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## Setting a strategic vision for our streets: Auckland Transport's updated Roads and Streets Framework

For decision:

For noting:

### Ngā tūhonga / Recommendations

That the Auckland Transport Board (board):

- a) approve the updated Roads and Streets Framework for use as a key element of Auckland Transport's project planning system.
- b) approve the Roads and Streets Framework for public release, including a Geographic Information System (GIS) map, displaying Movement/Place information (once a baseline assessment of the full region is completed).

### Te whakarāpopotanga matua / Executive summary

1. This paper presents the revision of the Roads and Streets Framework (The Framework) and seeks approval for its adoption and release.
2. The Framework provides a systematic methodology for identifying the 'Place' and 'Movement' functions of roads and streets and setting their modal priorities. In doing this, it reflects the needs and catchment of the adjoining land use as well as the movement of people, goods and services. It enables these varying functions to be captured and defined early on, setting the vision and identifying potential conflicts, enabling outcomes which are strategically sound and locally relevant.
3. Since the Framework's release in 2017, several issues have come to light with the scope and application of the Framework, A review was undertaken by AT and Auckland Council to address these issues and incorporate current best practice thinking from around the world.
4. The Framework is now in its final version after a period of piloting approved by the Customer and Innovation Committee ("CIC") in 2019.
5. While Covid-19 has diverted attention to other issues, we seek approval of the revised Framework so it can be used for ongoing project development and be published to provide clarity on our approach. The Framework provides guidance on developing streets which better meet the needs of users, and automatically reflects changes in behaviour. The need for this approach is particularly relevant post Covid-19 lockdown.

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## Ngā tuhinga ō mua / Previous deliberations

6. The Framework was originally approved by the Board for use in 2017. This updated approach to the Framework was presented to the CIC and Auckland Council Planning Committee.

Date	Report Title	Key Outcomes
October 2017	AT Roads & Streets Framework and the Transport Design Manual	The Board approved the Framework, noted the Framework's role in improving strategic guidance and the wide engagement undertaken. It also noted that a review will be undertaken.
July 2019	Revised Roads and Streets Framework	The Executive Leadership Team supported The Framework revision and noted that being clear with the community about the strategic purpose of each road and street could be beneficial but could also cause complications if people disagree.
August 2019	Presentation of the updated Framework to the Customer and Innovation Committee	The Committee agreed to piloting the use of the revised Framework, and engagement with Local Boards and the Council's Planning Committee, prior to seeking final Board approval.
August 2019	Presentation to Council Planning Committee	The Planning Committee strongly supported the updated Framework and indicated their support for the update and its role in setting strategic guidance to project teams

## Te horopaki me te tīaroaro rautaki / Context and strategic alignment

7. For around five decades, transport planning assumed that the purpose of roads and streets was to move people through them, usually in private motor vehicles. Recently there has been greater emphasis on:
- the role roads and streets play not just as movement corridors, but also as 'places' – destinations themselves,
  - the need to support different modes of transport to different levels, depending on their place in a network.
8. In response to this evolution in thinking, AT developed the Roads and Streets Framework in 2017. The Framework since then has formed a core part of the project development lifecycle.
9. The Framework links network-wide strategy for land use and transport with business case, design and network management activity – ensuring transport and land use issues are considered whenever changes to existing roads and streets are made.
10. Through a robust, evidence-based assessment process, a 'movement' and 'place' value is assigned to a street for its current and future strategic role.

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11. The assessment then determines the modal priorities of the road or street in three scenarios – ‘current out the window’, ‘current if strategy was implemented’ and ‘future, given plans’.
12. The results of these assessments (and the underlining assumptions and working) are captured in a mandate document and kept in a GIS database, showing each road with a colour to indicate where on the typology matrix it is located. Transport safety is a core component of the assessment, aligning with Vision Zero, and the mandate captures transport safety issues and projects future issues needing early intervention.
13. The Framework does not provide ‘the answer’ for streets, only guidance – for instance it does not allocate space or provide a cross-section. As there are many unique characteristics of streets there is not a ‘one size fits all’ answer. Instead its purpose is ensuring that a holistic consideration of the full role of a street or road is incorporated into later project development phases, including the design process.

**Ngā matapakinga me ngā tātaritanga / Discussion and analysis**

14. The key issue for the Board is whether to approve this revised version of the Framework, now that its trial period is complete, and allow the publication of GIS maps showing the outcomes of network assessments made using the Framework.
15. Following the release of the original Framework in 2017 a number of issues emerged, including the potential for additional project costs to be driven by the design elements included in the Framework. This Framework has been revised to address these issues and incorporate the latest international best practice from other similar frameworks.
16. The issues, and the changes we have made to address them, are as follows:
  - **Governance and process** – there was previously no governance or ownership, leading to inconsistent outcomes and no oversight. The revised process mandates a working group to lead the assessments and steering group to approve the assessments.
  - **Definition of Place** – the previous Framework had a narrow definition, focused on place quality, which risked bias in favour of inner-city locations and missed the strategic importance of other land-use types that also play a key role in city functionality. The new definition resolves these issues, capturing a proxy of ‘how far people will come to this place’, and applies it across a range of land-use types.
  - **Safety assessment** – the previous version had a limited consideration of safety, while the new Framework uses agreed safety data and methodology and has the safety outputs as a standalone part of the resulting mandate document.
  - **Design** – the previous Framework included design elements within its guidance, which confused the guidance and risked ‘gold-plating’ projects. The new version removes all design elements and refers users to the new Transport Design Manual.
17. Having piloted the revised Framework on various key AT projects over the past few months, we are confident that the new Framework (together with the new GIS-based display of information) addresses the issues with the old approach and will produce more consistent, clear and strategically aligned guidance. We also recommend publishing the network assessment maps, which occurs in other jurisdictions such as London, will help to provide clarity external audiences on the approach taken and the background to project development.

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## **Ngā tūraru matua / Key risks and mitigations**

18. There is a risk that publication of the GIS system containing assessments under the Framework could lead to public comment and disagreement. The likelihood of this is low given the experience of other jurisdictions. The consequence would be a need for stronger communication and explanation. To mitigate this risk we will ensure the map release will only provide the movement and place part of the assessment, with supporting information to explain the outcomes.
19. Once the Framework is released there will be minor updates needed to the Transport Design Manual, which was written in reference to the previous Framework. The author of the Transport Design Manual has planned this for the next release version of the Manual.

## **Ngā ritenga-ā-pūtea me ngā rauemi / Financial and resource impacts**

20. Assessments are conducted in-house using existing resources from the Auckland Council whanau. There are no ongoing costs apart from staff time. The previous version used external resources, meaning this revision is a cost saving to AT.

## **Ngā whaiwhakaaro ō te taiao me te panonitanga o te āhuarangi / Environment and climate change considerations**

21. The Framework uses as its source of assessment all relevant land use and transport planning information and aligns with the environmental outcomes prescribed in those documents. The recognition of multi-modal outcomes also supports mode shift goals shift to more sustainable transport modes.

## **Ngā reo o mana whenua rātou ko ngā mema pooti, ko ngā roopu kei raro i te maru o te Kaunihera, ko ngā hāpori katoa / Voice of mana whenua, elected members, Council Controlled Organisations, customer and community**

22. In developing the revised Framework we engaged with a range of partners and stakeholders. The overall response was positive and there were some amendments in response to feedback, as follows:
  - Auckland Councillors and officers (directly) - strong endorsement and support, keen for publication,
  - Local Boards (via brochure) - emphasise local plans and the need for local characteristics to be important throughout design,

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- AT Māori engagement team (direct) - ensure that cultural sites are recognised as highly significant sites so that surrounding roads and streets support and reinforce their role and reinforce the Treaty commitments,
- Panuku (directly via officers) - support for Framework and desire to continue involvement in assessments,
- Transport planning / design industry (directly) - strong support and desire for urgent publication to guide their work.

**Ngā whaiwhakaaro haumarū me ngā whaiwhakaaro hauora / Health, safety and wellbeing considerations**

23. There is no risk to the health, safety or wellbeing of any staff member or community member from the application or use of the Framework.
24. The Framework revision has been developed with considerable input from the Transport Safety team at AT. A transport safety assessment reflecting Vision Zero principles, forms part of the Framework assessment and is then captured in the mandate document, so that the applicable project teams are informed of transport system safety issues and are instructed to work to remedy them.

**Ā muri ake nei / Next steps**



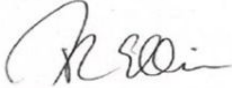
25. Once approved, the project team will continue the baseline assessment of the road network using the Framework and will publish the Geographic Information System map once the baseline is complete for internal and external audiences.
26. The project team will then undertake project-specific assessments in an ongoing manner, and will oversee an internal communication campaign to highlight the revision emphasise the importance of its use.

**Te whakapiringa / Attachment**

Attachment number	Description
1	Current draft of the Roads and Streets Framework

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## Te pou whenua tuhinga / Document ownership

<b>Submitted by</b>	Andrew McGill <b>Head of Integrated Network Planning</b>	
<b>Recommended by</b>	Jenny Chetwynd <b>Executive General Manager, Planning and Investment</b>	
<b>Approved for submission</b>	Shane Ellison <b>Chief Executive</b>	

