Movement & Place Consulting

Best Practice in Car Share Policy for the City of Port Phillip

Draft Report
24 February 2022

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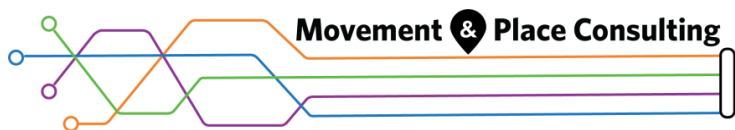
Document Revision History

VERSION	DATE	DOCUMENT TYPE
1.0	4 January 2022	Draft Report
2.0	5 February 2022	Final Report

Document Control Panel

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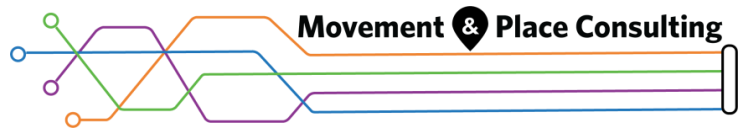Movement & Place Pty Ltd
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Acknowledgement of Country

We acknowledge the traditional custodians of the land we are meeting on the Wurundjeri and Bunurong people of the Kulin Nation.

We do this by encouraging the Port Phillip community to take lighter footsteps and reduce their impact on Country.

Car share services are key to Healing Country while providing appropriate access to cars when necessary – because:

- Sharing resources like cars reduces the negative impacts on Country

- Resources required to build and operate cars (including lithium required for new car batteries) comes from Country

- Car share users walk more and take lighter footsteps on Country

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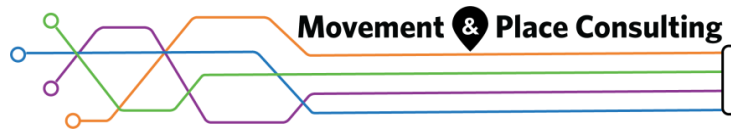
Executive Summary

The City of Port Phillip is recognised by the industry and other government agencies as a national reference for its approach to car share outlined in the 2016 Car Share Policy. This policy has effectively guided the expansion and uptake of car share in the municipality during the early evolution and growth of the service.

Car share is at a maturing level in the City of Port Phillip. In June 2016, there were 79 dedicated car share bays. Currently, in 2021, there are approximately 200 dedicated on-street car share bays in the municipality.

Each provider typically seeks to grow services in proven markets with the highest financial returns. As a result, installation of new bays has not been evenly distributed across the municipality. Council provides car spaces for use by residents and service providers. The City of Port Phillip therefore has a key role in planning the car share network.

The City of Port Phillip is reviewing its Car Share Policy. In addition to accommodating changes provoked by the impacts of COVID-19, there is a need to assess opportunities to expand the car share network and benefits it provides across the community.

The Port Phillip community benefit significantly from car share services, and future growth of the services can reduce the traffic congestion that will otherwise occur from the next two decades of population growth. Therefore, the City of Port Phillip aims to become a leader of best practice management for car share in Australia. To achieve this outcome, the current best practice approaches to managing car share services are being reviewed.

Many best practice approaches from European, North American, Asian, and Australian contexts have been reviewed. Five cases were chosen considering their relevance and applicability to the Port Phillip context: Bremen and Munich, in Germany, as well as San Francisco, Seattle and Chicago, in United States of America. This study identified additional national cases of relevance for this policy review, such as Milan, Ghent, Hamburg, London, Portland, New York, Los Angeles, Vancouver, Sydney, Adelaide, and Freemantle, among others.

The City of Port Phillip has applied a mainly *"Demand Responsive Network"* approach to managing the car share network over the last decade, in which on-street spaces are provided upon request from service providers. To maximise the community benefit, inclusion, and viability of car share within the municipality, it is recommended that Council evolve towards a *"Catchment Based Network"* approach, maintaining support for car share services and improving inclusion.

Adopting the *"Catchment Based Network"* approach means the car share network will be strategically planned by Council officers and on-street spaces will be provided to meet potential community demand. Applying this approach will focus on service coverage and inclusion of the whole Port Phillip community.

To maximise the community benefit, inclusion, and viability of car share within the municipality, it is recommended that Council:

1. Adopt a Catchment Based Network approach to growing the car share network.
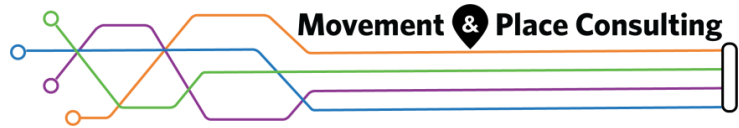
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2. Adopt a coverage target of having a car share vehicle a maximum of 250m from 90% of properties

   o Focus on coverage, availability, and demand to expand the car share network across the municipality

3. Consider the feasibility of allocating car share bays more than twice a year.

4. Build awareness and the Social Licence to Operate.

5. Continue a shared decision-making process with service providers.

6. Partner with CSPs to investigate the potential of car sharing in specific areas

7. Integrate car share with public transport and other shared transport services

   o Establish multimodal mobility hubs around public transport stations, with other shared transport services.

   o Develop a Municipal Shared Transport Services Strategy.

8. Support a uniform best practice approach to car share across inner Melbourne.

9. Retain qualification requirements and multiple service operators.

10. Develop a more efficient data sharing system.

11. Engage with developers and CSPs to establish viable car share in future commercial and residential developments.

12. Use car share vehicles to complement or replace Council fleet vehicles.

The insights provided by this report will assist the City of Port Phillip to maximise the community benefit derived from car share services. They also provide best practice guidance on how to implement changes that will expand the catchment of the car share network and improve social inclusion by providing better access to mobility options for the Port Phillip residents most in need.

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Glossary

Catchment based network	Car share network is strategically planned by government and on-street spaces are provided in response to community demand.
CoPP	City of Port Phillip
COVID-19	The SARS-CoV-2 pandemic and its impacts in Victoria particularly with regard to reduced travel and use of car share vehicles and general economic uncertainty
CSP	car share provider
Demand responsive network	On-street spaces are provided upon request from service providers.
EV	electric vehicle
MCL Strategy	Move, Connect, Live Integrated Transport Strategy
SUMP	Sustainable Urban Mobility Plan

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1   Introduction

The City of Port Phillip is a vibrant beach side inner-city area located directly south of the Melbourne CBD. This area includes numerous residential and commercial precincts that provide a wide variety of activities and opportunities. Despite being one of the smallest municipalities in Victoria by area, the City of Port Phillip is one of the most densely populated. The 2020 Estimated Resident Population for City of Port Phillip is 116,476, with a population density of 5,659 persons per square km. The population is expected to increase by almost 50% to over 176,000 by 2041.

This makes it the perfect place for more efficient transport options to thrive, as shown in the pedestrian, bicycle and public transport networks. Car share services provide mobility to those who cannot afford a car, and reduces transport expenditures for those who don't need a car all the time.

With more than twice the average population density for metropolitan Melbourne, significant employment areas such as St Kilda Road and the growth area of Fishermen's Bend, and nearly three million visitors per year, the pressure on the City of Port Phillip's transport infrastructure poses a considerable challenge for Council as the City continues to grow.

By 2050, Fishermans Bend is forecast to have 80,000 workers and 80,000 residents across the Cities of Melbourne and Port Phillip. The municipality is also Melbourne's second most popular visitor destination, attracting more than 2.8 million visitors each year. Car share services significantly improve the availability of parking and are a key factor that reduces traffic congestion on Port Phillip's arterial and collector roads.

Moreover, in 2019, the Council declared a climate emergency, recognising that as climate change is a global challenge, everyone must play their part. Using car share services is one of the most significant ways a Port Phillip resident can reduce their carbon footprint.

Council is committed to making it easy for the community to move around and connect with people and places, with options for sustainable and accessible transport available. The inner-city location provides residents with convenient access to high frequency train, tram, and bus services. However, despite the quality of public transport services, car ownership rates are higher than in other inner and less central Melbourne LGAs including the Cities of Darebin, Moreland, and Yarra. This leads to increased local traffic congestion and reduced local economic expenditure. Car share services mitigate both these issues.

Council has a stated goal to not increase the number of resident cars in Port Phillip, recognising that the number of cars 'living' in Port Phillip has a direct impact on traffic congestion in local streets. Factors influencing the current relatively high car ownership rate are likely to include household incomes, employment status, employment location, education and availability of alternatives like car share.

Car share is popular in Port Phillip and provides significant benefit to the community, even beyond those who use the service. The existing car share service helps to reduce overall car ownership (freeing up residential parking spaces) and usage which reduces traffic congestion. The service also increases local economic activity and improves health outcomes, both resulting from increased use of active transport for short trips.

Recognising the impact of car ownership on local traffic congestion, Council supports car share as a service that reduces the need for every new resident to also bring a privately

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owned vehicle. Council's Move, Connect, Live (MCL) Integrated Transport Strategy has a target of stabilising the number of daily trips taken in private passenger vehicles at 2016/17 levels (128,000 per day) by 2028. The targets also aim to increase daily trips by walking (36%), bike riding (151%), and public transport trips (35%) over the same period.

In 2016, the City of Port Phillip adopted a Car Share Policy to establish a network of 330 car share vehicles across the municipality by 2021. Five years on, this policy is now being reviewed. The City of Port Phillip is seeking to identify opportunities for further growth of the car share service.

This report is structured in the following way:

- Chapters 2 and 3 provide an analysis of the current characteristics of the car share network and the policy context in the City of Port Phillip.

- Chapter 4 provides an analysis of transport & demographic characteristics in the municipality.

- Chapters 5 and 6 provide a review of global and local best practices on approaches to car share.

- Chapter 7 provides recommendations for the municipality's future approach to car share.

2   Background and policy context

The City of Port Phillip is recognised by the industry and other government agencies as a national reference for its approach to car share outlined in the 2016 Car Share Policy.

This policy has effectively guided the expansion and uptake of car share in the municipality during the early evolution and growth of the service. The City of Port Phillip promotes car sharing through a range of channels, including the Council website, stories in e-newsletters, and consultation with adjacent properties when new car share bays are installed.

Ride-hailing and various taxi providers (including Uber, Didi and local company Oiii) also operate in the municipality.

Other shared transport services have been implemented in the last years, including an electric dock-less bike sharing system, developed on a trial basis in collaboration with other municipalities (Melbourne and Yarra). A scooter sharing system is also being considered.

Planning is underway to establish a network of public electric vehicle charging stations across the municipality.

In addition to accommodating changes provoked by the impacts of COVID-19, there is a need to assess opportunities to expand the car share network and benefits it provides across the Port Phillip community.

To achieve this outcome, Council is interested in understanding the current best practice approaches to managing car share services. As an outcome of the current policy review, the City of Port Phillip wishes to implement an approach that will enable further expansion of the network to meet the needs of significant population growth and maximise benefits across the whole community.

Port Phillip is home to one of Australia's first and largest car share services providers. It is also home to the Australian headquarters of a new services provider, making it the only municipality in Australia to be home for two car share service provider's national headquarters.

The Port Phillip community benefit significantly from car share services, and future growth of the services can reduce the traffic congestion that will otherwise occur from the next two decades of population growth. Therefore, the City of Port Phillip aims to become a leader of best practice management for car share in Australia.

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3   Car share in the City of Port Phillip

Car share is at a maturing level in the City of Port Phillip. In June 2016, there were 79 dedicated car share bays. In June 2018, there were 181 car share bays, (21 off-street and 160 on-street bays) as shown in Figure 3.1 below. This evolution suggested the target of 330 car share vehicles (including on and off-street vehicles) could be met or exceeded by June 2020/21, prior to the impacts of COVID-19.

