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Let's GET Wellington MOVING

# Appendix K - Golden Mile Benefits Realisation Plan

October 2021

Golden Mile Single Stage Business Case | Contract No. 1851



Futuregroup »





## Golden Mile Benefits Realisation Plan

### Background

The Golden Mile Benefits Realisation Plan is one of several benefits plans developed to compliment a suite of projects included within the Let's Get Wellington Moving (LGWM) program. A Benefits Realisation Plan (BRP) documents the Benefit Measures or Key Performance Indicators (KPI), the monitoring regime (including the responsible parties) timelines, expected results and actual results of implementing the project.

The LGWM program team have developed a Monitoring Framework<sup>1</sup> for monitoring and reporting on the impacts of the LGWM programme. The LGWM monitoring plan is used primarily to take the identified benefits and their measures from a programme level and cascade them to the project level for the Golden Mile.

The Waka Kotahi Benefits Framework<sup>2</sup> is also used to inform and develop the Golden Mile Benefits Realisation Plan.

### Scope of work

As described previously, this BRP relates to the Golden Mile in Wellington, New Zealand. The Golden Mile is described as a 2.3 km long series of streets, each with different characteristics, issues and opportunities. The Golden Mile is made up of Lambton Quay, the Old Bank Arcade loop, part of Willis Street, Manners Street and Courtenay Place. Please refer to the map below for reference.

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<sup>1</sup> LGWM Monitoring Framework DRAFT, Andy Ford, 12 May 2021.

<sup>2</sup> <https://www.nzta.govt.nz/resources/land-transport-benefits-framework-and-management-approach-guidelines/?category=&subcategory=&audience=&term=land+transport+benefits+framework>





Figure 1-1 : The Golden Mile, Wellington

### Investment Logic Mapping

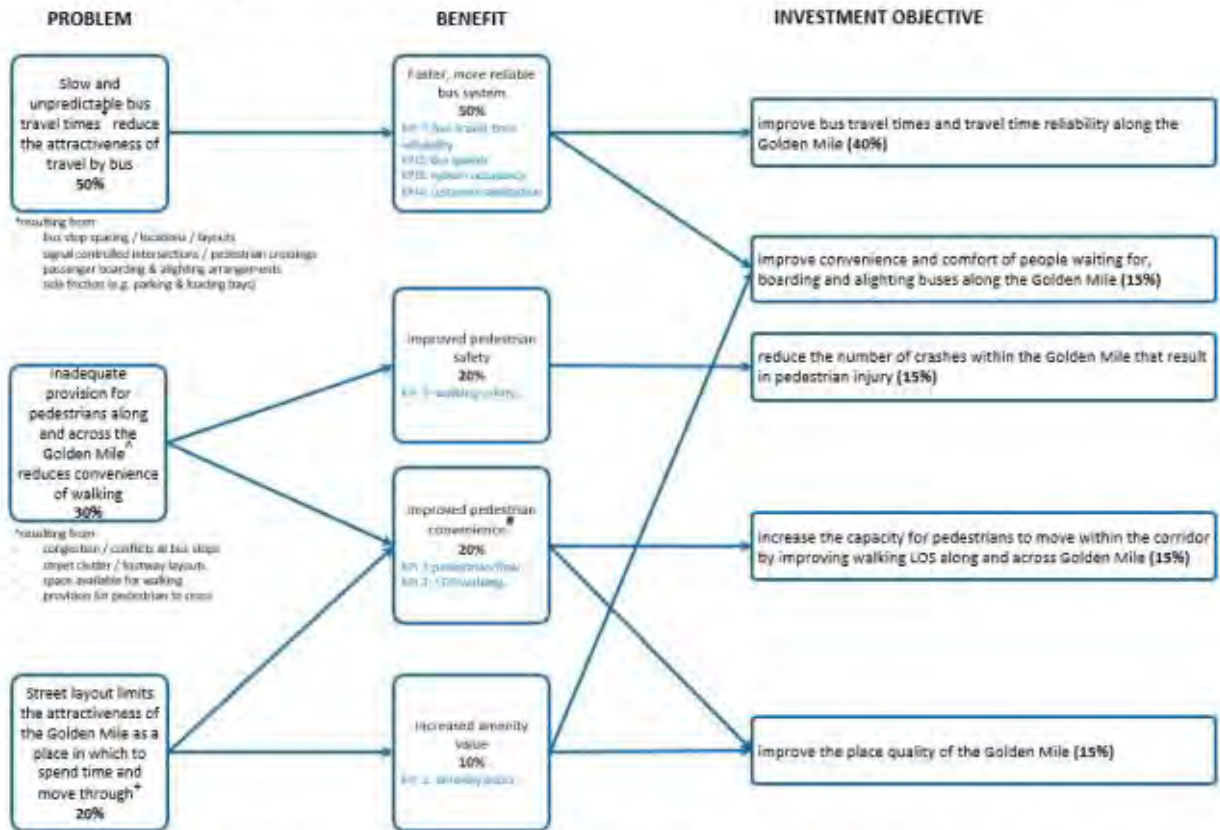
Through the development of the Golden Mile Strategic Case<sup>3</sup>, an Investment Logic Map (ILM) was used to develop and link Problems, Benefits and Investment Objectives.