Version 2: 2020



# Roads and Streets Framework

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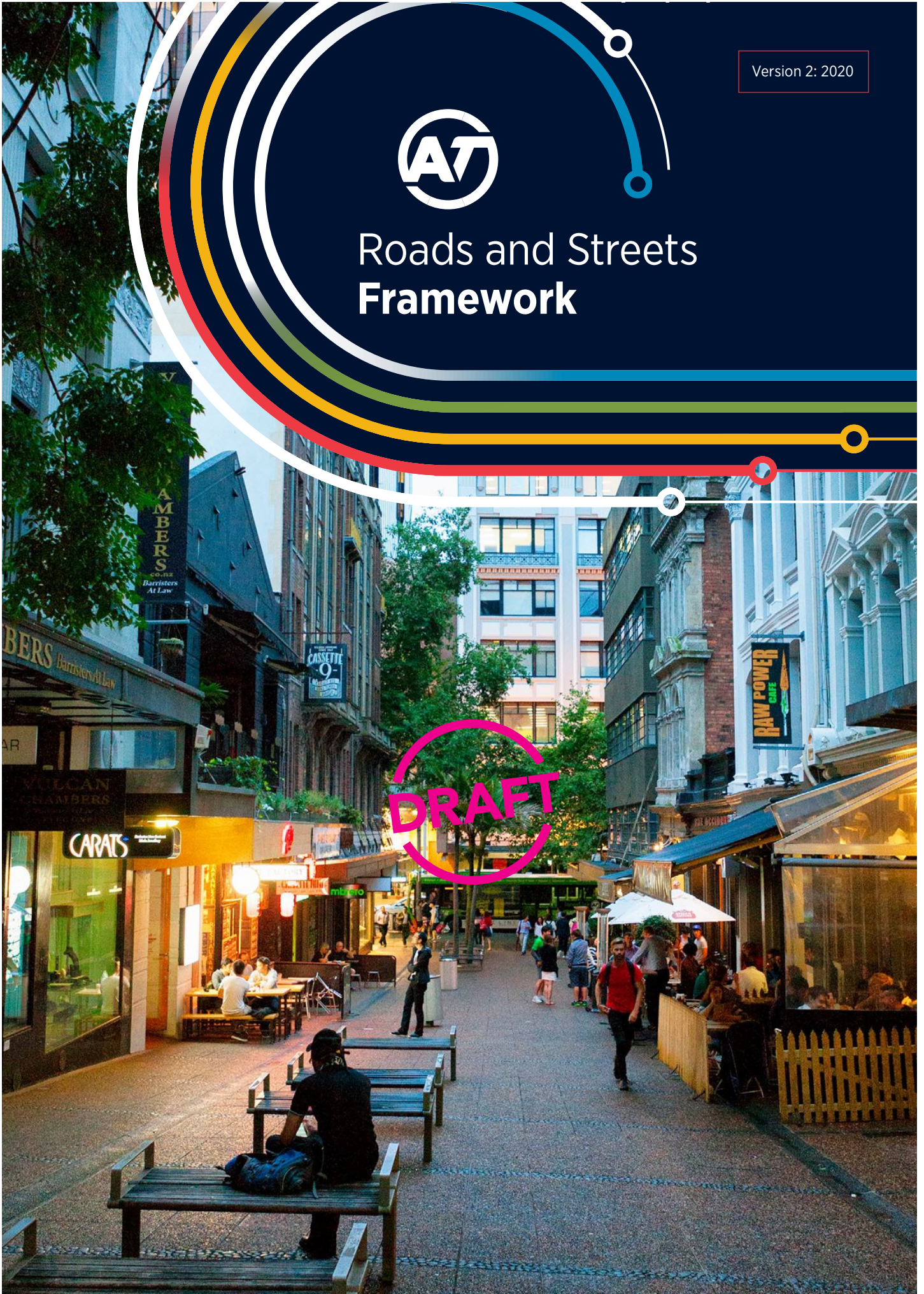
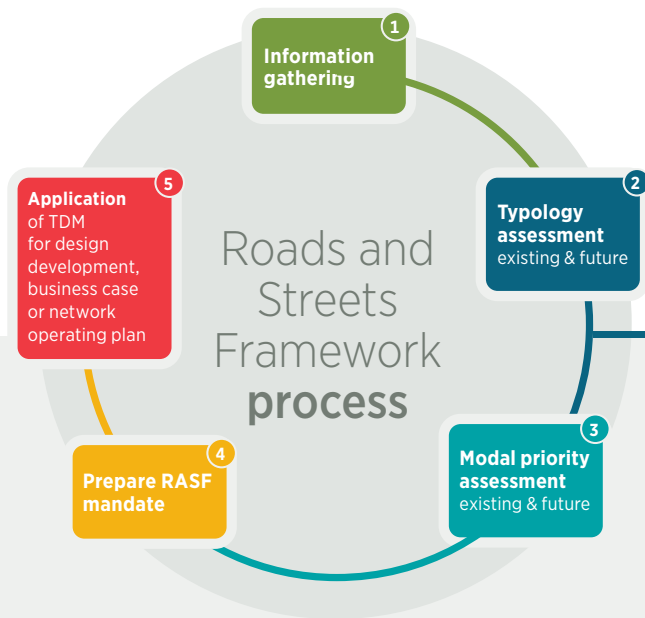


Figure 1 RASF process



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## What you need to know about the Roads and Streets Framework

Roads and streets represent a large portion of public space in Auckland with many activities, buildings and destinations fronting them. Over the last few years, Auckland Transport, along with Auckland Council, has been looking at better ways to plan and manage our roads and streets to better reflect the full range of modes, activities and functions that occur on them.

The Roads and Streets Framework (RASF) is a guiding document which provides a systematic and consistent methodology for identifying the different functions of roads and streets in Auckland. It uses the concepts of 'Place' and 'Movement' to reflect the strategic role of each function within Auckland.

For the purposes of the RASF, Place and Movement function are defined as follows:

- Place function: Represents the extent to which a road or street (and its adjacent land use) is a destination in its own right, i.e. what catchment does the area service/how far are people prepared to travel to go there.
- Movement function: Represents a road or street's level of strategic importance within the transport network for any mode in terms of moving people, goods and/or services efficiently between locations and accessing key destinations.

Strategic documents such as the Government Policy Statement on Land Transport, the Auckland Transport Alignment Project, the Auckland Plan and the Auckland Unitary Plan feed into the RASF, giving strategic direction. In turn, the RASF provides the guidance for individual streets, identifying their principles and strategic modal priorities.

The broad steps of the RASF process are outlined in Figure 1. **The RASF provides a framework for thinking about the Place and Movement function and identifies their level of significance. It is not intended to provide solutions and does not provide definitive design guidance. Instead it is the first step in a process to identify the issues that must be addressed by a project.**

Through the RASF, all roads and streets in Auckland will eventually be classified as one of nine typologies based on the strategic significance of their Place and Movement functions. Roads and streets change throughout their length and so they are split into sections and assessed individually where appropriate. Modal priorities for each road or street are also identified through the RASF and provide guidance for project teams on the priorities for road space allocation.

Roads and streets should be assessed for both their existing function and also for the future. A different function and/or modal priority may be identified for the future due to an operating gap, a planned project or land use change. This is then documented in the RASF Mandate, which guides business case development and design.

The RASF Mandate is the key output from the RASF. It summarises the outputs from the RASF process and gives guidance to project teams as they undertake a business case. It creates appropriate outcomes by enabling project teams to make design decisions with a more informed understanding of the strategic functions of a road or street. The Transport Design Manual (TDM) is then used to inform and develop the design

CHAPTER

# 1

## A new approach to roads and streets

More than 1.6 million people live in Auckland. Over the next 30 years this is expected to increase by another 720,000 people to reach around 2.4 million. This would mean that another 313,000 dwellings and 263,000 jobs are required over this period. The combination of this growth and the development of new residential and commercial areas is placing increasing pressure on the transport network. To manage this, roads and streets need to do more than just provide for traffic movement. Understanding their function in terms of both Place and Movement provides an informed view for developing an integrated, multi-modal network which celebrates Auckland as a vibrant, world class city where people want to live, work, play and visit.

## What is the Roads and Streets Framework?

The Roads and Streets Framework (RASF) provides a systematic and consistent methodology for identifying the Place and Movement functions of roads and streets. In doing this, it reflects the needs and catchment of the adjoining land use as well as the movement of people, goods and services. It enables these varying functions to be captured and defined early on, setting the vision and identifying potential conflicts.

The RASF brings together these Place and Movement functions to support the aspirations of the Auckland Plan. It is designed for use on both existing and new roads and streets, including undeveloped parcels of land within Auckland.

The RASF enables the Place and Movement function for a specific road or street to be determined through assigning a typology and establishing modal priorities. It also incorporates Auckland Transport's Vision Zero approach to road safety. It is crucial that these are established prior to any design work commencing as they will guide and shape the outcomes.

In all contexts, the RASF provides a vision and a mandate for new projects which informs design and is both strategically sound and locally relevant.

## Where does the Roads and Streets Framework fit in?

The RASF is one of the first steps in project development and Figure 2 shows how it fits into Auckland's wider strategic network. It enables modal conflicts to be identified early on and thus informs the business case and design process.

**The RASF informs the prioritisation of uses of a road or street but does not provide the definitive solution for a project such as, design guidance, cross-sections or typical treatments** – this ultimately happens through the business case process where strategic priorities and design considerations are weighted against available funding and the TDM. The RASF also provides modal priority guidance to the Network Operating Plan (NOP) for the day-to-day operational management of the transport network.



