



VERSION 2
MAY 2020

Roads and Streets Framework



Roads and Streets FRAMEWORK

What you need to know about the Roads and Streets Framework

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Roads and streets represent a large portion of public space in Auckland/Tāmaki Makarau 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 serve, does it attract many people and are people prepared to travel to reach it?
- 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. AT's Statement of Intent sets out how AT will fulfill its responsibilities, including how AT will enable better outcomes for and with Māori. In turn, the RASF provides the guidance for individual streets, identifying their functions and 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, to inform the design process.

Roads and streets should be assessed for both their existing function and also for the future. Functions and/or modal priorities may change in the future to improve levels of service and/or reflect major projects and land use changes. This data is then documented in the RASF Mandate, which guides business case development and design.

The RASF Mandate is the key output. It summarises the outputs from the RASF process and informs project teams undertaking a business case. It enables project teams to make design decisions with an understanding of the strategic functions of a road or street. Project teams then use the Transport Design Manual (TDM) to inform and develop the design.

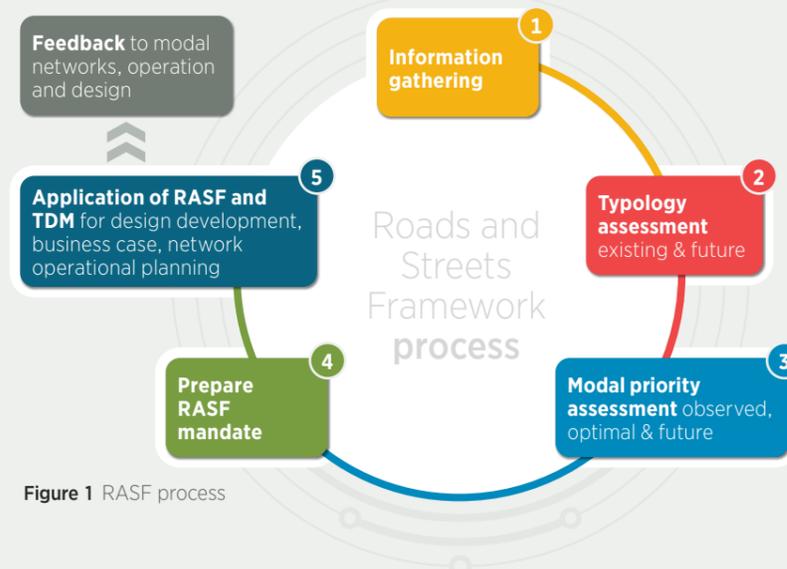


Figure 1 RASF process

A new approach to roads and streets



As Auckland grows, its roads and streets will need to work harder. 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. By understanding their Place and Movement functions, we can deliver streets that form an integrated, multi-modal network which ensures Auckland is a vibrant, world-class city where people want to live, work, play and visit.

What is the RASF?

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. The RASF captures these functions 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. By establishing these principles before design work starts, they inform the design process and 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 RASF 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 as part of the design, informed by the TDM, business case process and available funding. 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 RASF 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.

RASF mandates contain a dedicated safety section (see Appendix). This builds Vision Zero principles into the start of the project, informing the design process.

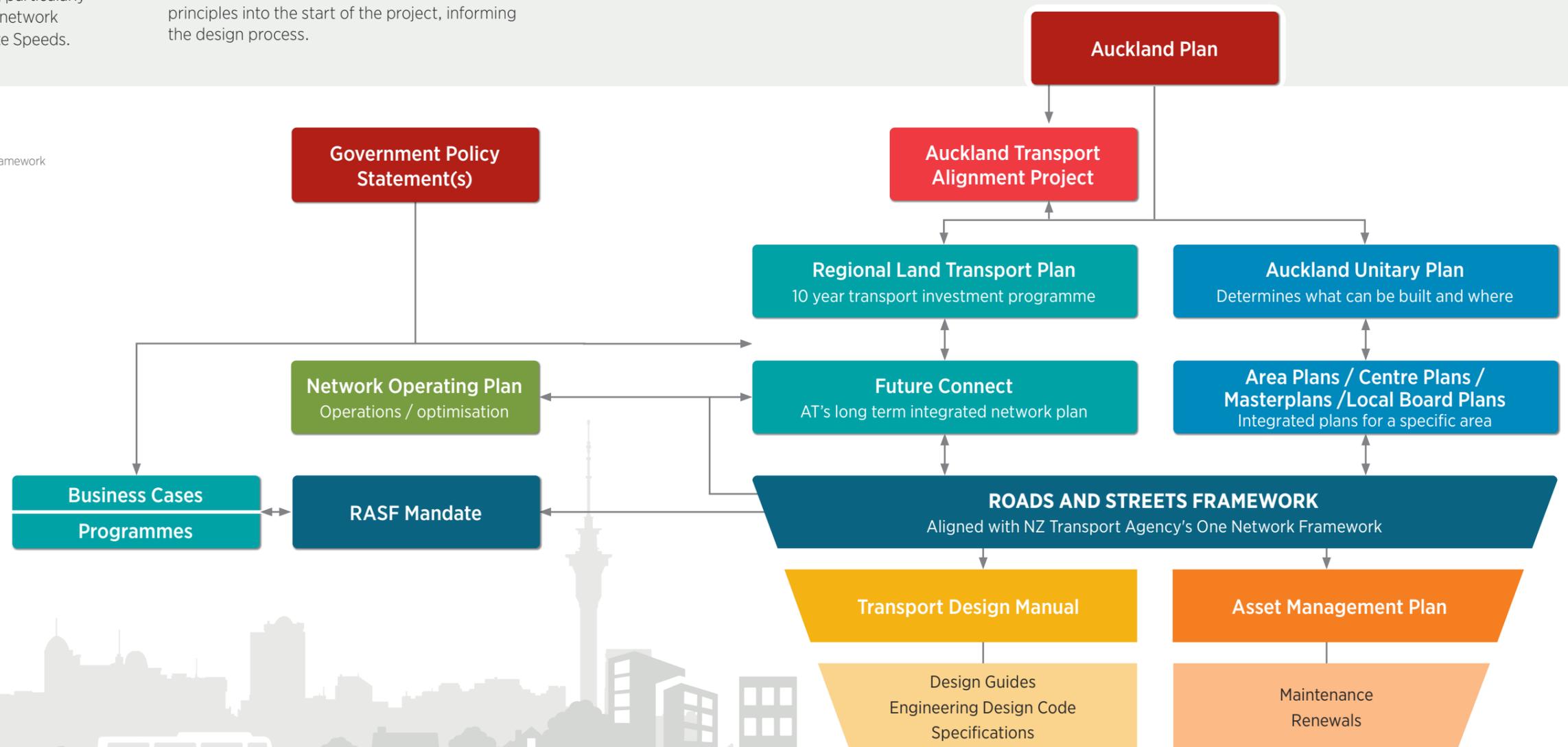
Who is the RASF for?

