

Comparison of High Capacity PT Modes for the Auckland Central Isthmus

Refer to the Central Access Plan (CAP) Programme Business Case Options Assessment, March 2016

1. The Central Access Plan (CAP) business case process commenced in August 2015, and has been jointly progressed to date by Auckland Council (Council), Auckland Transport (AT) and the New Zealand Transport Agency (Transport Agency)).
2. The CAP Programme Business Case (PBC) was completed in March 2016. The PBC confirmed the problems identified in the Strategic Case as being valid, critical and urgent.
3. The PBC process considered a large number and wide range of options to address the access problems, through multi-criteria assessment and joint stakeholder workshops. Options were shortlisted and tested as separate investment programmes. Elements of the separate programmes were then combined into an integrated investment programme (IP) for further investigation against agreed KPI's.
4. Bus Rapid Transit (BRT) and Light Rail Transit (LRT) were evaluated as options. A high-level comparison summary against key criteria is shown below. BRT was discarded through the PBC process as being far more costly than comparable LRT, uncertainty as to its constructability in the city centre, required significant property purchase, and could not be staged (ie required full investment from day 1).

Mode	BRT	LRT
Spatial requirements	Significant land-take in fringes / town centres for off-line stops, grade separation. Irequires undergrounding in city centre	Minimal (at stops), generally in road corridor
Aesthetic amenity	Improved in city centre due to under-grounding, poor in fringes / town centres	Improved due to removal of buses, environmental improvements
Capacity	Satisfies demand at 2046	Demand exceeds capacity of Dominion / Sandringham Rd LRT by 2046. Further investment required (eg Mt Eden / Manukau Rd LRT) from 2046
Average operating speed (including stops)	Journey time improves	Journey time improves plus improved reliability due to signal priority
Capital Investment	\$5.4 - \$9.2 Bn	\$1.6 - \$1.9 Bn (2018 to 2046) \$1.7 - \$2.0 Bn (from 2046) \$3.6 Bn Total for full network
Operating costs	Increase due to tunnels and u/ground stations, offset by service delivery efficiencies	additional \$13 - \$25 M per annum, service delivery efficiencies
Land development impacts	Poor in fringe / town centres due to land take and separation caused by high volume of buses on arterial corridors. Improved in city centre due to undergrounding / reduction of vehicles on streets. Good access to / from employment and residential growth areas	Improved due to removal of buses, environmental improvements, certainty for developers, considered an attractive / modern form of PT. Good access to / from employment and residential growth areas