The framework, tools and processes to build the strategy

Key points

Chapter 2

The framework brings together local and network considerations.

The RTF proposes a street family for London.

This comprises nine street-types, defined by their 'place' and 'movement' roles, which are associated with a set of priority uses, strategic performance measures and potential types of interventions. They may also be part of particular networks (eg bus or cycling).

This is intended to aid TfL and borough planning and decision making, especially with regard to road space allocation and traffic management.

This approach needs to be set within a wider network strategy to support London-wide and network outcomes, and manage the cumulative impact of granular changes.

The RTF 'toolbox' contains measures to:

- Ensure infrastructure and assets are fit for the future: future-proofed assets which are in good repair and are fundamental to high-performing streets and network
- Make more efficient and flexible use of space: ensuring efficient use of available space in the face of growing demands and flexing its use by time/function

- Deliver more intelligent systems and management: capitalise on exciting new technological possibilities to deliver benefits for road users and drive innovation
- Help change behaviour and manage demand: building on the 2012 Games experience to reduce pressures on the network and help London grow more sustainably
- Provide substitute, re-located or enhanced capacity: for public spaces, new development, more sustainable modes and vehicular traffic

TfL, the boroughs and other stakeholders need to work together better, with clearer processes, to deliver the vision. Innovation, integration and greater accountability are needed.

The public and road users must be involved in debating and shaping the future of London's roads and streets, and how different aspirations can be achieved.

The framework:

A local and network approach

Since some of the functions are specific to place (for example 'living'), whereas 'moving' is related to a network, the approach needs to combine both a bottom-up and top-down perspective. In effect there is a need to 'think local, plan network'.

In order to achieve the ambition and tackle the challenges set out in Chapter 1, the RTF is proposing a framework for managing and developing London's roads that enables TfL, the boroughs and stakeholders to:

- Identify user needs in different circumstances and set priorities/ make trade-offs accordingly
- Reflect changing functions and aspirations as particular streets change
- Identify the types of tools that may be appropriate locally
- Balance place-specific needs with the overall function of the network
- Understand the need for intervention at a strategic level

This new framework is intended to mediate between the different demands on London's roads, and to clarify the balance between different functions and users for different types of streets.

The street-type is then linked to a set of service standards and a toolkit of potential interventions, namely the right solution in the right place.

But this is firmly set within the network context and recognises the need for strategic and network-level interventions to enable the aspirations, both locally and London-wide, to be met.

London needs great places and streets for its residents. But, conversely, not all streets can be pedestrianised nor can there be ever-worsening conditions for motor vehicle journeys on vital routes, or the city simply won't work.

Figure 10: The movement and place axes
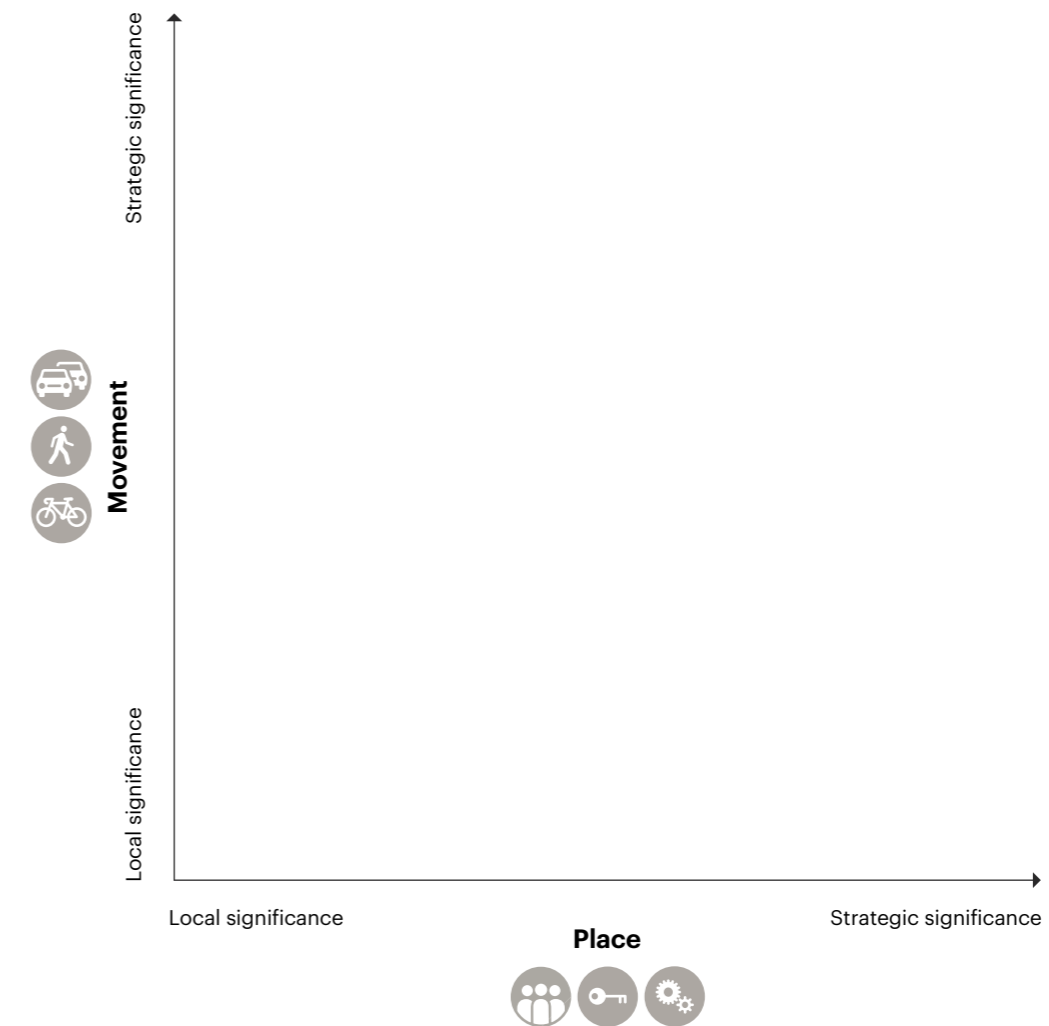
The 'think local' approach

Figure 10 shows two axes – 'movement' and 'place'. The movement axis relates to the moving functions outlined in Chapter 1 across different modes, while the place axis relates to those functions that are specific to and happen in particular places, namely living, unlocking and functioning.

The protecting and sustaining functions are related to both axes, and the intersection of movement and place factors. For example, air quality in particular locations is

affected by both the number and types of vehicle moving through, and physical factors such as the layout of streets, while safety is linked to the speed and mix of vehicles and people, the layout of streets and quality of crossings in different places.