Figure 3.1 Car share bay locations
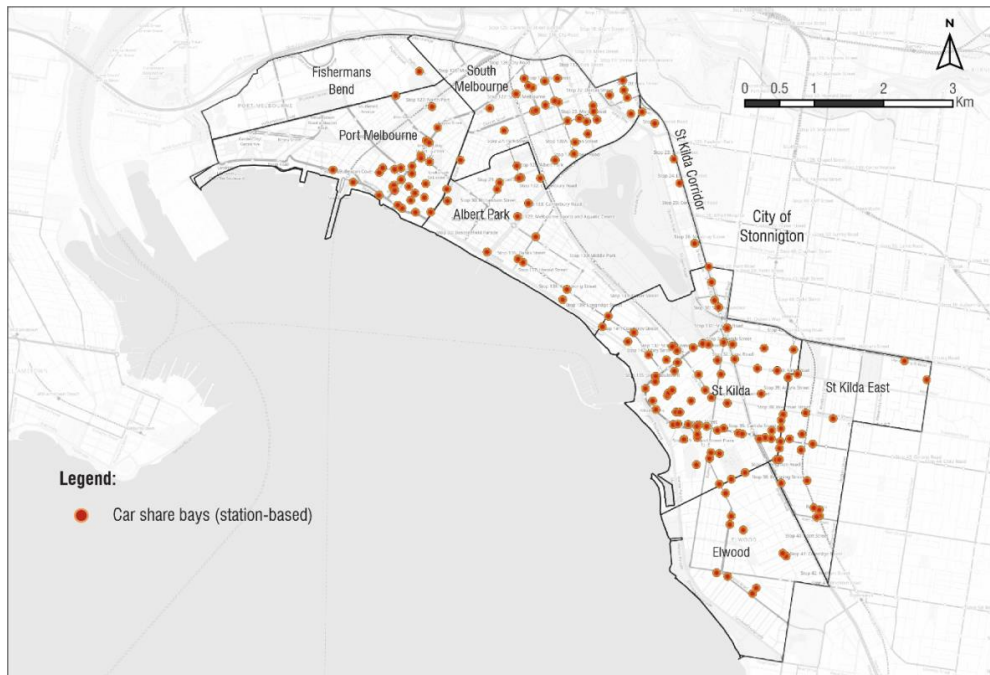
Source: Data.gov.au (January 2020) with M&PC Analysis

There were minimal changes to the car share network during the Covid pandemic and this data shows the network as it was in January 2020. This map can be used for reference of the areas with higher concentration of bays, not for specific location or exact quantity of bays.

Currently, in 2021, there are approximately 200 dedicated on-street car share bays in the municipality. For comparison purposes, there are 163 peer-to-peer car share vehicles registered within the municipality. Peer-to-peer vehicles are also considered part of the overall car share network and represent 45% of the total of vehicles (excluding off-street), as shown in Figure 3.2 overleaf.

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Figure 3.2: Car share vehicles in the municipality
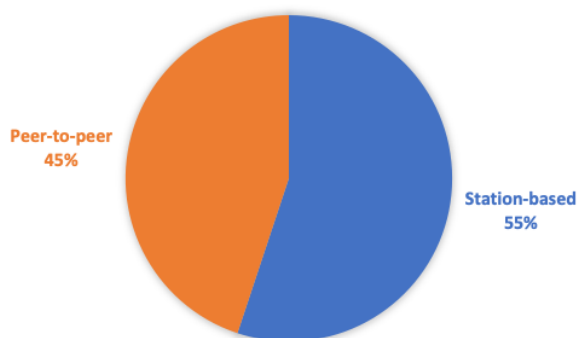
Source: Data from the City of Port Phillip

Since the last policy review, in 2016, two service providers (Popcar and RACV Carshare) entered the market and two providers have withdrawn from the municipality, Greensharecar ceased operation in 2019 and RACV Carshare in mid-2020. The current providers are Goget, FlexiCar, and Popcar, with a fourth operator Kinto planning to begin operations in 2022.

In the last five years, membership in City of Port Phillip has grown and car share service providers have experienced relatively high utilisation rates.

Membership

Car share service providers have reported a steady growth in membership, from 2,996 residents (2.8% of the population) in 2016 to 6,108 residents (5.4%) in June 2018 and 9,240 residents (7.7%) in December 2021. The 2021 number is a sum of members from all qualified operators (not including Car Next Door), not the exact number of residents who use car share. It is not possible to determine if there are members of more than one operator in this cohort.

Areas with high concentrations of members include St Kilda, South Melbourne and Elwood (despite Elwood being one of the least served areas in terms of vehicles and service coverage). At the lower end of the scale in terms of membership is Middle Park, Albert Park, and Ripponlea.

Some academic studies have specifically used data from the City of Port Phillip (member surveys) to explore the profile of car share users in the region. These provide an understanding of the factors that influence car share adoption (Jain et al., 2021); and classified car share users into "car dependents, car avoiders, car limiters, car aspirers, and car sellers" (Jain et al., 2020), who were divided into two overall groups, the sustainability focused users, and users whose intention was to buy a car upon a change in their financial situation.

In general, these studies found that the adoption of car share depends on attitudes, which relate to factors such as cost, the environment, the variety of vehicles available, maintenance issues, and a will to own less things.

However, they also found that cultural aspects and status, distance, vehicle availability, conditions to use the system, and household composition (with kids, for example) can be barriers to car sharing adoption. Moreover, the studies also concluded that car share is

more effective in sustaining car ownership, rather than reversing it, and that life milestones and changes are opportunities to introduce residents to car sharing (Jain et al., 2021, 2020).

Utilisation

International best practice references highlight that car share vehicles need to be relatively available in order to instil confidence that the service can meet customers' needs. The generally accepted wisdom is that each vehicle needs to be in use 20-25% of the time. This amount of use ensures adequate revenue to finance the services while also being relatively available for each customer.

Service Coverage

The 2016 Car Share Policy proposed an overall target of 330 vehicles, distributed across the municipality in a manner that ensures inclusion for all residents. These neighbourhood targets were based on forecast population growth, the proportion of on-street parking spaces, and membership. The Car Share Policy allowed targets to be increased based on car share utilisation, membership, and the benefits of car share particularly to reduce car ownership.

Local demand for car share services has a significant influence on service providers. Each provider typically seeking to grow services in proven markets with the highest financial returns. As a result, installation of new bays has not been evenly distributed across the municipality. Some neighbourhoods, such as St Kilda, have experienced high membership and usage leading to service growth, whilst others, such as Elwood and Fishermans Bend, have a low provision of vehicles.

In Fishermans Bend, a slower progress of residential development has led to a lower rate of growth in car share service provision. For example, Fishermans Bend had a target of 35 car share bays by 2021. However, only four on-street car share bays were installed by this time. This is less concerning than the lack of coverage in Elwood, which has a high rate of membership, and merits consideration for additional car share vehicles. Council has a keen interest in achieving equitable provision of services across the whole municipality.

In some areas, such as along St Kilda Road, where there is high residential density, there may be limited opportunities for on-street car share and it is essential that the City of Port Phillip work with developers to provide viable car share spaces in future developments.

The distribution of bays in neighbourhoods throughout the years (2016, 2018, and 2021) is graphically represented in Figure 3.3 below.

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Figure 3.3: Distribution of car share bays by neighbourhood from 2016 to 2021
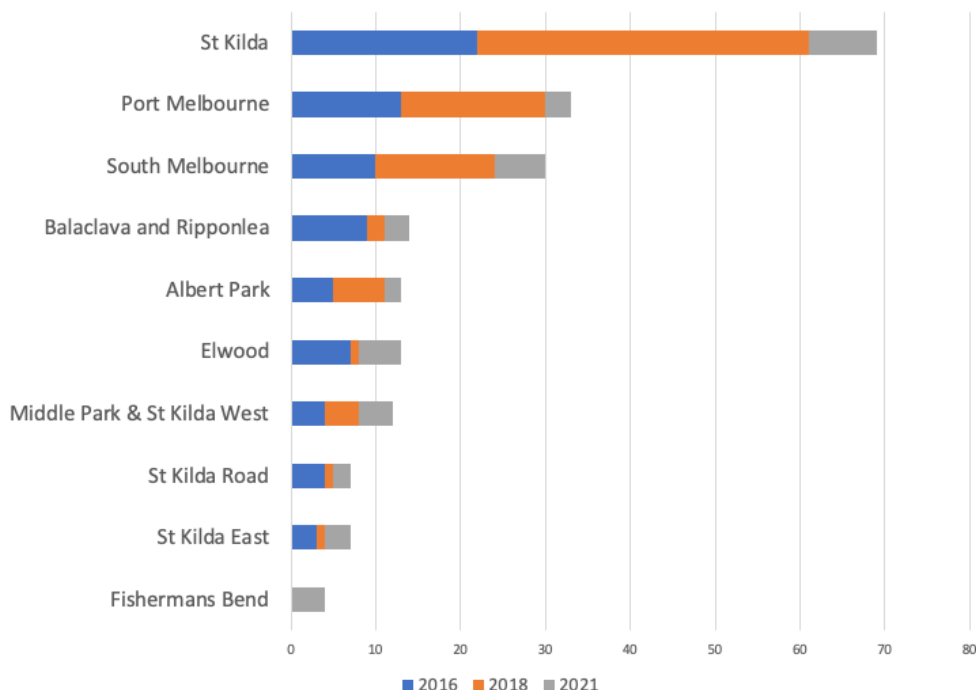
Source: Data from the City of Port Phillip

The evolution of Port Phillip's on-street car share network is presented in Table 3-1 below.

Table 3-1: Evolution of the on-street car share network (from 2016 to 2021)

PRECINCT	2021 GROWTH SCENARIO	CURRENT TARGET (by 2021)	JULY 2016 (total)	JUNE 2018 (total)	JUNE 2021 (total)	% ACHIEVED
St Kilda	98	32	22	61	69*	216%
Port Melbourne	77	55	13	30	33	60%
South Melbourne	102	28	10	24	30*	107%
Balaclava and Ripponlea	75	23	9	11	14	61%
Albert Park	42	27	5	11	13	48%
Middle Park & St Kilda West	52	30	4	8	12	40%
Elwood	70	48	8	7	12	25%
St Kilda Road	74	15	4	5	7	47%
St Kilda East	96	37	4	3	6	16%
Fishermans Bend	64	35	0	0	4	11%
TOTAL	**750**	**330**	**79**	**160**	**200**	

Above target (>100%)*	
On-track	
Below target (<50%)	

Notes: Providers were required to demonstrate demand through membership and usage to gain additional vehicles in areas that exceeded the "coverage" target.

Source: Data from the City of Port Phillip

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In some areas the current target for network expansion has been exceeded. This is in locations where the resident demand exceeded the service availability and increasing services was demonstrated to be demanded by increased membership and use. This report analyses how the City of Port Phillip needs to evolve its bay allocation system to ensure fair and equitable allocation of bays and network coverage to all residents.

The expansion of the on-street car share network (from 2016 to 2021), showing vehicles added by 2018 and by 2021 is presented in Table 3-2 below.

Table 3-2: Expansion of the on-street car share network (from 2016 to 2021)

PRECINCT	JULY 2016 (total)	JUNE 2018 (added)	JUNE 2021 (added)
St Kilda	22	39	8
Port Melbourne	13	17	3
South Melbourne	10	14	6
Balaclava and Ripponlea	9	2	3
Albert Park	5	6	2
Middle Park & St Kilda West	4	4	4
Elwood	8	-1	5
St Kilda Road	4	1	2
St Kilda East	4	-1	3
Fishermans Bend	0	0	4
TOTAL (added to date)	79	81	40
TOTAL IN 2021			200

Source: Data from the City of Port Phillip

Administration and Fees

Council established the role of a dedicated Car Share Officer in 2018, which later became the Shared Transport Services Officer (including other shared mobility modes), to oversee the implementation and management of car share in the municipality. This is a unique arrangement in Australia. This global best-practice approach is part of what sets the City of Port Phillip above others with respect to car share services provided to the community.

The City of Port Phillip currently charges two types of fees for car share bays:

- An installation fee of $1,400 (a one-off fee to cover line-marking and signage costs).
- An annual fee of $85 (representing the resident parking permit cost).

Contracts with CSP to allow them to have dedicated on-street car share bays were valid from 2026 to 2021 and now are valid until 2023.

