## Infrastructure Financing: Key Terms and Concepts

### Monetization vs. Development

- Extracting upfront cash in exchange for a future revenue stream is **monetization**

- **Development P3s** build or rehab an asset(s)
  - These include “greenfield” (i.e., new construction) and “brownfield” rehab/reinvestment projects

### Aggregation and Standardization

- Experience has led other jurisdictions to develop a coordinating entity staffed to design the “template” and assist state/local governments evaluate projects and execute selected P3 approaches

- Standardizing protocols and documentation can substantially lower costs and clarify/streamline process for all parties
  - Infrastructure Ontario screens projects greater than $20 mln
  - Aggregating multiple projects can broaden the pool of potential investors, but requires additional coordination

### Financing and Funding

- **Financing** is the mix of debt and equity capital that provides sufficient monies for a capital project. Options include tax-exempt/taxable bonds, bank loans, government financing programs (TIFIA, PABs, etc.), funds on hand (Pay-Go) and private sector equity

- **Funding** is the underlying source of revenue supporting an asset’s upfront construction and ongoing maintenance/operating costs
  - P3s require an adequate funding source(s)
  - Governmental sponsor(s) can make payment from the project’s revenues (“self-supporting”), general revenues (“availability payment”), or both

### Maximizing Resources

- A P3 approach can maximize the long-term resources applied to infrastructure
  - Access to debt and equity capital
  - Private sector project management and risk assumption encourage new technology application and innovative management techniques
  - A 2010 Canadian study reported 17 of 19 projects using a P3 approach delivered early or on time\(^{(1)}\)
  - Risk assumption for maintaining the asset (including “hand back”) encourages lifecycle/rehabilitation planning

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\(^{(1)}\) The Conference Board of Canada, “Dispelling the Myths: A Pan-Canadian Assessment of Public-Private Partnerships for Infrastructure Investments” (January 2010)
### Why Governments Use P3 Methods

#### Four Main Benefits of P3

<table>
<thead>
<tr>
<th>Risk Transfer</th>
<th>Private Sector Expertise</th>
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<tbody>
<tr>
<td>Ability to transfer key risks to the private sector owner/operator</td>
<td>Access to top international best practices in private sector</td>
</tr>
<tr>
<td>Revenue/demand risk</td>
<td>New technologies</td>
</tr>
<tr>
<td>Construction risk</td>
<td>Innovative management techniques</td>
</tr>
<tr>
<td>Technology and performance risk</td>
<td>Cost innovation in lifecycle/rehabilitation planning</td>
</tr>
<tr>
<td>Operating and maintenance risk</td>
<td>Innovative designs to reduce cost and enhance performance</td>
</tr>
<tr>
<td>Lifecycle/capital reinvestment risk</td>
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<table>
<thead>
<tr>
<th>Additional Resources</th>
<th>Timing &amp; Certainty of Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3 projects maximize the capital proceeds which can be raised against infrastructure asset</td>
<td>P3 structures can accelerate the delivery of the asset by years</td>
</tr>
<tr>
<td>Access to debt and equity capital</td>
<td>Private firms often submit multiple design alternatives to speed permitting and construction timeline</td>
</tr>
<tr>
<td>Competitive bid process ensures most attractive valuation</td>
<td>Construction price is fixed at financial close</td>
</tr>
<tr>
<td>Leasing of existing assets often bring large upfront sums</td>
<td>Delays past the guaranteed delivery date result in penalties being assessed</td>
</tr>
<tr>
<td>Brings outside personnel to supplement agency staff</td>
<td></td>
</tr>
</tbody>
</table>