The two axes show that both the movement functions and the place functions are on a continuum. The different functions will be of more or less strategic importance depending on the position on the axes.

The movement axis

Streets perform a wide range of movement functions from roads carrying very high volumes and mixes of vehicular traffic and people, to streets which only have a local movement function.

Streets are also part of corridors and the overall road network. A corridor is a series of roads and streets that work together to facilitate longer distance movement in a given direction. Efficient corridors are vital to support movement.

Many streets and roads also support more specialised transport networks, for example:

- The bus network
- The cycle network, including Quietways and superhighways
- Freight and delivery networks, including the London Lorry Control Scheme-exempt route
- Others, for example coach routes, tram networks, green ways

Strategic road corridors for longer distance journeys and freight are different to bus corridors for example, and it is important when considering specific locations and street-types, that their role as part of particular corridors and networks is recognised and understood.

Regardless of the mode of travel, people share similar objectives in terms of direct, safe, quick journeys with minimum disruption. But they often compete for the same space and can conflict with each other, particularly where roads are narrow or crowded and at junctions. This can cause specific issues for particular modes, such as safety concerns for cyclists and powered two-wheelers.

The position of a street along the movement axis is determined by the strategic importance of that route (its impact on the overall resilience/performance of the network, the proportion of longer distance trips and the overall volume of people movement, as well as its role in particular networks as outlined above).

Movement includes pedestrian movement. Streets in some areas will be high on the movement axis owing to the intensity and strategic importance of pedestrian flows, for example, near stations and in the West End. Pedestrians are often the majority mode at different times of the day on particular streets, including many high streets.

Ensuring the effective functioning of the strategic road network is fundamental for London. But the approach must still be as responsive as possible to local impacts (for example, reducing emissions and noise for communities adjacent to a major road).
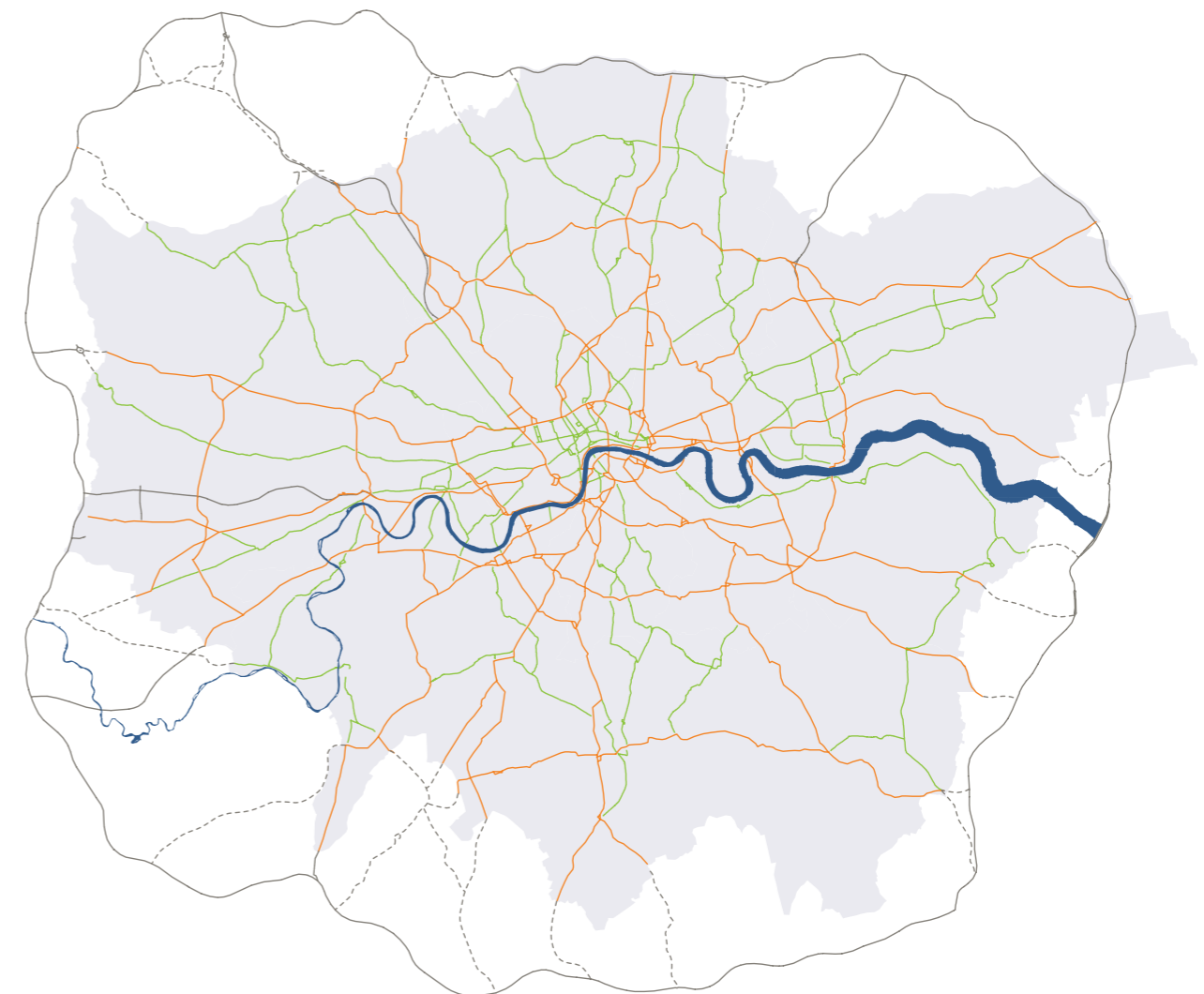
Figure 11: London's strategic roads within the M25

Figure 11 shows London's strategic road network, made up of roads managed by the Highways Agency, TfL and the boroughs.

There may be some roads in the TLRN that may not be at the top of the axis, alternatively there may be some not in the TLRN that perform genuinely strategic roles for the network.

At the lower end of the axis, the streets perform more local functions and have less effect on overall network functioning.

Key

— Transport for London Road Network (TLRN)
— Borough roads
— Motorways
···· Strategic roads linking London to the M25

The place axis

Streets perform a wide variety of functions which are specific to place. These include living, unlocking and functioning, and are equally important to movement. They have an impact economically as well as on quality of life – with place-making an increasingly important element of successful cities.

Streets and roads are also the foreground to a specific built environment, and the most successful streets are those that respect and refer to it.