COVID-19 has made the last two years particularly difficult in Melbourne. The longest lockdown periods in the world had a significant impact on travel and transport patterns. Car share usage has changed and there is uncertainty of how it will evolve over the coming

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months and years. The main characteristics identified by car share providers during this period were:

- Greater interest from businesses seeking to reduce costs by using car share vehicles to supplement or replace vehicle fleets.

- Less use of CBD car share vehicles due to office base work restrictions.

- Increased uptake of car share from people who are:

  o Working from home, mainly in residential areas with conveniently located vehicles, and

  o Reluctant to use public transport (new markets), issue observed across different municipalities.

  o Holidaying locally, which contributed to increased membership and occurrence of first car share journeys.

The City of Port Phillip has relocated some car share bays to accommodate parklets during COVID-19, by establishing new bays in nearby locations. In some cases, this leads to a change in the geographic catchment of the car share bay and comes with an increased cost of signage and line-marking changes.

This highlights the need for a purposeful approach to managing the car share network and future coverage in order to achieve Council objectives (specifically related to inclusion and housing affordability). Analysis found that the approach to bay allocation could be used to incentivise placement of cars in some locations that are not otherwise getting attention from service providers.

3.1 Input from providers (CSPs)

Car share service providers (CSPs) that operate in the City of Port Phillip are regularly engaged to understand their needs and any critical issues, including how to best meet the municipality's community needs. Round table discussions with qualified CSPs have been held when reviewing or developing policy and the report authors were invited to present and gather first hand experiences from CSPs at one of these round-table discussions.

Overall, the approach and policy implemented by the City of Port Phillip were rated highly by the CSPs, encouraging growth and facilitating an adequate level of car share service provision across the municipality.

The CSPs characterised the processes to manage car share and allocate new bays as being fair, flexible, and well-organised. The municipality is commonly referred to as a leader in best-practice among other Australian cities.

Opportunities for improvement in the approach were also identified through the insights and suggestions offered by the providers. The information collected and the discussions during meetings provided direction to this study. Key findings, insights, and suggestions included:

- Demand responsive growth – implement a flexible approach to quicky meet fluctuating demands (shifts in use and service demand), even on a temporary basis (i.e., temporarily turn on and off bays), including to accommodate COVID-19 impacts.

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- Targets – avoid setting caps on growth and continue considering demonstrated demand as a basis for expansion. This could require greater focus on population, membership, and usage.

- Floating vehicles (permission to park anywhere within a designated area) is considered a good low risk way to test the market or meet demand surges. Some providers appreciate the ability to 'float' vehicles without the need for the financial and infrastructure investment for each dedicated space.

- More frequent processes to allocate new bays – a more frequent allocation of bays (currently twice a year) would enable community needs to be met more quickly.

- Promotion – the Council could assist with messaging generally and in specific neighbourhoods. The resident parking permit process is an opportune moment to promote car share, possibly via link to further information within the permit system.

- Fees - annual fees for car share services should be aligned to those for residents, with the same regulations and restrictions that are applied to private vehicles. Also, it would be reasonable for car share to pay comparable rates that are not subject to significant changes each year of operation. Moreover, if residential parking fees were increased over time, more people would consider using car share services and ultimately reduce their cost of living.

- Illegal parking within the car share bays – availability of the dedicated car share parking bay upon return of the car is critical to users, the inconvenience generated can be significant to the community.

- Usage and operational issues – including vandalism (such as smashed windows), and theft attempts (unsuccessful, most notably within the St Kilda area), and vehicles retained by users.

- Car share in new developments – The Council could encourage early provision of services in new developments by involving CSPs early in pre-application processes so that developments can be appropriately designed.

Electrification of the fleet generated a range of opinions from CSPs, varying from the importance of reduction in vehicle emissions from the whole fleet (including all residents' vehicles), to increasing interest from users in electric and hybrid vehicles; and a note that increasing cost to serve the community, without increasing private vehicle costs, will reduce future car share uptake and overall community benefits. Other insights related to electrification included:

- Providers suggest that Council incentivise and encourage electrification, for all, by matching requirements to those applied to resident vehicles.

- Emission targets should consider the impact of State Government taxes on electric vehicles.

- Electric vehicles present a range of challenges such as maintenance costs, reliance on charging infrastructure, as well as user education and reluctance. The cost margin is not currently high enough to support including EVs to the fleet. The saving from electric vs petrol for fuel does not offset the cost.

- Any increase in costs of service provision is passed onto members and becomes a disincentive to use car share services.

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- Operational challenges – which require staff to attend to plug-in the vehicles (when a user forgets) or new batteries are required when a car is not used for a few weeks (such as during COVID-19 lockdowns).

3.2   Community views, awareness and perceptions

Research on attitudes to car share in the City of Port Phillip from community engagement prior to developing the Parking Management Policy and the Move, Connect, Live Integrated Transport Strategy have shown that:

- Locals are finding that driving around the area is getting more and more difficult, and many are using public transport, walking, or cycling on a daily basis.

- On-street parking is a challenge, especially in local streets. While participants believe in to reducing dependence on cars, they also think there are some steps that could be taken now. Council could do more to enforce parking and permit conditions, or to ensure residences with off-street parking are making use of those spaces before parking on the street.

- Access to on-street parking is seen as a benefit of rate-paying and living in the municipality. Participants told us that local residents, together with people with disabilities, should have priority for local parking over commuters and those who profit from using parking spaces, like car-sharing companies.

- Most survey participants believe residents who have access to off-street parking should retain their permits, but should have fewer than those who don't have off-street parking.

- Small businesses and parents of young children are more reliant on their vehicles, and have greater concerns about impacts on parking.

- Attitudes towards car share companies differ by age. Younger residents tend to have a greater understanding of car share as a concept, making them more receptive to the benefits of assigning parking to these companies. Older residents tend to hold a weaker understanding of the concept and see them as taking up valuable space.

- Older residents are more likely to reject additional uses for parking. Residents are hesitant to support the use of car spaces for alternative purposes and tend to place more value on parking space. Their reluctance lies in the belief that as the population continues to grow, even more parking spaces will be needed, and that reducing car parking might be detrimental to local businesses.

Station-based car share services are given priority to locate in residential areas. This helps to build awareness of the services amongst the Port Phillip community but anecdotally the vast majority of the community are still unfamiliar with the services and benefits that car share provides.

Many within the community confuse car share services with the new ride-hailing (taxi) type of services offered by companies like Didi, Oiii and Uber. This is a fundamental mis-understanding given that these are all provided by drivers, and car share services require

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the user to drive themselves. The mis-understanding makes communicating about car share services to those that are unfamiliar with the service, particularly difficult.

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4   Demographic Analysis

It is important to note understanding of which demographic factors influence car share use and the significance of each factor is a set of research that has not been undertaken. While the factors presented here are generally accepted across the industry as being important, the relative importance of each one, in the Australian and Port Phillip context is unknown. Developing this understanding is the most critical element of additional insight that the City could seek to generate through a future project.

The following factors discussed below are those that are generally considered most important indicators of potential car share membership and use.

4.1   Public transport access

Most areas in Port Phillip are well-served by public transport, primarily by trams and buses which have frequencies which are high (one service every 10-19 minutes during peak times of weekdays) or at a "turn-up and go" level (where there is one service every 10 minutes or less). Most routes operate at these levels of frequency during most of the day and 20 minutes or less at other times like evenings or during the day on Sundays.

The most frequent services are found along the tram corridor and turn-up-and-go services in St Kilda and Port Melbourne. Some areas in South Melbourne and Albert Park have relatively less frequent bus services, approximately two buses per hour. However, there is substantial car share availability in these areas to meet trip demand as shown in Figure 4.1 below.

Figure 4.1 Public Transport Stops and car share
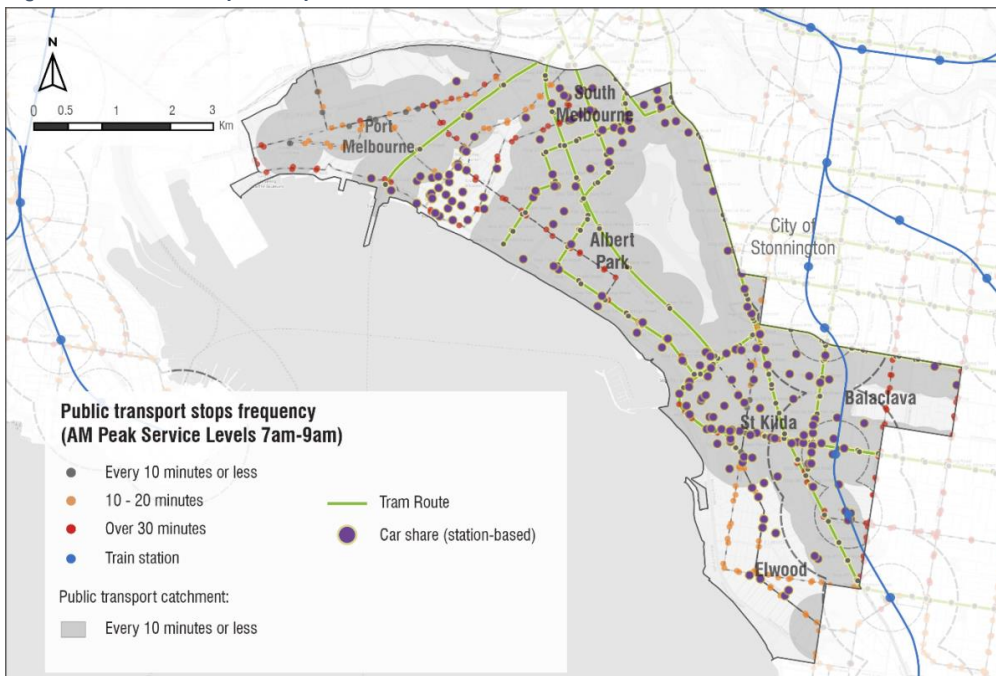
Source: PTV Timetable data, City of Port Phillip car share station locations, with M&PC Analysis

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4.2   Population growth

Population growth is one of the most significant factors which determine the feasibility of expanding car share services. In 2041, it is estimated that the municipality's population will increase by 62.8% (68,189 additional residents).

Currently, many car share vehicles are located in St Kilda, which is expected to increase by 5,672 residents (as shown in Figure 4.2 below). However, significant growth in the municipality is also expected in Fishermans Bend and along the St Kilda Road corridor where there are currently far fewer car share bays and vehicles.

Figure 4.2 Current Population and Projected Change (2016 – 2041)
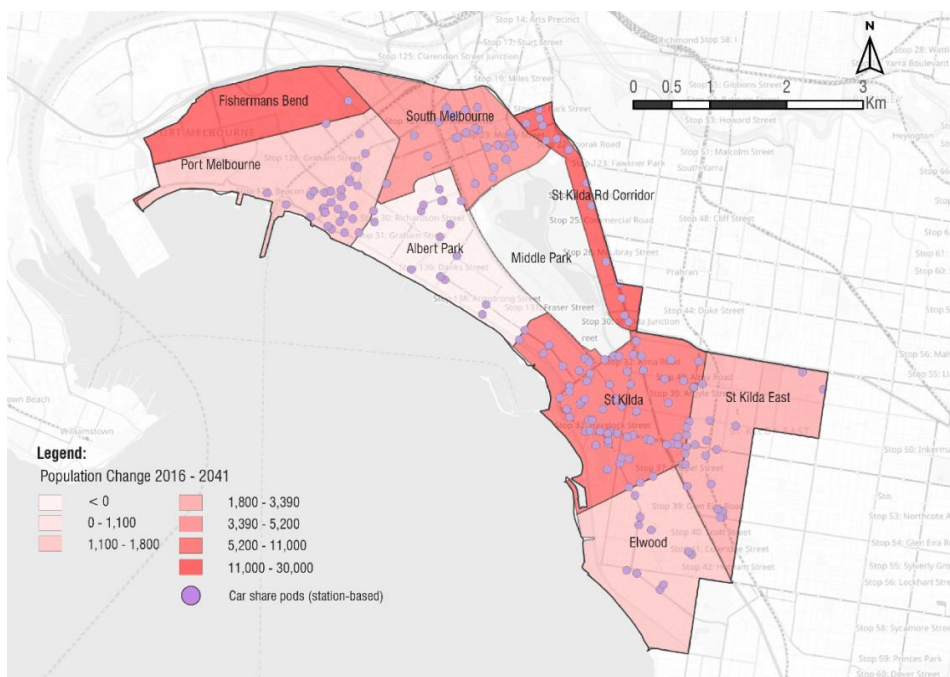
Source: .id community profile of the City of Port Phillip, City of Port Phillip car share station locations, with M&PC analysis

The population of Albert Park is expected to decrease from 12,188 in 2016 to 11,897 in 2041. During the same period, Fishermans Bend and the area along St Kilda Road are expected to experience the highest population growth. In total, these two areas are expected to accommodate 41,250 residents. Fishermans Bend and the St Kilda Road corridor for this reason present significant opportunities for service expansion. Moreover, new buildings in the Fishermans Bend urban renewal area (Port Melbourne Industrial) provide publicly available parking facilities, which could potentially accommodate off-street car share bays.