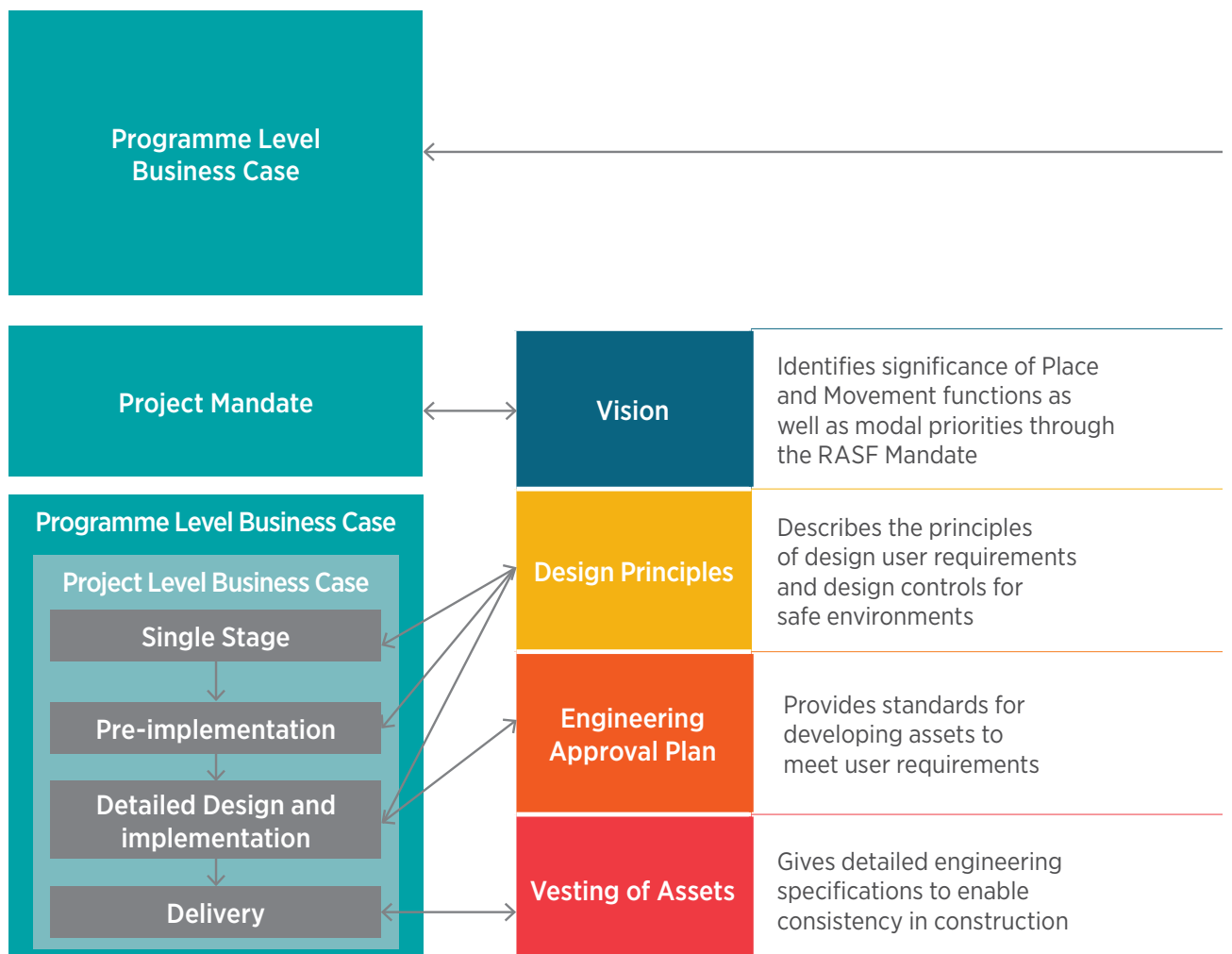
**THE ROADS AND STREETS FRAMEWORK AND VISION ZERO FOR AUCKLAND**

**Vision Zero for Tāmaki Makaurau – A Transport Safety Strategy and Action Plan** sets the goal of zero deaths and serious injuries on our network by 2050. Vision Zero puts people first and is based on the principle that it isn't acceptable for people to be killed or seriously injured while using the transport network. It doesn't mean that there will be no crashes, but when these do occur the transport system has been designed so people survive and aren't seriously injured. Currently each week in Auckland one person loses their life on our network and a further fourteen are seriously injured. The transport network has large safety deficiencies, particularly for active road users, with 71% of the network not designed for Safe and Appropriate Speeds.

Safe transport is vital to our city's success, a Vision Zero network is about safety for all modes; no matter their priority. Creating a transport network that protects and improves conditions for walking, cycling and public transport can lead to a more vibrant healthy city and aligns strongly with the Auckland Plan, Government Policy Statement on Transport and the Auckland Transport Alignment Project.

Safety is often seen as a design issue however the sooner Vision Zero principles are built into projects the greater the safety outcome. By completing the safety component of the RASF mandate a clear safety assessment and direction will be produced.

Figure 2 The RASF within the boarder planning framework

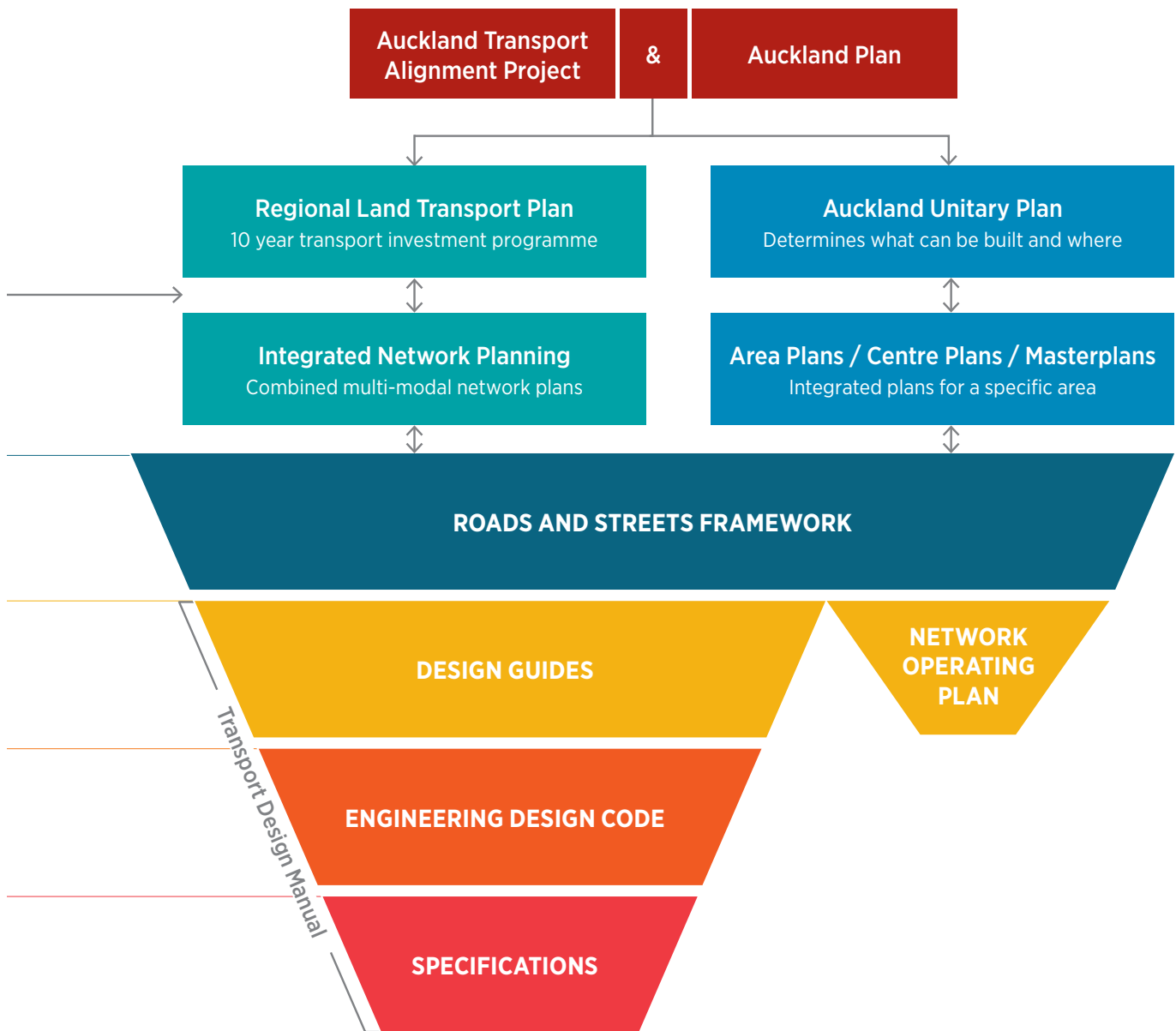


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## Who is the Roads and Streets Framework for?

To ensure a consistent approach that is well aligned to Auckland Transport’s and Auckland Council’s policy and strategic direction, the RASF process will be led by the Integrated Network Planning team (Auckland Transport), the Auckland Design Office (Auckland Council) and the Design & Standards team (Auckland Transport). Where the development of a road or street is being led by the private sector, including as part of a subdivision, the RASF process will be undertaken in close collaboration between the developer and the relevant Auckland Transport and Auckland Council teams. At present the RASF is not mandated for developers, however Auckland Transport is keen to work with the private sector to ensure that proposals align to Auckland Transport’s strategy documents, such as the Auckland Transport Alignment Project, Regional Land Transport Plan, Vision Zero, Parking Strategy and so on.

The output of the RASF is the RASF Mandate, which indicates the street typology and modal priorities within the context of the road or street being assessed both for existing and future. This will be available to project teams from the start of the project to inform and guide design development.



CHAPTER

# 2

## The primary functions of roads and streets



In the context of the RASF, roads and streets have two primary functions: Place and Movement. They are often destinations in their own right and support the adjacent land use, as well as providing for the movement of people, goods and services. The strategic significance of these functions varies depending on context. Understanding these functions in the context of Auckland as a whole is an important first step in ensuring that roads and streets meet the needs of the people who use them.

It is important to acknowledge that while all roads and streets will be considered of high significance by those who live and work on them, this is not necessarily an indication of their significance within the context of the whole Auckland region. This new approach to Place and Movement outlines the regional significance of the street in terms of its role in the wider networks across Auckland.

## Defining Place function

For the purposes of this framework, Place function represents **the catchment of a road or street and its adjacent land use as a destination in its own right, i.e. how far people are prepared to travel to go there.** This is a focussed definition as during the design process and application of the TDM, a fuller appreciation of Place concepts and design outcomes will be applied.

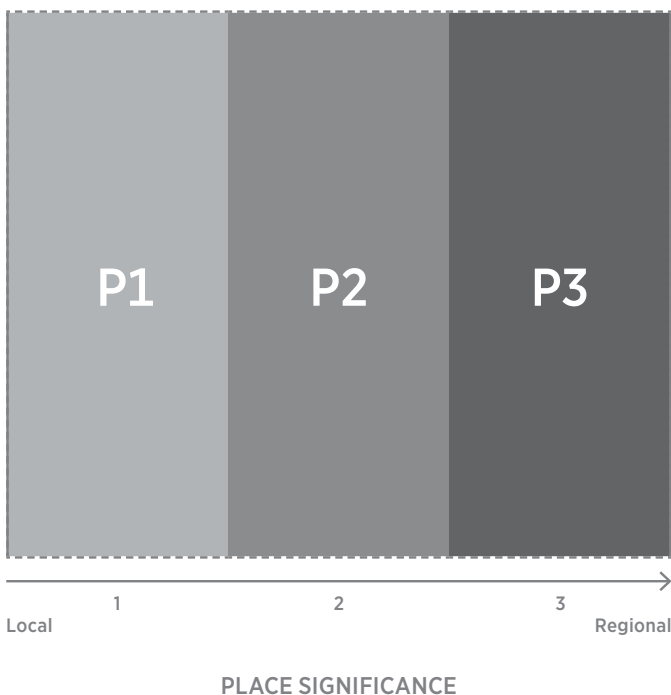
A road or street's catchment is influenced by the density, type and variety of adjacent land uses and its economic significance, so it is important that these are well understood.

For example, a street with high end retail, bars and restaurants along it may attract people from a wider catchment (i.e. across the city) and thus have a higher strategic significance for Place. However, a residential street with a local dairy and café will attract people from a much smaller catchment and so will have a lower strategic significance for Place.

Place is not necessarily a measure of amenity or aesthetics. It is possible for streets with high amenity to have a low Place significance and it is also possible for streets with a high Place significance to have low amenity.

For the purposes of the Roads and Streets Framework, Place is assessed as one of three categories, according to its strategic role significance.

Figure 3 The Place significance



For example, a new residential development with expensive paving materials and bespoke street furniture may look as though it should have a high Place significance due to the materials used, however the catchment is local and so it has a low Place significance.

Whereas a town square surrounded by cultural buildings without any public seating and with inadequate street lighting still has a high Place significance even though its environment may not reflect this.

Key commercial or industrial sites, which support wide catchments, may also have a high Place significance even though they lack aesthetic value or large numbers of people.

By understanding Place significance, informed design decisions can be made, ensuring the design better reflects the road or street.

## Defining Movement function

The Movement function of a road or street is its level of strategic importance within the transport network, measured in terms of moving people, goods and services safely and efficiently between locations and accessing key destinations.

For example, a road or street which is part of the Frequent Transit Network for public transport will have a higher Movement significance than a road or street with a local or less frequent public transport service as it has a role to move more people.