As with movement, the level along the place axis is determined by the strategic significance of these aspects. At the strategic end of the axis are those with a London-wide (or national and international) role and the widest catchment areas. This includes many areas of central London (for example, the West End and South Bank) and metropolitan centres.

In the context of London's growth, this also includes major development areas, with the potential to create new city quarters and drivers of economic growth. Figure 12 shows some of these places.

The mid-range of the axis includes the many major and district centres across London as well as high streets with a range of community and commercial facilities.

At the other end of the axis are streets that have less significance strategically but are still important to the people there, for example, a suburban residential street is very important to those people who live on it but of limited interest to others.

Bringing them together: London's street family

So streets should be mapped against both axes, reflecting the importance of their movement and place functions, as well as the mix/balance of modes within movement, the nature of the built environment/aesthetic quality and character of different places.

The combination of the row (movement) and column (place) = the street-type.

This establishes a balance. An important reality is that London and Londoners can't have everything, everywhere, at the same time. The use of streets can change during the day and a key aim should be to maximise the flexibility of the road space, particularly for those street-types with significant movement and place pressures.

The RTF has identified nine broad types of streets and roads in London shown in Figure 13. These have been used to develop the street family that represents the diversity of London's roads and streets.

This recognises that a well-functioning and successful city needs a variety of street-types that serve different roles and functions in different places. All these street-types are needed. The different functions will be more or less important depending on the type of road or street in question.

This relatively simple categorisation aims to make it practical to use for TfL and the boroughs. It should also help involve developers, community groups and other stakeholders in a structured way in relation to particular proposals.

At the same time, the RTF recognises the variety within a given street-type – there should therefore be some flexibility within the relevant parameters.

There may also be some particular needs that must be taken into account when applying the framework and designing any interventions. For example, the safety of vulnerable users (pedestrians, powered two-wheeler riders, cyclists), and for those with physical limitations, street layout can have a major impact on their mobility and enjoyment of an area. Road and street design must also ensure that every road in London, including traffic-calmed streets and pedestrian areas, must be accessible by the emergency services.

This street family aims to establish a definition of the roles played by different street-types and the priorities and 'service standards' associated with them. This will provide a framework for making decisions about how to balance the competing demands and guide proposals.
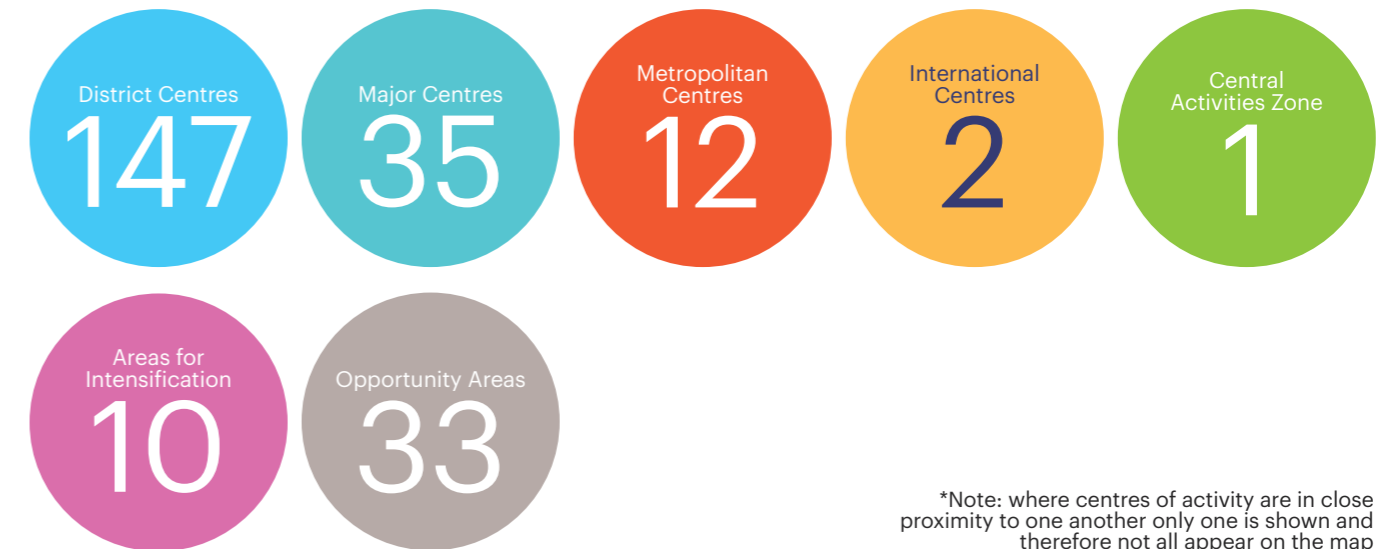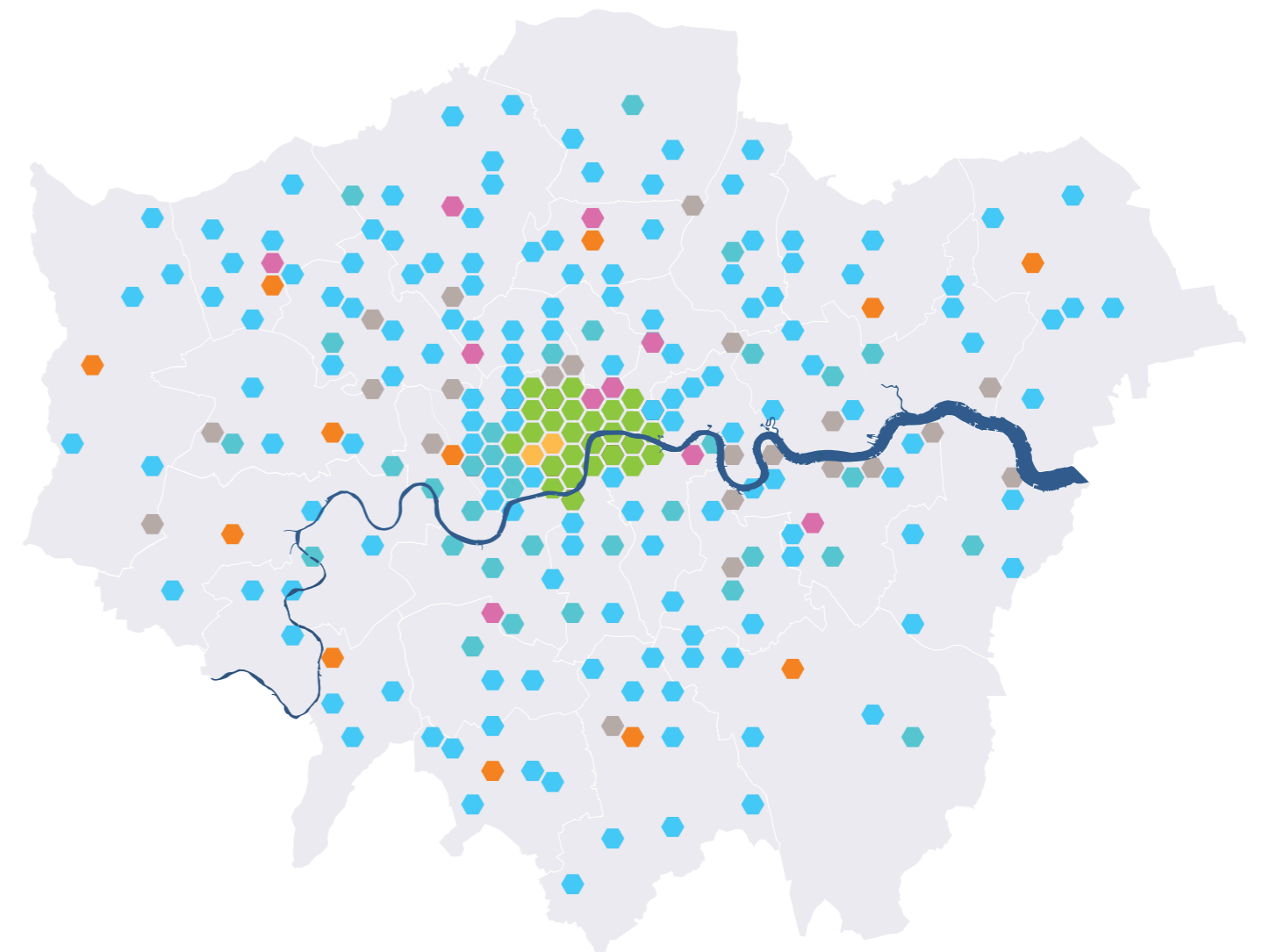
Ideally, major place and streetscape schemes can succeed in delivering improvements for many different users at the same time, for example the Piccadilly two-way re-working and the Britannia Junction and Exhibition Road schemes.