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4.3   Population density

St Kilda Road Corridor had the highest population density in 2016, an increase of 46.27% from 2011 (102.89 residents/Ha). The population density in St Kilda and St Kilda East has remained relatively high in 2016, and general observations suggest a slight decrease in 2016 compared to 2011. It should be noted that comparing the population density for the eastern area, St Kilda, St Kilda East, and Elwood might produce distorted results due to the difference in the mapping unit between 2011 and 2016.

St Kilda, St Kilda East, and Elwood are not expected to have high population growth; however, they already have a high population density, ensuring viability for the many existing car share locations (as shown in Figure 4.3 below). Considering the existing moderately high population density, they have the potential to expand car share networks, which could result in a more significant number of users per vehicle and hour, with potential significant community benefit from greater levels of service coverage and reliability.

Figure 4.3 Population Density (2016) & Car share location
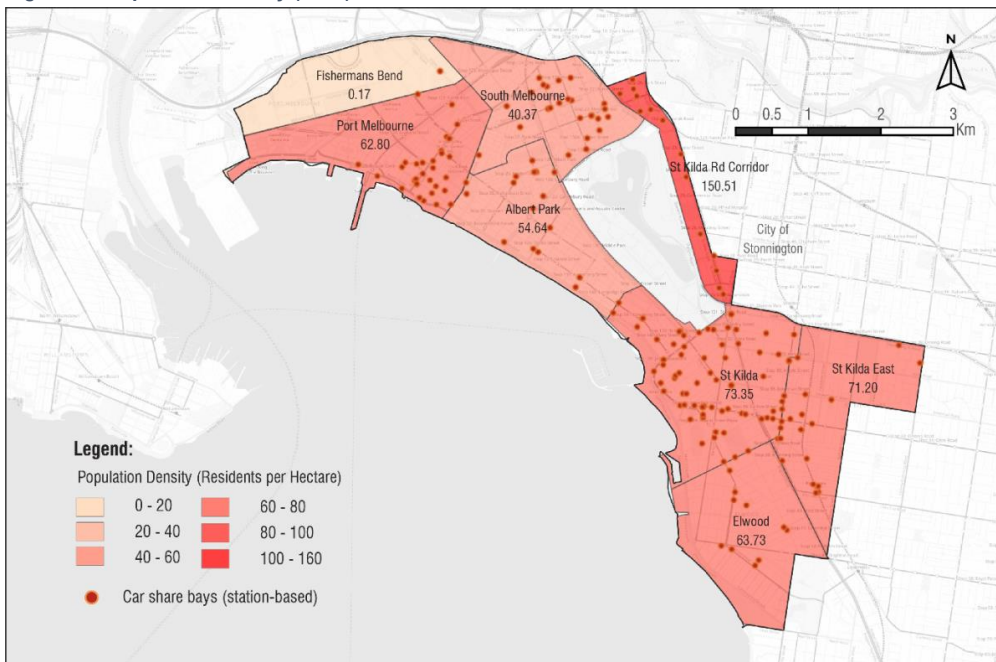
Note: The area denominator does not include Albert Park Reserve, Beaches or areas outside the City of Port Phillip
Source: City of Port Phillip (Forecast.id), City of Port Phillip car share station locations, with M&PC analysis

Areas with the highest population density, including St Kilda Corridor, Port Melbourne, and St Kilda, will need car share services provided on-street as well as within future developments.

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4.4   Median age

Global research shows that most car share users are under 40 years old (Burkhardt and Millard-Ball, 2006; Ceccato and Diana, 2018; Le Vine et al., 2014). As a result, there is a disproportionately higher number of car share stations in areas where the median age is below 40, as shown in Figure 4.4 overleaf.

However, Council should ensure that everyone in CoPP has access to car share services, particularly given that a key reason behind usership is reducing costs associated with driving which represent the second highest component in typical household expenditure (behind the house itself).

Figure 4.4 Median age (2016) & Car share locations
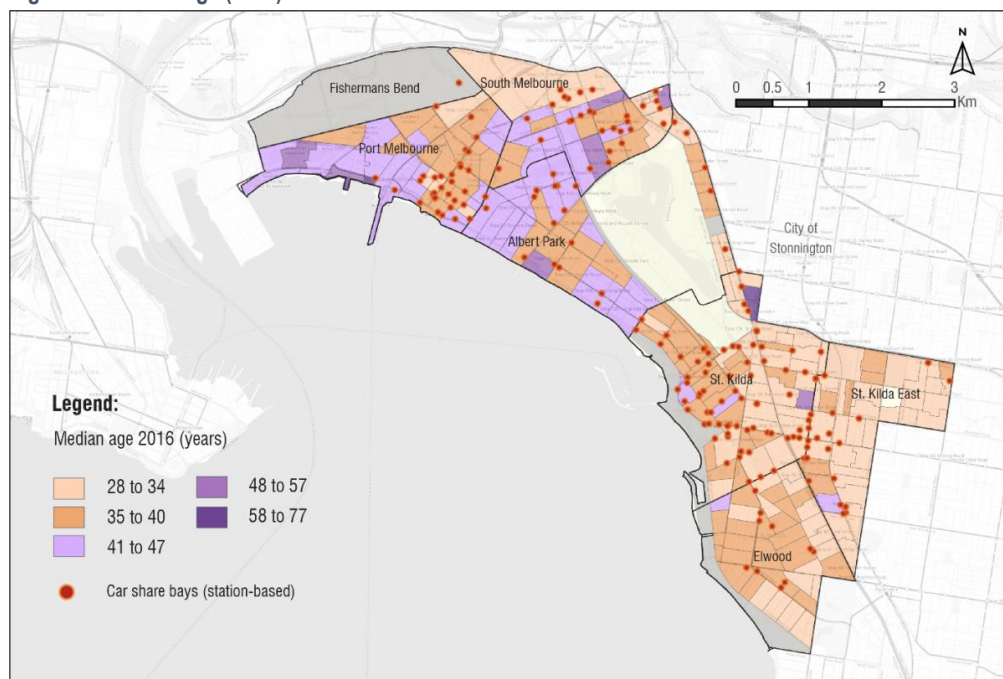
Source: City of Port Phillip .id community social atlas, City of Port Phillip car share station locations, with M&PC analysis

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4.5   Car-free households

Many people see benefit in forgoing ownership to participate in sharing given that it substantially reduces transport costs. As a result, households without a car represent a significant share of the car share market; and some studies suggest that the availability of car share is a key factor in improving people's likelihood to forgo car ownership.

In total, in 2016 there were almost 8,000 households in Port Phillip that did not own a car (18% of all households). The data indicates areas where more than 25% of households do not own a car were mainly located in South Melbourne and St Kilda. This is typically because they have access to many transport alternatives including car share services.

These neighbourhoods and several areas highlighted red in Figure 4.5 have potential for expanded car share services to assist households that do not own a car.

Figure 4.5 Change proportion of households without a car 2011 to 2016 (%) & car share locations
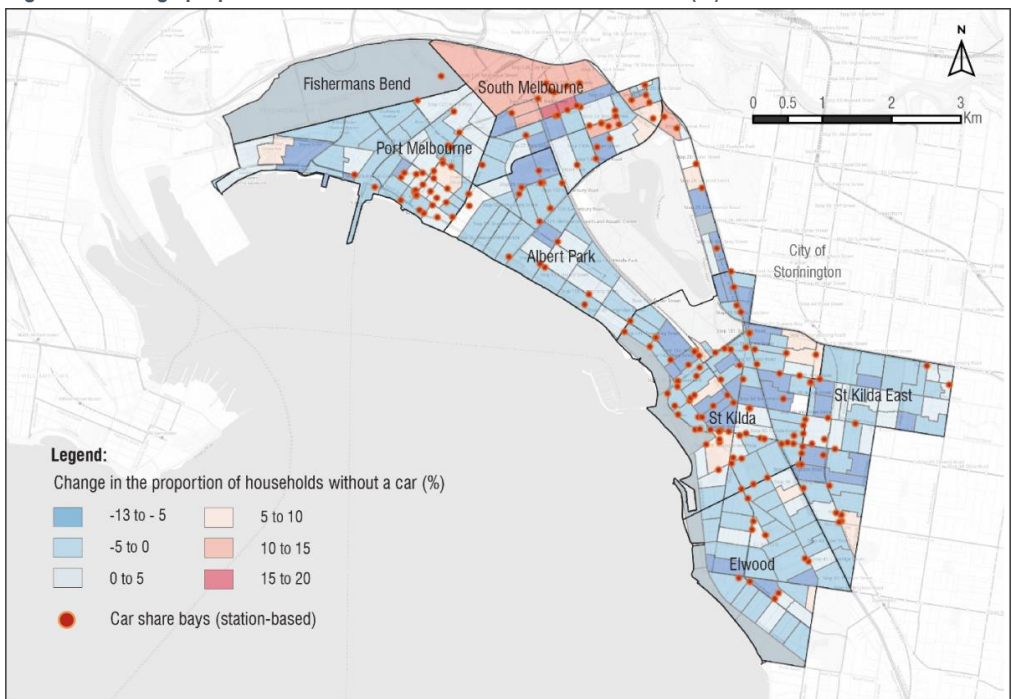
Source: .id community profile of the City of Port Phillip, City of Port Phillip car share station locations, with M&PC analysis

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4.6   Mode of travel to work

Car share provides an ideal service for people who rely on public and active transport modes for most of their trips (including commuting to work) but still need to drive occasionally.

As shown in Figure 4.6 below, a substantial proportion of commuters in the suburb (SA2) of St Kilda, St Kilda East and along the St Kilda Road corridor use public transport to travel to and from work. These areas represent the most viable opportunity for an increased car share market. The share of public transport commuters has increased along the St Kilda Road corridor and in St Kilda East, but decreased slightly in other areas of the municipality.

