Introduction to Alternative Procurement Delivery

for

Florida Transportation Commission

January 24, 2013
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- APD Funding and Financing Examples
- Aon Infrastructure Solutions’ Role and Impact in APD
Alternative Project Delivery (APD) US Market Overview
### Defining Alternative Procurement Delivery

<table>
<thead>
<tr>
<th>Considered ‘APD’</th>
<th>~% of APD projects</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design/Build/Finance/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operate/Maintain</td>
<td>In addition to DBF, the private sector operates the project for a specific time period before turn over to public operation / ownership</td>
<td>65%</td>
</tr>
<tr>
<td>Design/Build/Finance</td>
<td>Shared financial responsibility using private debt/equity to completely execute a project, which is run by public sector once operational</td>
<td>25%</td>
</tr>
<tr>
<td>Build/Operate/Transfer</td>
<td>Private firm builds and operates a project for a period of time, based on government providing up-front capital and a clear operational fee structure</td>
<td>10%</td>
</tr>
<tr>
<td>Design/Build</td>
<td>Single private firm designs &amp; builds for a government project</td>
<td></td>
</tr>
<tr>
<td>Outsource</td>
<td>Non-core service outsourcing (e.g. janitorial services)</td>
<td></td>
</tr>
<tr>
<td>Design/Bid/Build</td>
<td>Traditional government acquisition model</td>
<td></td>
</tr>
</tbody>
</table>

Source:
Naval Postgraduate School - Graduate School of Business & Public Policy – Acquisition Research Program
“Project Finance” published by the Canadian Council for Public Private Partnerships
Canadian, UK and Australian publically-reported project history with AGS analysis of each APD markets
ALTERNATIVE PROJECT DELIVERY (APD) MODEL

**Key characteristics of APD**

*the model above represents one of many variations of the APD delivery model*

- Public sector holds ultimate ownership of asset
- Concessionaire procures all debt and equity financing
- Concessionaire paid according to performance based criteria through availability payments or user fees
- Term comprises construction and operations

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**Alternative Project Delivery**

- **Government**
  - Financing, design, construction & operation of asset

- **Equity**
  - Concessionaire may contribute equity and act as concessionaire
  - APD contract & routine payments

- **Debt**
  - Financing, design, construction & operation of asset

**Traditional Design-Bid-Build Procurement**

- **Government**
  - Design request
  - Building design
  - Construction contract & lump sum payment

- **Contractor**
  - Construction and warranty

- **Architect**
  - Building design

- **Debt**
  - Debt

**Construction**

- **Contractor**
  - Construction contract & lump sum payment

**Design**

- **Architect**
  - Design request
Value for Money Example

<table>
<thead>
<tr>
<th>Component</th>
<th>Traditional Delivery</th>
<th>Alternative Project Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancillary Cost</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Retained Risk</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>Financing Cost</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Base Cost</td>
<td>60</td>
<td>62</td>
</tr>
</tbody>
</table>

Example VfM = $15

• Value for Money is estimated by comparing four primary factors:
  - **Base cost**: construction cost, lifecycle cost, hard and soft facilities management costs, profit (under APD)
  - **Financing cost**: liquidity and opportunity cost, borrowing cost
  - **Retained risk**: planning and strategic, financial and accountability, design coordination, maintenance, lifecycle
  - **Ancillary cost**: internal and external project management expense, transactional expenses

• A study analyzing 28 publicly available Value for Money evaluations completed before October 2010 by Infrastructure Ontario, found that an aggregate of 11% in VfM savings had been achieved on those projects.²

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Source:
Infrastructure Ontario “Assessing Value for Money”
1) Aon Infrastructure Solutions analysis of publically-available Canadian Value for Money reports from 2005 to 2010 for aggregate savings in DBFM, DBFO, and DBFMO projects
2) Infrastructure Ontario, “Assessing Value for Money” report, 2010
### Critical Success Factors for APD Pursuit

#### Competitive Differentiation

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Key Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>• Influence the master conceptual design prior to final RFP</td>
</tr>
<tr>
<td>Construction</td>
<td>• Drive construction price down by thoughtfully teaming design, engineering, and construction</td>
</tr>
<tr>
<td>Operations &amp; Maintenance</td>
<td>• Balance lowest operation costs with realistic projections</td>
</tr>
<tr>
<td></td>
<td>• Minimize the impact of major maintenance expenditures</td>
</tr>
</tbody>
</table>

#### Right Price

| Payment Structure           | • Prioritize low construction price to win project                                  |
| Construction Price          | • Fully understand availability payment structure and negotiate appropriately         |
| Financing Structure         | • Explore all potential financing options                                           |
|                             | • Manage inter-creditor issues (bank/bond, TIFIA/bank & bond, hedge providers, etc) |
| Project Support             | • Assess political risks early and often                                             |
| Consortium Support          | • Develop awareness and political support long before RFQ                            |
|                             | • Use political support during the draft RFP stage to shape final RFP                |