The ILM is shown below as background for the development of the benefits map.

<sup>3</sup> Golden Mile Strategic Case, June 2020.

# Moving More People, Safely and More Reliably using Fewer Vehicles

## Accommodating the Growth of Wellington



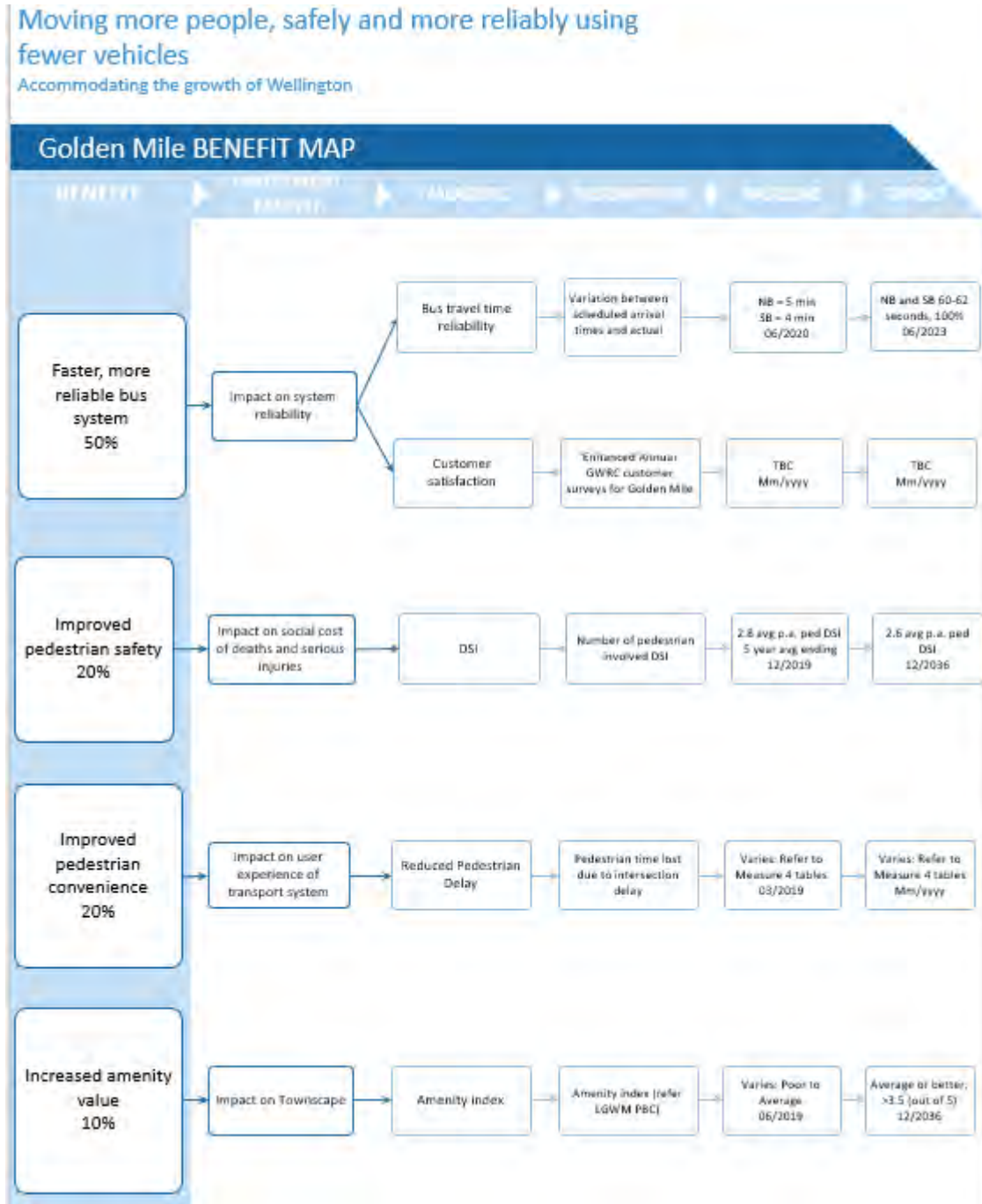
### Assumptions about Cycling in the Central City

It is recognized that the Golden Mile is an important destination for many cyclists and that Courtenay Place plays an important part of the central city cycling network. The project will seek to enhance conditions for cyclists in Courtenay Place. For other sections of the Golden Mile it is assumed that "interested but concerned" cyclists will be accommodated on parallel routes. Cyclists' access to the Golden Mile will not be reduced as a result of the project.