Figure 4.6 Journey to work by public transport (2016) & car share locations
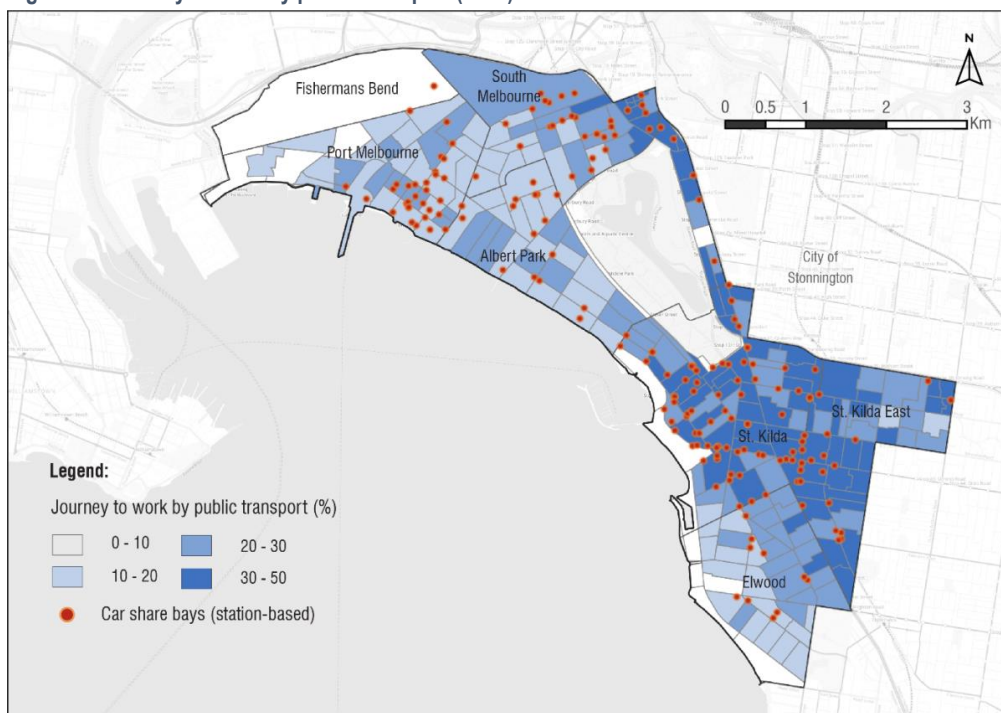
Source: Australian Bureau of Statistics 2016, City of Port Phillip car share station locations, with M&PC analysis

The number of people traveling to work by walking has decreased in all neighbourhoods (SA2) in the municipality compared to the previous census period (2011). There was a slight increase of 0.3% in Port Melbourne and 0.83% in St Kilda Corridor in 2016. Currently, over a quarter of residents living in South Melbourne walk to work, there are also high rates of walking in St Kilda and St Kilda East, but very few residents walk to work in Elwood, as shown in Figure 4.7 overleaf.

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Figure 4.7 Journey to work by walking (2016) & car share locations
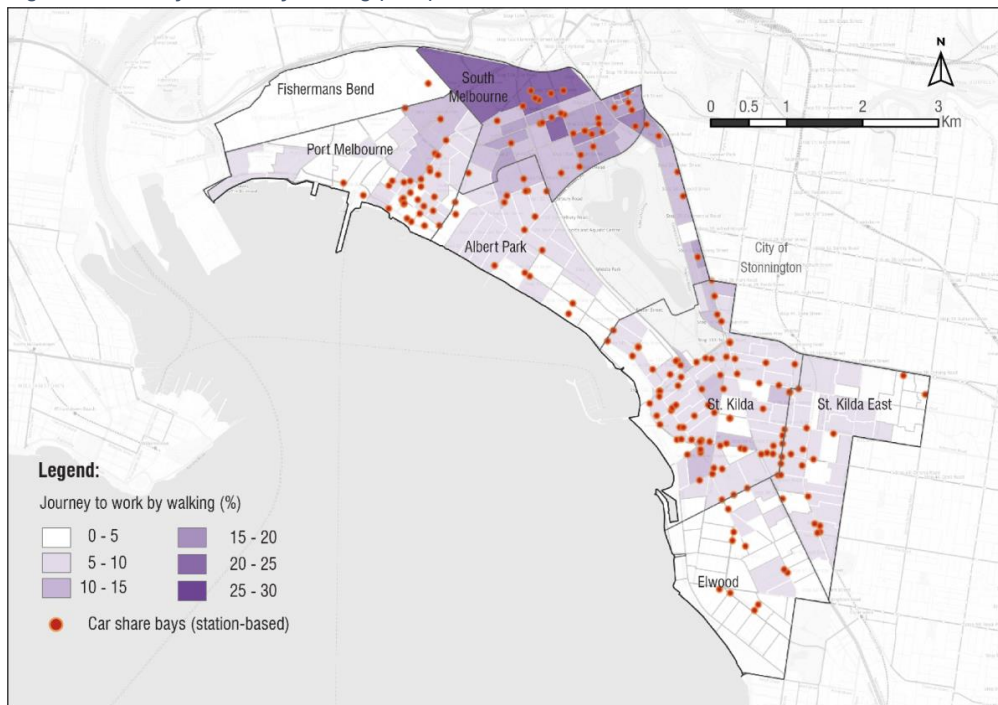
Source: Australian Bureau of Statistics 2016, City of Port Phillip car share station locations, with M&PC analysis

Analysis of 2011 and 2016 ABS data shows that there was a decline in walking and bike riding as the primary method of travel to work over this time. However, since then significant improvements to infrastructure especially in the CBD and uptake of walking and bike riding have occurred during COVID-19 suggesting there is scope for supporting walking and bike riding through having car share available for occasional trips done by car.

Despite the availability of public transportation, it could be assumed that people attempt to explore various modes of transportation that will suit their needs. The condition suggests the possibility of providing alternative modes of transportation to meet a variety of people's movement needs.

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4.7   Median household income

In Melbourne, according to the most recent findings of the Transport Affordability Index, the average household spends $400 weekly on car ownership and usage. For the 16% of households in the City of Port Phillip who earn less than $650 a week, this represents over 60% of their weekly income, resulting in difficult week-to-week decisions to buy fuel or food.

Car share provides an important alternative that reduces the cost of living for those that need it most. Council's support for improved service coverage and reliability in areas where there are higher proportions of households earning less than $650 per week will help to alleviate financial stress. It will also increase local economic activity, because for every dollar saved on transport, 70 cents of the saving ends up being spent in the local economy (Blue, 2016).

Figure 4.8 shows the geographic location of households with different income levels in 2016, with the red colour representing areas with relatively low-income families. The income level did not change significantly from 2011. Only 19 out of 235 SA1s pockets decreased from a higher to a lower income quantile.

Figure 4.8 Median household weekly income (2016) & car share locations
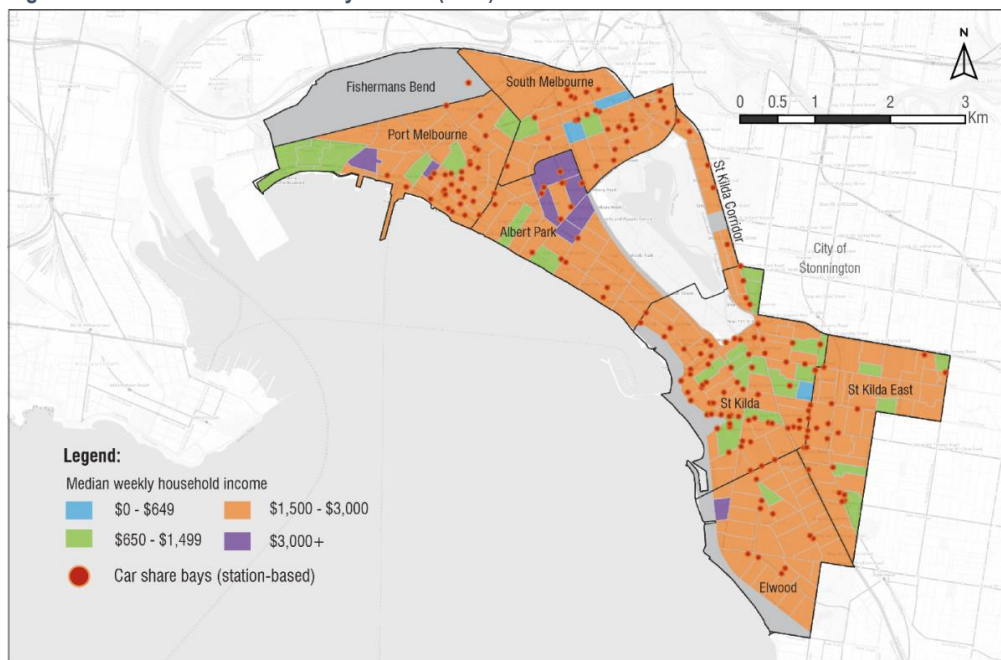
Source: City of Port Phillip .id community social atlas, City of Port Phillip car share station locations, with M&PC analysis

Car share services encourage people to try other transport modes, reducing emissions, congestion, and parking pressures. When modes other than a car can meet most of their weekly needs, they can reduce car ownership through reliance on car share services for those occasions when they do need a car.

Car share is likely to continue as a successful service in the City of Port Phillip due to the municipality's high population density, demographic issues, such as young population and fewer households with children, and restricted parking where permits are required.

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5 Global and national best practice

The City of Port Phillip aims to provide the best possible services to its community. Continuing to apply global best practices to the management of car share services will retain Council's leadership position for the sector in Australia.

This project analysed examples from European, North American, Asian, and Australian contexts to identify best practices, considering their relevance and applicability to the Port Phillip context. The car share markets from most of these regions have been established for approximately 30 years, have gone through different maturing phases, and can provide valuable insights to the City of Port Phillip. These insights inform how the evolution of the mode can be managed to achieve Council's broader objectives (particularly regarding inclusion and diversity improved parking availability and reduced traffic congestion).

Observations regarding global car share practices

It is important to reinforce that municipalities globally tend to apply different approaches to car share, and there is no perfect city that implements all the possible measures in terms of supporting car share. Additionally, there is no "one size fits all" solution that would suit and generate similar benefits in all situations and contexts.

The geographical, political, demographic, urban form, and transport characteristics of cities worldwide are extremely different; and initiatives and results are context-based. Therefore, what works in one place, in terms of achieving public benefits with car share, might not work in others (particularly if applied with exactly the same settings). However, the general ideas and concepts of initiatives implemented by other cities can work as inspiration and be transferred to other places, provided they are tailored to the local characteristics before implementation.

Best practice ideas should only be applied if they are relevant to the Port Phillip context. The impacts of car share systems and the success of related initiatives worldwide are typically evaluated using a range of different methodologies, and insights need to be understood in the context of each location the insights are drawn from.

5.1 Global cases

Many global cases for best practice in car share were sourced and reviewed for this work. Five cities were chosen as being relevant to the Port Phillip context. Although all cities have different demographics, urban forms, and transport systems, there are many insights from other cities with more mature car share networks and experience at implementing actions that Port Phillip needs to implement in its next phase of growth.

- Bremen and Munich, in Germany.
- San Francisco, Seattle, and Chicago, in United States of America.

The main initiatives are described in the following sections. Additional examples from the international experiences studied, which are also relevant for this work, are provided in Table 5-1 below.

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Table 5-1: Global cases of relevance for the City of Port Phillip

PLACE	TRANSFERABLE INITIATIVES AND INSIGHTS
Milan (Italy)	• Public tenders enable and set operational requirements for the implementation of station-based and free-floating car share (with different processes for each type) in the city. • Car share is one of the key actions of the Sustainable Urban Mobility Plan (SUMP). • Multimodal mobility hubs with electric charging stations (free for car share operators), mostly at or close to transit stations, connect and integrate different shared mobility services.
Ghent (Belgium)	• Car share Action Plan (elaborated in 2016) as part of a set of ambitious plans to reduce car ownership and use in the city. This plan set a target of 20.000 car share members by 2020, 500 reserved parking spaces, and a shift towards environmentally friendly cars. Although this target was not achieved, the city currently aims for 25,000 car share members by 2025 (approximately 10% of the population). • Reserved parking for car share in public charging stations. • Public staff use car share vehicles for work trips.
Hamburg (Germany)	• Multimodal stations "Switch" (18) located in public transport nodes and managed by the transit authority (HVV). o As shown in Figure 5.1., the Berliner Tor Switch connects the station for urban and regional trains and bus stops with different types of car share (station-based and free-floating), bike sharing, and bicycle parking facilities.
London (England)	• Car Club Strategy, developed in 2015 by the Car Club Coalition, with an action plan for car share and recommendations for public support. For example: engaging with CSPs, using car share to complement the public fleet, raising awareness of car sharing among the community, integrating it with other modes, improving the data sharing system. • "Future Mobility" taskforce, with a regional approach, to promote car share and encourage collaboration among the Boroughs for a more efficient car share system. This initiative is conducted by a Sub Committee from the London Councils, organisation that represents 32 borough councils and the city of London.
Montreal (Canada)	• Partnership between the regional transit authority (STM) and shared mobility providers (bike and car share) to provide combined services via the integrated transport card.