Risk transfer, accelerating delivery and tapping equity capital for infrastructure are drivers of P3 rationale
The following chart summarizes the risk transfer to private parties compared to a traditional design-bid-build procurement.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Traditional Approach</th>
<th>P3 Approach</th>
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</thead>
<tbody>
<tr>
<td>Construction Cost</td>
<td>Government/Contractor</td>
<td>Contractor</td>
</tr>
<tr>
<td>Design Scope</td>
<td>Government/Designer</td>
<td>Designer</td>
</tr>
<tr>
<td>Environmental</td>
<td>Government</td>
<td>Government/Contractor</td>
</tr>
<tr>
<td>Financing</td>
<td>Government</td>
<td>Equity/Lenders</td>
</tr>
<tr>
<td>Inflation</td>
<td>Government</td>
<td>O&amp;M Contractor/Government</td>
</tr>
<tr>
<td>Lifecycle</td>
<td>Government</td>
<td>O&amp;M Contractor</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Government</td>
<td>O&amp;M Contractor</td>
</tr>
<tr>
<td>Operations</td>
<td>Government</td>
<td>O&amp;M Contractor</td>
</tr>
<tr>
<td>Permits</td>
<td>Government</td>
<td>Contractor</td>
</tr>
<tr>
<td>Property Acquisition</td>
<td>Government</td>
<td>Government/Designer</td>
</tr>
<tr>
<td>Revenue</td>
<td>Government</td>
<td>Equity/Lenders</td>
</tr>
<tr>
<td>Schedule</td>
<td>Owner/Contractor</td>
<td>Contractor</td>
</tr>
<tr>
<td>Site &amp; Soil Conditions</td>
<td>Owner/Contractor</td>
<td>Contractor</td>
</tr>
<tr>
<td>Utilities</td>
<td>Government</td>
<td>Contractor/Designer</td>
</tr>
</tbody>
</table>

In a P3 structure, private entities manage key project risks.
Examples of Infrastructure Investors

<table>
<thead>
<tr>
<th><strong>Strategic Investors</strong> (Water asset investors as an example)</th>
<th><strong>Infrastructure Funds / Private Equity</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>CORIX Utilities</td>
<td>J.P. Morgan</td>
</tr>
<tr>
<td>SJJJ San Jose Water Company</td>
<td>Morgan Stanley</td>
</tr>
<tr>
<td>SEVERN TRENT</td>
<td>THE Carlyle Group</td>
</tr>
<tr>
<td>Ni America (&quot;Ni&quot; The Ojibwe Indian Word for Water)</td>
<td>Citi</td>
</tr>
<tr>
<td>American Water</td>
<td>BOREALIS Infrastructure</td>
</tr>
<tr>
<td>CIM Group, Inc.</td>
<td>STEELRIVER INFRASTRUCTURE PARTNERS</td>
</tr>
<tr>
<td>California Water Service Co.</td>
<td>CalPERS</td>
</tr>
<tr>
<td>VEOLIA ENVIRONNEMENT</td>
<td>Brookfield Infrastructure Partners</td>
</tr>
<tr>
<td>AQUA</td>
<td>BMO Capital Markets</td>
</tr>
<tr>
<td>Metropolitan Mayors Caucus</td>
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</tbody>
</table>
History of Canadian Public-Private-Partnerships

- As government debt levels rose in the 80’s and early 90’s, governments sought to increase private investment in infrastructure
- P3s were introduced as a way to transfer risk and take advantage of the private sector expertise
- Private Finance Initiative (PFI) template introduced in the U.K. in 1992 to promote P3s and reduce public sector borrowing
- Canadian P3 market is based on the UK’s PFI template but has developed its own characteristics
  - Ontario, Quebec and British Columbia have strong P3 programs with dedicated agencies to manage the procurement process
- Canadian P3 Financing History
  - Initial source of long-term financing for P3s was European bank lending
  - During credit crisis European bank funding capacity substantially reduced and spreads rose rapidly
  - Increase in spreads and reduced capacity made bond financing attractive
  - Over C$9 bln of P3 bonds issued
  - Long-term European lending back in the market but not at same aggressive terms as pre-crisis
- Large C$1+ bln projects are getting done
- Financing readily available from banks, bonds, and equity

Highway 407 East Extension
City of Brampton SWQR Project
Pan American Games Athletes Village
Billy Bishop Airport Pedestrian Tunnel
Key Success Factors of the Canadian Model

- A number of items have led to the success of the Canadian P3 model
- Not all of them were intentional and came from improving on initial errors or from private sector feedback
- Success has been at the state level – municipalities and the federal government are only now considering widespread adoption