## Benefits Map

A benefits map, based on the ILM from the Golden Mile Strategic Case is illustrated below.



The benefits map above identified five (5) measures linked to the four investment benefits.

The measures are set out below linking to the Let's Get Wellington Moving Programme Business Case (Draft) Monitoring Plan<sup>4</sup> and subsequent monitoring and analysis reports specifically for the Golden Mile network and corridor components. Following the descriptions immediately below, tables with each measure, the reporting requirements, recommended intervals and periods is also shown.

<sup>4</sup> <https://lgwm-prod-public.s3.ap-southeast-2.amazonaws.com/public/Documents/Programme-Business-Case/APPENDIX-M-MONITORING-PLAN.PDF>





# 1 Investment Benefit - Measures

## 1.1 Bus travel time reliability

The LGWM Monitoring Framework (12 May 2021) provides direction regarding public transport travel times and reliability monitoring<sup>5</sup> and in particular recommends the following metric for monitoring:

- Travel times – monthly median (and 25<sup>th</sup> / 75<sup>th</sup> percentile) travel times for core routes and sections
- Travel time reliability – from the median and percentile range, an estimate of variability can be derived
- Aggregate – percentage of stops at timing points that are within 5 minutes of scheduled stop times, by time period.

The section identified for the Golden Mile corridor is Courtney Place to the Wellington Station. Currently, bus route 1 covers this corridor sufficiently to provide bus time reliability data using a cordon approach. For example, in the northbound direction, measure the time the bus enters the Golden Mile (at Courtney Place/Kent Terrace) and arrives at the Train Station. Timing points along the way (bus stops) can be established and elapsed time measured. Similarly, the Southbound direction can also be monitored.

Bus travel times and reliability are regularly tracked by GWRC using on-board real time tracking system on all buses.

Current variability is noted as Northbound of 5 minutes and Southbound 4 minutes. The target value is determined based on the model used in the economic model.

## 1.2 Customer satisfaction

An obvious benefit of the proposed investment will be improved levels of customer satisfaction. Survey's need to be designed and administered to gauge the current level of customer satisfaction (e.g. baseline) on the affected bus routes.

MetLink currently undertakes network wide customer satisfaction surveys on an annual basis, with these survey capturing customer perceptions of a range of attributes, including punctuality, comfort, safety etc.<sup>6</sup>

While these surveys are currently conducted network wide, similar, more focused surveys could be undertaken using the same methodology but targeting bus routes on the Golden Mile. These surveys would be undertaken by independent survey intercepts on-vehicle and provide a robust, benchmarked measure of customer experience over time.

Nominally, surveys will be undertaken on an annual basis, in keeping with MetLinks broader annual survey and are typically conducted in May.

Customer satisfaction surveys specifically addressing the Golden Mile should focus on Route 1 to provide consistency with the bus travel time reliability measures.

## 1.3 Deaths and Serious Injuries (DSI)

The LGWM Monitoring framework identifies a safety metric as measured by deaths and serious injuries through the Waka Kotahi Crash Analysis System (CAS). The focus will be presenting the data spatially in GIS, with summaries provided for the Wellington CBD and the various corridors and / or areas of the city (dependent to some extent on whether a statistically significant sample of data is available).

It is anticipated that a declining DSI rate for the Golden Mile is in line with Vision Zero is targeted.

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<sup>5</sup> LGWM Modelling Scope – April 2021 – July 2021, page 6.

<sup>6</sup> <https://www.metlink.org.nz/news-and-updates/surveys-and-reports/customer-satisfaction-survey/>



A few caveats to understand with respect to the assessments and projected targets.

- Crash numbers are small and therefore trying to extrapolate or project a specific target number is difficult to produce with a high degree of accuracy and confidence.
- Pedestrian growth is significant (expected to be upwards of 20%. DSI figures incorporate increased pedestrian growth and therefore higher exposure)
- Future target DSI includes likely improvements on the Golden Mile including infrastructural and operational (e.g. increased buses) improvements
- Baseline pedestrian DSI is an average DSI p.a. based on 2015-2019 (5-year) crash history from CAS

## 1.4 Pedestrian Delay

The Waka Kotahi non-monetised benefits manual and benefits framework have yet to specify how pedestrian delay is scoped. The measure is described as “pedestrian time lost due to intersection delay”<sup>7</sup>.

The LGWM PBC Monitoring plan identifies a number of key intersections that will be monitored as part of the Recommended Package of Improvements (RPI). Four of those intersections identified are part of the Golden Mile corridors and are recommended to be used for monitoring and reporting the pedestrian delays. The intersections are:

- Bowen Lambton
- Taranaki Courtney
- Lambton Willis
- Willis Boulcott

It is expected that pedestrian delays will be reduced at these key intersections.

