

# Total Cost of Ownership as a Guideline in the Procurement of Rail Assets

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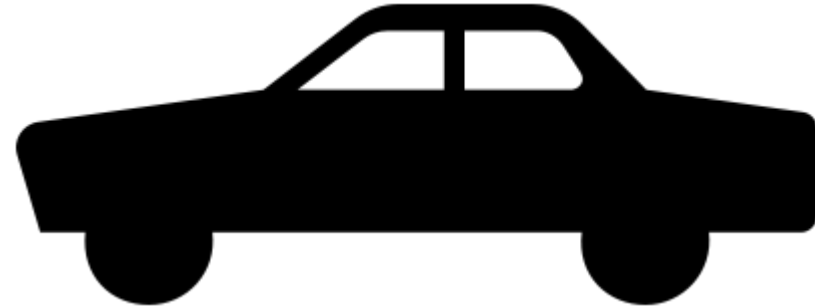
2018 Rail Conference

# Total Cost of Ownership



Source: <https://openclipart.org/detail/297781/station-wagon>

VS



Source: <https://en.wikipedia.org/wiki/File:Car.svg>

	Purchase Cost	Annual Fuel Cost	Annual Maintenance Cost	Total Cost of Ownership (5 years)
CAR A	\$4,000	\$800	\$800	\$12,000
CAR B	\$6,000	\$500	\$200	\$9,500

# Total Cost of Ownership Rail Vehicles



- TCO Vehicle ~ TCO Subsystems
- One off solutions -> higher TCO
- Standardisation can drive savings
- Lowest Capital Cost < > Lowest Lifecycle Cost