<table>
<thead>
<tr>
<th>Procurement Agency</th>
<th>Existing Template</th>
</tr>
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<tbody>
<tr>
<td>• A separate agency to shepherd project – avoids legacy department politics</td>
<td>• Use existing (European) template to maximize both bidder and global lender interest</td>
</tr>
<tr>
<td>• Non-political leadership – senior staff drawn from private sector and career Government employees</td>
<td>• Complete new projects using the same standardized docs and experienced staff – matches private sector experience</td>
</tr>
<tr>
<td>• Build project teams that focus on expertise (accountants not doing capital markets)</td>
<td>• Collaborative approach (Bidder meetings) to identify risk transfer savings – improve on existing documents and refine to local market</td>
</tr>
<tr>
<td>• Use Value-for-Money (VFM) studies and fairness advisor to further emphasize transparency to public and bidders</td>
<td>• Release final documents to the public with only major commercial terms excised</td>
</tr>
<tr>
<td>• Ministry department is the client</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Selection</th>
<th>Focus on Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Start with relatively simple, well-supported projects</td>
<td>• Public support comes from perceived problems with cost overruns</td>
</tr>
<tr>
<td>• Work out the 'kinks' before trying more complex projects</td>
<td>• Projects are not introduced as a way to reduce or outsource staff</td>
</tr>
<tr>
<td>• Initially avoid projects where you can't fully direct process</td>
<td>• Support of construction unions mutes opposition of private sector unions</td>
</tr>
<tr>
<td>• Create a transparent pipeline of projects which attracts bidders to set-up locally</td>
<td></td>
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</tbody>
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Success has been focused at the state level
## P3 Procurement Options

<table>
<thead>
<tr>
<th>P3 Alternative</th>
<th>Description</th>
<th>Government Retained Risks</th>
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</thead>
</table>
| Design – Build | - Traditional procurement  
- Government contracts for the design and construction of assets directly  
- Mix of interim and completion payments  
- Government to manage and operate assets | - Construction (mitigated through time-certain, fixed-price contract)  
- Financing, operations, maintenance, residual |
| Design – Build w/ Operating Contract | - Traditional procurement with an operating contract with Private sector for operating the assets post construction  
- Often operating contract includes a payment penalty mechanism to ensure performance | - Construction, financing, maintenance, residual  
- Operations outsourced to Private sector with payment penalty mechanism  
- Often used with already constructed assets or Governmental services |
| Design – Build – Finance | - Government contracts with Private Developer to deliver newly constructed assets  
- Payment at completion or paid over time as lease  
- Government to manage and operate assets | - Private sector takes construction and financing risk  
- Government retains ownership risks including operating, maintenance and residual |
| Design – Build – Finance – Operate – Maintain | - Government contracts with Private Developer to deliver newly constructed assets and operate under a long-term “concession” agreement  
- Government can (a) pay fixed “availability payments” quarterly or (b) grant rights to the Private Developer to collect fees or tolls  
- 30 to 99 year operating period post-construction | - Private sector takes all risks except residual as assets typically revert to Government at end of concession term  
- Government must either (a) make availability payments overtime or (b) forego asset revenues from tolling and/or user fees |
| Asset Sale / Full Privatization | - Government sells constructed assets to Private sector  
- Government may retain some monitoring and enforcement rights | - Private sector takes all risks including residual |
Typical DBFOM Structure

- O&M Contractor
- O&M Parent Company
- Government / Authority
- DB Parent Company
- Design Build Contracting Company
- Development Company and/or 3rd Party Equity
- Lenders

**Project Co Company**

- Operating Agreement
- DB Contract
  - Construction security
- DBFOM Concession
- Parent Company Guarantee
- Recourse for Limited Amounts
- Construction Loan and long-term debt
- Provision of equity contribution to form a Concession Company
- Completion payment and Concession Payments
The Ontario Provincial Police (OPP) Modernization project applied a P3 approach to the construction of 18 new facilities in 16 communities across Ontario.

The new facilities replaced several that had exceeded their useful life and substantially upgraded Ontario’s policing and justice system infrastructure.

With environmentally-sustainable construction practices and energy efficiency in mind, the new buildings were designed and built to meet the Canada Green Building Council’s Leadership in Energy and Environmental Design (LEED) Silver standards.