The Golden Mile corridor also consists of a number of footpaths and side streets that are of interest in terms of pedestrian delay. The tables below and repeated in the Measurement section illustrate the current delays along and across the various corridor components as well as the expected level of improvements post implementation. The data is obtained from Appendix F Pedestrian Capacity of the LGWM – Golden Mile MCA report.

Note that the figures below are aggregated averages of components of each corridor section. For instance, Lambton Quay consists of ten side street crossings.

### **Pedestrian Crossings (criteria 2)**

#### **AM peak pedestrian delays along the Golden Mile (B.1)**

##### **Average Delay (seconds)**

<b>Corridor section</b>	<b>Base</b>
Lambton Quay	125
Willis Street	65
Manners Street	101
Courtney Place	151

#### **AM peak pedestrian delays across the Golden Mile (B.2)**

##### **Average Delay (seconds)**

<b>Corridor section</b>	<b>Base</b>
Lambton Quay	149

<sup>7</sup> Waka Kotahi non monetised benefits manual, page 88, section 10.1.2, August 2020.



Willis Street	73
Manners Street	101
Courtney Place	171

**PM peak pedestrian delays along the Golden Mile (B.3)**

**Average Delay (seconds)**

<b>Corridor section</b>	<b>Base</b>
Lambton Quay	110
Willis Street	64
Manners Street	107
Courtney Place	161

**PM peak pedestrian delays across the Golden Mile (B.4)**

**Average Delay (seconds)**

<b>Corridor section</b>	<b>Base</b>
Lambton Quay	147
Willis Street	76
Manners Street	107
Courtney Place	181

**Pedestrian Crossings (criteria 2)**

**AM peak pedestrian delays along the Golden Mile (B.1)**

<b>Corridor section</b>	<b>Opt 3</b>
Lambton Quay	65
Willis Street	30
Manners Street	55
Courtney Place	68

**AM peak pedestrian delays across the Golden Mile (B.2)**

<b>Corridor section</b>	<b>Opt 3</b>
Lambton Quay	118
Willis Street	42
Manners Street	60
Courtney Place	126

**PM peak pedestrian delays along the Golden Mile (B.3)**

<b>Corridor section</b>	<b>Opt 3</b>
Lambton Quay	48
Willis Street	28
Manners Street	58
Courtney Place	74





### PM peak pedestrian delays across the Golden Mile (B.4)

Corridor section	Opt 3
Lambton Quay	119
Willis Street	46
Manners Street	63
Courtney Place	134

### 1.5 Amenity Index

The Amenity Index is defined in the LGWM PBC monitoring plan. An amenity index for Wellington has been defined specifically for LGWM and is intended to demonstrate liveability within the central city. The amenity index method or data score, scores the index on a five point scale and is calculated using eight factors: traffic volumes, traffic speed, footpath area, vehicle traffic area, footpath and road material, density of street furniture and green space coverage. The metric is a constant and therefore not time specific.

The Amenity index is program wide (LGWM) but the sections relating to the Golden Mile are identified and reported graphically.

Benefit Measure Recording Sheet

<p><b>Measure 1</b></p>	<p><b>Bus travel time reliability</b></p>
<p>Description</p>	<p>Currently bus travel across the day is variable along the Golden Mile. Figures 16 and 17 from the Golden Mile Strategic Case (June 2020) illustrate a distribution of the trips across the day both north and south is illustrated below (average and standard deviation).</p> <p><i>Figure 16: Northbound travel times on Golden Mile by time of day (average and standard deviation)</i></p> <p><i>Figure 17: Southbound travel times on Golden Mile by time of day (average and standard deviation)</i></p> <p>Public Transport travel time data will be used to monitor bus travel times delivered along the Golden Mile.</p>
<p>Measure Owner</p>	<p>GWRC</p>
<p>Measure (include any calculation formulae)</p>	<p>For the purposes of assessing bus travel time reliability benefits, Route 1 is identified as representative route, as this service maintains a representative frequency and travels the full extent of the Golden Mile</p> <ul style="list-style-type: none"> <li>• Monitor Route 1 (Wellington Station – Courtney PI)</li> </ul>