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 (ADO) 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

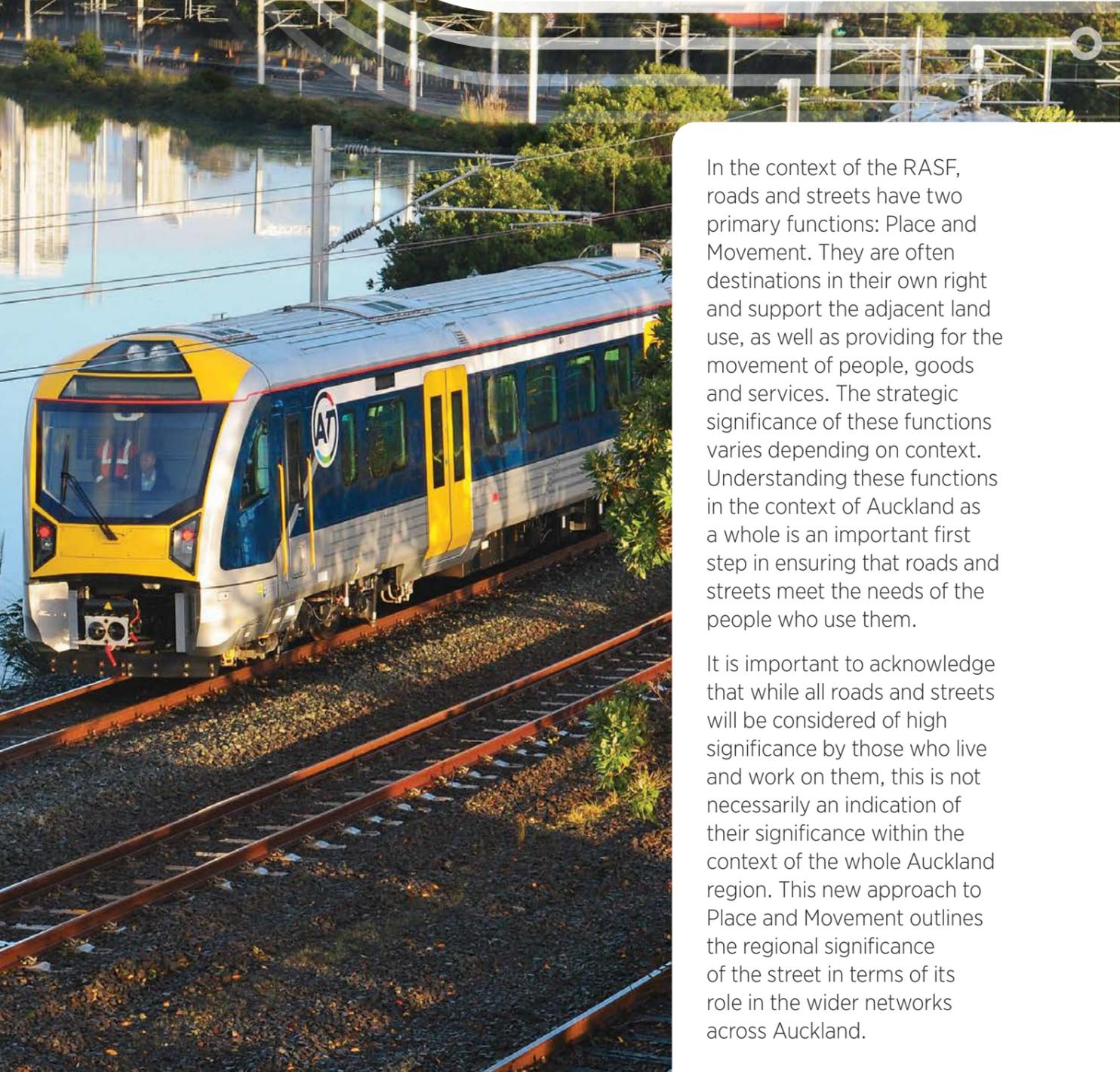
Transport is keen to work with the private sector to ensure that proposals align to Auckland Transport's strategy documents, such as the Auckland Transport Alignment Project, Regional Land Transport Plan, Vision Zero, Parking Strategy and so on.

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 the future. This will be available to project teams from the start of the project to inform and guide design development.

Figure 2 The RASF within the broader planning framework



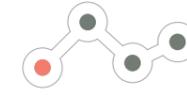
The primary functions of roads and streets



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.

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 no other uses 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 levels according to its strategic significance.

EXAMPLE

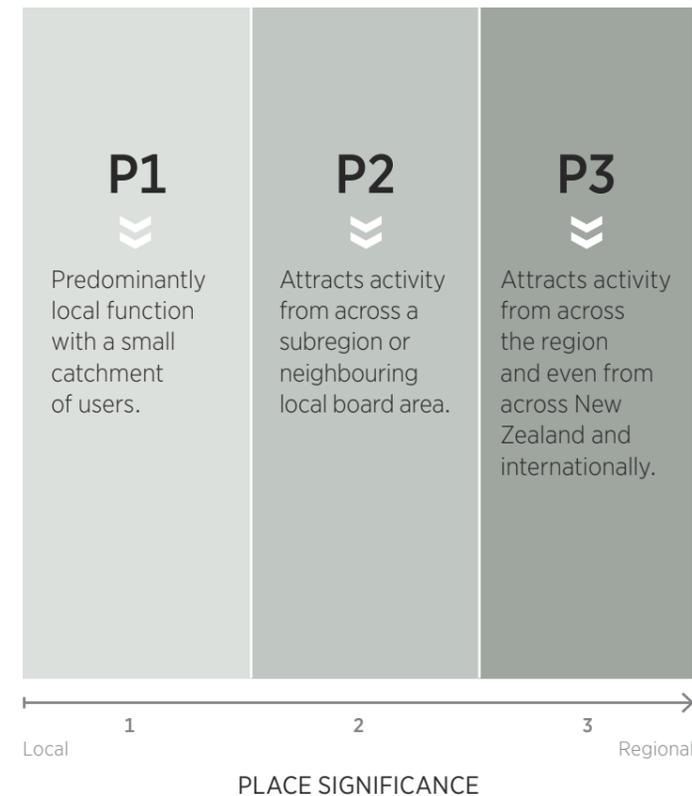
A new residential development with expensive paving materials and bespoke street furniture may look as though it should have a high Place significance due to the materials used, however the catchment is local and so it has a local (P1) Place significance.