#### Political Connectivity

| Design Innovation           | • Minimize overall project risk to control price                                     |
| Financing Innovation        | • Maximize value design & engineering                                                |
| Risk Transfer Innovation    | • Leverage financial engineering                                                    |
|                             | • Manage risks as effectively as possible and communicate impact to debt            |

#### Construction Team

- Influence the master conceptual design prior to final RFP
- Drive construction price down by thoughtfully teaming design, engineering, and construction
- Balance lowest operation costs with realistic projections
- Minimize the impact of major maintenance expenditures
- Prioritize low construction price to win project
- Fully understand availability payment structure and negotiate appropriately
- Explore all potential financing options
- Manage inter-creditor issues (bank/bond, TIFIA/bank & bond, hedge providers, etc)
- Assess political risks early and often
- Develop awareness and political support long before RFQ
- Use political support during the draft RFP stage to shape final RFP
- Minimize overall project risk to control price
- Maximize value design & engineering
- Leverage financial engineering
- Manage risks as effectively as possible and communicate impact to debt
Global infrastructure spending
Displayed as a percent of national GDP

- India, 6.6% (USD $114 bn)
- China, 5.1% (USD $301 bn)
- Russia, 4.6% (USD $68 bn)
- Canada, 3.4% (USD $53 bn)
- UK, 2.3% (USD $51 bn)
- US, 1.5% (USD $219 bn)

Source:
Aon Infrastructure Solution analysis based on 1990 to current GDP values from the World Bank and 1990 to current non-residential infrastructure construction values from IHS Global Insights
APD PROCUREMENT IN MATURE MARKETS

APD in the UK
APD as a percentage of non-residential infrastructure

Average = 15%

2004  2005  2006  2007  2008  2009  2010  2011
17%  15%  33%  24%  17%  13%  6%  6%

APD in Canada
APD as a percentage of non-residential infrastructure

Average = 10%

2004  2005  2006  2007  2008  2009  2010  2011
7%  9%  3%  9%  9%  6%  19%  13%

APD in Australia
APD as a percentage of non-residential infrastructure

Average = 10%

2004  2005  2006  2007  2008  2009  2010  2011
13%  4%  4%  9%  10%  5%  15%

Source:
1) IHS Global Insights and UK Treasury
2) IHS Global Insights and InfraAmericas

APD is currently 3% of infrastructure spend in the US

Average = 15%

Average = 10%
APD Funding and Financing Examples
APD SOURCES OF FUNDS

10-40% Equity

Source:
Concessionaires, private equity, hedge funds, pensions
Returns:
12.0% -20.0%+

60-90% Debt

Source:
Pensions, life insurance companies, other institutional investors
Returns:
5.5% - 9.0%

Debt financing is the key to winning APD projects

Source:
P3 Financing Comparison

Project Financing Breakdown

In USD millions

<table>
<thead>
<tr>
<th>Project</th>
<th>Equity</th>
<th>Private Debt</th>
<th>TIFIA</th>
<th>PABs</th>
<th>State Grants</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Tarrant Express</td>
<td>573</td>
<td>400</td>
<td>650</td>
<td>428</td>
<td>650</td>
</tr>
<tr>
<td>I-635 LBJ Freeway</td>
<td>496</td>
<td>615</td>
<td>850</td>
<td>665</td>
<td>2051</td>
</tr>
<tr>
<td>I-595 Corridor</td>
<td>780</td>
<td>678</td>
<td>1666</td>
<td>1528</td>
<td>2626</td>
</tr>
<tr>
<td>I-495 Capital Beltway</td>
<td>589</td>
<td>589</td>
<td>589</td>
<td>350</td>
<td>1528</td>
</tr>
</tbody>
</table>
Aon Infrastructure Solutions’ Role in APD
Risk transfer goes beyond the assignment of risk to a concessionaire; it is a commercial transaction.
AON INFRASTRUCTURE SOLUTIONS (AIS)

- Market-leading experience in construction and infrastructure risk **solutions**

- Unmatched Alternative Project Delivery (APD) **insight** and analysis

- Global network of infrastructure and APD **experts**

- Placed more than $1,600 million of construction and infrastructure premium in 2011
- More than 600 construction-infrastructure-sector dedicated professionals globally

- Advised on over 475 APD projects over the last 20 years
- Aggregated a comprehensive database of infrastructure and APD projects that provides unmatched analytical capabilities.

- Centralized the knowledge of Aon’s global network of risk, performance security, construction, and infrastructure professionals.

**AIS brings insight, expertise, and solutions to all phases of an APD project lifecycle to ensure clients are well-positioned for (1) favorable debt terms, (2) competitive bids, and (3) successful project completion and asset management**
Market Intelligence
APD Project Database

• AIS has compiled a comprehensive North American project database dating back to 2004
• This database includes project bidder, financing, performance security, and insurance details
• AIS also tracks on-going transactions and opportunities

Risk Allocation
Concession Agreement Review Tool (CART)

• CART is a global database of concession agreements, with particular focus on critical risk transfer clauses and requirements
• CART provides market intelligence on current commercial terms and industry practices.