Movement significance is mode agnostic and should be assessed for all modes such as people travelling on foot, by bike, by public transport, by car and the movement of freight and service vehicles. Auckland Transport's strategic modal networks are an important input into any RASF assessment.

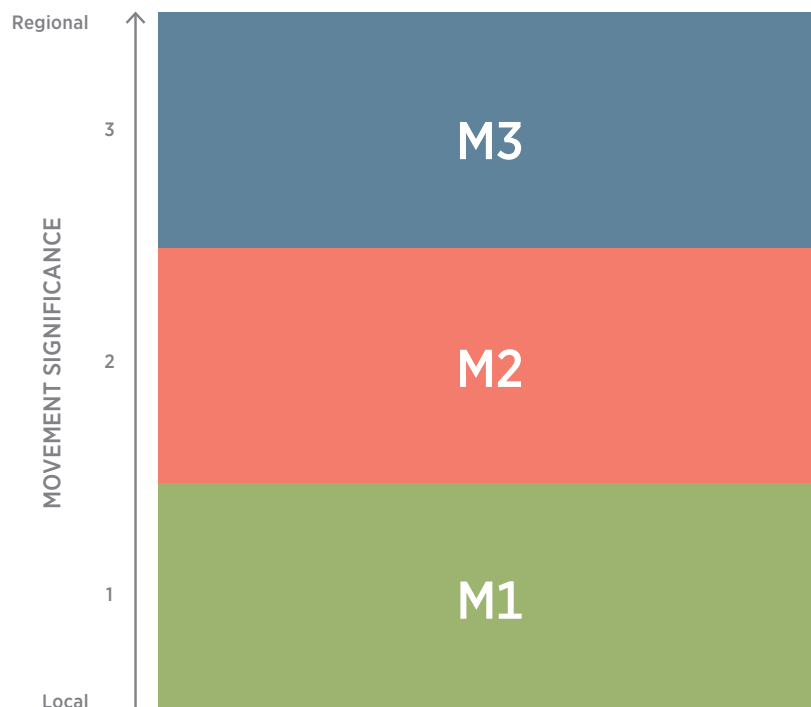
Roads and streets also perform an important access function, including access to residential properties, local services, public transport services and industrial areas (particularly for freight). Access needs should be noted in the RASF mandate and considered during the design process.

Regardless of the mode of travel, the priority for the Movement function is about moving people, goods and/or services safely, efficiently and reliably.

For the purposes of the Roads and Streets Framework, Movement is assessed as one of three categories, according to its strategic role.



Figure 4 The Movement significance





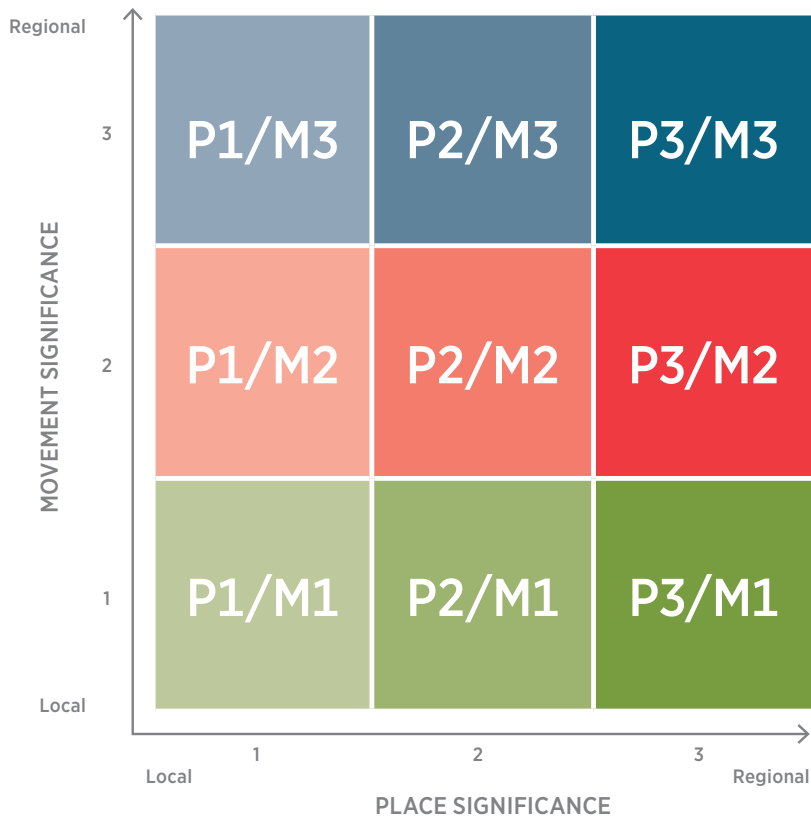
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## Nine typologies for Auckland

The significance of the Place and Movement function within a road or street can vary from local to regional. This concept is simply represented using a 3x3 grid, indicating the three broad levels of Place and Movement significance in Auckland. Using this grid, roads and streets in Auckland can be divided into one of nine typologies. The nine typologies are a fundamental planning tool within the RASF. The typology matrix is shown in and explored in more detail in Section 5.

Figure 5 Typology matrix



CHAPTER

# 3

## Applying the Roads and Streets Framework

The RASF is a simple and informative process to identify the values and priorities for Auckland's roads and streets. Figure 6 illustrates how the process works in detail.

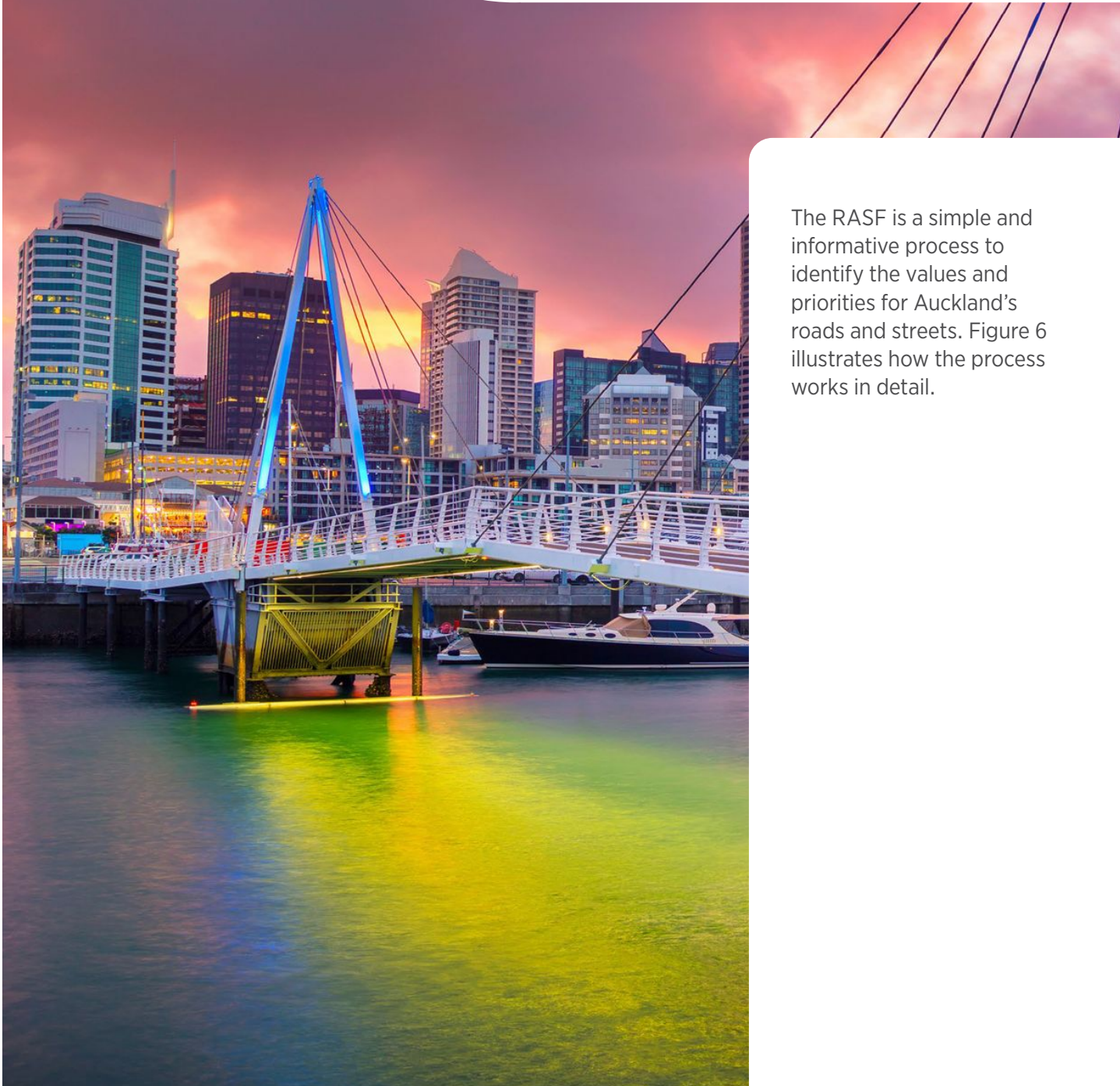
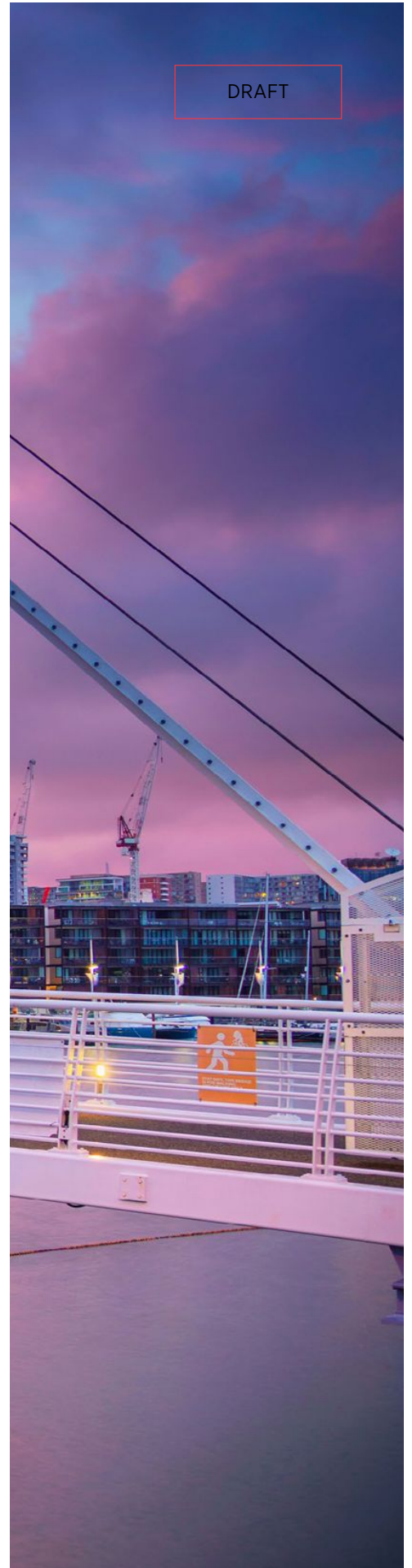
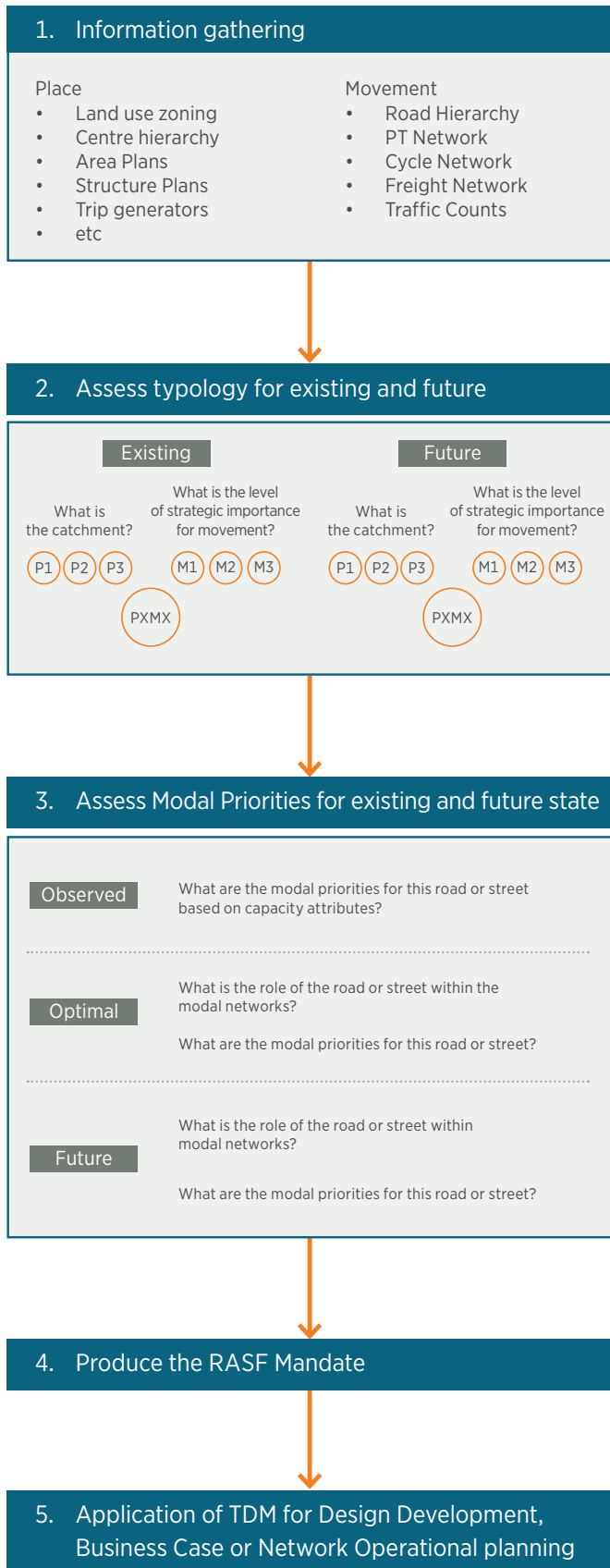