A town square surrounded by public 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.

Figure 3 Place significance



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.

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 than a road or street with a local or less frequent public transport service.

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 significance.

Figure 4 Movement significance

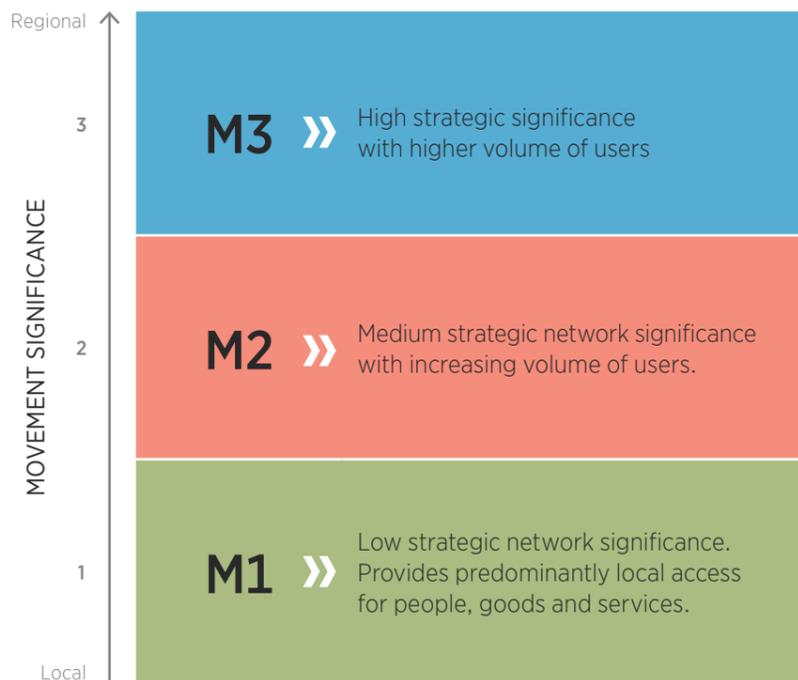
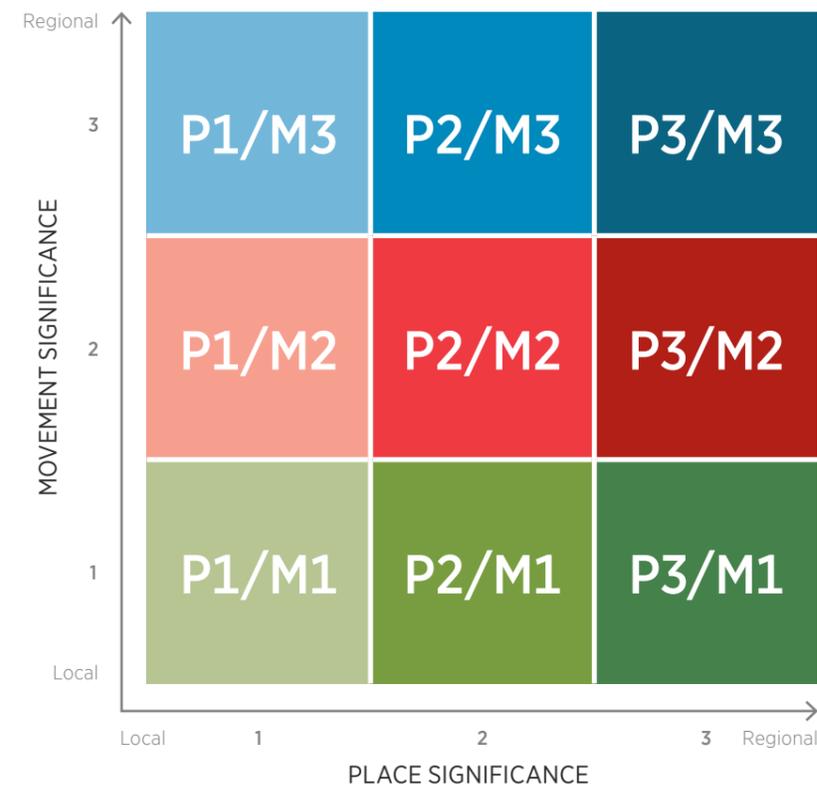


Figure 5 Typology matrix



Nine typologies for Auckland

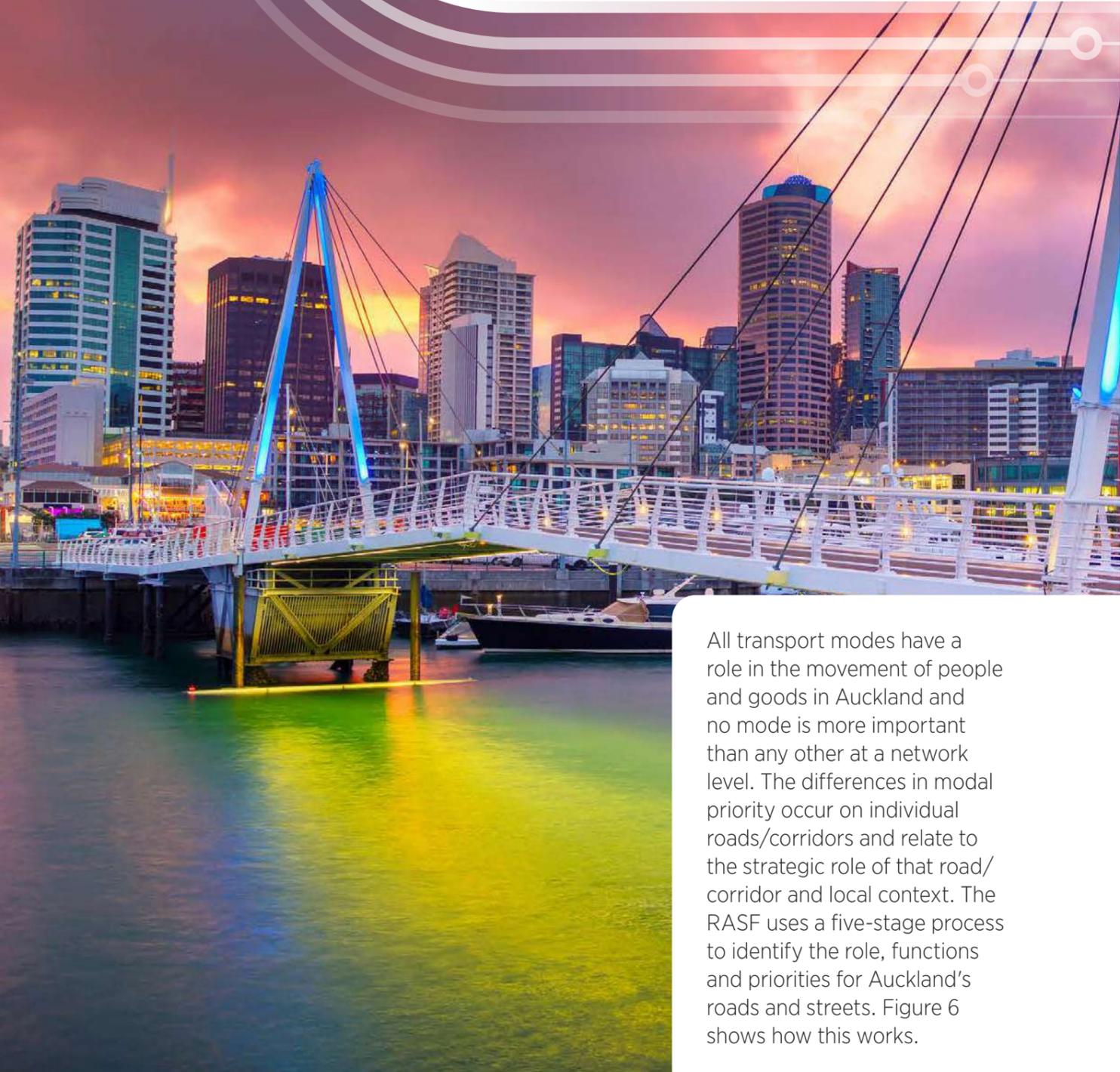
The Place and Movement values are then combined, as shown here, to provide a 3x3 grid.

