The business case used to determine the optimal delivery method for the SE and W LRT assumed that the entire 27 km system from Millwoods Town Centre through downtown to Lewis Estates would be delivered as a single project with revenue service starting in January 2017.

All phases of the SE and W LRT project life cycle were factored into the business case. It assumes that Administration will oversee the preliminary engineering and performance specification development for the project. A P3 or DB contract would then be procured. Although the operations and maintenance of the LRT system would be undertaken by the City under a DB contract, the cost of the operations and maintenance, along with the associated risks, are still factored in as part of the Value for Money (VFM) assessment.

Determining the Public Sector Comparator (PSC)

The PSC is the best non-P3 delivery method and is used as the baseline for comparison against the P3 delivery option.

DBB was determined to be too risky a delivery method because of the integration risks associated with managing several contracts. This risk could lead to higher costs and increased time to complete the project.

The DB and CM methods were then assessed based on the ability to deliver the projects on-time and on-budget, and which would provide the best overall value through the entire project life cycle (design, construction and O&M phases). The ability to transfer risks to the parties best suited to handle those risks was also a factor in the assessment.

DB was selected as the PSC over CM for the SE and W LRT project because:
- it is better able to achieve schedule and cost certainty;
- as the SE and W LRT is a new style of system to Edmonton, the project offers the greatest opportunities for innovation. A DB contract allows for more innovation because of performance based specifications and contractors and designers working together;
- scope creep is less likely under a DB;
- many of the project integration risks are transferred to the contractor under a DB model.

Business Case Inputs

The business case model used the following inputs to determine if value for money could be achieved by using a P3 to deliver the SE and W LRT:

- capital cost estimate
- O&M cost estimate
- land costs

- risk adjustments for all project life cycle phases (i.e. design, construction, operations and maintenance)
- ridership
- fare revenue
- non-fare revenue
- inflation
- efficiency factors
- insurance costs
- accounting treatment
- bus savings
- the City's project management and administration costs
- discount rate
- market sounding

Although several of these inputs are the same between the two delivery methods assessed, many of these inputs vary significantly different.

Market Sounding

Market sounding was conducted as part of the business case with several North American and global contractors, designers, vehicle suppliers and financiers. The market sounding indicated that there is currently great interest in this project by the industry, and a market exists to deliver the SE and W LRT by either a DB or a P3.

Among other items, market sounding was also used to determine:
- which risks the industry is willing to accept;
- what the optimal public-to-private capital financing ratio is; and
- industry capacity.

Analysis and Results

Potential P3 commercial terms were developed based on market sounding findings along with the experiences of the Province of Alberta P3 project staff and the model used for Vancouver's Canada Line P3. Using the inputs listed above, the total cost to deliver the project and then operate and maintain the system for 30 years was determined for both the DB and P3 models. The costs were determined in 2010/2011 dollars and then escalated over the life of the project based on inflation factors and projected cash flows. This resulted in nominal cost for each delivery model.

In order to represent the cost of public vs. private borrowing, the nominal cost of the PSC was then discounted based on the same rates used by the Province of Alberta for their P3 business cases. All projected revenues are then subtracted from the discounted values to generate a Net Present Cost (NPC) for each delivery model. Projected revenues are the same for both delivery models.

The VFM amount is the difference in the NPC of the P3 and DB models. For the SE and W LRT, it has been determined that 5% to 10% VFM can be achieved. The range provided is based on the sensitivity around some of the more critical inputs, specifically:

- the discount rate;
- the efficiency factor;
- the ratio of public-to-private capital financing; and
- private sector cost of P3 debt margin.

The model was rerun several times adjusting these four factors both up and down. The 5% to 10% VFM range is based on the low and high values generated by the sensitivity analysis.