Measure 1	Bus travel time reliability	
	<ul style="list-style-type: none"> <li>• Utilise on-board real time tracking systems</li> <li>• Travel times – monthly median (and 25<sup>th</sup> / 75<sup>th</sup> percentile) travel times</li> <li>• Travel time reliability – from the median and percentile range, an estimate of variability can be derived</li> <li>• Monitor Peak and off peak times.</li> </ul>	
Tolerances	<p>Current latency in data recording is a combination of 13 sec and 20 sec. Not all bus systems are currently functioning at 13 second intervals. It is expected that 13 second interval recordings will improve across the fleet (and even shorter sampling times in the future as further improvements are made).</p> <p>Therefore, the accuracy (tolerance) will be within plus minus 13 seconds.</p>	
Baseline value, source and date	<p>On average, northbound trips take 14.9 minutes and southbound trips 13.5 minutes (Golden Mile Strategic Case, June 2020). On average, the largest variance for Northbound travel is 5 minutes (time between the fastest and slowest average trip). For Southbound travel the largest average variance is 4 minutes.</p> <p>Recommend a baseline measure is sampled prior to any implementation works on the monitored corridor.</p> <p>See below for target dates.</p>	
Target value for measures	<p>Based on option 3 (the preferred option), a range between 60 and 62 seconds is expected<sup>8</sup>. Northbound = 12.6 – 13.6 minutes (range of 60 seconds) and Southbound 11.9 – 13.1 minutes (range of 62 seconds). Expect 100% met<sup>9</sup></p>	
Assumptions	<p>Runtime model used to estimate target values (from economics) range of median to upper limit travel times in the PM peak. Majority of conflict removed along corridor with RPI, resulting in the removal of almost all unreliability.<sup>10</sup></p>	
Specific actions required to achieve this measure	Download and interrogate real time data from on-board bus ticketing systems.	
Dates targets will be met	Planned Dates	
Confirm Baseline (before construction start Summer 2022)	DD MMM YYYY	
Post Implementation, Year 1 following construction (assume Winter 2023)	DD MMM YYYY	
Annual Monitoring thereafter	DD MMM YYYY	
	DD MMM YYYY	
	DD MMM YYYY	
	DD MMM YYYY	

<sup>8</sup> Economics Assessment of Short List Options for MCA, Final Report, MR Cagney, 2021, pp 16.

<sup>9</sup> LGWM Draft PBC, June 2019, Assessment of RPI (KPI 7 travel time reliability changes).

<sup>10</sup> LGWM Draft PBC, June 2019, Assessment of RPI (KPI 7 travel time reliability changes).





Measure 2	Customer satisfaction																																																														
Description	A customer satisfaction survey to highlight how people feel about their journey's in and out of the Golden Mile precinct.																																																														
Measure Owner	GWRC																																																														
Measure (include any calculation formulae)	<p>Undertake a localised Golden Mile bus survey based on existing GWRC Public Transport Survey.</p> <p>Utilise the same questions as the broader Wellington survey but specifically target the Route 1 Bus route along the Golden Mile.</p> <p>An example is shown below of the survey questions from the GWRC survey.</p> <table border="1" data-bbox="592 786 1082 1592"> <thead> <tr> <th colspan="2">Share of passengers satisfied to some extent (%)</th> </tr> </thead> <tbody> <tr><td>Personal security during this trip</td><td>Green</td></tr> <tr><td>Stop being easy to get to</td><td>Grey</td></tr> <tr><td>Ease of getting onto the vehicle from stop</td><td>Grey</td></tr> <tr><td>Ease of getting on/off the vehicle</td><td>Green</td></tr> <tr><td>Trip overall</td><td>Green</td></tr> <tr><td>Stop overall</td><td>Grey</td></tr> <tr><td>Helpfulness of the driver</td><td>Green</td></tr> <tr><td>Attitude of the driver</td><td>Green</td></tr> <tr><td>Condition of vehicle</td><td>Green</td></tr> <tr><td>Comfort of the inside temperature</td><td>Green</td></tr> <tr><td>Having enough seats available</td><td>Green</td></tr> <tr><td>Personal safety at stop</td><td>Grey</td></tr> <tr><td>Condition of stop</td><td>Grey</td></tr> <tr><td>Cleanliness of stop</td><td>Grey</td></tr> <tr><td>Public transport information currently available</td><td>Blue</td></tr> <tr><td>Information available at stop</td><td>Grey</td></tr> <tr><td>Public transport system overall</td><td>Green</td></tr> <tr><td>Ease of getting info about public transport routes and timetables</td><td>Grey</td></tr> <tr><td>Travel time</td><td>Green</td></tr> <tr><td>Value for money of the fare</td><td>Green</td></tr> <tr><td>Convenience of paying for public transport</td><td>Green</td></tr> <tr><td>How often the service runs</td><td>Green</td></tr> <tr><td>Service being on time</td><td>Green</td></tr> <tr><td>Provision of shelter from weather</td><td>Grey</td></tr> <tr><td>Information about service delays and disruptions</td><td>Grey</td></tr> </tbody> </table> <table border="1" data-bbox="1118 1368 1369 1576"> <thead> <tr> <th colspan="2">KEY</th> </tr> </thead> <tbody> <tr> <td>Green</td> <td>Current trip</td> </tr> <tr> <td>Grey</td> <td>Bus stop</td> </tr> <tr> <td>Blue</td> <td>PT Information</td> </tr> <tr> <td>White</td> <td>PT system</td> </tr> </tbody> </table> <p>A link to the GWRC survey is here <a href="https://www.metlink.org.nz/news-and-updates/surveys-and-reports/customer-satisfaction-survey/">https://www.metlink.org.nz/news-and-updates/surveys-and-reports/customer-satisfaction-survey/</a></p> <p>Given that the survey should be undertaken along the Golden Mile route, there is likely to be only 10 minutes or so to conduct the survey and therefore it is recommended that only 5 or 6 of the survey questions are used. The following are recommended:</p> <ol style="list-style-type: none"> <li>1. How often the service runs,</li> <li>2. Service being on time,</li> <li>3. Having enough seats overall</li> <li>4. Ease of getting on/off the vehicle</li> <li>5. Condition of Stop</li> <li>6. Public transport system overall</li> </ol>	Share of passengers satisfied to some extent (%)		Personal security during this trip	Green	Stop being easy to get to	Grey	Ease of getting onto the vehicle from stop	Grey	Ease of getting on/off the vehicle	Green	Trip overall	Green	Stop overall	Grey	Helpfulness of the driver	Green	Attitude of the driver	Green	Condition of vehicle	Green	Comfort of the inside temperature	Green	Having enough seats available	Green	Personal safety at stop	Grey	Condition of stop	Grey	Cleanliness of stop	Grey	Public transport information currently available	Blue	Information available at stop	Grey	Public transport system overall	Green	Ease of getting info about public transport routes and timetables	Grey	Travel time	Green	Value for money of the fare	Green	Convenience of paying for public transport	Green	How often the service runs	Green	Service being on time	Green	Provision of shelter from weather	Grey	Information about service delays and disruptions	Grey	KEY		Green	Current trip	Grey	Bus stop	Blue	PT Information	White	PT system
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Tolerances	To be determined based on the sample size.																																																														
Baseline value, source and date	A Customer Satisfaction baseline value of the Golden Mile corridor has not been established yet.																																																														

