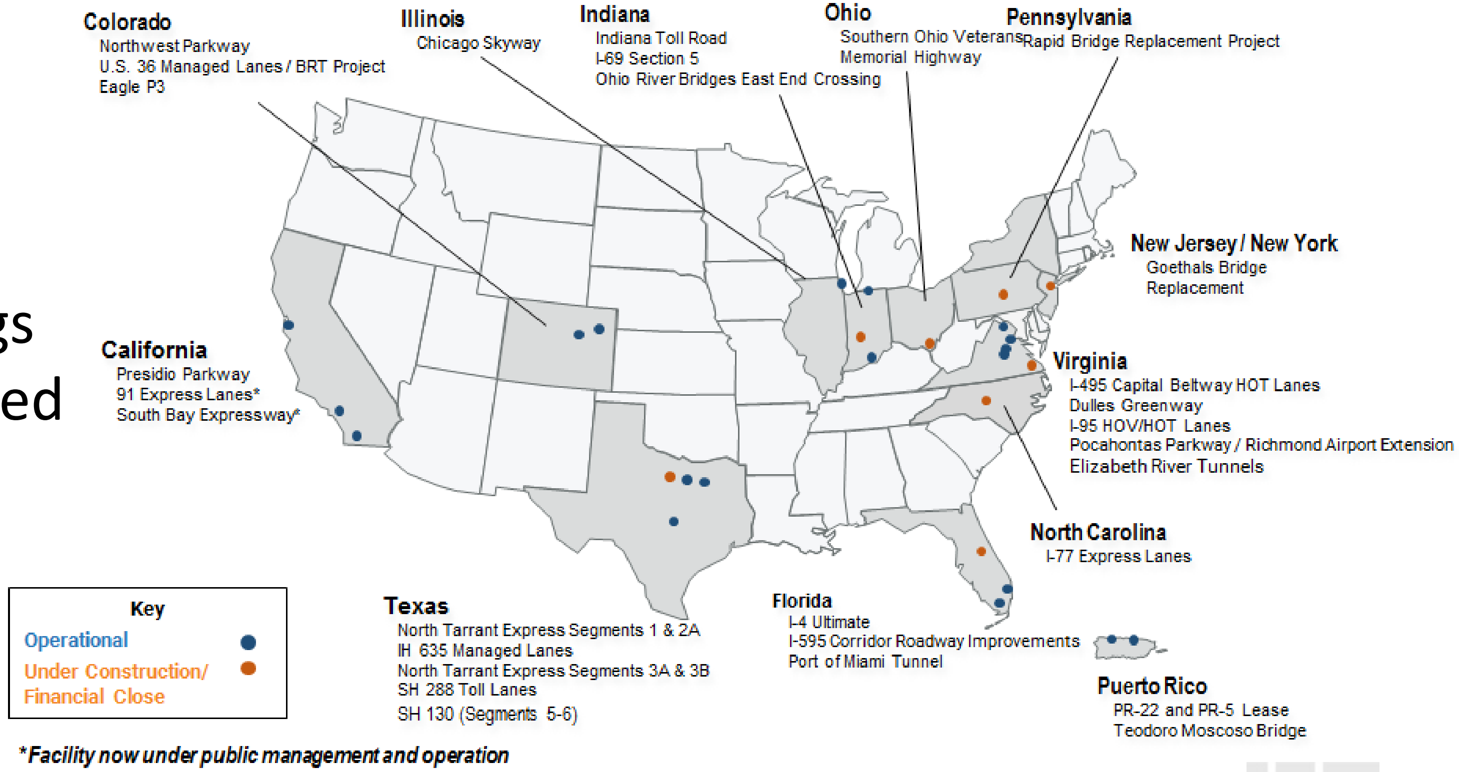
Legislation Must Change to Allow for P3 Activity

The US has all the necessary conditions for P3s:

- Dilapidated infrastructure (D+ infrastructure grade in 2017)
- Significant budgetary shortcomings
- Growing political will among elected officials



However, the actual number of P3 projects completed in the US is low.

**FHWA Map of Highway-Related P3s - 2016

P3 account for 1% of infrastructure build

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Policies and Practices that Encourage P3s

Countries such as the United Kingdom, Australia and Canada have developed a number of practices that add certainty to the pursuit of P3s:

1. **Dedicated procurement offices**
2. **Standardized contracting**
3. **The application of P3s across infrastructure asset classes in the US**

Only a few states or municipalities have offices dedicated to P3s.

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Barriers to P3 Adoption in the US: Public Opinion and Municipal Debt Infrastructure Funding

Public opinion is not as favorable here as it is in Canada and other P3 markets.

Municipalities in the US, unlike those in Canada, can fund infrastructure projects with cheap municipal debt:

- The municipal bond market complicates P3 financing.
- Local governments can finance capital projects through the use of municipal bonds, which allow them to issue tax-exempt debt.
- Therefore, the public sector can deliver infrastructure at a relatively low cost.