This provides a total of nine typologies for roads and streets in Auckland.

The typology matrix is explored in more detail in Section 5.

The RASF uses a five-stage process to identify the functions and priorities for Auckland's roads and streets. Figure 6 shows how this works.

Applying the Roads and Streets Framework



All transport modes have a role in the movement of people and goods in Auckland and no mode is more important than any other at a network level. The differences in modal priority occur on individual roads/corridors and relate to the strategic role of that road/corridor and local context. The RASF uses a five-stage process to identify the role, functions and priorities for Auckland's roads and streets. Figure 6 shows how this works.

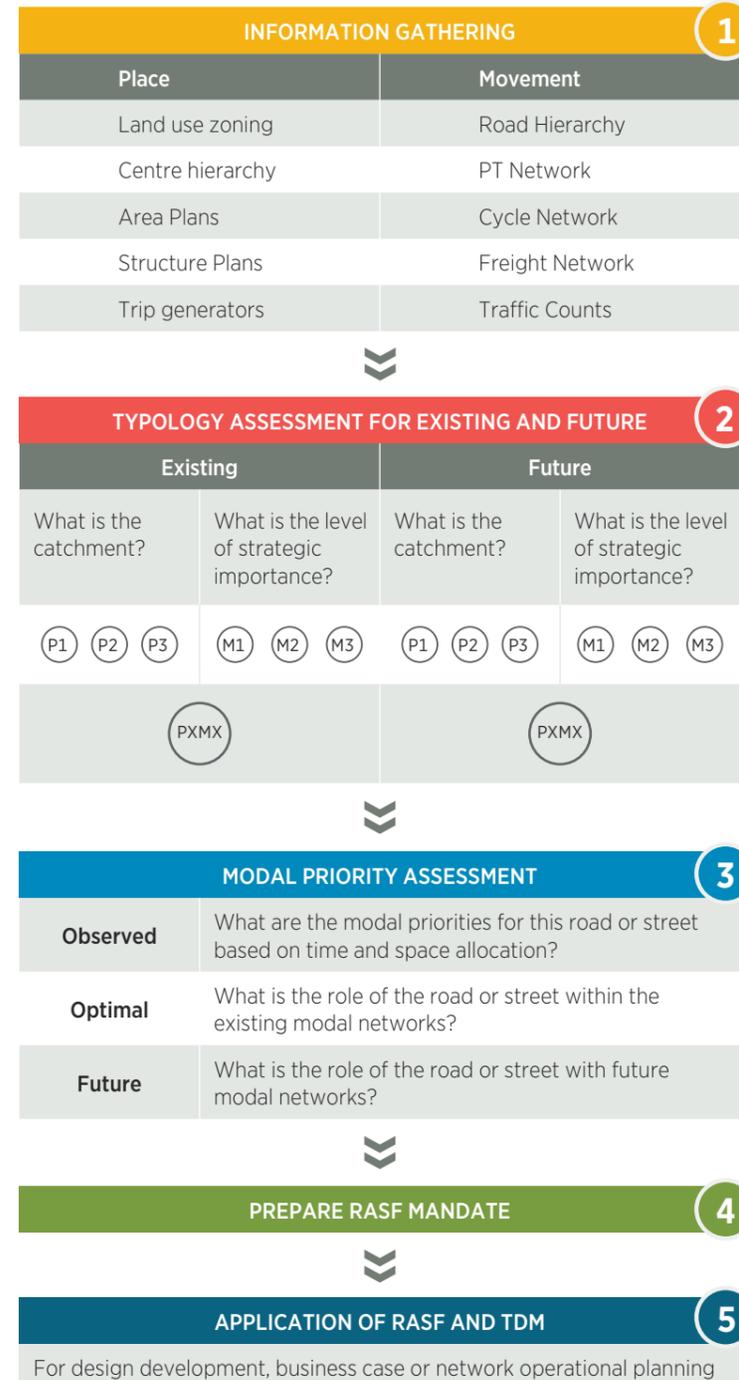


Figure 6 Roads and Streets Framework process detail



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, Walking and General Traffic. For Place function, land use 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 many and how far people will travel to get there.

Table 1 outlines many of the sources of Place and Movement information. This is not an exhaustive list, nonetheless, it indicates the types of data to use for Place and Movement assessments. Professional judgment should inform the type and quantity of data used in RASF assessments.

The RASF Mandate also captures safety issues for further investigation by the 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 in relation to vulnerable road users. In understanding the attributes and function of Place, the RASF assessment recognises Māori places of significance.

Table 1 Typical Place and Movement information

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

*not exhaustive lists

STEP 2 Assess typology for existing and future state

Identify existing typology

Use the information collected in Step 1 to understand the existing Place and Movement functions. If the road or street corridor is likely to change characteristics along its length; split it into sections of similar characteristics and assess each section separately. 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.

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.

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.

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.



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. The type of landuses may include regional parks, sports facilities and heritage buildings.

Movement Significance

Table 3 defines the three levels of Movement significance. Use the data sources listed in Table 1 to determine Movement. Consider all travel modes. Do not be tempted to make Movement assessment based solely on general traffic volumes. 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.