Measure 2	Customer satisfaction		
	<p>Recommend that at least 6 months prior to any implementation of improvements along the Golden Mile, a survey is undertaken to determine the baseline.</p> <p>This should be done at the same time as the wider regional public transport survey to ensure consistency.</p> <p>For context, the last regional survey (2020) identified that the Wellington Bus customer satisfaction was 95% while the rest of the region was 92%.  <a href="https://www.metlink.org.nz/assets/Uploads/2021-02-04-Metlink-Public-Transport-Customer-Satisfaction-Survey-November-2020.pdf">https://www.metlink.org.nz/assets/Uploads/2021-02-04-Metlink-Public-Transport-Customer-Satisfaction-Survey-November-2020.pdf</a></p>		
Target value for measures	TBC		
Assumptions	<p>Any comparison between the Golden Mile customer satisfaction survey and the Greater Wellington customer satisfaction survey require surveys to be conducted on the same day.</p> <p>On-board Survey            Exclude School Services.</p>		
Specific actions required to achieve this measure	<p>Annual Survey, ideally conducted at the same time as the wider GWRC PT customer satisfaction surveys.</p> <p>Should be able to isolate those surveys undertaken on Route 1 (Golden Mile service) from wider Survey.</p>		
Dates targets will be met	Planned Dates	% of End Value	
	Confirm Baseline (before construction start Summer 2022)	DD MMM YYYY	%
	Post Implementation, Year 1 following construction (assume Winter 2023)	DD MMM YYYY	%
	Annual Monitoring thereafter	DD MMM YYYY	%
		DD MMM YYYY	%
	DD MMM YYYY	%	




Measure 3		Deaths and serious injuries (DSI) Pedestrian	
Description	Number of pedestrian involved DSI along Golden Mile corridors.		
Measure Owner	WCC		
Measure (include any calculation formulae)	Utilise NZTA CAS data for pedestrian crashes (Fatal, Serious, and Injury) to obtain DSI along Golden Mile corridor.		
Tolerances	Yearly numbers are likely to fluctuate but average with downward trend from current levels are expected.		
Baseline value, source and date	Utilise NZTA CAS data. Current 5 year average (2015-2019) p.a. pedestrian DSI for the Golden Mile is 2.8.		
Target value for measures	Declining pedestrian DSI trend, reduced to less than 2.6 DSI per annum with a Vision Zero harm target.		
Assumptions	<ul style="list-style-type: none"> <li>Crash numbers are small and therefore trying to extrapolate or project a specific target number is difficult to produce with a high degree of accuracy and confidence.</li> <li>Pedestrian growth is significant (expected to be upwards of 20%. DSI figures incorporate increased pedestrian growth and therefore higher exposure)</li> <li>Future target DSI includes likely improvements on the Golden Mile including infrastructural and operational (e.g. increased buses) improvements</li> <li>Baseline pedestrian DSI is an average DSI p.a. based on 2015-2019 (5-year) crash history from CAS</li> </ul>		
Specific actions required to achieve this measure	Describe any actions required such as frequency of checking, initiating a business process, gaining approvals, obtaining expertise		
Dates targets will be met	Planned Dates	% of End Value	
Post implementation review (2026)	DD MMM YYYY	%	
5 Year intervals	DD MMM YYYY	%	
	DD MMM YYYY	%	
Baseline	DD MMM YYYY	%	
What about the change (bedding in) period	DD MMM YYYY	%	
1 year after construction			
2 year etc			
Introduction of electric buses (2026?)	DD MMM YYYY	%	