In other cases, this will not be possible, but it's important to recognise that there are already trade-offs now – they're just often not explicit or 'concious' and tend to be made on an ad hoc basis.

For each street-type the framework should enable TfL and boroughs (working with user groups and other stakeholders) to:

- Agree the movement and place roles and priority functions
- Agree key service standards associated with these priorities
- Agree minimum provision/ mitigation for other users
- Develop a toolkit of the types of measures to help deliver this
- Agree variations by time of day and day of the week

Figure 12: Centres of activity across London

District Centres **147**

Major Centres **35**

Metropolitan Centres **12**

International Centres **2**

Central Activities Zone **1**

Areas for Intensification **10**

Opportunity Areas **33**

*Note: where centres of activity are in close proximity to one another only one is shown and therefore not all appear on the map

A key starting point is therefore particular locations. This framework will enable the mapping of existing conditions and an assessment of the 'change potential' of a street or a local area in order to better meet the defined aims for that street-type.

For street-types along the bottom row, there should be a light-touch approach given their lower significance in network terms.

For an arterial road, that is one in the top left hand corner of the matrix, the focus will be on supporting reliable and efficient movement for motorised vehicles while seeking to mitigate the impacts on communities that live alongside (for example, noise, air pollution and severance) as far as possible.

This may be linked to network management strategies, for example, these roads should be a key focus for the roll-out of real-time traffic management, reducing delays by minimising or optimising signals, and implementing lane rental with the highest charges.
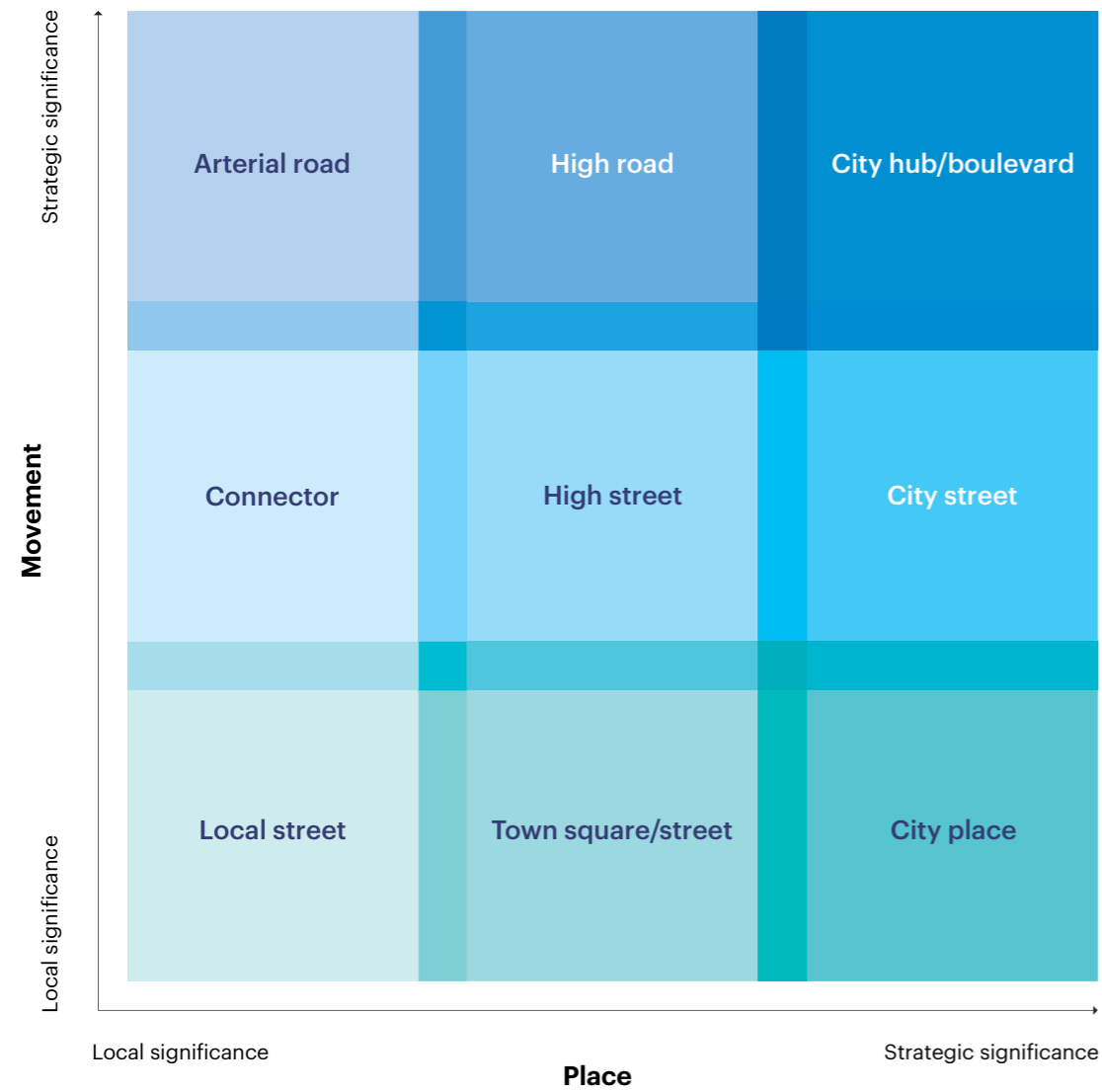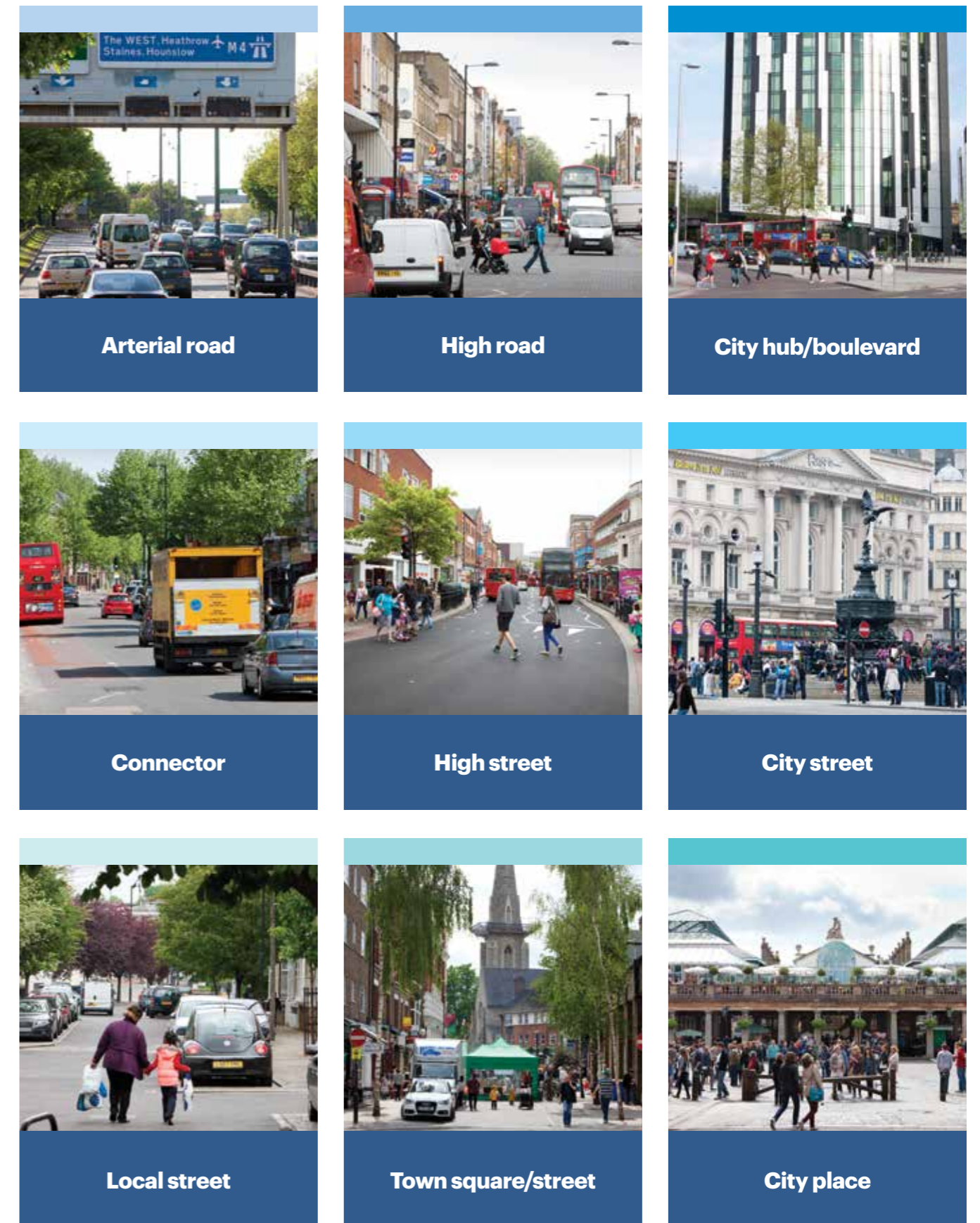
Figure 13a: London street family

Movement (vertical axis): Strategic significance (top) → Local significance (bottom)
Place (horizontal axis): Local significance (left) → Strategic significance (right)

Arterial road	High road	City hub/boulevard
Connector	High street	City street