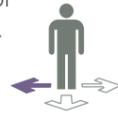


Table 3 The three levels of Movement significance

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. 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. M3 roads or streets will often be the only connection between two destinations for a particular mode and there would be major network-wide impacts if they were removed as there are no alternative routes available.

Movement assessment must consider 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.

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 is the correct value to assign to this link.



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 combination of the P value and M value provides the typology (e.g. P3/M2).

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 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.

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 as a general rule, to 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 a 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 the Long-Term Plan for improvements. It is important to note 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.

STEP 3

Assess modal priority for existing and future state

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 have elements of both Place and Movement. 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, walking, sitting, 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).



PEOPLE USING PUBLIC TRANSPORT

Includes people using public transport services such as bus or train.



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. Includes cycle parking and bus layovers.



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.

Modal priority is assessed in three ways:

- **Existing observed** (based on how modes are currently prioritised in space and time)
- **Existing optimal** (based on existing strategic networks and land use requirements - i.e. how we would ideally like things to be now)
- **Future** (based on optimal plus any change in future demand and modal networks)



Figure 7 Two different modal priorities 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.

- **Space allocation**

The physical design elements that prioritise the mode, including general traffic lanes, 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'.

This stage of the modal priority assessment only assesses what the modal priority currently is; NOT what it should be.



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, Walking Network, Road Network). The purpose of this step is to understand what the modal priority should be, compared to what it currently is.

When assigning the existing modal priorities, understand the corridor's role in the wider Auckland Transport Network. Do any of the modal networks feature on it? 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. 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 based on future strategic networks and land uses. This will inform the design process.

The differences between existing and future modal priorities shows the designer how much change is expected for each mode. Larger changes mean that more intervention is likely to be needed, via hard and soft measures.

To ensure a Vision Zero aligned outcome for safety, a decision to prioritise some modes may require a shift in priority for others.

EXAMPLE

Raised pedestrian crossings on side roads may affect general traffic movement. A Vision Zero outcome for cycling may require protected cycleways and/or low traffic volumes and speeds.

Vision Zero principles are embedded throughout the design process and should be reflected in the RASF future modal priority.

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.

NOTE

Existing optimal or future modal priority does not indicate design requirements for the allocation of space, level of service or movement volumes. 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.

Figure 8 shows changes to modal priority in a road which is due to receive a new frequent bus route.

Use the Mandate to explain changes to modal priorities, e.g. an existing deficiency, a future deficiency in the modal priorities, 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

What is the Transport Design Manual?

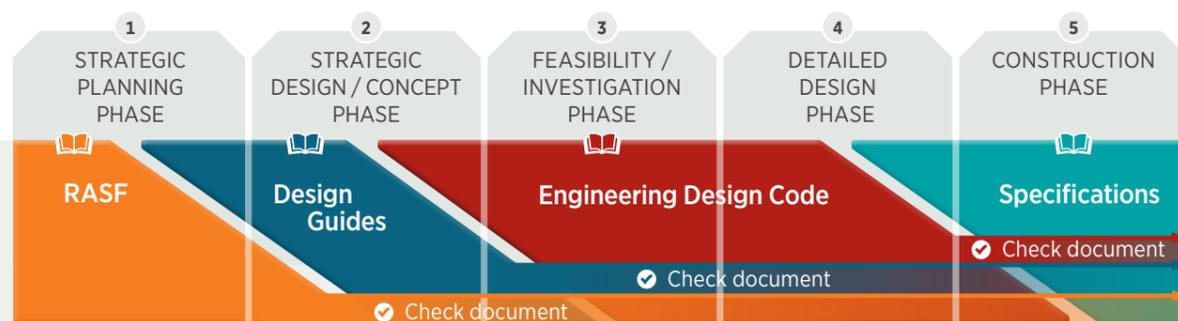
The Transport Design Manual is a set of Guides, Codes and Specifications that are specifically created for the Auckland region based on international best practice and robust common engineering theory.

Its purpose is to show how transport infrastructure should be designed and constructed, to manage change to introduce international best practice for Auckland, and to assist with transforming outcomes within the Auckland Region.

The system consists of the following elements:

- Design Guides
- Engineering Design Code
- Specifications for Infrastructure Works

Each part of the system acts in an overlapping manner, cascading from the top down to ensure consistency of approach and outcome throughout the planning and design process.



STEP 4 Produce the RASF Mandate

The analysis undertaken in Steps 1-3 informs 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.

The RASF Mandate must highlight the factors that determine the Place and Movement significance. 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, note the key drivers for preserving, maintaining, or deprioritising transport modes on each section of road or street. For safety, record the risk characteristics of the link.

By recording these characteristics, values and priorities, the Mandate ensures they are not forgotten or undermined by decisions during the later design phases.

The Mandate is the starting point for any potential project on a road or street. It provides clear direction on Place, Movement, Modal Priority and safety, regardless of the project drivers. Update Mandates as necessary to account for latest information and projects.

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

EXAMPLE

RASF analysis of a street to inform a stormwater upgrade may also show that there is a high priority for pedestrians, but a poor pedestrian environment. RASF identifies the opportunity to incorporate footpath widening and improved crossings as part of the stormwater project, subject to funding.