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PLACE	TRANSFERABLE INITIATIVES AND INSIGHTS

Vancouver (Canada)	• Pilot project for a regional integrated transport initiative focused on work related trips using the local transport card, the Shared Mobility Compass Card, encompassing transit, car share, and bike sharing was launched in 2019.
	
	   o This initiative is the result of an "innovation call" run by Translink, the metropolitan transport authority, and developed in partnership with the service providers.
	
	   o Results showed that more than 60% of participants shifted to public and shared modes instead of using their cars. The pilot also enabled many participants to try different modes and combine them for different trips (Clean50, 2021),
	
	• Regulations require car share bays in new developments to be wired, ready for future the development of electric mobility.
	
	• Authority use of car share vehicles (fleet) for work trips.

Los Angeles (USA)	• Pilot project for electric car share with an equity component to improve mobility of low-income communities launched in 2018.
	
	   o An evaluation of the first phase (from 2019) concluded that the network effects and multimodal connections enabled by the system led to a significant growth in membership and utilization, effectively reaching low-income residents (who had discounted fess and made 60% of the trips); and an estimated reduction of "annual GHG emissions by 260 metric tons since its launch" (Shared-Use Mobility Center, 2019, p. 4).
	
	   o The main lessons learned showed that local leadership, political commitment, and champions, as well as partnering with and engaging all parties in the negotiations, are critical for the success of this type of initiative (Shared-Use Mobility Center, 2019),

Washington DC (USA)	• Focus on providing car share bays at metro stations.

New York (USA)	• Pilot project to improve mobility conditions of disadvantaged areas launched in 2018.
	
	   o An evaluation from 2021 showed an increase in trips and users (with more middle-income residents and members from disadvantaged communities using the service), and a decrease in car usage among participants and greenhouse gas emissions (New York City DOT, 2021).
	
	   o The program will continue as a permanent initiative due to the benefits car sharing brought to the city, with one main change: the local government will shift the task of identifying locations for car share bays to providers, to enable the feasibility of operations and avoid "straining" city staff with workload (New York City DOT, 2021).
	
	• NYCDOT staff use car share vehicles for work trips.

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PLACE	TRANSFERABLE INITIATIVES AND INSIGHTS
Portland (USA)	• *Portland's Transportation Wallet* program, originally developed in 2017 to reduce parking needs, that has a pilot component (launched in 2019) focused on the inclusion of residents from affordable housing, by improving the mobility of residents from disadvantaged areas.
	• The program subsidises transit and shared mobility modes, including car share, offering different packages for residents which depend on where they live.
	• An evaluation from 2020 showed that participants in the program had access to and adopted different transport options, reduced their "drive alone" trips to work to 25% in comparison with 57% from non-participants, and reduced overall parking needs (Portland Bureau of Transportation, 2020).
San Diego (USA)	• Multimodal mobility hubs with car share vehicles.
Singapore	• Financial disincentives to car ownership and use including expensive car ownership licences.
	• Electric public car share funded by government.

Source: Various, see list of references

A range of pilot programs focused on the concept of Universal Basic Mobility (UBM) have been growing globally. These programs typically subsidise transport for disadvantaged residents to improve inclusion. The programs have achieved good results in terms of increased accessibility, connection of residents with job opportunities, reduced transport expenditures and modal shift.

Some locations have trialled 'free-floating' car share services, but most have had a short life, and the data is inconclusive about their impacts. Logically, there is a tendency for free-floating services to reduce demand for walking and public transport trips due to the ability to 'dump' the car at almost any location – even a short distance away.

This operational model then encourages people to drive more, rather than drive less. The station based car share model adopted in Port Phillip is the opposite, as it replaces the travel certainty and reliability that is otherwise gained by owning a car and parking it at home.

Peer-to-peer schemes land somewhere in the middle, partly because they rely on local car ownership to provide the fleet and partly because there is lower levels of certainty and reliability possible with this type of service. It stands to reason that if a car owner aware of car sharing was using their car infrequently enough to consider putting it on a peer to peer sharing service, then they are pretty close to the notion of selling their car altogether and just becoming a user of the service. Conversely if they use their car 'a lot' but find some benefit of making it available for others in the community, then it won't be as available at the times of peak demand (because they are already using it).

From these logical perspectives it can be seen that Fixed Base car share services (those that are the subject of this report) are likely to be much more beneficial for the community than other forms of car share service.

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Figure 5.1: Car share vehicles at the Berliner Tor (train station) *Switch***, in Hamburg (2019)**

Source: (Paganelli, 2021)

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Bremen, Germany

Bremen is a city-state with approximately 680,000 inhabitants (2021) located in the north of Germany. The city is the global forerunner of a supportive approach to car share and is still considered one of the main proponents of global best-practice. The initiatives implemented date from the late 1990s, when the city decided to support and encourage the development of a network of car share to complement the existing sustainable transport system. Examples of the initiatives implemented are:

- Marketing campaigns to promote the benefits of car share and enhance the attractivity of this alternative to the private car, using humour in many cases. The main examples are campaigns with a character called "Udo" (use it, don't own it), amusing videos in which an agent like James Bond uses car share to perform his job, and advertisements with provocative ideas such as "you don't buy a cow when you need a glass of milk", to connect with the unfounded need to buy a car if it is only needed for a few trips.

- "Mobipunkts", the car share public stations created in 2003 (and currently in operation), with special signage and different sizes, which are spread around the city. As shown in Figure 5.2 overleaf, most of these stations work as multimodal hubs as they are usually located close to public transport stops and connected with bicycle riding infrastructure.

  o The city decides the locations for these car share stations and makes them available to qualified providers through tendering processes in the form of an expression of interest by CSPs. Providers that meet their qualifying criteria are selected. If more than one operator wants to use the same spaces, the city requests them to resolve the issue among themselves first. If no solution is found, the city selects one provider based on a classic tendering process.

  o One of the qualification criteria to enable providers to use these public stations is proving that a car share vehicle will replace at least 6 private cars in the region. Providers demonstrate how many private cars each of their car share vehicle replaces by sharing results from their periodic user surveys.

  o The city has dedicated staff to manage car sharing, and the process involves other departments, similarly to the situation in the City of Port Phillip.

- The "Bremer Karte plus AutoCard", a public transport card implemented in 1998 that integrated car share and gave transit users access to the vehicles.

- A Car Sharing Action Plan, developed in 2009, aimed at expanding the network of public car share stations, as well as achieving 20,000 car share members by 2020 (3% of the metropolitan population). This target was accomplished in 2021, and there are approximately 400 car share vehicles in more than 150 stations spread around the city.

- A Sustainable Urban Mobility Plan (SUMP) developed in 2014 that suggests using car share to help reduce car ownership and use.

- A Car Sharing Law, adopted in 2019, aimed at establishing local procedures for the implementation of car share in the city.

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- Incentives for the provision of car share in new developments as condition for reduced parking requirements, challenged by the difficulty of creating regulatory frameworks that strategically incorporate the timings of car share provision and the actual occupation of the areas (shown in Figure 5.2 overleaf).

- A 2017 study to measure the impacts of car share in the city identified that one car share vehicle reduces 16 private vehicles in the city (Schreier et al., 2017).

- Replacement of part of the local government fleet by car share, with public staff using shared vehicles for work trips.

Figure 5.2: *Mobil.Punkt* **car share station in an urban renewal area in Bremen (2019)**

Source: (Paganelli, 2021)

Main sources consulted for this case: (Glotz-Richter, 2016, 2012; Schreier et al., 2017) and interviews with city representatives.

Munich, Germany

Munich is the capital of Bavaria, a city with approximately 1.5 million inhabitants (and close to 6 million in its metropolitan region), located in the south of Germany. The city has an efficient public transport system, composed of rail, metro, trams, buses, and shared mobility modes, including car, bike, and scooter sharing schemes. Munich also has a low emission zone that covers its central area, with circulation restrictions on high-emission vehicles. The city has a vibrant car share market, with different types of operations (including station-based and free-floating) and the system complements its existing sustainable transport options. Munich develops many pilots and participates in different

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European projects that, among other transport related objectives, also aim to keep improving the municipality's approach to car share, especially to increase the public benefits it can generate. Examples of the initiatives implemented are:

- A pilot project in 2010, that helped to define the parking regulatory framework and fees.

- A regulatory framework, combined with agreements with operators, which determine the conditions of car share operation in the city. Support to car share is granted on the basis of proven public benefits, represented by a reduction in car use and parking demands (Schreier et al., 2015).

- A study to measure the impacts of car share in Munich completed in 2015 identified that one car share vehicle "replaces more than one private car, and car share therefore contributes to a reduction of the parking problem" (Schreier et al., 2015, p. 16).

- Multimodal mobility stations developed since 2012, which are spread around the city, have different characteristics, include transit, car share, bike sharing, and electric charging stations, and are often located close or at public transport nodes. Car share bays are either on-street or off-street in public parking areas in these stations, with a combination of both in some cases.

    o A study was developed in partnership with the Technische Universität München (TUM) to evaluate the efficiency of the multimodal stations. This study concluded that mobility stations have potential to contribute to more sustainable mobility uptake in the city, provided they are replicated and expanded around the region, with improved multimodality services (Villarreal, 2018).

- The "MVG more" App, developed by the public transport operator (MVG), that integrates multiple mobility providers, including car share, to enable payments and trip planning with real time information.

- A regional resolution to integrate shared mobility modes with the existing systems and monitor their performance (under development).

Main sources consulted for this case: (Schreier et al., 2015; Shared-Use Mobility Center, 2018a; Villarreal, 2018) and interviews with city representatives.

San Francisco, USA

San Francisco, a global reference for innovation, including for issues related to transport, has approximately 870,000 inhabitants (and close to 4,7 million inhabitants in its metropolitan region). San Francisco has a high mode share of public transport, which is performed on an efficient and diverse public transport system. After some experimental endeavours realised between the 1980s and 1990s, car share officially launched in the city in 2001, has been publicly supported since then, and has been an important component of the local transport system until now. Examples of the initiatives implemented are:

- City CarShare, a non-profit car share provider that was established (initially as a pilot project) in 2001 by sustainable transport advocates, in partnership with local and metropolitan government agencies and financial institutions. This provider

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received many grants or other sources of public funding and partnered with local authorities to develop projects aimed at promoting car share, improving accessibility of the community (especially of disadvantaged groups), and generating public benefits in the region. City CarShare was acquired by Getaround in 2016, a per-to-peer car share company.

- Changes to the planning code since 2008 to incentivise the provision of car share in new developments (residential and commercial) as condition for reduced parking requirements, and to enable unbundled parking arrangements. San Francisco was the first North American city to promote this kind of changes and remains as a reference of best practice (Paganelli, 2013).

  o For example, the planning code from 2008 required that residential buildings with 50 to 200 units should have at least one car share bay; another bay should be added for more than 200 units; and then an additional car share bay for each 200 more units (Paganelli, 2013).

- Different pilot projects, implemented since 2011, to allocate on-street dedicated parking spaces for car share, that helped the city build experience with managing parking schemes for the system and make necessary changes along the way.

- Discounts in parking fees for car share vehicles granted in different forms throughout the years of car share operation and the allocation of dedicated parking spaces in transit stations.

- Diverse marketing campaigns to promote car share in governmental websites, trip planning services, and public transport stations (including vehicles), developed as partnerships between transit operators (BART, MTC and SFMTA, for example) and car share providers. These initiatives also aimed at reinforcing the complementarity nature of car share in the transport system.

- The Metropolitan Bay Area Carsharing Strategy Plan, developed in 2018 by the Metropolitan Transport Commission, in partnership with the Shared-Use Mobility Centre (SUMC), to identify opportunities to expand car share and guide its implementation in the region, with overall goals of reducing car usage and emissions.

- Replacement of part of the local government fleet, with public staff using shared vehicles for work trips, as a partnership established with City CarShare in 2010 (as shown in Figure 5.3 overleaf).