Local street	Town square/street	City place

Figure 13b: London's street family illustrated

Arterial road

High road

City hub/boulevard

Connector

High street

City street

Local street

Town square/street

City place

There will also be a focus on the corridor that these roads form part of and the aim to provide a reasonably congestion-free route. But this route will also go through areas of varying importance, which will change the balance in different places.

The A10 Corridor (see Figure 14) illustrates this, for example. Along its length it changes from an arterial to a high road and finally to a city hub – its street-type shifts along the top row of the matrix.

Where this route goes through a strategic place, the aims for a better quality urban realm, unlocking development, and supporting walking and cycling, will more strongly come to the fore, while still seeking to maintain a relatively high degree of movement function.

The RTF recommends that the speed environment is linked to the different street-types (see Figure 15)

Speed limits will play an important role where movement and place need to be more balanced, where there are high levels of pedestrian and cycling activity and where safety issues need to be tackled.

A slower speed environment could deliver significant benefits in many places and for particular users, with less adverse impacts for movement (for example vehicular flows) than other potential interventions.

Win-win solutions should be the primary aim, and innovative/flexible functionality can help in this.

Some of the street-types, such as city streets, some high streets and town streets, may lend themselves to more of a 'shared space' approach, where a more equal balance can be struck.

It will often be necessary, however, to make clear choices in terms of how capacity is allocated and used (including by time of day). In part, the realities of higher service levels for some users are defined by what is not being delivered for others.

For example, how long a pedestrian should expect to wait to cross a suburban high street will be different to the waiting time on a busy arterial road where the focus on motor vehicle movement and journey time will be greater, and provision for pedestrians consequently less.