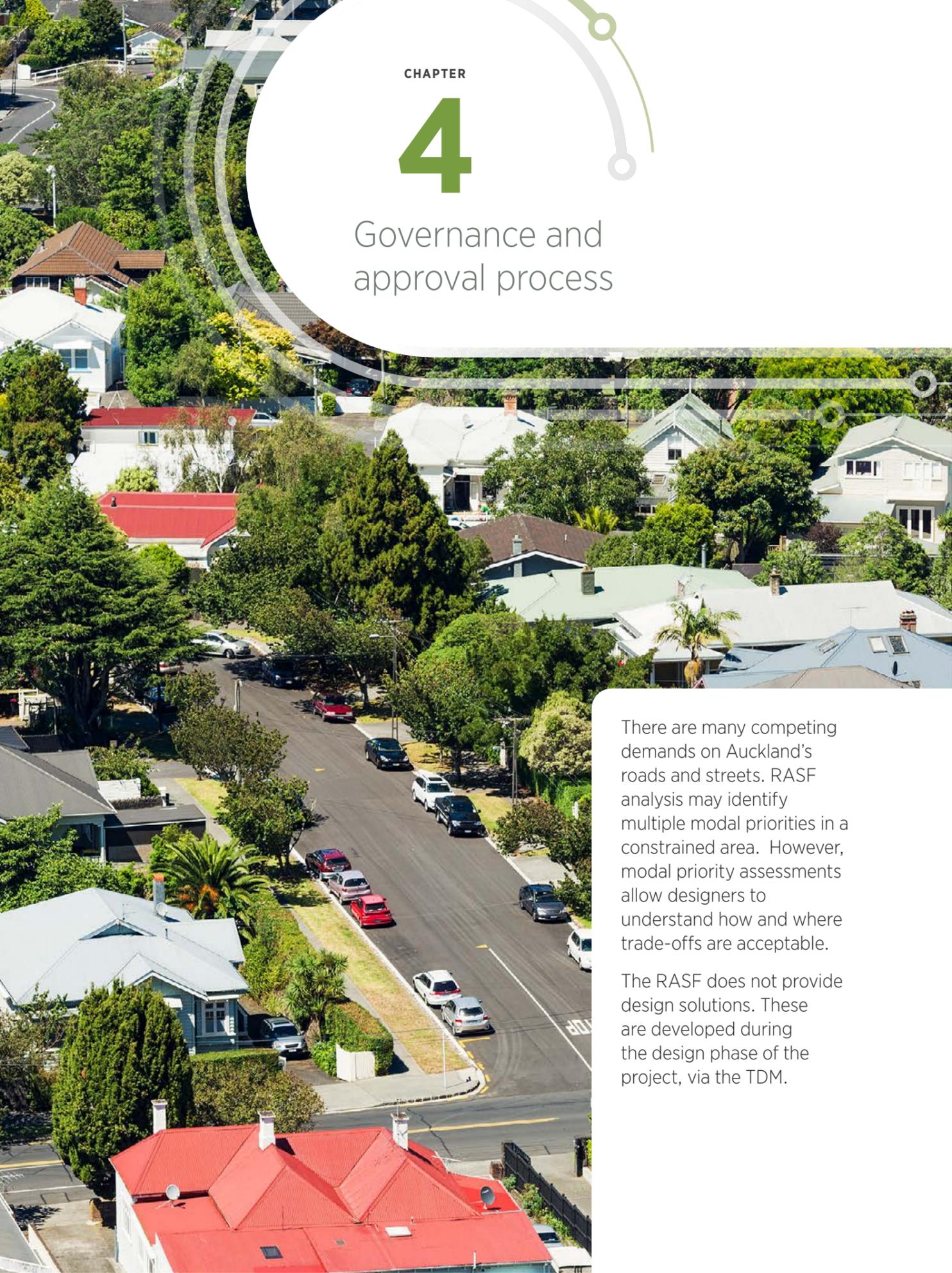
STEP 5 Design development, business case or network operational planning

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. The RASF Mandate informs the design process via the TDM. It also informs business case development and network operational planning. The TDM provides more detail about the principles of Vision Zero, as well as design guidance that includes safe outcomes. The TDM is guided by Māori design principles, founded on core Māori cultural values. These principles are

applied in collaboration with Mana Whenua across infrastructure projects, and all projects within the RLTP programme are asked to consider Māori design principles. 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.

If during design development, there are any concerns or issues with the strategic priorities, these should be raised with AT's Integrated Network Planning team or via email RASF@at.govt.nz.

Governance and approval process



There are many competing demands on Auckland's roads and streets. RASF analysis may identify multiple modal priorities in a constrained area. However, modal priority assessments allow designers to understand how and where trade-offs are acceptable.

The RASF does not provide design solutions. These are developed during the design phase of the project, via the TDM.

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.

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.

Ensure that the elements or characteristics (modal priority or associated infrastructure) critical to a road's Movement and Place functions 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 particularly likely in P3/M3 streets, which must accommodate high Place and high Movement significance.

While the strategic modal priorities represent the strategic direction, there will often be constraints (such as funding) to delivering on all strategic priorities simultaneously. This does not invalidate the process, but accepts the reality of deliverability. Where this occurs, the proposals should be reviewed by the Steering Group. Regardless of the constraints, projects should not compromise safe outcomes or preclude strategic modal priorities being realised in future.

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 Integrated Network Planning (AT), Design & Standards (AT) and Auckland Council. 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.