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Recommendation:
Explore the Progressive Partnership Model

Case Study: Water

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Case Study:
2012 Rialto Water and Wastewater Concession

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Options for Infrastructure Delivery

Design Bid Build | Construction Manager At-Risk | Design Build | Progressive Partnership | Private Ownership

Public Risk | Private Risk

There are a wide range of options for delivering infrastructure projects with different risks and different costs

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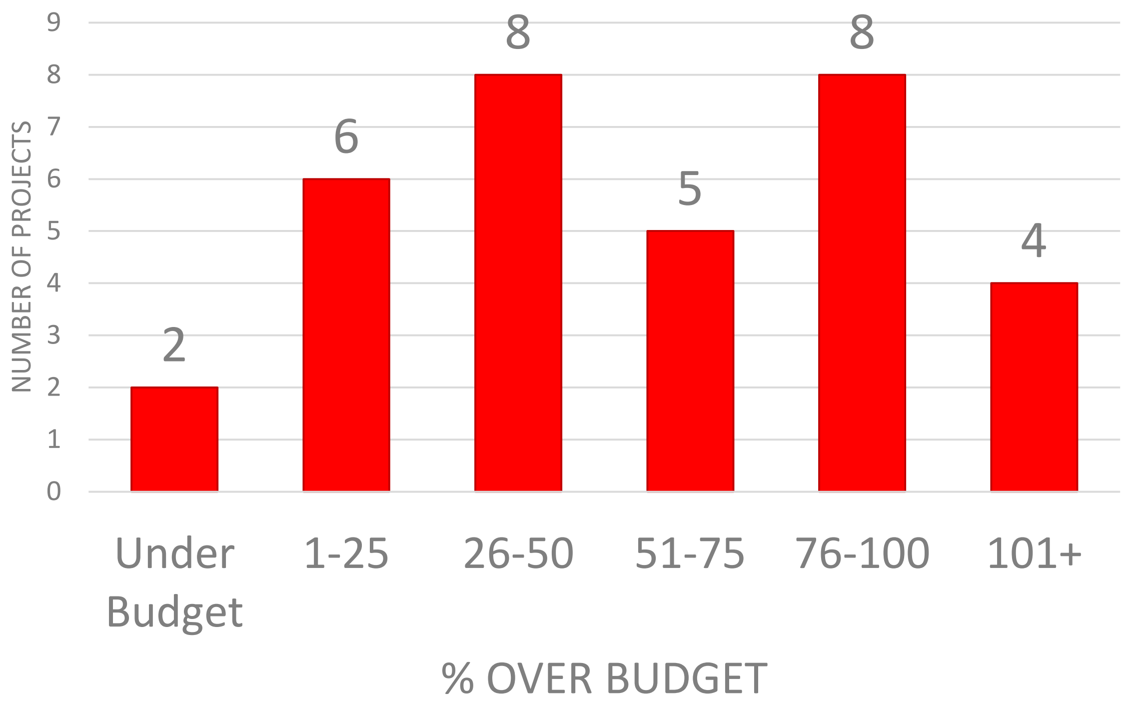
Most Public Projects Underperform

- Cost overruns on major public projects (>$100MM) due to risks retained by public under traditional procurement:

- Engineering risk: Treatment process may not work
- Construction risk: Change orders and scope changes increase cost
- Schedule risk: Project takes longer than anticipated
- O&M risk: Staff may not properly operate or maintain project



Charting An Alternative Solution

- **A PROGRESSIVE PARTNERSHIP DELIVERS MORE VALUE**

Progressive partnership allows city to **assess and select** the management approach for its water and wastewater system that delivers the most value.

Assessment includes public-private partnership which can 1) **reduce life-cycle costs**, 2) **lower rates**, and 3) **generate payments** for priority projects in the city.

If city selects partnership, partner assumes responsibility for delivering and financing system upgrades and maintaining the system for the long-term.