For more information, go to http://www.infrastructureontario.ca/What-We-Do/Projects/AFP-Projects/ and follow the link for the “OPP Modernization”
The Canadian Council for Public-Private Partnerships, in partnership with PPP Canada, developed a guide that describes P3s and discusses issues key to Canadian municipal governments, many of which are relevant to U.S. local governments as well.

More information and resources can be found at: http://www.p3canada.ca/information-and-resources.php
## Myths and Misconceptions

<table>
<thead>
<tr>
<th>Perception</th>
<th>Clarification</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3 and “Privatization” are the same</td>
<td>Privatization is just one form of P3 in which an existing asset is contractually transferred to the private sector for compensation</td>
</tr>
<tr>
<td>P3s “enrich” the private sector to the detriment of the taxpayers</td>
<td>P3s should be procured through a competitive process with contractual terms that share potential upside and preclude windfall gains by the private party</td>
</tr>
<tr>
<td>P3s are too complex</td>
<td>Governments contemplating P3 transactions should retain advisors with expertise in both process and the respective asset type</td>
</tr>
<tr>
<td>P3s are more costly than traditional procurement approaches</td>
<td>Tax-exempt borrowing is nearly always less expensive for upfront financing of construction; however, comparing the full lifecycle costs of maintenance, repair and operation, P3s can often be less expensive on a risk-adjusted basis in the long-term</td>
</tr>
<tr>
<td>P3s are only for massive projects</td>
<td>Large-dollar P3 projects have been far more prevalent to date because these could absorb higher transactions costs; with its standardized process and documentation, Infrastructure Ontario (I/O) suggests evaluation of projects as &quot;small&quot; as $20 million</td>
</tr>
<tr>
<td>P3s provide funding when the public sector cannot</td>
<td>For availability payment P3s, the government must provide annual payment; P3s, however, can provide upfront funding for projects for which public sector bonding would not be possible</td>
</tr>
<tr>
<td>The public sector loses “control” in these deals</td>
<td>Governments “control” their assets through contract design, including provisions for minimum performance standards, events of default, and handback requirements</td>
</tr>
<tr>
<td>P3s will negatively impact jobs</td>
<td>Governments can stipulate in the contract requirements for use of labor groups, prevailing wage, local hiring, MBE/WBE, etc.</td>
</tr>
</tbody>
</table>

Appendix A: Case Studies
Case Study: CSS FSCC Partnership

Project Overview

The new FSCC facility will be a modern forensic and coroner’s complex, which will represent a significantly improved facility over the existing forensic and coroner’s facilities in Toronto - Established by the Ministry of Community Safety and Correctional Services to provide a modern consolidated forensic laboratory, autopsy facility and coroner’s courts complex for use by the Centre of Forensic Sciences and the Office of the Chief Coroner and procured through Ontario’s AFP program as a design, build, finance, maintain project by Infrastructure Ontario with a 31-month construction and 30-year concession

Facility will be a building of 5 storeys, with underground parking to provide 247 underground parking spaces, plus an additional 53 above-ground parking spaces for a total of 300 parking spaces.

BMO Capital Markets’ Role

BMO Capital Markets was retained by Carillion to act as Financial Advisor on the project, Lead Underwriter for the project bond and Lead Arranger for the construction loan

Financial Advisory
- Supported negotiations with lenders/IO
- Provided financial advisory throughout the RFQ/RFP submissions
- Created and managed the bid financial model including updating, reviewing, running scenarios and sensitivity analysis
- Provided strategic advice on funding options, substantiated with financial model results
- Managed the model audit process

Rating Agency
- Managed the rating agency process and achieved A- (S&P) and AL (DBRS) ratings for the project
- Advised on the security package in order to achieve the desired ratings

Financing
- Sourced debt and secured required commitments, including running of a global funding competition
- Advised & supported on terms and conditions and sources of financing (including pricing, financial covenants, reserving requirements and Sponsors support package)
- Analyzed responses from potential lenders, and identified competitiveness of pricing and terms
- Structured bank and bond facilities including covenant package
- Provided committed financing for bid

Execution
- Managed the marketing documents and process
- Managed the financial close process
- Distributed bonds to a group of diversified buyers and placed the bond into the DEX bond index
- Syndicated construction loan to high quality lenders
- Reinvested bond proceeds on behalf of the project partnership
- First P3 project in Canada where single financial institution underwrote entire financing for both short-term and long-term requirements
Case Study: Pan American Games Athletes Village