Figure 6 Roads and Streets Framework process detail



## STEP 1 Information gathering

The first step of the RASF is to collate as much information as possible about the road or street and how it operates today as well as how it is planned to operate in the future. This information must cover indicators of both the Place and Movement function. A key reference for the Movement function is Auckland Transport’s strategic transport networks which include existing and future networks for Public Transport, Freight, Cycling and General Traffic. For Place function it is land use, as this drives catchment. Some of the information collected will be tangible and quantitative, such as the road network configuration, the presence of a high frequency bus route or land use zoning. Other inputs will be more qualitative including how far people will travel to get there.

Table 1 outlines some of the sources of this Place and Movement information that will assist with understanding the street context. Although it is not an exhaustive list, it is not intended that all of the data has to be collected before an assessment can be undertaken. Instead, a judgement should be made using readily available data, while still aiming for a diversity of data sources.

The RASF also enables any potential safety issues to be captured and documented within the RASF Mandate to be further investigated by a project team. Therefore, Kiwi Road Assessment Programme (Kiwi-RAP) safety analysis and other safety data provided by the Auckland Transport Safety team should be used to identify existing issues within a road or street corridor. Future safety considerations should be identified where there are expected changes in the use of a corridor, particularly by more vulnerable road users.

Table 1 Typical Place and Movement information

	PLACE information*	MOVEMENT information*	
	<ul style="list-style-type: none"> <li>Existing land use</li> <li>Density / scale of land use</li> <li>The variety of different activities occurring</li> <li>Frontage – active / passive</li> <li>Access requirements</li> <li>Kerbside uses (e.g. parking, loading, taxis, cycle parking, pick up &amp; drop off)</li> <li>How far people travel to visit the place (how big is the catchment)</li> <li>Trip generators</li> <li>Unitary Plan Zoning</li> <li>Town Centre Plans</li> <li>Local Area Plans</li> <li>Local Board Plans</li> <li>Other Local Board publications</li> <li>Auckland Plan</li> <li>Auckland Unitary Plan</li> <li>Panuku Development Neighbourhoods</li> <li>Structure / Subdivision Plans</li> <li>Planned developments</li> <li>Regional Land Transport Plan projects</li> <li>Other planned projects</li> <li>Population numbers and diversity</li> <li>New Zealand Transport Agency ‘Mega Maps’</li> </ul>	<ul style="list-style-type: none"> <li>Existing Strategic Public Transport Network</li> <li>Existing Strategic Freight Network (including overweight and over-dimension routes)</li> <li>Existing Strategic Cycle Network</li> <li>Existing Strategic Road Network</li> <li>HGV counts</li> <li>Truck volumes/Heavy %</li> <li>Motorcycle counts</li> <li>Cycle counts</li> <li>Scooter counts</li> <li>Traffic counts, including vehicle occupancy</li> <li>Existing infrastructure (cycle lanes, bus lanes, transit lanes)</li> <li>Pedestrian network and connections</li> <li>Kiwi-RAP, Crash Analysis System, Safe and appropriate speeds, and other safety data</li> <li>Pedestrian counts and desire lines</li> <li>Future Strategic Public Transport Network</li> <li>Future Strategic Freight Network</li> <li>Future Strategic Cycle Network</li> <li>Forecasts on future travel patterns (all modes)</li> <li>Regional Land Transport Plan projects</li> <li>Other planned projects</li> </ul>	

\*not exhaustive lists

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## STEP 2

# Assess typology for existing and future state

### Identify existing typology

The information collected in Step 1 should be analysed to understand the appropriate significance of the Place and Movement function and identify which of the nine typologies best reflects the road or street as it is today. It is quite likely that the road or street will change along its length and thus it will be necessary to split it into sections of similar characteristics and assess the typology of each section independently.

For example, a road or street passing through multiple town centres with areas of low population density in between will have different typologies along it.

### Place Significance

Table 2 defines the three levels of Place significance. The information gathered in Step 1 will inform this assessment and will help to capture the strategic significance of the location in the context of the Auckland region as a whole. The Place assessment is a qualitative assessment, based on professional judgment, drawing on the evidence, rather than absolute thresholds.

As a guide, most roads and streets in Auckland will have a local Place significance and therefore be P1.

**Table 2** The three levels of Place significance

P1	P2	P3
Predominantly local function, with a small catchment of users (number and distance travelled).	Attracts activity from across a subregion or neighbouring local board area. Greater density and variety of land uses/trip attractors.	Attracts activity from across the region and even from across New Zealand and internationally. These locations generally have higher densities and activity levels.

For example, most residential streets are P1 as they are only visited by those who live there or by people who are visiting those who live there.

This should not be confused with how people feel about the street they live on as it will have a high significance to them, however, in the context of the whole of Auckland, in most cases a residential street will have a local strategic significance for Place function. There are only a limited number of places in Auckland that would be considered as P3 significance, attracting people from across the region and from other parts of New Zealand. Many of these will be found in the City Centre and Metropolitan centres and will likely be areas with a lot of interaction between people and the road or street. They may also include regional parks, sports facilities, key logistics hubs, museums and hospitals.



## Movement Significance

Table 3 defines the three levels of Movement significance. Whilst it may be tempting to rely on traffic volumes to determine Movement, there are many other sources of data listed in Table 1 which should also be considered to enable assessment across all modes of travel. Some of the assessment may be qualitative, such as the criticality of the route within the network, which is important in understanding the full scope of the Movement function. The information gathered in Step 1 will be useful in understanding the role of the road or street within the various modal networks in Auckland.

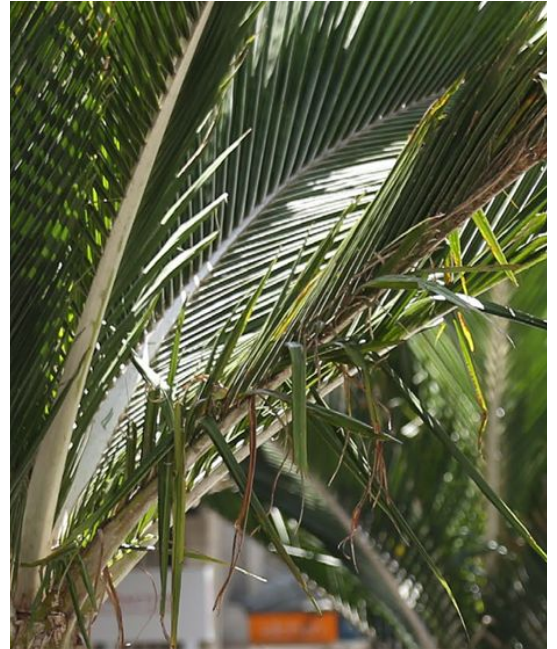


Table 3 The three levels of Movement significance

M1	M2	M3
Low strategic network significance. Provides predominantly local access for people, goods and services.	Medium strategic network significance with increasing volume of users. Provides connection within and between subregions as well as connecting to strategic routes (which are generally M3).	High strategic significance with higher volume of users. Key connections across Auckland linking between subregions, key centres and other parts of New Zealand. This will also include nationally significant connections, including the motorway network.