This framework should help guide understanding and expectations. Figures 16 and 17 show how particular priorities change across the different street-types.

Within the agreed priorities, there may still be some minimal standards or mitigations to protect non-priority users. For example, along arterial roads, it will be important to mitigate impacts on residents without impacting unduly on vehicular traffic flows – whether in terms of noise by improved screening, or severance by Mile End Bridge-type crossings.

Figure 14: A10 corridor: example of changing street-type

It is the combination of the movement and place levels that defines the street-type.
The movement level typically remains the same while the place level changes along the corridor.
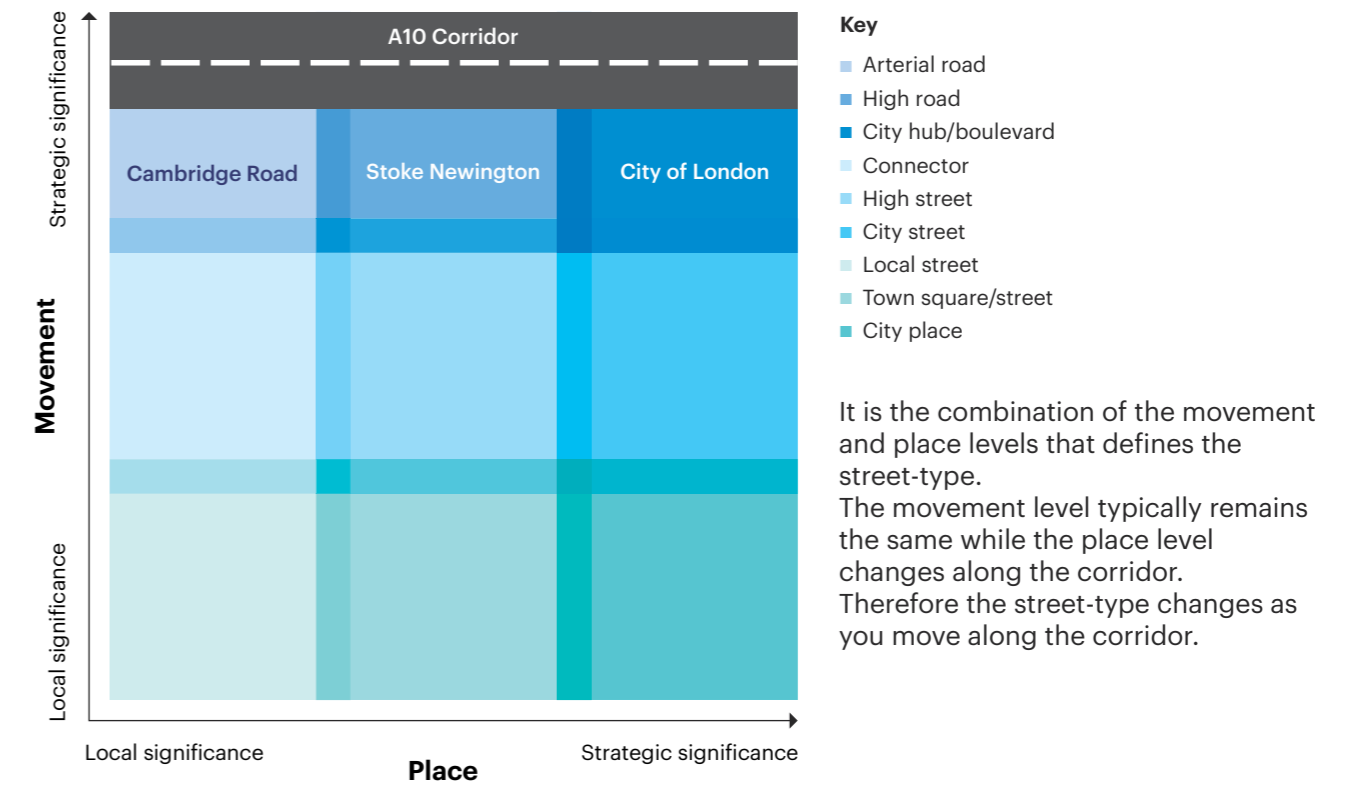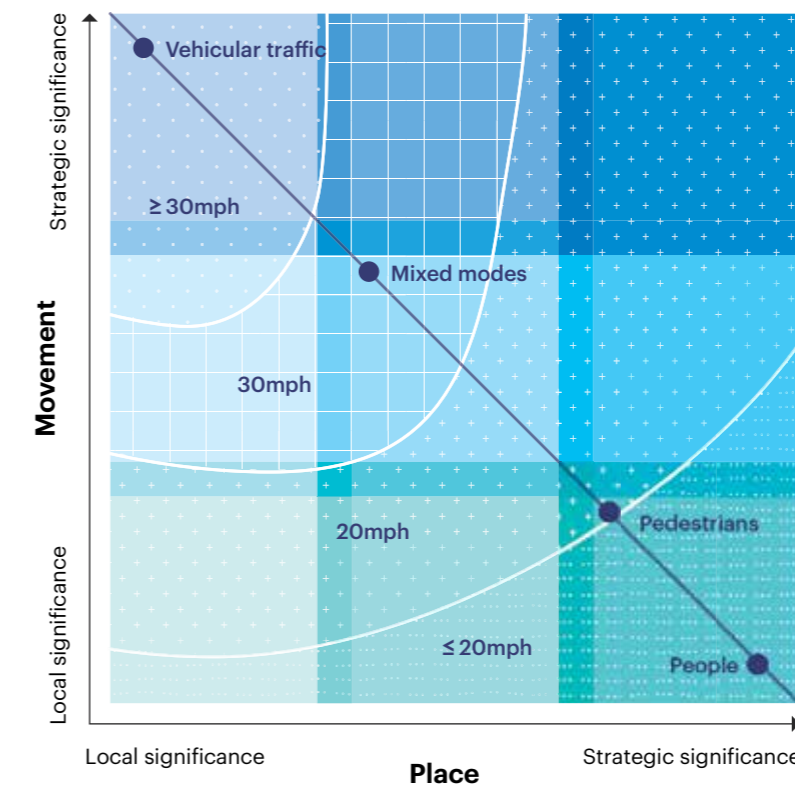Therefore the street-type changes as you move along the corridor.

Figure 15: The implications of street-types for the speed environment

At the other end of the spectrum, pedestrian signals were introduced in Sloane Square to help control the very high flows of pedestrians and give vehicular traffic a chance. The priorities remain clear, but some minimal mitigation is provided.

With the different street-types, different users in those particular contexts will be impacted in varying ways, with some gaining and some possibly losing, but there will be benefits for all users across the street family as a whole.