Project Overview
Infrastructure Ontario, Waterfront Toronto and the Ontario Realty Corporation are working with Toronto 2015 to develop a section of West Don Lands that will be home to the Athletes’ Village (“Village”). The Village will house the 10,000 athletes and officials of the 2015 Pan/Parapan American Games (“Games”). Following the Games, the Village will be converted into a range of housing developments including affordable housing and new condominiums units to be sold by the developer as part of Toronto’s waterfront revitalization.

<table>
<thead>
<tr>
<th>BMO CM Role</th>
<th>Unique Challenges</th>
<th>Project Structure</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| • Combined effort of the BMO Infrastructure group and Real Estate group  
• Structured the project to ensure financeability  
• Development of the project documents including the RFP and Project Agreement  
• Prepared presentations / memos to IO and Waterfront Toronto as needed  
• Met and negotiated with bidders on behalf of IO and Waterfront Toronto  
• Advised the Province during bid evaluation  
• Advised on appropriate scoring mechanism for bid evaluation to ensure all risks were appropriately considered | • New asset class - combination of P3 project finance and real estate development  
• Risk allocation between Province and private sector to achieve a financeable deal that is attractive to the private sector while protecting Province’s objectives  
• Mix of Provincial payments to develop the Village for athletes and Market Revenue risk post the Games a challenge to finance  
• Significant financing needs required structure to accommodate various types of debt – $1 billion project  
• Very tight construction timeframe with a firm deadline due to 2015 Games | • The Province will provide payments during the Games phase for the construction of the Village  
• Project consortium is required to have a minimum level of contingent equity during Games phase which can be drawn by the Province in the event of a construction delay or default  
• Condominium sale revenues are the first form of debt repayment following the Games in the event of a shortfall the Province will pay lenders shortfall amount  
• Province provides a take out loan facility on shortfall after the Games are complete to insulate lenders from real estate market risk  
• The take out loan facility can be exercised 2 years after the Games are complete and carries a high coupon | • High level of interest shown by the market during the RFQ stage  
• Meetings were held with the three selected bidding consortiums to refine the Project Agreement and project structure  
• By bid submission the Province received three fully committed bids for the Project  
• The project reached financial close in December 2011 |
Appendix B: BMO Infrastructure Banking
BMO Capital Markets Infrastructure Banking

Who We Are

BMO Financial Group (NYSE, TSX: BMO) (Parent of BMO Capital Markets)

Key Statistics on BMO Financial Group include:
(as of most recent fiscal year end 10/31/13)

- Strong credit ratings Aa3/ A+/ AA- (Moody’s/ S&P/ Fitch);
  $23.6 billion in Tier 1 Capital (Tier 1 Ratio of 11.4%)
- 45,500 BMO employees globally; 6,400 in Illinois
- 8th largest North American bank with $515 billion total assets

Public Finance & Infrastructure

- Headquartered in Chicago with offices in New York and San Francisco
- Focused on serving state and local governments, healthcare, higher education, 501(c)3, power, and transportation clients

P3 Practice Leadership

- 20 years experience advising public sector clients on procurement processes for new infrastructure and new investment in existing assets; and advising private sector clients bidding on infrastructure projects
- Experienced in arranging bank, equity and bond financings

Select BMO Infrastructure Finance & Advisory Experience

- **Ottawa Light Rail Project**
  Advisor to Infrastructure Ontario and City of Ottawa
  February 2012

- **Golden Link Concessionaires**
  Mandated Lead Arranger
  June 2012

- **Infrastructure Ontario**
  Financial Advisor
  December 2011

- **Greater Toronto Airports Authority**
  Sole Bookrunner
  November 2011

- **407 East Development Group**
  Joint-Lead and Bookrunner
  May 2012

- **Infrastructure Ontario**
  Financial Advisor
  December 2011

- **Ohio River Bridges**
  Underbidder for the DBFOM of the East End Crossing P3 Project
  February 2012

- **Pan Am Games Athlete’s Village**
  Financial Advisor
  December 2011
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