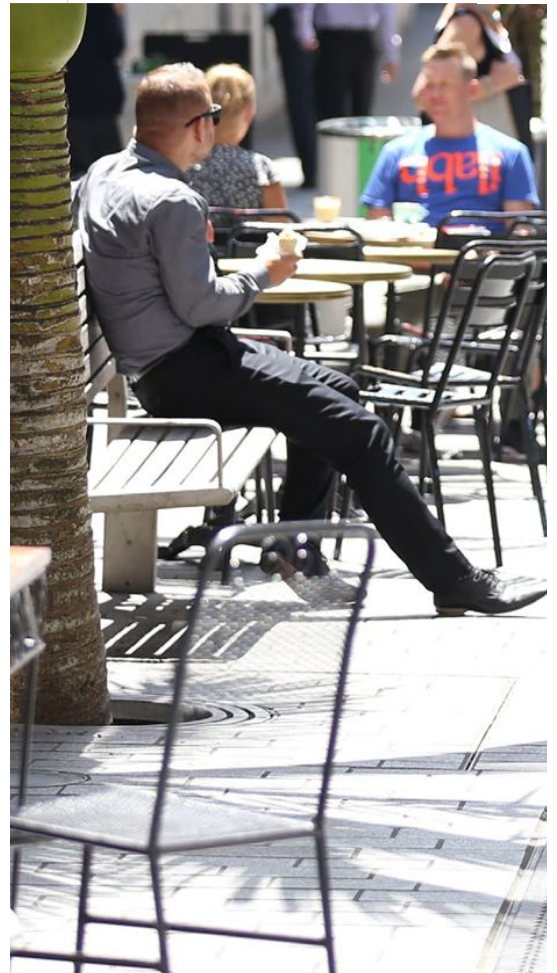
Most roads and streets will have an M1 significance, providing access to adjacent land uses whereas roads and streets with a regional or national significant Movement function (M3) will play a critical role in the movement of people, goods and services in Auckland. They will often be the only connection between two destinations for a particular mode. There would be major network-wide impacts if they were removed as there are no alternative routes available.

It is important that Movement function considers all modes and their respective strategic modal networks. If a road or street is a high-level strategic route for any mode, that should be reflected in the movement significance.

For example, a road or street may have a low significance (M1) for the movement of people in cars but may be regionally significant for the movement of people in buses (M3). In this case, M3 should be selected to represent the Movement significance.

The RASF assessment should reflect and document this within the RASF Mandate to ensure the needs of all modes are accounted for within the later design phases.

Note, that for the assessment of both Place and Movement, the intention is not analytical perfection. Instead, the objective is to ensure that the separate importance of a road or street's Place and Movement function is captured and considered to inform future project development (it should not be a trade-off between the two). A key objective is to identify the Place or Movement elements/characteristics that support the strategic function of the road or street and ensure any impacts on these are carefully considered during the analysis.





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### Assigning a typology

Both the Place and Movement significance should be assigned a value from 1 to 3 based on the significance of that function. The cross section of the two within the matrix will identify the relevant typology.

For example, a road or street section with a Place significance of 3 and a Movement significance of 1 would be a P3/M1 typology.

The RASF Mandate should identify the essential elements that contribute to the Place and Movement function and ensure that these remain as key reference points during the course of the project.

### Identify future typology

Cities are not static, they change over time reflecting land use and transport developments. To enable robust decision making, it is important to understand what the character of the road or street may be in the future. Therefore, the next step of the RASF is to understand the future typology for the road or street.



There will always be some uncertainty when forecasting or making assumptions about the future and it is recommended to, as a general rule, look ten years ahead when assessing the future state of the road or street. This time period reflects both the lifetime of the Regional Land Transport Plan (RLTP) and the Unitary Plan review, two of the main inputs into the RASF.

This assessment follows the same process as defining the existing typology but is based on the information gathered about future changes to the street. An assessment of the future could identify a change in the typology due to a new development, land use or change in modal networks.

This assessment provides the opportunity to be aspirational and identify and record a future priority for the street. It is a necessary step in understanding the vision and setting priorities which can feed into RLTP updates and Long-Term Plan for improvements. It is important to note, however, that the future assessment, however aspirational, needs to also be based on likely reality – i.e. what is realistically achievable.

Roads and streets that have a high Place or Movement significance today are unlikely to experience a substantial change in significance in the future. However, their modal priorities may change. This is demonstrated by the streets that formed the Auckland city tram network in the 20th century, which continue to have a high significance for Movement today albeit now for general traffic and buses rather than trams.

## Assess modal priority for the existing and future state

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Once the relevant typology for each road or street section has been identified, the relative importance of different modes can be determined, noting that all modes can be both Place and Movement activities. Again, the information gathered in Step 1 will be useful for this. For the purposes of this document, the following mode groups should be assessed:



### PEOPLE ON FOOT

Includes people of all ages and abilities, sitting, walking, pausing and resting



### PEOPLE ON BIKES

Includes people riding all types of cycles, including e-bikes and e-scooters (and other emerging micro-mobility technologies). Includes cycle parking.



### PEOPLE USING PUBLIC TRANSPORT

Includes people using public transport services such as bus or heavy/light rail.



### FREIGHT

The movement of goods and/or service providers through the network, via heavy and/or light commercial vehicles.



### PEOPLE IN PRIVATE MOTOR VEHICLES

Includes people in cars and people on motorbikes.



### LOADING & SERVICING

(regulated kerbside activity): Includes loading and servicing kerbside activities as well as taxi pick-ups & drop offs and ride sharing/car sharing where these activities require a dedicated provision.



### GENERAL PARKING

Includes the parking of motorised vehicles for extended periods of time (regulated and unregulated), as well as consideration for access to adjacent land use.



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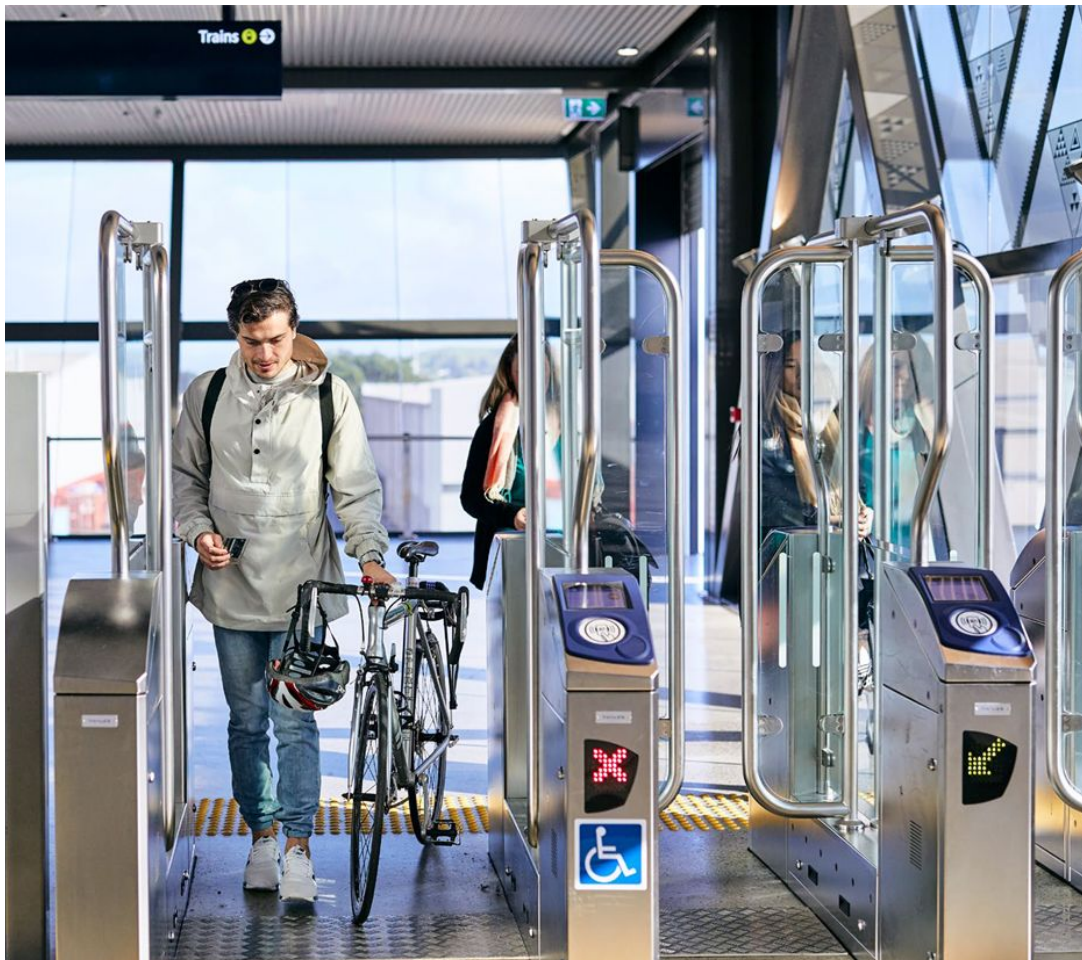
Modal priority is represented on a modal priority chart. A mode scoring the highest possible level of priority would be one that is considered the most important within the road or street. Whereas a mode showing low priority indicates that it has less importance in relation to other modes and activities.

It is important to note that the same typology will have different modal priorities depending on the specific

context. An illustrative example in figure 7 shows a P1/M1 street where in the context of a local residential street (left) the priority is for people travelling by car and parking. For comparison, an industrial area could also be a P1/M1 typology (right), but with movement and access for freight as the highest priority. These modal priorities will help inform and guide the design process.

The modal priorities section of the Framework is assessed in the following three parts.