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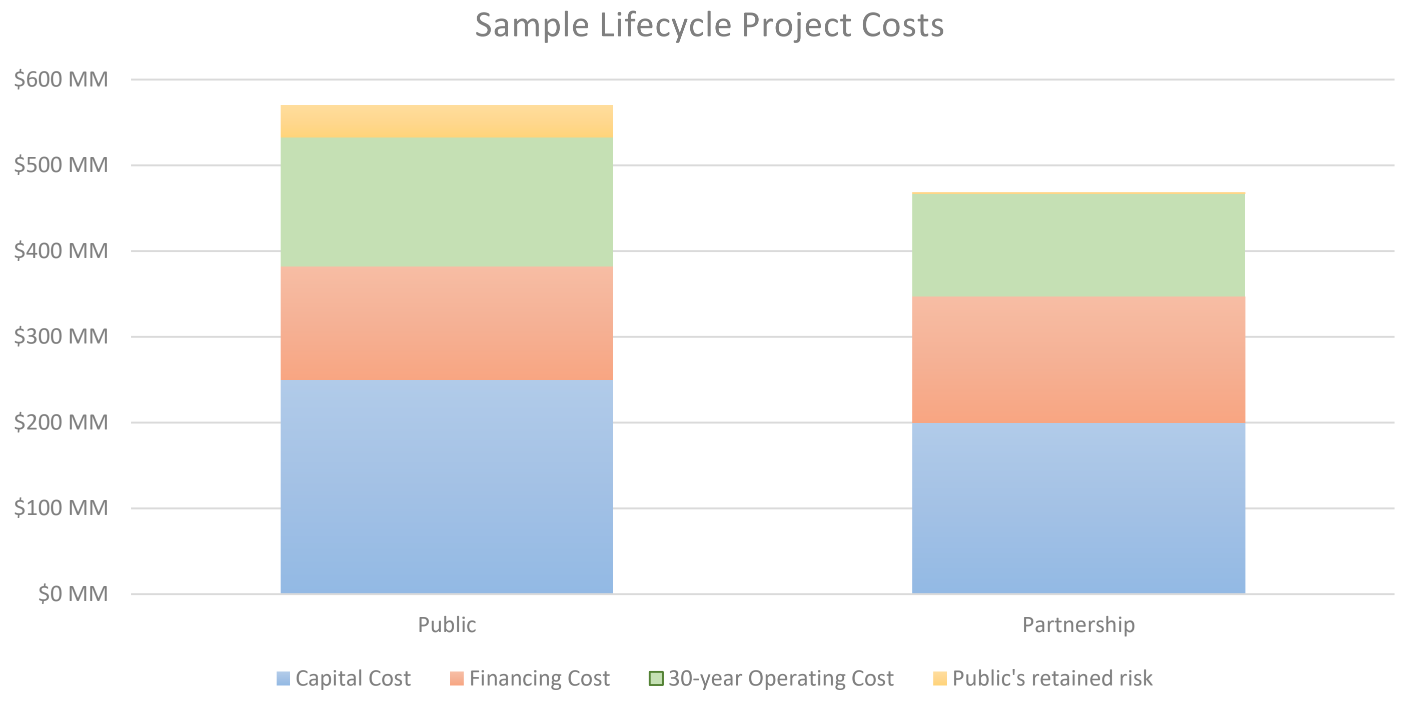
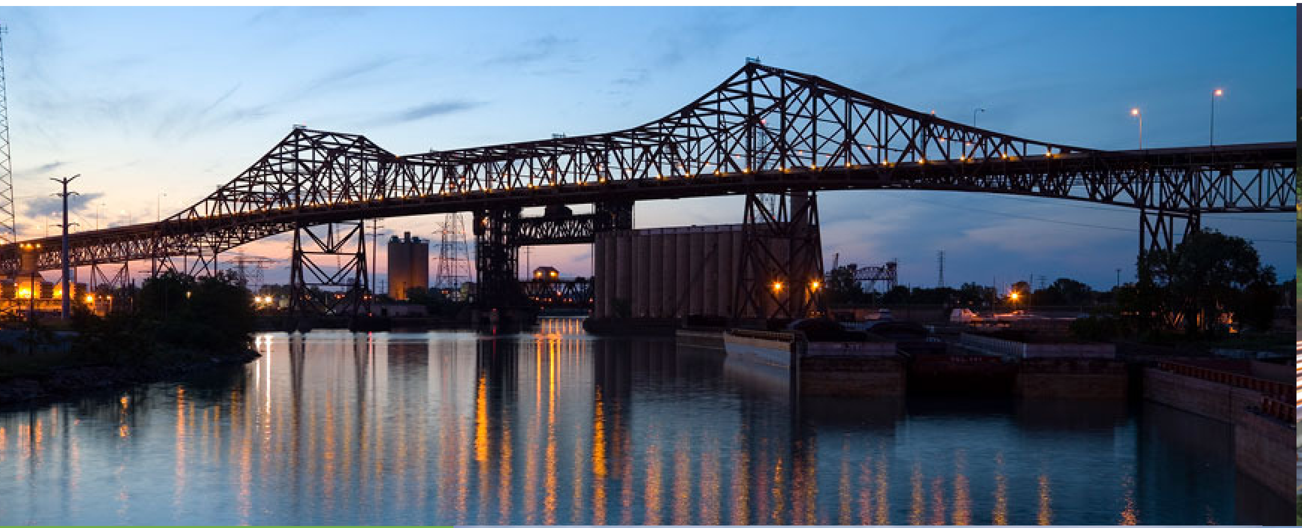
Comparative Impact Rates

- **Lower rate impacts stem from 1) optimized Clean-In-Place(CIP) and 2) 15-30% lifecycle cost savings from partnership**



Questions?



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