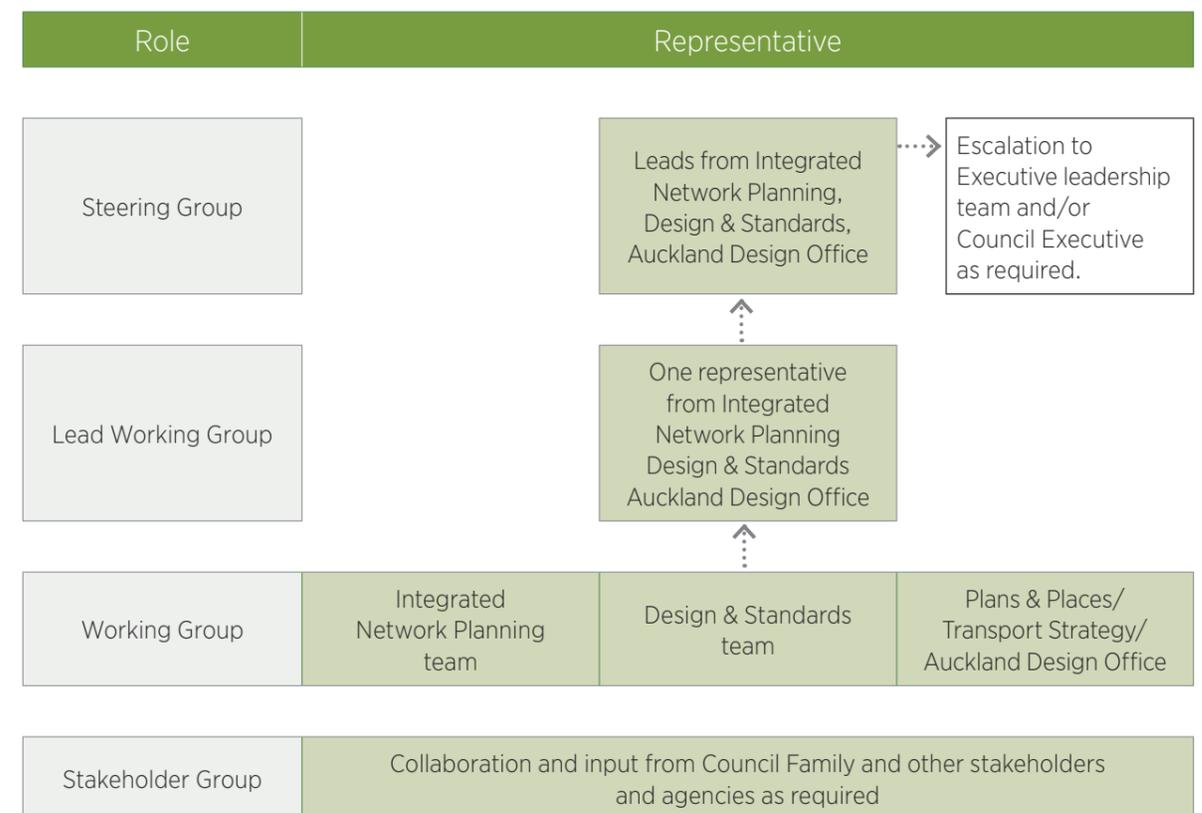
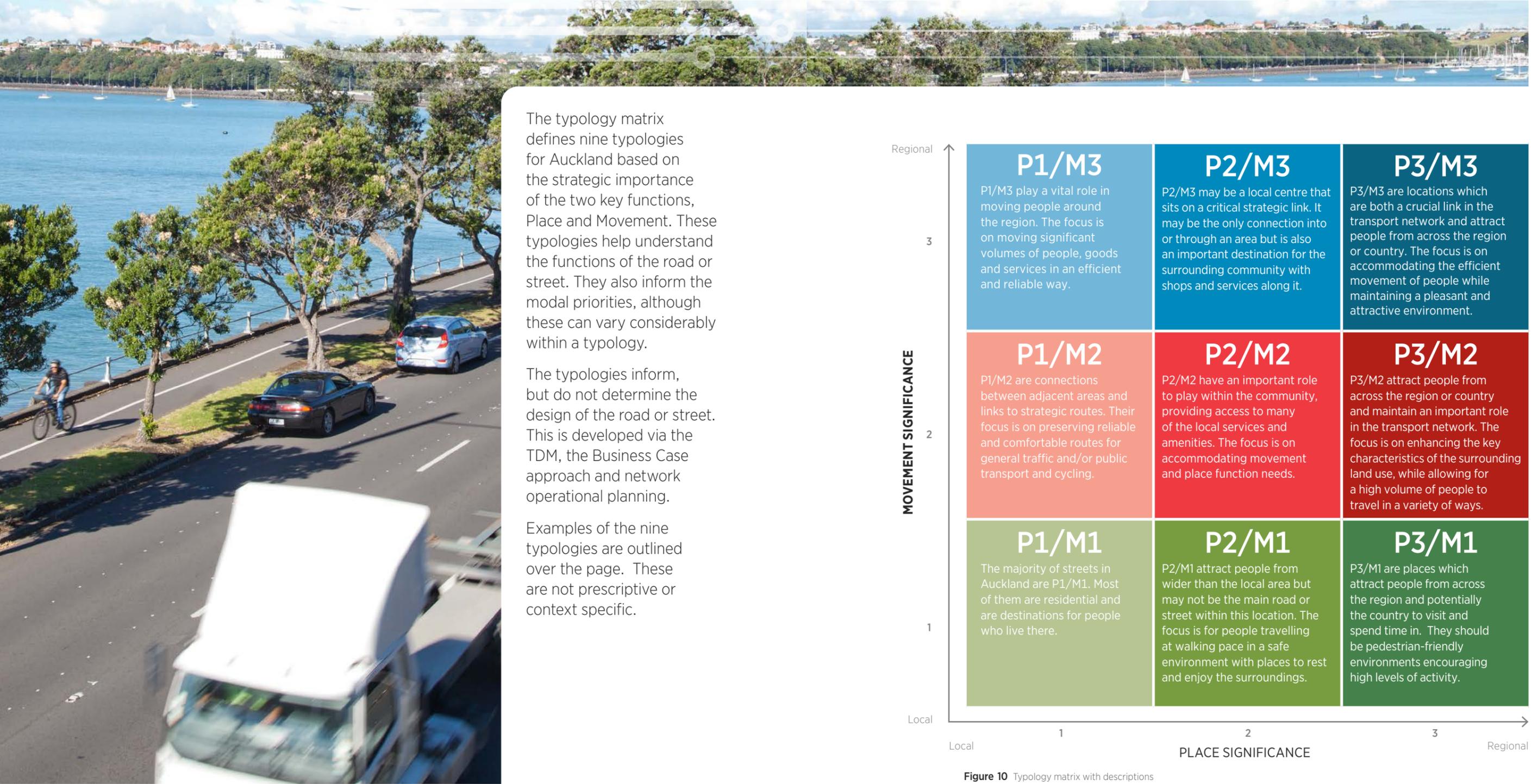


Figure 9 RASF Governance Structure



The typology matrix defines nine typologies for Auckland based on the strategic importance of the two key functions, Place and Movement. These typologies help understand the functions of the road or street. They also inform the modal priorities, although these can vary considerably within a typology.

The typologies inform, but do not determine the design of the road or street. This is developed via the TDM, the Business Case approach and network operational planning.

Examples of the nine typologies are outlined over the page. These are not prescriptive or context specific.