Measure 4		Reduced pedestrian delay																			
Description	Reduction in pedestrian delays at key intersections.																				
Measure Owner	WCC																				
Measure (include any calculation formulae)	<p>The LGWM PBC Monitoring plan identifies a number of key intersections that will be monitored as part of the Recommended Package of Improvements (RPI). Four of those intersections identified are part of the Golden Mile corridors and are recommended to be used for monitoring and reporting the pedestrian delays. The intersections are:</p> <ul style="list-style-type: none"> <li>• Bowen Lambton</li> <li>• Taranaki Courtney</li> <li>• Lambton Willis</li> <li>• Willis Boulcott</li> </ul> <p>The Golden Mile corridor also consists of a number of footpaths and side streets that are of interest in terms of pedestrian delay. The tables below illustrate the current delays along and across the various corridor components as well as the expected level of improvements post implementation. The data is obtained from Appendix F Pedestrian Capacity of the LGWM – Golden Mile MCA report.</p>																				
Tolerances	Describe any agreed tolerance / variation relating to this measure																				
Baseline value, source and date	<p>The Golden Mile corridor is sectioned into 4 sections for assessment. Within each section, there are a number of intersections. The values reported below are the calculated average delays for the baseline value for the respective section. Details of the assessment by intersection are available in Appendix B, page 30 of Appendix F, the Pedestrian Capacity appendix of the LGWM Golden Mile MCA report, June 2021.</p> <p>Note that the figures below represent an aggregate of average delays and the aggregate relates to multiple side streets/crossings along each corridor segment. For instance, Lambton Quay has 10 side streets that intersect.</p> <p><b>Pedestrian Crossings (criteria 2)</b></p> <p><b>AM peak pedestrian delays along the Golden Mile (B.1)</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;"></th> <th style="text-align: right;">Average Delay (seconds)</th> </tr> <tr> <th style="text-align: left;">Corridor section</th> <th style="text-align: right;">Base</th> </tr> </thead> <tbody> <tr> <td>Lambton Quay</td> <td style="text-align: right;">125</td> </tr> <tr> <td>Willis Street</td> <td style="text-align: right;">65</td> </tr> <tr> <td>Manners Street</td> <td style="text-align: right;">101</td> </tr> <tr> <td>Courtney Place</td> <td style="text-align: right;">151</td> </tr> </tbody> </table> <p><b>AM peak pedestrian delays across the Golden Mile (B.2)</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;"></th> <th style="text-align: right;">Average Delay (seconds)</th> </tr> <tr> <th style="text-align: left;">Corridor section</th> <th style="text-align: right;">Base</th> </tr> </thead> <tbody> <tr> <td>Lambton Quay</td> <td style="text-align: right;">149</td> </tr> </tbody> </table>				Average Delay (seconds)	Corridor section	Base	Lambton Quay	125	Willis Street	65	Manners Street	101	Courtney Place	151		Average Delay (seconds)	Corridor section	Base	Lambton Quay	149
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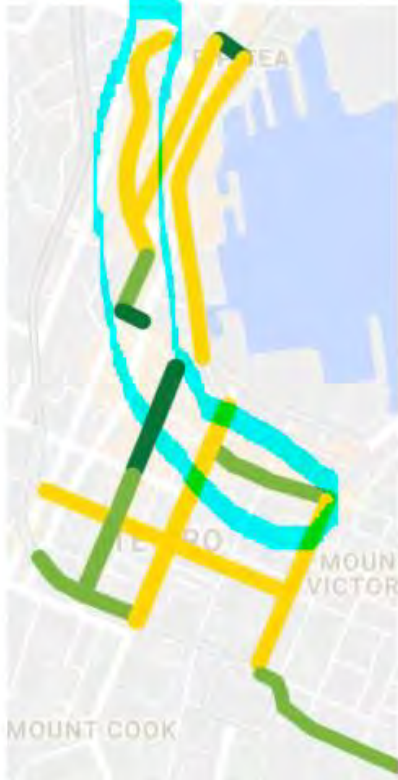
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Measure 4	Reduced pedestrian delay	
	<p>Lambton Quay 48</p> <p>Willis Street 28</p> <p>Manners Street 58</p> <p>Courtney Place 74</p> <p><b>PM peak pedestrian delays across the Golden Mile (B.4)</b></p> <p><b>Corridor section</b></p> <p>Lambton Quay 119</p> <p>Willis Street 46</p> <p>Manners Street 63</p> <p>Courtney Place 134</p>	<p><b>Opt 3</b></p>
Assumptions	<ul style="list-style-type: none"> <li>• Pedestrian volumes obtained from the LGWM PBC Active Mode Visualisation tool were found to be lower than expected demand, therefore volumes were scaled up based on 2019 March monitoring volumes</li> <li>• Future signal timings were taken from the AimSun Golden Mile Traffic Model</li> <li>• A conservative approach was taken to determine the number of crossing pedestrian: <ul style="list-style-type: none"> <li>○ It was assumed that pedestrians crossing along (parallel) the Golden Mile were the lower of the total ped volumes on the sections adjacent to the crossing</li> <li>○ No data was available for pedestrian crossing across (perpendicular) at designated crossings for both signalised and unsignalized crossing locations, therefore it was assumed that 50% of the pedestrians crossing along (as identified above) would cross across.</li> </ul> </li> </ul>	
Specific actions required to achieve this measure	Describe any actions required such as frequency of checking, initiating a business process, gaining approvals, obtaining expertise	
Dates targets will be met	Planned Dates	End Value
Baseline (before construction)	DD MMM YYYY	Tabular, averaged numbers as above for along and across the Golden Mile.
One year after completion	DD MMM YYYY	
Annually	DD MMM YYYY	
	DD MMM YYYY	
	DD MMM YYYY	

