

# Financing for Smart Cities Projects: The P3 Approach

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# Agenda

- ➔ Introductions
- ➔ P3s vs. Smart City P3s
- ➔ Project Steps (High Level)
- ➔ Funding vs. Financing
- ➔ Value Generation
- ➔ Overview of Private Financing and Types
- ➔ Risk Evaluation by Lenders and Investors
- ➔ Risk Mitigation by Lenders and Investors
- ➔ Example

# P3s vs. Smart City P3s

P3s are designed to enhance efficiency. Technology is a major driver of efficiency.

- ➔ **P3** – a collaboration, typically through an agreement, between the public and private sector to solve a problem or capitalize on an opportunity by sharing risk of an asset.
- ➔ **Smart City P3** – all of that...but incorporate the use of new technology/adaptation to technological advancement.

**Disclaimer:** 1) all P3s are unique 2) Smart City P3s lack performance history.

# P3s vs. Smart City P3s

## P3

New Bridge/Road Construction  
Vehicle Fleet  
Transit or Rail Line Construction  
Parking Systems and Structures  
Real Estate Development  
Social Infrastructure  
Wastewater Management  
Airport Operations

## Smart City P3

Broadband Infrastructure  
Data Systems Management  
Wi-Fi Kiosks  
Vehicle Charging Stations  
CAV Networks  
App-based Mobility  
Energy Management  
Environmental Management

# Project Steps (High Level)

- ➔ Define & Estimate Value
- ➔ Consider Public/Private Financing
- ➔ Determine Procurement & Delivery Method
  - ➔ DBFMO
  - ➔ Agreements
  - ➔ Establishing KPIs
  - ➔ JVs and Special Entities

# Funding vs. Financing

- ➔ **Funding:** Government provides money for a designated purpose, typically interest free, with no expectation of repayment.
- ➔ **Financing:** Someone (usually financial institutions) provides an amount of capital (debt or equity) to a project. This is expected to be repaid with interest.

## P3 Value Generation (Revenues)

- ➔ Understanding cash flows and revenue models drive the P3 financing decision.
  - ➔ **Financing Payments** – allow full coverage of expenditures and agreed returns
  - ➔ **Availability Payments** – linked with performance of private sector operator and asset at agreed performance standards.
  - ➔ **Cost Savings** – gained efficiencies generate public sector savings, savings generates budget to help fund the service.
  - ➔ **"Shadow" Tolls** – public sector makes payments (sometimes with recurring payments) to private sector operator based on user's usage of asset.
  - ➔ **User Fees** – based on payments for service by users of asset.
  - ➔ **Rate Payments** – public sector collects revenues and pays private operator to operate asset.

# Smart City P3 Value Generation (Revenues)

- ➔ While traditional revenue models apply to Smart City P3s, the following are more common with certain Smart City P3s.
  - ➔ **Recurring**– services are charged to users on a per-use basis. Such as using a service on a mobile app.
  - ➔ **Subscription** – user pays fixed amount for the services
  - ➔ **Advertising** – revenue collected from selling ads in the "asset geography" as opposed to charging users

# Financing Considerations

## ➔ Revenue Casting Net

- ➔ **Direct Value Capture** – direct "asset" revenues (ie user fee on City services)
- ➔ **Indirect Value Capture** – revenues from areas "impacted assets" (ie tax levy or TIF to collect revenue from the surrounding area)
- ➔ **Asset Recycle** – create value out of existing asset (lease energy facilities or land to private user and in exchange for capital for-or-delivery-of economic development projects)

## ➔ Construction Period Costs

- ➔ Design – Capital – Overruns – Time Delay

## ➔ Operation Period Costs

- ➔ Operating Costs - Overruns

# Overview of Public/Private Financing Types

## ➔ Debt

- ➔ Senior debt, institutional debt, project bonds, social impact bonds
- ➔ municipal bonds, infrastructure bonds, industrial revenue bonds (IDBs), TIF, special tax/charge districts, federal loans

## ➔ Equity

- ➔ Construction firms and project operators
- ➔ Infrastructure funds
- ➔ Investors

## IMPORTANT CONSIDERATIONS

- Smart City projects can come with smaller asset values, creating challenges for specific types of debt financing mechanisms.
- Enhanced with funding, ie government funding or grant funding

# Types of Private Financing

- ➔ Equity
- ➔ Senior Debt
- ➔ Junior/Mezzanine Debt

# Basics of Equity

- ➔ Ownership interest in entity
- ➔ Contributes capital in exchange for ownership
- ➔ Receives return of capital and profit from net profit of the developer entity
- ➔ May require a preferred return
- ➔ Can be individuals (inside or outside) or institutional (infrastructure funds, private equity, etc.)