Several studies developed by local research institutions to evaluate the impacts of different initiatives implemented for car share. One of these studies concluded that car share can remove between 9 and 13 private vehicles (Shaheen and Cohen, 2007).

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Figure 5.3: City CarShare vehicles in front of the municipality (2012)

Source: Paganelli (2013, p. 99)

Main sources consulted for this case: (Millard-Ball et al., 2005; Paganelli, 2013; Shaheen and Cohen, 2007; Shared-Use Mobility Center, 2018b).

Seattle, USA

Seattle has approximately 740,000 inhabitants (and more than 4 million inhabitants in its metropolitan region). Car share has been part of the city's transport system since the late 1990s (when it was established as a proactive initiative from the local government) and has received different types of public support including:

- Flexcar, a car share provider launched (initially as a pilot project) in 1999 by the regional transport authority (King County Metro), as a public-private partnership (PPP) with an operator. Flexcar received many grants, administrative staff and space for its initial operation. Flexcar grew fast and started operating in other cities from the USA, such as Portland, San Francisco, Los Angeles, San Diego, and Washington, DC. In 2007, Flexcar was acquired by Zipcar, the largest car share provider in North America.

- Inclusion of car share in transport related plans and strategies, as well as special promotion performed by the transport authority, to reinforce its complementarity nature in the transport system and its potential generate public benefits.

- Different pilot projects implemented since 2000 to allocate on-street parking spaces for car share that helped the city build experience with managing parking schemes for the system and make necessary changes along the way. For example, the first initiative implemented was to create a special class of vehicles for car share, using the same approach as the one used for taxis.

- Discounts in parking fees for car share vehicles, granted in various forms throughout the years of car share operation. For example, free of charge during the initial stages, mostly in unrestricted parking areas.

- Changes to the planning code to incentivise the provision of car share as condition for new developments (residential and commercial).

- Public projects developed by the municipality, in partnership with Flexcar and other regional authorities, to increase the mobility of disadvantaged communities, by subsidising car share membership and use for residents and by enabling (physical and financial) access to vehicles for trips related to job seeking or training.

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- Diverse marketing campaigns to promote car share in governmental websites and travel behaviour programs.

Main sources consulted for this case: (Millard-Ball et al., 2005; Paganelli, 2013).

Chicago, USA

Chicago has approximately 2.8 million inhabitants (around 9.6 million in its metropolitan region). Car share has been part of the city's transport system since the early 2000s, with a history of different types of public support including:

- I-GO Car Sharing, a non-profit initiative that was established by the Center for Neighborhood Technology (CNT) and an NGO in 2001, mainly with public funds. This provider partnered with the transit authority (CTA) to develop pilot projects to expand the network and provide vehicles at transit stations.

- A change in tax regulations promoted by the local government in 2005, differentiating short term car share from the normal car rental, reduced the local taxes payable by car share services.

- The "Chicago Card Plus/I-GO Card", a public transport card implemented in 2008 that integrated car share and transit ticketing.

- Marketing campaigns to promote car share in public transport stations and vehicles, developed as partnerships between the transit operator and car share providers, also aimed at reinforcing the complementarity nature of car share in the transport system, as shown in Figure 5.4.

- Replacement of part of the local government fleet, with public staff using shared vehicles for work trips. This initiative started as a pilot project in 2004, and was later established as a permanent practice, through the development of tendering processes with car share operators for the provision of services.

Figure 5.4: Advertising of the I-GO + CTA card at a train station and inside the vehicle (2012)
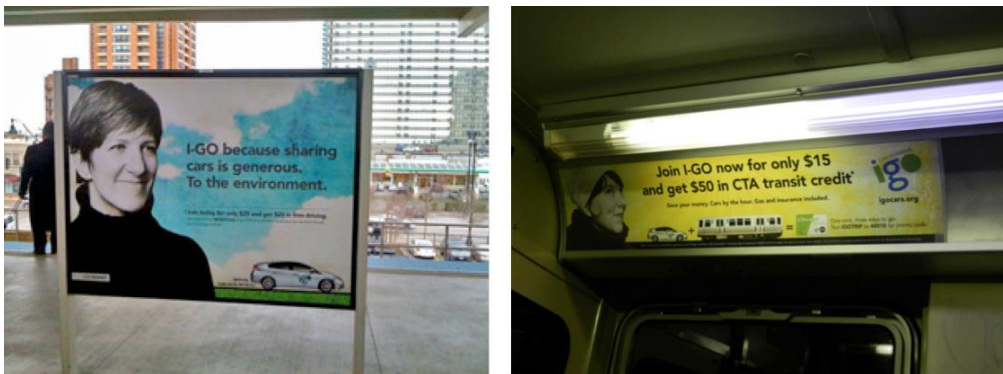
Source: Paganelli (2013, p. 173)

Main source consulted for this case: (Paganelli, 2013).

5.2   Australian cases

The City of Port Phillip is already considered a best practice in Australia for its approach to and regulatory framework for car share, constantly mentioned as a successful case in the

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region. This study identified additional national cases of relevance for this policy review and a summary of their main insights is provided in Table 5-1 below.

Table 5-2: Australian cases of relevance for the City of Port Phillip

PLACE	TRANSFERABLE INITIATIVES AND INSIGHTS
Sydney (NSW)	• The process to request on-street bays operates monthly with a clear program of future bay releases. • A Benefit-Cost Analysis of car share from 2012 concluded that the on-street network yielded significant community benefits compared to the costs of its delivery, supporting an increase in the number of bays.
NSW	• Developers are using car share provision in new developments to argue for lower parking requirements.
Adelaide (SA)	• Car share network planning based on walking catchment. • Electric car share initiative financially supported by local government, including subsidy for charging facilities. • Saved $100,000 in fleet costs by using car share vehicles.
Freemantle (WA)	• Car Share Policy and a pilot project launched by the Council to implement car share with network based on geographic and demographic characteristics.
Brisbane (QLD)	• Digital parking permits for car share launched in 2019, which allow 'eligible operators' of different types of service (except peer-to-peer) to operate using on-street spaces.
Northern beaches (NSW)	• Car Share Parking Permit available for eligible applicants. • No fees apply to car share parking permits.
Inner West (NSW)	• Pilot project to allocate car share vehicles in light rail stops, launched by the municipality, in partnership with a CSP.
Various LGAs in Metropolitan Melbourne	• Floating vehicles, operating in unrestricted parking areas and non-dedicated on-street bays, are a common practice in some LGAs, to test demand, feasibility, and acceptance of car share. For example: City of Moreland, City of Glen Eira (6 months), City of Stonnington, City of Darebin, City of Maribyrnong, and City of Yarra. o Some of these LGAs (Moreland, Glen Eira, and Darebin, for example) accept information related to the usage of these vehicles as support evidence to approve permanent on-street dedicated car share bays.
Melbourne (VIC)	• Strategy for temporary locations in case of events or roadworks that impact on dedicated on-street bays: 'flip signs' (i.e., the parking sign flips from 2P to 'CARSHARE VEHICLES ONLY') that CSPs can use to facilitate access to car share for the duration of the works.
Moreland (VIC)	• Pilot project launched by the Council, in 2017, to allocate on-street dedicated bays for peer-to-peer car share.
Stonnington (VIC)	• Recently reviewed approach and policy for car share, now allowing more than one provider to operate in the municipality and apply for on-street bays (using two separate documents: policy and operational procedures).

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6 Approaches to car share identified in global practices

It is important to understand the six types of car share service provision, with respect to how government is involved. This helps to highlight the differences in management approaches implemented and reviewed.

The approaches vary from active ownership of operations (like operating a library and owning all the books to be borrowed) through to suppression (like measures to limit the borrowing of books from anyone). These are presented in

Table 6-1 below.

Table 6-1: Framework of possible approaches to car share

TYPES OF APPROACHES	DESCRIPTION
Public car sharing	• Government agency is the service provider. It owns and manages the service directly or in partnership with partners. • Example: Seattle (early 2000s).
Strategic network	• Expansion of the on-street car share network is planned by the local government, based on achieving strategic targets. • On-street spaces are provided in areas strategically targeted for expansion by the municipality, through a regular release of spaces to one or more service providers. • Level of competition from service providers depends on the network size and stage of service evolution (in smaller networks with slow growth it is better to have an exclusive 'franchise' to operate) • Example: Bremen (since late 1990s).

Catchment based network	• On-street spaces are provided in response to community demand.
	• Network of bays is strategically planned by government through:
	  o Installation of permanent bays based on walking catchments.
	  o Incentives to ensure equity of services provided, particularly in low-income areas that tend to be avoided by private sector operators.
	• Practical arrangements must be defined in collaboration with service providers to ensure financial sustainability.
	• Example: Adelaide (2018).

Demand responsive network	• On-street spaces are provided upon request from service providers (reactive), typically focused on commercially viable areas (not responsive to equity and network coverage considerations). • Example: City of Port Phillip, City of Moreland, City of Sydney (currently).
Limited network	• Expansion of the on-street car share network is prescriptive based on limiting criteria, that seeks to maintain the status quo. • Limited availability of on-street bays for car share services. • Example: City of Stonnington, City of Melbourne, and City of Yarra (currently).
Suppression	• On-street spaces are not available to car share service providers, forcing use of private parking to operate the system.

Source: M&PC

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Within these broad approaches, governments apply a combination of strategies to meet the needs and characteristics of their specific communities. The approaches can also vary based on the type of car share service being considered (station-based, free-floating, or peer-to-peer).

A significant factor is the political understanding of what car share services provide for local communities and alignment with contemporary political narratives in each location. For example, car share was effectively 'prohibited' in Brisbane until 2015 due to it being used as a political wedge. This situation should be avoided, by ensuring that existing users know how to effectively advocate for improvements they would like to see.

Focusing on Council's long-standing objectives and how car share services can help achieve these will also be important. For example, car share services provide a very low cost mobility option for those who cannot afford to own a car. This relates to a key concern Council has about inclusion within Port Phillip. However, the current network does not provide any car share vehicles at the entrance to the Park Towers (the Homes Victoria apartment complex on Park Street, South Melbourne) and the nearest car share vehicle is over 300m away.

Greater alignment of the car share policy and management approach to Council's strategic goals and objectives will help to ensure it is truly meeting community needs and will ensure it retains ongoing broad-based support.

A number of best practice car share cities have included the concept of mobility hubs by providing car share services at key public transport nodes such as tram and train stations. This has not occurred naturally in the Port Phillip network and presents an opportunity to raise awareness of car share services within a key market segment (regular public transport users).

For example, there are many light rail stations on Routes 96 and 109, along with several tram stops along Brighton and Dandenong Roads, that do not have convenient access to a car share bay. Ensuring car share bays are located at transit station/stop entrances is a good way to increase awareness and broaden the catchment of potential customers. Particularly if cars are in high demand elsewhere (such as along St Kilda Road or in St Kilda), then a short transit trip to a nearby convenient location can significantly improve overall service reliability.

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7   Recommendations for a future approach to car share

The review of national and international best practices for management of car share services has been analysed with respect to the current management approaches applied by the City of Port Phillip, and the identified needs within the Port Phillip community.

The recommendations focus on how to meet Council objectives related to inclusion, accessibility, reliability of service, improving residential parking availability and reducing traffic congestion.

The City of Port Phillip has applied a *"Demand Responsive Network"* approach to managing the car share network over the last decade.

To maximise the community benefit, inclusion, and viability of car share within the municipality, it is recommended that Council switch to a *"Catchment Based Network"* approach, maintaining support for car share services. The benefit of applying this approach is allowing service coverage expansion in a way that better meets specific needs within the Port Phillip community.

Continued collaboration with private sector service providers is important to ensure the success of car share within the municipality and maintain the City's role as national headquarters for two of the car share service providers. The strategic recommendations are summarised in Table 7-1 below and explained in the sections that follow.