Measure 5	Amenity index
<p>Description</p>	<p>Amenity covers all modes but is likely to have the greatest impact on pedestrians who spend the longest time in the environment. Urban amenity covers a range of different aspects including noise and vibration, open space, density, vegetation and landscaping, urban design, culture and heritage, character, views, safety, security, accessibility and a sense of well-being. An amenity index for Wellington has been defined specifically for LGWM and is intended to demonstrate liveability within the central city.</p> <p>The amenity index is indicated for the segments of the LGWM project that are specific to the Golden Mile corridor.</p>
<p>Measure Owner</p>	<p>WCC</p>
<p>Measure (include any calculation formulae)</p>	<p>An amenity index has been defined and can be calculated for each street section in the LGWM program<sup>11</sup>. This index scores streets on a five point scale and is calculated using eight factors: traffic volumes, traffic speed, footpath area, vehicle traffic area, footpath and road material, density of street furniture, and green space coverage.</p> <p>This can then be presented graphically using geospatial analysis tools, or in a tabular format for key areas. An overall average score is then calculated using the length weighted scores for measured streets.</p>
<p>Tolerances</p>	<p>Describe any agreed tolerance / variation relating to this measure</p>
<p>Baseline value, source and date</p>	<p>Current amenity baseline is obtained from the LGWM PBC Draft (release 21 June 2019). The map below shows the broader LGWM corridors with the Golden Mile corridor segments circled in light blue.</p> 
<p>Target value for measures</p>	<p>Improve the LGWM Amenity Index to an 'Average' standard or better for all key routes by 2036.</p> <p>Map shown below illustrates the expected outcome by 2036, the Golden Mile corridor segments encircled in light blue. Golden Mile components are expected to be at least "Average" or "Good".</p>

<sup>11</sup> LGWM Draft PBC, June 2019, Assessment of RPI (KPI 1 Amenity Index).

Measure 5	Amenity index	
	 <p data-bbox="507 1249 1382 1312">Recommended Package Improvements (RPI) calculates a score of 3.5 out of 5 by 2036 at programme level (LGWM).</p>	
Assumptions	<p data-bbox="507 1361 1382 1424">Recommended Package Improvements (RPI) calculates a score of 3.5 out of 5 by 2036 for the program (LGWM).</p> <ul data-bbox="507 1435 1382 1682" style="list-style-type: none"> <li>• The RPI delivers amenity benefits across the CBD by redirecting traffic to the State Highway</li> <li>• CBD speed reductions also contribute to increased amenity</li> <li>• Some reallocation of road space leads to improvements along waterfront and Vivian Street</li> <li>• Significant improvement in amenity along Karo Drive due to construction of linear park on top of State Highway</li> </ul> <p data-bbox="507 1693 1382 1756">Consideration of amenity index outcomes required as part of investigation and design as some factors are infrastructure driven.</p>	
Specific actions required to achieve this measure	Describe any actions required such as frequency of checking, initiating a business process, gaining approvals, obtaining expertise	
Dates targets will be met 1 year, post implementation Reporting year, 2036.	Planned Dates	% of End Value
	DD MMM YYYY	%
	DD MMM YYYY	%
	DD MMM YYYY	%
	DD MMM YYYY	%





Measure 5	Amenity index	
	DD MMM YYYY	%
	DD MMM YYYY	%



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