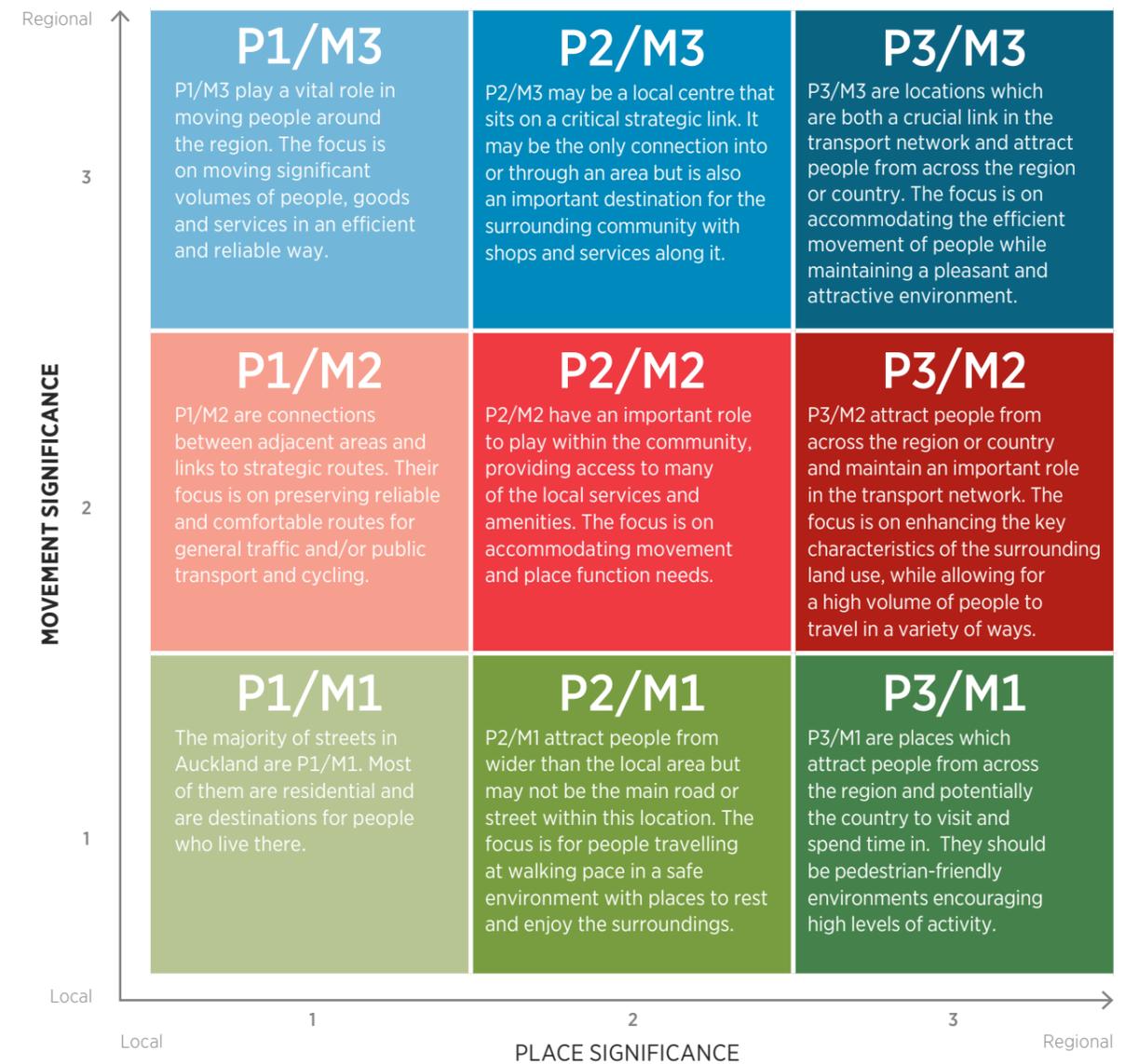
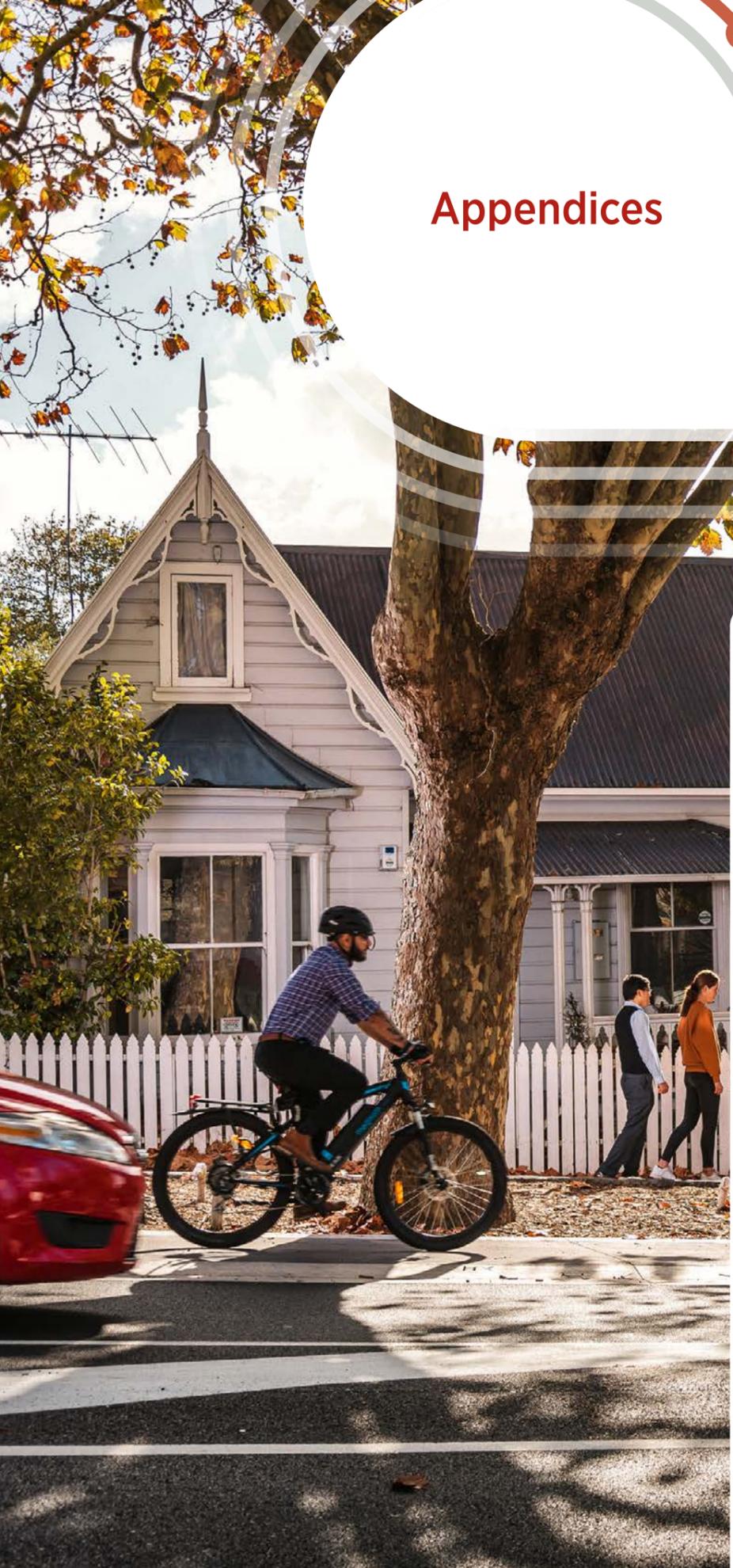


Figure 10 Typology matrix with descriptions

Appendices



There are a number of high-level questions to consider when assigning future modal priorities for a road or street.

It is important to note that these questions are for consideration only. 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
Strategic network	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)?
Place/ Movement functions	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 If the Place and Movement values are both high, the design process will be more complicated. This is because the street has to accommodate multiple functions in a single corridor.	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?
Level and Quality of service (LOS and QOS)	<ul style="list-style-type: none"> If the expected LOS/QOS is reasonable within the current allocation, there is less need to prioritise it, all other things being equal 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. 	Is there a need to improve the level and/or quality of service experienced for that mode?
Actual throughput	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?
Safety	An expected increase in movement and/or vulnerable road users will increase safety considerations. 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?
Provision of car parking	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?