# Basics of Senior Debt

- ➔ Bank (or non-bank lender) loans money to developer entity
- ➔ Receives repayment over time plus interest on money loaned
- ➔ May be secured by payment stream from municipality or other collateral, if available
- ➔ Difference from equity: **Required** to be repaid, regardless of profit
- ➔ May require guarantees

# Basics of Junior/Mezzanine Debt

- ➔ “In between” senior debt and equity
- ➔ Subordinated to senior debt, but gets paid before any payment to equity-holders
- ➔ Otherwise, similar to senior debt
- ➔ May or may not be an option depending on the specifics of the project

# Equity/Debt Evaluation of Risks

- ➔ Debt and Equity will view most aspects of a project in similar ways when it comes to due diligence of project risks
- ➔ Junior debt and equity may view certain risks differently when there is senior debt on a project as well – more cash flow is required to provide them with returns

# Some Types of Risks

- Appropriation Risk – are the payments subject to periodic appropriation by a municipality? What happens if an appropriation does not occur?
- Other Payment Risks – are payments tied to user fees or occupancy? What if enough volume is not generated to pay?
- Developer Experience Risks – what kind of track record does the project developer have? Is there enough experience to avoid execution risk?

## Some Types of Risk (cont.)

- ➔ Environmental Risk – does the project involve some kind of environmental risk (e.g., does it involve construction of a new facility)?
- ➔ Technology Risk – does the project involve an untested technology which could jeopardize long-term viability? Would there be an issue with adoption of the technology?
- ➔ Budget Risk – what if there are construction cost overruns? What if the project requires more overhead to operate than anticipated?
- ➔ Data Security/Privacy Risk – in particular for projects that involve collecting data or access to data.

# How Debt/Equity Mitigate Risks

- ➔ Detailed financial models with multiple scenarios, vetted by outside advisors
- ➔ Risk-sharing for the project developer – can be guaranteed by other entities/individuals for debt and required meaningful capital contributions for debt/equity
- ➔ Assignment of rights in payment obligations from municipality – debt gets paid directly

## How Debt/Equity Mitigate Risks (cont.)

- ➔ Step-in Rights – more common with debt – right to take over project in the event of a default, or replace developer – usually included in a 3 party agreement among municipality, developer and lender
- ➔ “Typical” debt protections – affirmative covenants, negative covenants, financial covenants, representations and warranties, draw schedules, etc. – similar to other contexts

## How Debt/Equity Mitigate Risks (cont.)

- ➔ “Typical” Equity protections – approval rights, required distributions, right to take control of entity, etc.
- ➔ Payment/Performance Bonds – more common for lenders
- ➔ Insurance generally – specific coverages for project-specific risks
- ➔ Reserve accounts – specific funds set aside prior to distributions to investors.

# Some Practical Considerations

- ➔ Particular project risks and particular risk mitigation strategies can impact the “bankability” of a deal – could cut in to whether a developer wants to move forward or if a lender/investor will find enough return.
- ➔ Timing – essentially a “3-party” project, with municipality, developer and investor/lender all having similar but sometimes distinct goals and due diligence needs – this can lead to slow downs while a party tries to get comfortable
- ➔ Education – Municipalities aren’t always familiar with private lending/investment transactions, and lenders/investors aren’t always familiar with dealing with municipalities

# An Example: Public Transit Wi-Fi

- ➔ A Municipality wants to add wi-fi access as a benefit to users of its public transportation system.
- ➔ Municipality determines that from a cost and performance perspective, a private company is better suited to build out and operate the system.
- ➔ Municipality either determines legislation already exists or passes new legislation to enable procurement of this project through a public-private partnership.

## An Example: Public Transit Wi-Fi (cont.)

- ➔ Private company (“Developer”) wants to bid in the procurement and develop the project
- ➔ What are some key factors a Developer and financing source (debt or equity) will consider in evaluating the project?

# Example Project Considerations

## ➔ Revenue Streams

- ➔ Will this be an availability payment model? If so, what is the appropriation risk? Can the municipality pay enough to generate returns?
- ➔ Will there be an opportunity for other revenue streams like user fees? Advertising revenue? If so, will the Developer keep all that revenue or will it be split with the municipality?
- ➔ Can the Developer sell user data?

# Example Project Considerations (cont.)

## ➔ Data Security

- ➔ What kind of user data will be collected? What is the risk associated with that?
- ➔ If it will be sold, what is necessary to secure those rights?

## ➔ Technology

- ➔ How reliable will the technology be? Any performance requirements? Will that impact user fees and other alternate revenue generation?
- ➔ Will the technology adequately protect user information?

# Example Project Considerations (cont.)

## ➔ Infrastructure/Development

- ➔ Is there already infrastructure in place? If so, how does the Developer secure the rights? If not, what is the cost to develop the infrastructure?
- ➔ Will there be work required in a public right of way? What environmental risks are associated with that work?
- ➔ How much money will be required? What is the possibility of budget overruns?

# Example Project Considerations (cont.)

## ➔ Operations

- ➔ How experienced is the Developer?
- ➔ How experienced is the municipality? Have they worked on similar structured deals before?
- ➔ Developer won't own the overall transit system where its system will operate – overall system is mobile and may have access issues

## ➔ Competition

- ➔ How quickly will system become obsolete?
- ➔ Will mobile device technology render it unnecessary?

# Example Project Considerations (cont.)

## ➔ Security for Loan/Investments

- ➔ Will there be assets in addition to payment streams to secure the investment/loan?
- ➔ Will the Developer own the system?

# Questions?

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