1. Existing observed (based on capacity attributes)
2. Existing optimal (based on strategic networks and land use requirements)
3. Future (based on future demands and modal networks and including considerations in Appendix 1)



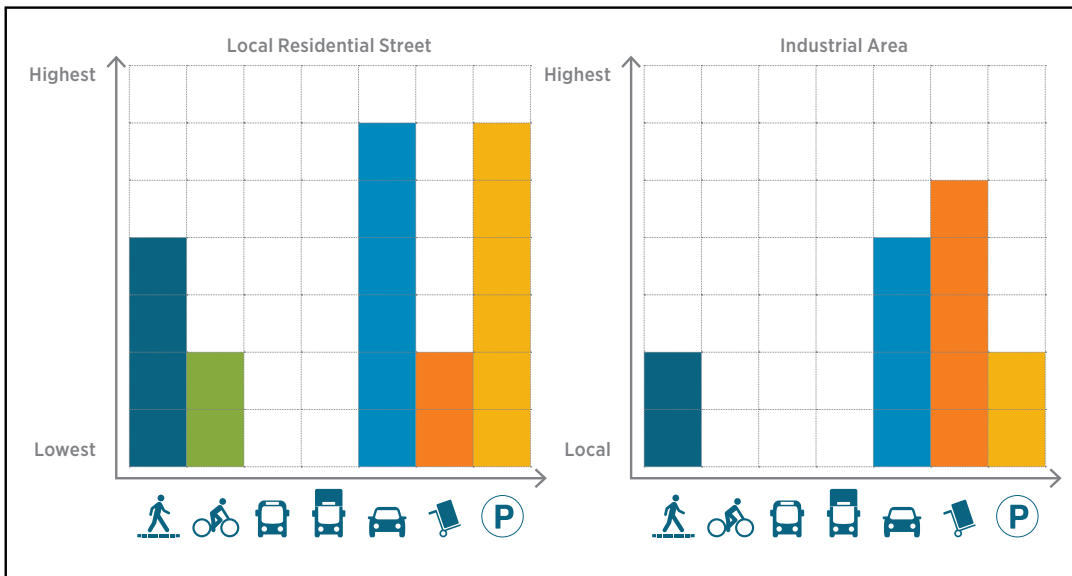


Figure 7 Two different modal priority scenarios for a P1/M1 scenario

## Identify existing (observed) modal priorities

The existing observed modal priority of a road or street is the current prioritisation of modes as seen by looking ‘out the window’. When identifying the existing modal priority, it is vital to understand the current relative **capacity attributes** for the road or street section in question for the entire road reserve (i.e. fence to fence). This should take into consideration all the hard and soft measures that Auckland Transport can use to prioritise a mode, including:

- **Time allocation** – The amount of time prioritised to the mode through operational management. For example, a mode could be given priority/efficiency of movement at traffic signals, or parking could be allowed in priority lanes in off-peak hours.
- **Infrastructure** – The physical design elements that prioritise the mode, including general traffic lanes, treatments such as crossings or footpaths for people on foot; cycle lanes or separation for people on bikes; bus lanes or borders for people using public transport; priority lanes for trucks and freight; kerbside features for loading, servicing and parking and slip lanes or grade separation for general traffic.



If a mode is completely absent from a road or street, has no capacity attributes allocated to it or is banned from travel on the subject road or street it will not appear on the chart and should be noted as such within the mandate.

Freight vehicles or buses may be able to move freely along a corridor as part of general traffic, however the modal priority may not be shown on the priority chart if none of the above capacity attributes are provided for that mode. This approach is particularly important when considering buses, freight and cycle movement, as well as loading and servicing. Priority scoring for these modes should only occur where either road/footpath space, time or prioritisation (capacity attributes) are specifically allocated to that mode. For example, through a bus lane, truck lane or cycle lane.

Capacity attributes are mode specific and any overlap should be considered and avoided when assigning priorities to each mode. For example, the movement or flow of goods in a general traffic lane should be considered as part of the 'people in cars' modal priority, not 'freight'.

It is also critical to note that this stage of the modal priority assessment is not an assessment of what the modal priority *should be*, only what it *is*.

## Identify existing optimal modal priority

The next step is to identify the existing optimal modal priority as per Auckland's existing strategic networks and facilities (i.e. Freight Network, Public Transport Network, Cycle Network, Road Network). The purpose of undertaking this step is to understand what the modal priority should be compared with how a corridor is currently providing for priority.

When assigning the existing modal priorities (based on strategic networks and land use priorities), it is important to take note of a corridor's role in the wider Auckland Transport Network and whether any of the specific modal networks feature on it. The specific strategic modal networks contain different levels of priority, such as the public transport network, which differentiates the strategic network by level of service.

Some of the modes do not have a specific network that can be relied on to inform the existing priority (e.g. pedestrians, loading and servicing, and parking). In this case where a strategic modal network is not present, the relevant policy or strategy, adjacent land use and adjoining networks should be used to inform the relative priority a mode has in a road or street.

As previously noted, it is important to note that the same typology will have different modal priorities depending on the specific street or street section. These modal priorities should be taken into consideration and reflected in the design process.

## Identify future modal priority

The future modal priority outlines the change in relative priorities for the road or street section due to the future strategic networks and land use, which is to be reflected in a mode's capacity attributes. It should demonstrate the desired change from the existing situation to illustrate the degree of change that should be considered by the project manager or designer during later design phases (e.g. a Business Case, the TDM, the NOP). Where modal priority increases the most, the designer should consider more of the hard and soft measures (i.e. capacity attributes) available for that typology and location.

To ensure a Vision Zero aligned outcome for safety, a decision to prioritise some modes may require a shift in capacity attributes for others. For example, raised crossings on side roads for pedestrian through routes may impact time allocation for general traffic. A Vision Zero outcome for cyclists would require a route on the strategic cycle network to be provided on a separated cycle lane, or by adjusting the speed limit, again affecting other modes. Being aware of the principles of Vision Zero at this stage means that safe treatments can be reflected in the prioritisation of capacity attributes.

If modal priority is expected to increase for one mode, a trade-off is likely to be needed with other mode(s) (assuming there is not spare capacity in the corridor). However, the degree of change between modes should not necessarily be an equal reflection of the desired change in physical road space allocation alone. All capacity attributes should be considered for later design phases, including consideration of soft measures, such as time allocation.

Existing optimal or future modal priority does not indicate design requirements for the allocation of space, level of service or movement volumes as these will be specific to each context and determined in later design phases in alignment with the TDM.

There are a number of further principles that should be considered when assigning future modal priorities for a street. However it is important to note that when explaining the priority in the mandate, the justification should raise issues and not delve into design solutions. These questions and considerations can be found in Appendix 1.

An example future modal priority assessment is demonstrated in Figure 8 for a road or street which will change to have a new frequent bus route along it in the future.

It is important to note that an explanation must be provided in the mandate as to what the source is for the changes to modal priorities i.e. is it a current deficiency in the modal priorities, a future deficiency, a safety issue or is it an external change such as a change in land use or strategic network.

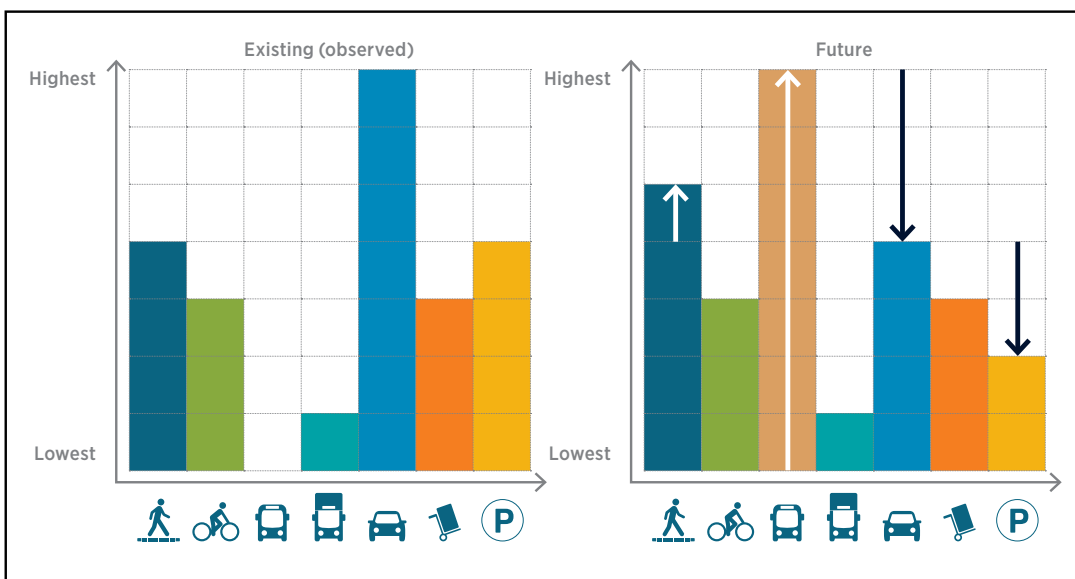


Figure 8 Example of a street with changing modal priorities in the future

## STEP 4

# Produce the RASF Mandate

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The analysis undertaken in Steps 1-3 will allow production of the RASF Mandate. This Mandate summarises the existing and future significance of Place and Movement, the typology(s) and modal priorities. The RASF Mandate allows gaps in network service, priority and safety to be recorded, which could help identify projects for future revisions of the RLTP.

In developing the RASF Mandate, the key characteristics that contribute to the Place and Movement function should be highlighted. This could include the need for capacity to move people on buses to support a high Movement function, or the playground within a park that makes it a destination from across the sub-region. For modal priority, it is important to record what is important to preserve, enhance or perhaps deprioritise within a particular section of road or street and the key drivers behind the priority assessment. The key characteristics of risk to be addressed from a safety perspective also need to be recorded. The Mandate should record these characteristics, values and priorities so that they are not forgotten or undermined by decisions during the later design phases.

The Mandate should be produced as the starting point for any potential project on a road or street as it is important to understand the context, regardless of the project drivers. If an existing mandate exists for the road or street, it should be updated to account for the latest information and projects.

A template for the RASF mandate can be found in Appendix 2.

For example, a project could be initiated by a stormwater upgrade and the RASF may show that there is a high priority for people walking on the street. If there is a service deficiency for pedestrians, there could be the opportunity to incorporate footpath widening and improved crossings as part of the same project if appropriate funding could be secured.

## Design development

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The RASF Mandate will be the starting point for planners, project managers and designers when working on projects in Auckland. The Mandate documents the key characteristics, values and priorities for the road or street. These can then be articulated during design development and allocating level of service and space allocation in applying the TDM including through a business case process or Network Operating Plan process. The TDM provides more detail about the principles of Vision Zero, as well as design guidance that includes safe outcomes. Designers and project managers should continually refer to the RASF Mandate throughout design development to ensure that the values and priorities of the road or street are still being achieved.

CHAPTER

# 4

## Conflicts and Compromise

Throughout the RASF process, conflicts may arise due to the need for provision of multiple priorities in constrained areas, requiring compromise. These constraints and conflicts will only be truly realised and understood during the design phase of the project, through the application of the TDM.

The RASF provides the tools to resolve these conflicts through using the modal priority to understand where compromises may be acceptable.



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Specialists from the relevant teams within Auckland Transport and Auckland Council should be engaged, if required, to help identify what compromises are acceptable as it is important that the right people are involved in these discussions.

For example, in a street with a high priority for public transport but medium priority for general traffic, one design solution could be to reallocate a general traffic lane to a bus lane. These could be peak hour bus lanes that reflect the temporal changes in the modal priority.

It is imperative to ensure that the elements or characteristics (modal priority or associated infrastructure) which are critical to fulfil the Movement and Place function of the road or street are understood. This is a core requirement of the process of identifying and removing conflicts.

There will also be situations where an acceptable compromise cannot be reached by the project team. This is likely to be evident in locations with a P3/M3 typology, as these streets have to cater for both high Place and high Movement significance.

