Attachment 3: Benefits of a real time information system

Benefits for public transport users

The main benefit of a Real Time Information system for public transport users is that the system delivers reliable information about arrival and departure times. This is especially crucial if the public transport system itself lacks punctuality. Research has shown that about 80% of the passengers prefer real time information to printed timetables. Other benefits are:

- A Real Time Information system with on-street displays increases the perceived reliability, because the passengers focus more on the displays than on the printed timetables. In several studies a reduced perceived waiting time was reported, in one example the perceived waiting time decreased by 20%. Other psychological effects measured are an increased feeling of security and of control.

- Real Time Information can improve the (perceived) quality of intermodal journeys or journeys that require a vehicle change. An example is the situation at the Paraparaumu train station. The public view the connections between buses and trains as currently unreliable. Real time information can either help to guarantee the connection (by informing the bus driver when the train will arrive) and/or improve the perception of public transport users and give them greater certainty.

- A Real Time Information system is convenient and easily accessible. The user can choose from different media (Metlink homepage, txtBUS, Metlink call-centre, on-street displays) to gain reliable information, where and when needed.

- An internet application enables customers to use the system for the 'just-in-time' planning of their commuter trips, which can make public transport as a transport mode more attractive.

- A Real Time Information system can be linked to a bus priority system. It can be used to give priority at intersections to delayed buses. This increases the travel time reliability of buses thereby increasing the level of service for users. Bus priority can also be given to all buses, which leads to travel time savings. According to a conservative estimation, based on existing Real Time Information systems with signal pre-emption, the benefits will be around **$ 1.5m in the first year**. At this stage only traffic lights of the Wellington City Council have the SCATS system, which is needed for this part of the Real Time Information system. If in the future more traffic lights within the region are equipped with SCATS the benefits will increase as well.

- For the business case a conservative approach delivered passenger benefits of a Real Time Information system of **$ 1.7m in the first year**.

Benefits for Greater Wellington

The business case calculates an increase in public transport patronage due to the Real Time Information system. This increase would lead to extra revenue of ca. **$ 0.5m in the first year**, increasing per year after. Other benefits for Greater Wellington are:

- Real time information can be used to identify bottlenecks in the network. For example: Where do buses always run late? Greater Wellington can provide this information to other stakeholders, for example city councils, which can use the information for infrastructural improvements.

- The information gained from the system can be used in combination with passenger data to better plan the public transport network according to the needs of its users.

- Greater Wellington will be able to use the information gained to monitor the fulfilment of the contracts with the operators. Key performance indicators regarding punctuality and reliability can be monitored precisely and the operators can use the information to report their performance to Greater Wellington. Using the same data source will overcome discussions about the reliability of the data.

- A reliable Real Time Information system is positive for the image of public transport in the region. Especially the on-street displays are expected to contribute to the recognition of the Metlink brand.

Benefits for operators

Operators can use the information for operational, planning, monitoring and reporting purposes:

- The actual operational information gained enables both train and bus operators to react quicker to incidents. Deviations from the timetable can be recognized and this information enables the operator to solve the problem faster.

- The Real Time Information system can be linked to a bus priority system, which can speed up journey times, resulting in increased efficiency and lower costs.

- Since drivers know that they are being tracked they are less inclined to start their services early/late or deviate from the route.

- Since the accuracy of the system increases the number of complaints is likely to decrease (as recorded from the Auckland project). Passengers also react less stressed towards drivers, because they can access the information about the departure times of the bus in advance.

- Real time information can be used to provide better information for connecting services, perhaps even leading to guaranteed connections in the future.

- It helps operators to recognize timetable issues earlier and solve them in a sustainable way.

- The system can include a distress button for drivers, which can be pressed in case of an emergency.

A lot of benefits are realized for more than one group of stakeholders. The following table shows all benefits and for which group they apply:

Benefit	Passengers	Operator	Local Authority	Benefits common to all groups
Savings on journey times	✓	✓	✓	✓
Reduced number of vehicles required to operate service		✓	✓	
Avoidance of penalties from traffic commissioners		✓		
Improved regularity of service	✓	✓	✓	✓
Improved reliability of service	✓	✓	✓	✓
More realistic schedules/better adherence to schedules	✓	✓	✓	✓
Fuel cost reductions		✓	✓	
Retaining existing passengers		✓	✓	
Increase in use by existing passengers		✓	✓	
Passenger generation		✓	✓	
Increased passenger satisfaction	✓	✓	✓	✓
Less unscheduled overtime (drivers)		✓	✓	
Automatic updating of fare stages		✓		
Cost of system		✓	✓	
Improvement in service administration		✓	✓	
More effective supervision of staff		✓		
Better information on vehicle performance		✓		
Quicker response to breakdowns		✓		
Better working conditions		✓		
Reduced turnover of driver		✓		
Increased safety for drivers		✓		
Better information on driver performance		✓		
Reduced passenger waiting time at stations/stops and improvements to waiting experience	✓			
More bus priority/reduced delay at traffic signals	✓	✓	✓	✓
Reduced in vehicle time	✓			
Cost of information to passengers	✓			
Promotion of public transport through journey time savings		✓	✓	
Moving towards modal shift			✓	
Better pre-journey planning capabilities	✓		✓	
Compliance with national policy			✓	
Compliance with Local Transport Plan Objectives			✓	
Meeting local needs	✓		✓	
Promotion of social inclusion	✓		✓	
Meeting environmental targets			✓	

Not all operator benefits are equal for bus and train operators. Especially the journey time savings and related benefits don't apply for Tranz Metro, as the trains don't pass intersections.

More details regarding the benefits are given in the MWH report.