The PwC CP&I team

- c.1,000 professionals across the global network
- 800 infrastructure projects being worked on
- c.£100bn project finance deals closed in 10 years
**Introduction**

Different options exist for using private finance to deliver transport infrastructure

Most appropriate will depend on objectives of Government and specifics of project

This presentation provides a primer for certain of these options, setting out:

- Range of PPP structures
- Key considerations for Government
- Example structures:
  - Pros and cons
  - Case studies
**PPP structures**

Source: UNECE 2013

---

<table>
<thead>
<tr>
<th>Degree of private sector risk</th>
<th>Degree of private sector involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and build</td>
<td>Build and finance</td>
</tr>
<tr>
<td></td>
<td>Concession</td>
</tr>
<tr>
<td></td>
<td>DBFM-operate</td>
</tr>
<tr>
<td></td>
<td>Privatisation</td>
</tr>
</tbody>
</table>

**PPP Models**

Source: UNECE 2013
## Considerations for Government

<table>
<thead>
<tr>
<th>Category</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| Financial              | • Affordability  
                          • Certainty of outcome  
                          • Payment profile                                                   |
| Risk                   | • Risk transfer  
                          • Must consider Value for Money  
                          • Sustainability                                                    |
| Ownership              | • Sale or concession?  
                          • Constraints on use  
                          • Handback?                                                          |
| Private Sector Innovation | • Define asset or service required?  
                           • Lifecycle risk  
                           • Market competition                                                 |
| Deliverability         | • Market appetite  
                          • Complexity  
                          • Flexibility                                                       |
| Broader constraints    | • Political  
                          • Legal  
                          • Statistical/accounting                                              |
Options

Following slides present different PPP-style structures:

- **Example PPP Structures**
  - Traditional PPP structure *(Design Build Finance Maintain)*
  - Construction Financing *(Design Build Finance)*
  - Post construction financing *(Concession/Privatisation post-construction)*
Traditional PPP Model
Design Build Finance Maintain
**Traditional PPP Model**
Strengths and weaknesses

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Public sector only pays for service that it receives</td>
<td>• Cost of risk transfer (risk premium)</td>
</tr>
<tr>
<td>• Private sector incentivised to consider “whole life cost”</td>
<td>• Complexity of documentation, procurement and delivery</td>
</tr>
<tr>
<td>• Granular allocation of risk</td>
<td>• Requires strong legal framework</td>
</tr>
<tr>
<td>• Evidence indicates projects delivered on time and on budget</td>
<td>• Limited flexibility</td>
</tr>
<tr>
<td>• Significant international precedent</td>
<td></td>
</tr>
</tbody>
</table>
Construction financing
Design Build Finance

• As PPP structure but with some or all of the finance repaid through payments linked to construction milestones.

• Assets may be held by public sector or new concession may then be granted/assets sold

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Passes construction risk to private sector</td>
<td>• Private sector not incentivised to consider “whole life cost”</td>
</tr>
<tr>
<td>• Reduced PPP premium post construction</td>
<td>• Public sector pays for asset, not service – exposed to long term performance risk</td>
</tr>
<tr>
<td>• Operational flexibility</td>
<td></td>
</tr>
<tr>
<td>• Short term financing – greater liquidity in bank markets</td>
<td></td>
</tr>
</tbody>
</table>
Case study – New Tyne Crossing

- New crossing required for additional capacity
- Construction and maintenance of new road tunnel and maintenance of existing tunnel
- c.£250m (€310m) capital value
- Each bidder provided two proposals: (i) traditional PPP and (ii) significant payment at end of construction
- Value for money analysis identified latter as preferred option
**Post-construction financing**

- **Authority**
  - Construction contractor
  - Sub-contractors
  - Senior Lenders
  - Concessionaire (operations and maintenance)
  - Sub-contractors

- **CONTRACT**
- **CONCESSION AGREEMENT**
- **COLLATERAL WARRANTIES**
**Post-construction financing – strengths and weaknesses**

**Strengths**

- Reduced risk premium during construction
- Flexibility during design and build
- Removes significant complexity from procurement

**Weaknesses**

- Public sector retains construction risk which it may not be best placed to manage
- Private sector finance not involved in design – less focus on:
  - service requirement; and
  - long term cost
- Long term risk for construction
Case study – Crossrail Rolling Stock and Depot Procurement

- Procurement of 65 trains, a depot and a long term maintenance contract
- Commenced procurement as a privately financed project
- Switch to traditional procurement 13 months before close due to time constraints
- Traditional contracts but with ability to sell trains to a “ROSCO” following construction
- Sophisticated buyer
Conclusion

- Range of options for using private finance
- Preferred option depends on project and procuring authority

Source: UNECE 2013
Any questions?