Risk Transfer
Performance Security Innovation

• AIS is developing innovative performance security products to meet the needs of multiple stakeholders in APD projects, including contractors, lenders, and owners
• New performance security products offer increased liquidity with reduced collateral requirements and efficient pricing

Risk Education
APD, Risk and Risk Solution Workshops

• AIS facilitates workshops to better educate clients on APD related topics, including:
  – APD model, variations, and market
  – APD & “megaproject” risks
  – Risk solutions (performance security, surety, insurance)
SAMPLE OF AON’S NORTH AMERICAN APD EXPERIENCE – 2009 TO CURRENT

- De Cho Bridges P3
  - USD 168
  - Financial Close 2007

- William Bennett Bridge P3
  - USD 130
  - Financial Close 2005

- Sea to Sky Highway P3
  - USD 480
  - Financial Close 2005

- Southeast Stoney Trail P3
  - USD 750
  - Financial Close 2010

- US 36 HOT Lanes P3
  - USD 150
  - Target Financial Close: 2013

- Denver FasTracks Eagle P3
  - USD 2,085
  - Financial Close 2010

- Presidio Parkway P3
  - USD 954
  - Financial Close 2012

- North Tarrant Expressway P3
  - USD 2,013
  - Financial Close 2009

- I-635 LBJ Highway P3
  - USD 2,700
  - Financial Close 2010

- I-4 Connector DBF
  - USD 487
  - Financial Close 2010

- I-495 Capital Beltway P3
  - USD 1,800
  - Financial Close 2007

- I-595 Corridor P3
  - USD 1,760
  - Financial Close 2009

- Port of Miami Tunnel P3
  - USD 983
  - Financial Close 2009

- Goethals Bridge P3
  - USD 1,000
  - Target Financial Close: 2013

- Mid-Currituck Bridge P3
  - USD 660
  - Target Financial Close: 2013

- Connecticut Service Stations P3
  - USD 178
  - Financial Close 2009

- I-77 Hot Lanes P3
  - USD 200-600mm
  - Target Financial Close: 2013

- Northwest Corridor DBF
  - USD 800mm
  - Target Financial Close: 2013

- I-595 Corridor P3
  - USD 800mm
  - Target Financial Close: 2013

- Windsor-Essex Parkway P3
  - USD 1,400
  - Financial Close 2010

- Northwest Anthony Henday P3
  - USD 1,170
  - Financial Close 2008

- Ohio River Bridges P3
  - USD 2,900
  - Financial Close 2013

- North Tarrant Expressway P3
  - USD 2,013
  - Financial Close 2009

- I-635 LBJ Highway P3
  - USD 2,700
  - Financial Close 2010

- I-4 Connector DBF
  - USD 487
  - Financial Close 2010

- Government Advisor
- Concessionaire Advisor to Preferred Proponent
- Concessionaire Advisor

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## Project Risk and Credit Spread

### Credit Factor
- Appx. margin contribution for BBB project & 30 year bonds

### Risk-free rate
- ~3.5% yield

### Toll or Availability Payment
- 50 to 150 bps

### Availability Payer Rating
- 25 to 50 bps

### Project Risk Profile
- ~75 bps

### Contractor Risk Profile
- ~75 bps

### Contractor Supports
- ~75 bps

### Credit Factor

<table>
<thead>
<tr>
<th>Credit Factor</th>
<th>Debt Considerations</th>
<th>Aon Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Risk Profile</td>
<td>Concession agreement risk allocation</td>
<td>Concession Review Tool</td>
</tr>
<tr>
<td>Complexity of construction</td>
<td>Construction knowledge</td>
<td></td>
</tr>
<tr>
<td>Project schedule</td>
<td>APD deal knowledge</td>
<td></td>
</tr>
<tr>
<td>Construction budget</td>
<td>Construction knowledge</td>
<td></td>
</tr>
<tr>
<td>Site conditions</td>
<td>APD deal knowledge</td>
<td></td>
</tr>
<tr>
<td>Contractor Risk Profile</td>
<td>Creditworthiness</td>
<td>Cost of Credit Database &amp; advisory experience</td>
</tr>
<tr>
<td>Size, reputation and track record</td>
<td>Industry knowledge</td>
<td></td>
</tr>
<tr>
<td>Subcontractor strategy</td>
<td>Operational expertise</td>
<td></td>
</tr>
<tr>
<td>Joint venture strategy</td>
<td>Industry knowledge</td>
<td></td>
</tr>
<tr>
<td>Contractor Supports</td>
<td>Contractor replacement wording</td>
<td>Concession Review Tool</td>
</tr>
<tr>
<td>Parental guarantee</td>
<td>Contractor knowledge</td>
<td></td>
</tr>
<tr>
<td>Letter of credit</td>
<td>APD deal volume &amp; alternative products</td>
<td></td>
</tr>
<tr>
<td>Surety</td>
<td>Risk transfer tools, market expertise, construction knowledge, and deal influence</td>
<td></td>
</tr>
<tr>
<td>Subcontractor default insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Source:
Summary of DBRS, S&P, and Moody’s Project Finance / PPP Rating Models; risk free rate is 30 yr US Treasury bond as of 8/30/11