For proposed changes, there must be a proper assessment of the costs/benefits of any proposals versus the current situation, taking into account impacts across the different functions and users.

Annex 2 sets out some further detail about the different street-types and the suggested priorities and potential measures associated with them.

Figure 17: The implications of street-types for pedestrian crossing time
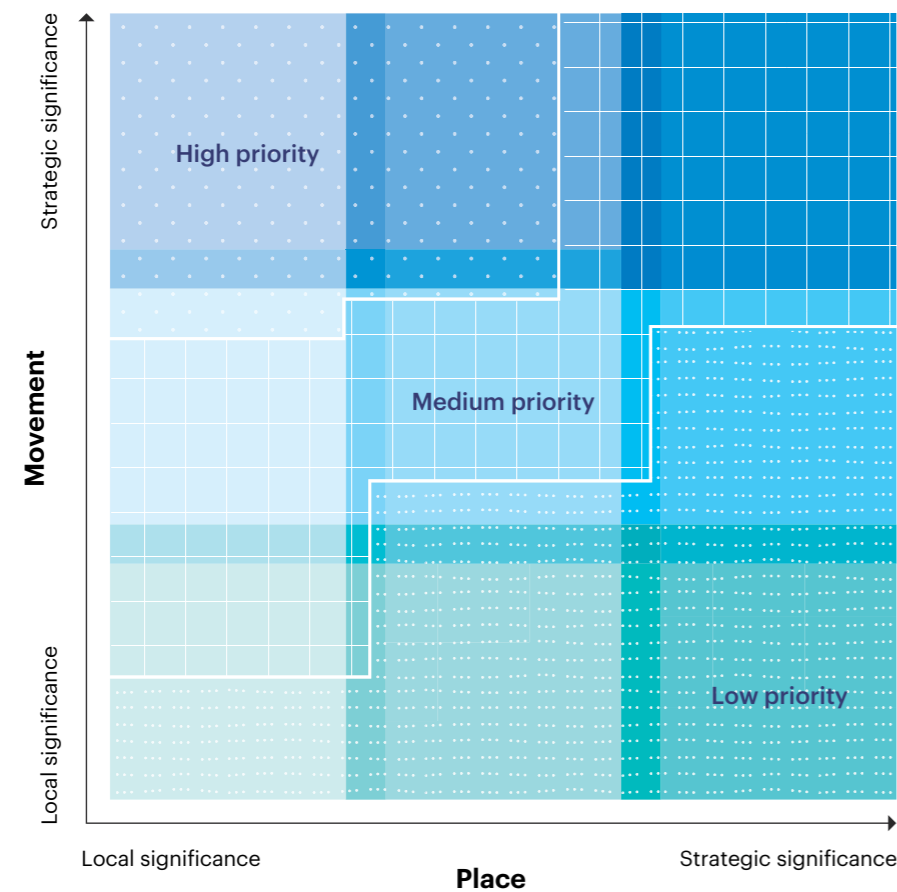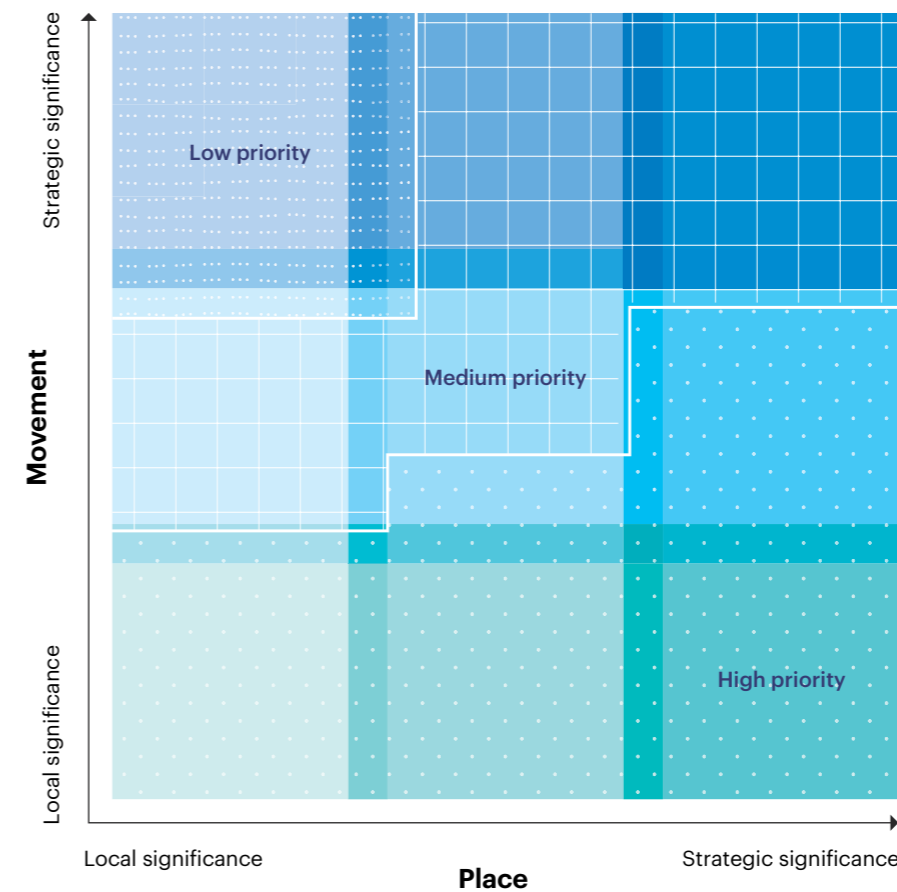

Figure 16: The implications of street-types for vehicle journey time

Implementing the street-types

The RTF recommends that TfL and the boroughs jointly develop and implement the street-types framework and tackle priority locations ensuring they contribute to the long-term vision.

From April 2014, any scheme being put forward by TfL or the boroughs should reflect the street-types approach, ahead of this there should be a pilot with willing boroughs.

An agreed framework, key performance standards and designation of an initial set of roads, for example the strategic road network, should be completed before the end of 2014. All authorities should align, where possible, the three existing definitions of road/street classification (highway, planning and traffic) by June 2016 to ensure consistency in approach between different functions and documents – Local Development Frameworks and Local Implementation Plans.

The approach must be pragmatic and focused on assisting decision-making and delivery, rather than mechanistic and overly complex.