# Total Cost of Ownership Rail Systems



Civil Infrastructure



Operations & Maintenance



Track



Vehicles



Signalling



Fare Collection



Power Supply & Distribution

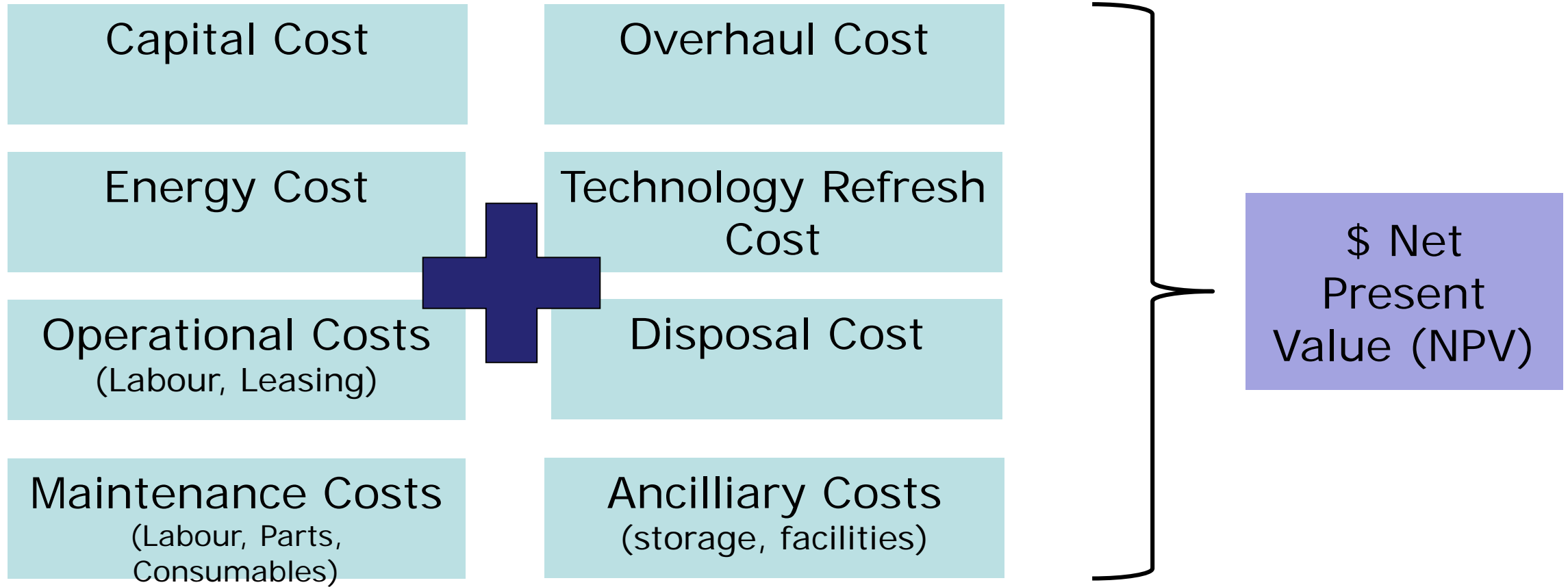


Overhead Catenary

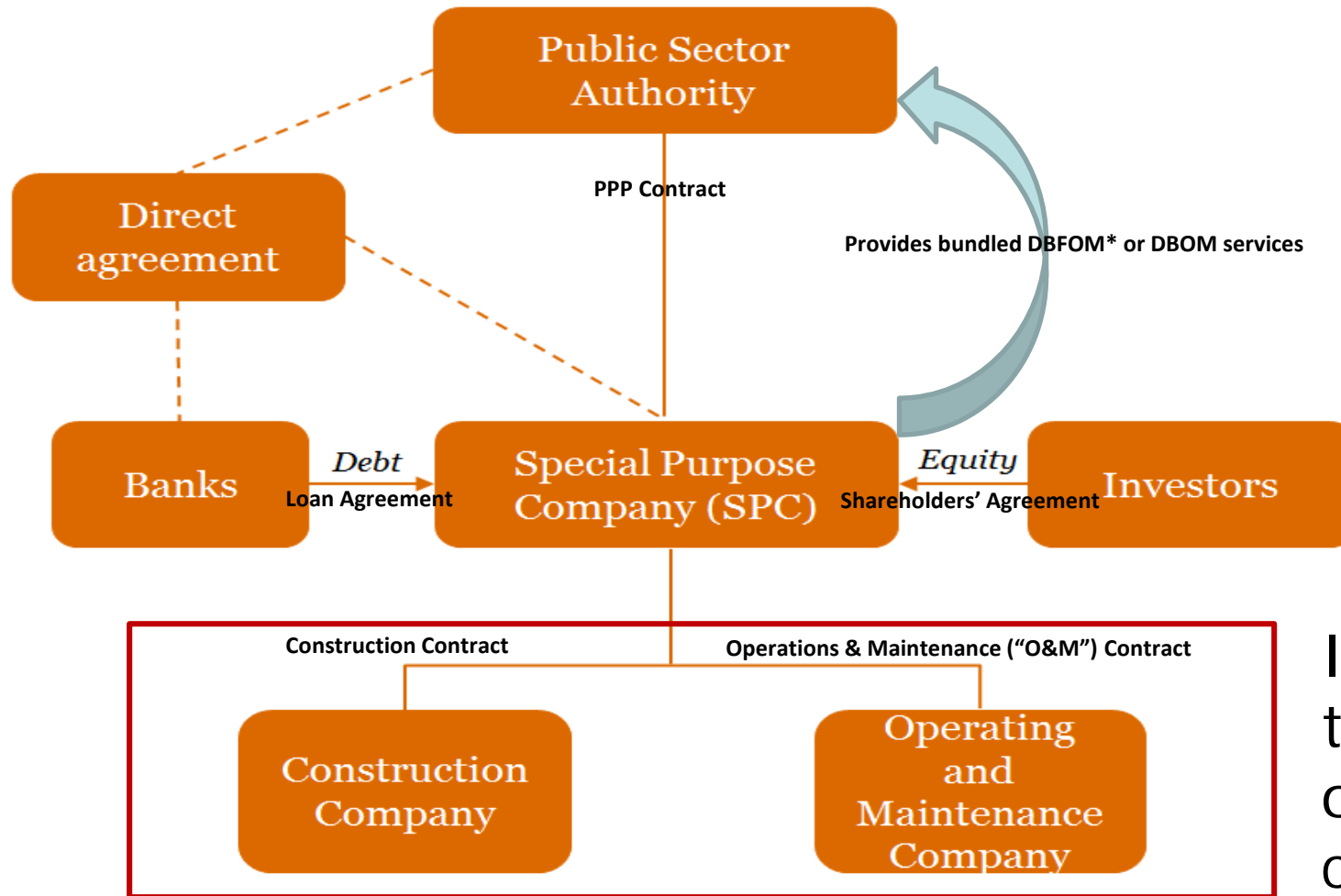


Communications

# Total Cost of Ownership Considerations



# Public Private Partnership



In a PPP, the evaluation is typically based on the NPV of the O&M and initial capital cost

\*DBFOM = Design, Build, Finance, Operate, Maintain

# Total Cost of Ownership Moving Forward

Putting TCO to work:

- For Turnkey Systems/large assets, consider PPP! (DBFOM, DBOM)
- Make TCO/LCC a criteria for asset procurement
- Consider grouping Services with new asset procurement (Maintenance, TSSSA, Parts)