A RASF Steering Group has been established to approve all RASF mandates, escalate any issues to identify the way forward. Figure 9 shows the structure of the escalation process, including a working group with representatives from Auckland Transport’s Planning and Investment team, Design & Standards team and the Auckland Design Office. This group has responsibility for undertaking the initial RASF assessments, mediating conflicts and identifying the appropriate compromise. If required, they can escalate to the Steering Group and potentially the Auckland Transport Executive Leadership Team or Auckland Council Executive, via the Group Manager of Policy, Integrated Network Planning and Sustainability within Auckland Transport.

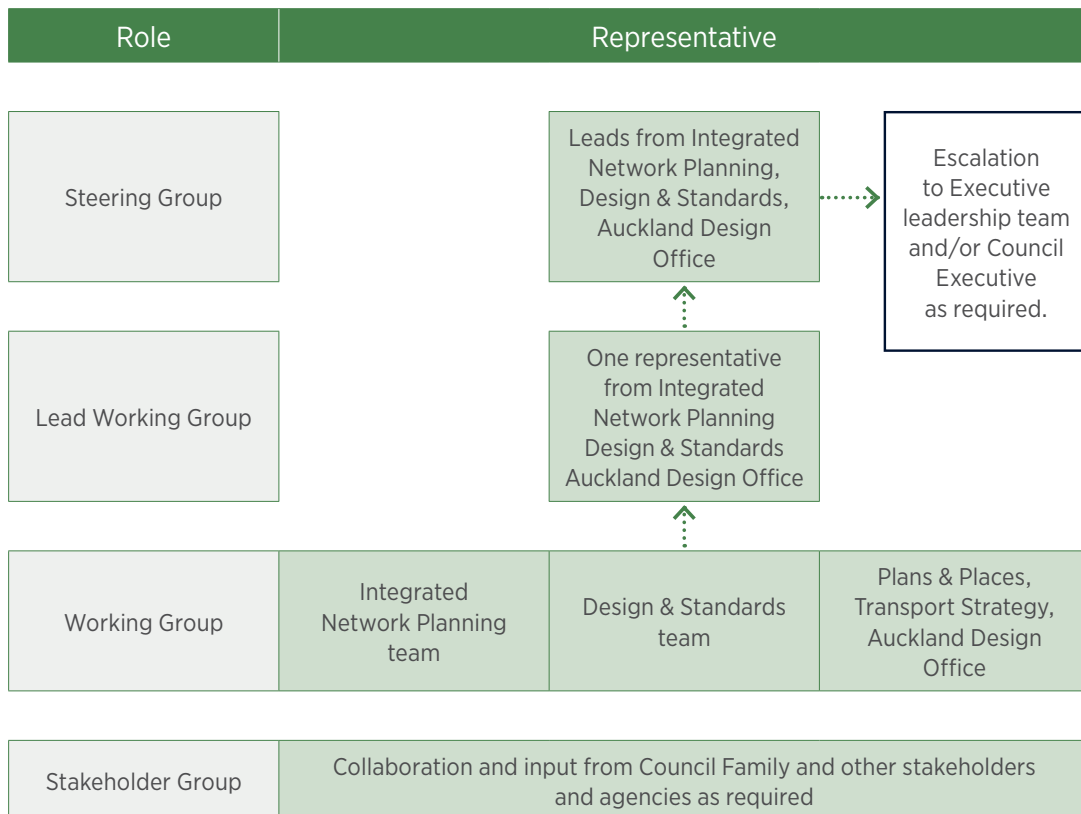


Figure 9 RASF Governance Structure

CHAPTER

# 5

## Typologies



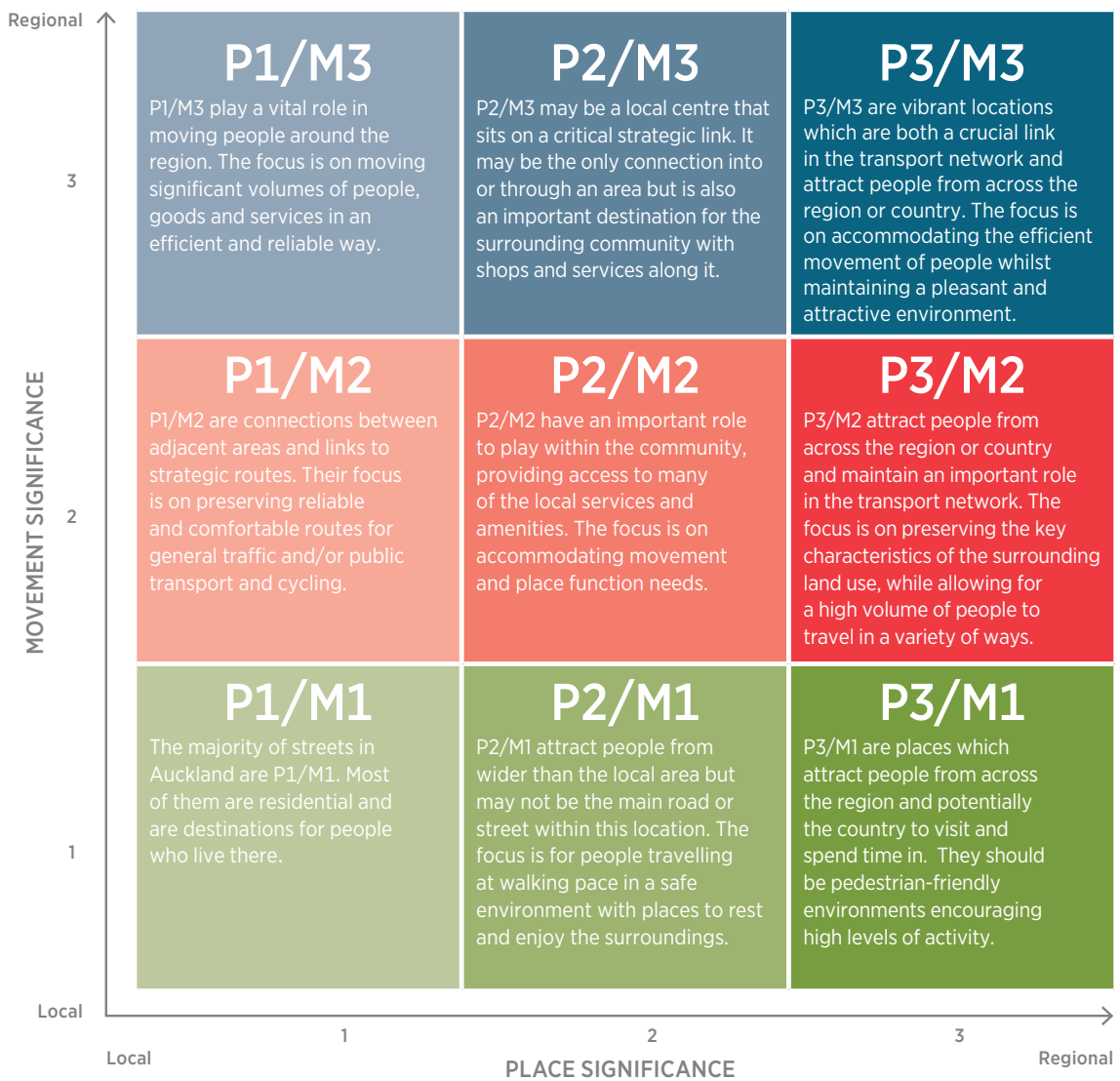
The typology matrix defines nine typologies for Auckland based on the strategic importance of the two key functions, Place and Movement. These typologies are a useful tool in understanding the functions for the road or street and a consideration for determining the modal priorities (although the modal priorities can vary for each typology).

The typologies inform, but do not determine the design of the road or street. This is developed through application of the TDM, the Business Case Approach and Network Operating Plan.

The typical values and characteristics of the nine typologies are outlined over the page. These are not prescriptive or context specific but give some guidance as to the likely outcomes sought.



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CHAPTER

# 6

## Appendices



There are a number of questions that should be considered at a high level when assigning future modal priorities for a road or street. It is important to note that these questions are for consideration only, and when explaining the priority in the mandate, the justification should raise issues and not delve into design solutions.

## Appendix 1 – Future Modal Priority Considerations

Consideration	Principle	Question to be answered
<b>Strategic network</b>	The presence of a street on a mode's strategic network provides it an inherent modal priority	Is the street on a mode's strategic network (if one exists, and its elements are likely to be realised/funded within the relevant timeframe)?
<b>Place/ Movement functions</b>	If the street has a Place significance greater than its Movement significance, then the attributes which support the key Place functions (and vice versa) should be given higher priority, though the goal is for all aspects to be included	Where on the matrix is this street located, and what attributes of each mode need to be preserved or enhanced to support place or movement outcomes?
<b>Level and Quality of service (LOS and QOS)</b>	<ul style="list-style-type: none"> <li>If the expected LOS/QOS is reasonable within the current allocation, there is less need to prioritise it, all other things being equal</li> <li>Forecast increases in demand for a mode may increase need for priority, particularly where there are LOS/QOS issues, unless, in the case of general traffic, it can be demonstrated that demand will shift to other modes.</li> </ul>	Is there a need to improve the level and/or quality of service experienced for that mode?
<b>Actual throughput</b>	The overall throughput (number of people and goods multiplied by average travel speed) of people and/or goods increases in priority as Movement value increases, particularly where increases in demand are expected	Will increasing the modal priority increase the actual throughput of people/goods along this street?
<b>Safety</b>	If there is expected to be an increase in movement and an increase in vulnerable users, addressing safety is a high priority, influencing the priority of applicable modes. Auckland Transport's Vision Zero approach should be consistent throughout RASF and the design process.	Is there an existing or forecast safety risk which means certain modes need increased priority?
<b>Provision of car parking</b>	Parking/kerbside stationary space is only a priority where it is needed to support adjacent land use outcomes and there is a reasonable LOS for other modes/uses.	How much is the parking getting used, what is it being used for, and when is it being used?

# Appendix 2 – RASF Mandate Template

<b>Roads and Streets Framework Assessment</b>			
Lead Working Group members:	INP	ADO	D&S
Steering Group members:	INP	ADO	D&S
Date of Assessment:			
<b>Typology Assessment</b>			
Existing Typology Assessment			
Road/Street section	Place Assessment	Movement Assessment	Existing Typology
	P ■	M ■	Choose an item.
<b>Future Typology Assessment</b>			
Assumptions	Place Assessment	Movement Assessment	Future Typology
Year: ■	P ■	M ■	Choose an item.

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<b>Modal Priority Assessment</b>		<b>Observed Modal Priority</b>	<b>Optimal Modal Priority</b>	<b>Future Modal Priority</b>			
		Highest	Highest	Highest			
		Lowest	Lowest	Lowest			
		Walking	Public Transport	Freight	Private Motor Vehicles	Loading & Servicing	Parking & Access
		<b>Observed Modal Priority</b>					
		<b>Optimal Modal Priority</b>					
		<b>Future Modal Priority</b>					
		<b>Safety Considerations</b>					