TfL and the boroughs, working with other stakeholders, should:

- Agree priorities and service standards across the street-types
- Agree the designation of street-types for particular roads/streets by understanding its movement and place roles to identify its position on the street-types matrix
- Identify where there are major changes taking place, or are expected, which might alter a street's position on the matrix. For each road/street, this would then inform what the expected priorities should be
- Audit how well the road is actually fulfilling its role – assess current performance levels against the priority service standards and also how well it is mitigating impacts on other users/functions
- Identify appropriate tools to improve performance where there is a gap – and how far local action will enable outcomes to be achieved or how far more strategic measures are needed in order to maintain network outcomes within required network standards
- Agree priorities for action and investment via Local Implementation Plans, borough funding, Community Infrastructure Levy charging schedules, TfL programmes, Local Development Frameworks and partnership programmes

This framework should be used as the basis for involving local businesses, communities and other stakeholders in auditing current performance of streets against expectations, and in developing and assessing proposals for change, recognising the wider strategy within which decisions are then made on improving performance.

For local streets, and small scale projects (for example, pocket parks and neighbourhood improvement schemes), the approach must be light touch to avoid over-burdening local groups and constraining innovation.

The 'plan network' approach

This bottom-up approach by itself would raise major challenges given that actions in a particular place may have knock-on effects elsewhere and – alongside many other places – have wider cumulative impacts.

This is particularly important where outcomes rely on overall network functioning and/or specific networks and corridors like freight movement, bus services or CO_2 emissions.

There is no use having lovely places or new office or housing developments if goods can't be delivered or if people can't get to them and if it worsens London's environmental performance.

In Figure 18, the strategic road network (as currently defined) is represented in orange and green – on which efficient movement needs to be maintained – while the hexagons represent some of the major focal points for change in terms of better places (including collision hot spots for example) and key growth areas.

There must be an understanding of potential cumulative impacts – 'adding up' potential or proposed changes at the granular level associated with some of the street-types (for example, enhanced public spaces and provision of more road space for cycling and walking).

This should be tied to some network-level or sub-regional performance indicators, such as corridor travel times and congestion – as set out in Chapter 1 and Annex 1.

TfL must develop a better understanding of the potential impacts of such changes in particular locations and across the network, as well as the strategic interventions required to enable these local changes to be implemented while maintaining network function.

Figure 18: Indicative areas across London with aspirations to improve the living function
These are typically located on London's strategic roads

Key

— Transport for London Road Network (TLRN)
— Borough roads
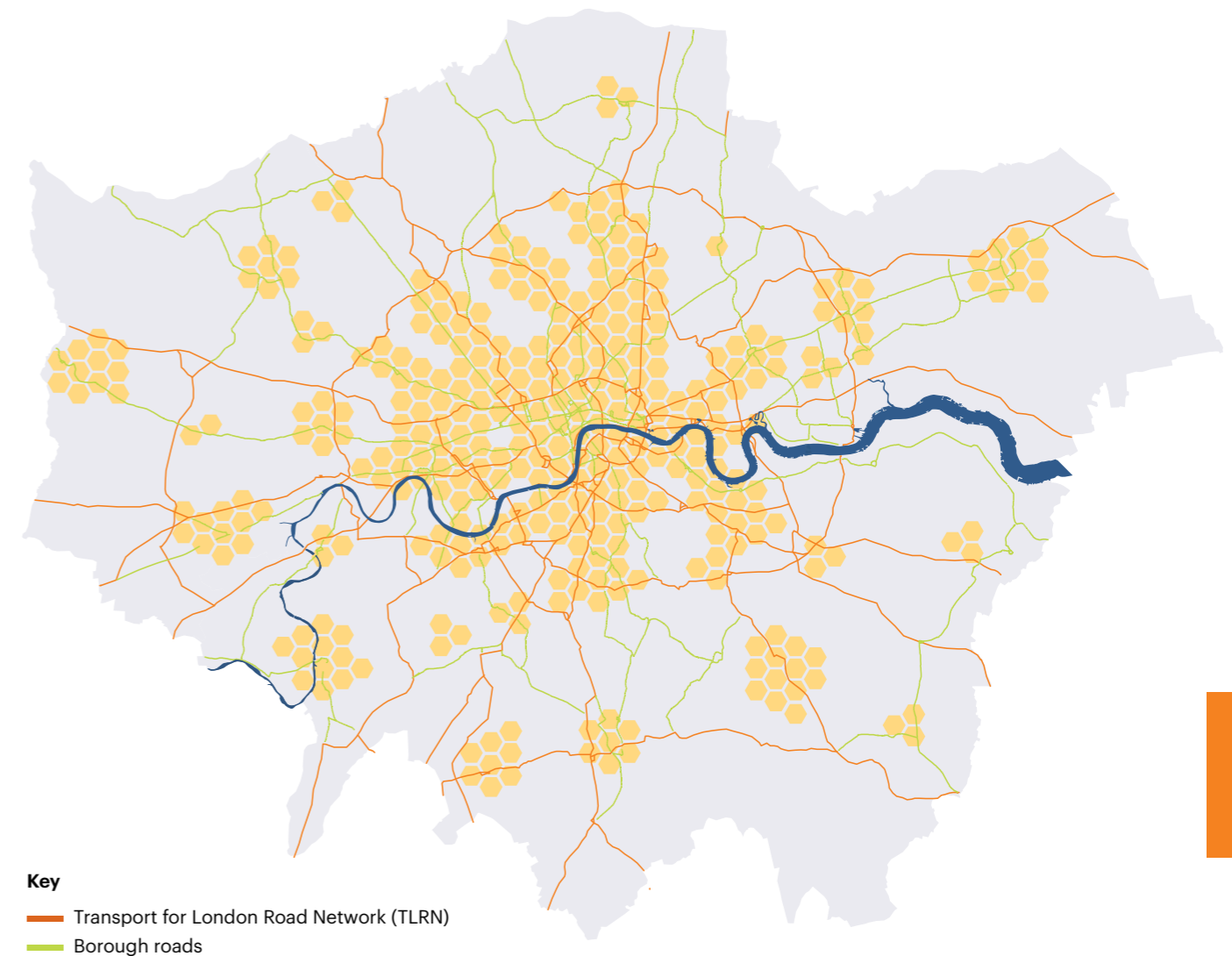
This is not intended to constrain appropriate action, but it may influence the scale or geographical scope of what is possible in the short versus the medium to long-term.

In order to inform and develop its approach, the RTF has used a scenario applying the street-types across London to understand the potential overall network impacts. This is considered further in Chapter 3.

This is purely illustrative – any designation of street-types in practice will need to be discussed and agreed with boroughs and TfL – but it has allowed the RTF to understand the need for more strategic interventions alongside local measures, to fully realise the aspirations associated with street-types, while keeping London moving.