Table 7-1: Strategic recommendations for the future approach to car share

NUMBER	DESCRIPTION
1	Adopt a Catchment Based Network approach to growing the car share network.
2	Adopt a coverage target of having a car share vehicle a maximum of 250m from 90% of properties
3	Consider the feasibility of allocating car share bays more than twice a year.
4	Build awareness and the 'social licence to operate' car share services.
5	Continue engaging and collaborating with service providers while evolving the 'franchise model' to implement the Catchment Based Network approach.
6	Partner with CSPs to investigate the potential of car sharing in specific areas.
7	Integrate car share with public transport and other shared transport services.
8	Support a uniform best practice approach to car share in inner Melbourne.
9	Consider how kerbside parking VPermits can improve operations.
10	Retain the qualification requirements for service providers.
11	Develop a more efficient data sharing system.
12	Engage with planners and CSPs to establish viable car share in developments.
13	Use car share to complement or replace the Council's fleet.

Source: M&PC

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7.1 Adopt a *Catchment Based Network* approach to growing the car share network

By applying the *Catchment Based Network* approach, the City of Port Phillip can establish a flexible and agile (but simple) regulatory framework, capable of managing and attending the car share demand, while also adapting to constant changes in transport demands.

This would include reviewing the format of the regulatory framework (policy and processes), as well as conditions and procedures of the process for identifying the network of bays and allocation of new ones.

The new framework should have more flexible operational requirements, that could be adjusted to accommodate changes in technologies, service models, financial circumstances, and community needs.

Key to this approach is the Port Phillip City Council deciding on the appropriate walking distance catchment for each car share bay (group of one or more cars). Council also needs to identify the percentage of the residential and commercial population that should be within the defined catchment area of the car share network.

7.2 Adopt a coverage target of having a car share vehicle a maximum of 250m from 90% of properties

It is recommended that Council adopt a coverage target, seeking to ensure that at least one car share bay is located within 250m of 90% of all households and businesses.

The current network does not meet either of these distance targets. There are currently large coverage gaps for residents and businesses located in parts of Albert Park, Elwood, Fishermans Bend, Garden City and St Kilda East as shown in Figure 7.1 below.

Figure 7.1 Catchment of car share bays (station-based)

Source: M&PC using CoPP and DoT data

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These areas include some Port Phillip residents who are in great need of low cost access to a car. Even small gaps in coverage will reduce access and can then make accessing jobs, education and services more difficult.

For example the Park Street Towers in South Melbourne is a Housing Victoria site that is beyond a 250m walk from the nearest car share vehicle. This means that while parts of St Kilda have abundant access to the service, people in the Park Street Towers are not provided with easy access. This directly impacts on their inclusion and ability to participate in the community and economy.

Expanding the car share network across the municipality

The City of Port Phillip should focus on coverage, availability, and demand to expand the car share network across the municipality, improving the current service reliability in areas of high demand and filling strategically important coverage gaps in the existing network.

The approach should combine inclusion and accessibility factors with a financially sustainable network that can operate without direct Council ownership or provision of services.

By considering factors that highlight car share feasibility, a set of reasonable municipal-wide targets can be developed. These would include timing of the network coverage targets, tailored to meet demographic needs, and financial sustainability of the CSPs. Moreover, these targets should work as guidelines for reference, enabling natural expansion of the network, in response to the evolving demographic, urban, and transport related conditions. The targets should not be used as caps, that would hinder growth where it is needed to meet local community needs.

It is recommended that the City of Port Phillip:

- Adopt a goal of 60% of households and businesses having access to car share services within 150m of their property.

- Adopt a goal of 90% of households and businesses having access to car share services within 250m of their property.

- Retain the membership goal of achieving 10% of the resident population as car share members, which currently would be approximately 13,362 people by 2026[1].

- Investigate the key factors that influence car share network expansion and use of the service.

- Strategically analyse the characteristics of the municipality to:
    - Identify areas with potential for car share, considering city objectives and enablers (factors that are common in successful deployments of car share).
    - Determine places where the Council would like to have car share vehicles to address inclusion and accessibility issues.
    - Specifically map Homes Victoria sites against the car share network to identify locations where residents could benefit from new car share bays at their front door.

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[1] *Based on ForecastID population forecast of 133,619 residents in 2026*

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- Based on this analysis, the municipality could estimate expected numbers or targets for car share, that should be flexible and adaptable to eventual changes.

Service Reliability

A key aspect of any transport service is reliability. Without reliability the users cannot be sure the service will meet their needs when they need it to. Ensuring that each pod of car share vehicles has enough capacity to meet local needs reliably is very important for the network manager (Council). For example, if Council promotes the service that is then considered unreliable, it reflects poorly on Council. When this has happened with services in the past, government often needs to step in and take over operating the service.

To improve service reliability across the network, Council should study possibilities to ensure vehicles availability in the pods, according to the profile of each area (considering demographics, density, urban form, and transport provision). Especially because the municipality has areas with different characteristics, and one solution does not fit all purposes. This could include deciding that each car share pod should typically have a minimum of two vehicles (from the same service provider) in denser and more demanded areas, for example. Moreover, if demand dictates, additional single vehicles (from any service provider) can be added. Whereas in less dense areas, where the demand is spread, this could mean having more distributed vehicles (of different types) The key is to ensure that at a base coverage level, there are two vehicles that can meet customer needs as they grow.

The suggested mechanisms for expansion to implement this approach and the areas where they could be applied are outlined in Table 7-2 below.

Overall, these mechanisms should be considered as guidance, enabling the network to grow naturally in applicable areas and encouraging the expansion in strategic ones.

Details of these mechanisms should be refined by Council officers (if considered feasible), in association with service providers (engaging them to workshop ideas) and based on any subsequent analysis. This set of mechanisms also represents an additional opportunity to determine the value of car share and their on-street bays to the City of Port Phillip, through a market-based approach.

Table 7-2: Mechanisms suggested for the car share network expansion

WHERE TO APPLY	MECHANISMS	DESCRIPTION
High car share demand areas	Adjust the existing process to allocate on-street bays, applying different financial conditions to "hot spaces".	• Use a bidding process to determine fees for on-street spaces (providers would inform how much they are willing to pay additionally for access to use these spaces). • Revenue generated can be reinvested in the network.
Average car share demand areas	Keep existing process to allocate on-street bays.	• Payment of standard establishment and annual fees. • Expansion on inclusion grounds could be funded from the Sustainable Transport Reserve.

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WHERE TO APPLY	MECHANISMS	DESCRIPTION
Council targeted areas	Allow floating vehicles (temporarily).	• Initial operation with floating vehicles, to test the feasibility and acceptance of the areas. • Bays made permanent upon demonstrated feasibility (utilisation and commercial).
	Offer different incentives for providers to add vehicles to the targeted areas and fill gaps of the network.	• Network expansion to fill coverage gaps funded by the municipality by reinvesting revenue from resident parking permits and high demand areas. • Enables better coverage into targeted areas. • The guiding question is how much would service providers need to be paid to provide services in these days? • Additional financial incentives could be considered including discounts on establishment fees, or annual fees or a subsidy for each new member.

Council targeted areas – areas that lack attractivity and commercial feasibility to operators, where the council would like to have car share coverage. The Council should understand why these areas are not attractive for providers and develop incentive measures tailored to these conditions.

Source: M&PC

The recommended mechanism to achieve the best network for the Port Phillip community is to offer financial incentive payments for the low viability spaces (in existing coverage gaps) and pay for these through tenders for the highest viability spaces, enabling CSPs to bid for the 'franchise rights' to specific spaces.

An alternative approach would be to pair-up two spaces (one high viability and the other low viability) and offer them as a pair on the basis that the service provider can only have access if services are maintained in both locations.

Some suggestions to encourage CSPs (particularly without financial incentives) to install vehicles where there is no demonstrated need are:

• Ask CSPs for ways to encourage them.

• Allow floating vehicles for a 6 or 12-month trial period (to be defined in collaboration with CSPs).

• Survey neighbourhoods and seek local support for service expansion.

7.3   Consider the feasibility of allocating car share bays more than twice a year

Over the last five years, the process to allocate new on-street bays has been bedded down and streamlined. There is an opportunity to increase the frequency of bay allocations based on this streamlined process.

To enable the expansion and improve the allocation of new bays, the City of Port Phillip should run a more agile process, allowing more frequent applications for new bays, such as *every 4 months (to start), and then move to* a quarterly or monthly process, if feasible and applicable. The most appropriate outcome should take into consideration staff workload, network expansion objectives and CSPs' views.

A more frequent process could accommodate demands and unforeseen issues, particularly practical ones that may emerge during the implementation phase, align with logistical aspects of acquiring vehicles, as well as their related timings and COVID-19

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impacts, and give the increased flexibility needed to the process. Some issues to consider regarding this approach and process include:

- Council should not limit the number of bays available for each application round (if the service grows quickly that is a good thing).

- Council should identify the key bays to be included in each round of the bay allocation process.

- Council should give incentives, and perhaps some kind of priority during the application process (that does not comprise the applications for areas with high demand) to targeted expansion areas, where car share may not be commercially feasible (yet).

- The potential adoption of e-permits could be a platform to streamline processes to allocate on-street bays.

- Council should retain the siting and location criteria set for on-street sharing bays, adjusted to the expansion strategy chosen and any targets set by Council. The criteria should still consider relevant issues listed below (from the current policy and approach):

    o Potential areas for car share uptake and expansion identified by Council.

    o Car share vehicles need to be easily accessed by users, on or off-street.

    o On-street spaces are essential for a network of car share vehicles to work. They are easier to access and more visible, which helps to promote the system.

    o Station-based/roundtrip vehicles work better, in the sense of being an attractive alternative to private vehicles, when they are allocated close to users, in places where trips tend to start and finish, as they must be returned at the end of the usage.

    o Integration of car share with other modes to increase reliability and awareness of the car share network.

Experimental approach to changes

To ensure the proposed approach and mechanisms presented in sections 7.1 to 7.3 would enable a more strategic, tailored, and demand responsive expansion of the network in the City of Port Phillip, the Council could apply the changes through a series of pilots. Reinforcing that changes to the framework and process to allocate new bays need to evolve to meet overarching community expectations (specifically related to inclusion and service coverage), and will be key to making the trials a success. Permanent initiatives could be developed and implemented after the experimental phase, based on the experience acquired.

7.4   Build awareness, membership and the *Social Licence to Operate*

Building the 'Social Licence to Operate' within Port Phillip is one of the key challenges of the next phase of the car share network growth, because this phase is going to involve installation of more vehicles in contested locations.

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Improve communication with the community, by raising awareness of the purpose of car share, how it works, as well as the general benefits and value it adds (not only to users) among decision-makers, planners, and residents. It is crucial to sharpen the message being provided to the community, ideally with more effective and compelling (typically humorous and/or emotive) language and concepts to help the message cut through. Ideally by running a campaign capable of going viral, that highlights the emotional reasons that car share is a must have part of everyone's life and liveable community.

Car share delivers results for everyone's (residents in general) benefit in the municipality, not just for members, as it impacts on other residents too. For example, when people reduce their car use, parking availability on-street increases, reducing pressures for residents who need to park. A strategic understanding of this message and the emotions involved for residents, can significantly change awareness, understanding, and sentiment within the community. It can enable deeper comprehension of the reasons for having and supporting car share in Port Phillip.

Examples of possible initiatives to improve communication with the community are:

- Encourage and (if possible) develop marketing campaigns to reinforce the positive contribution of car share to the community. These initiatives should promote car share as a favourable alternative to the private car, helping to reinforce its image as a benefit, rather than a competition for parking spaces among residents. They could also stimulate a shift in transport behaviours, particularly in new areas and developments, considering that life milestones represent good opportunities to trigger behaviour change.

- Incentivise the work of advocates and champions in the community, who could help to raise awareness of the system among residents who are not acquainted with car share. This could be achieved through a partnership with another organisation, such as the St Kilda Film Festival, to offer an award and financial prize to the best submission highlighting benefits of car share.

- Implement engagement and education initiatives to raise awareness of car share and its potential positive factors among the community. For example, by showing that car share vehicles can reduce the need for parking by freeing more spaces in a city as a result of adequate implementation. This could help to reduce or prevent complaints from residents.

- Run mobility workshops, in partnership with providers, to demonstrate how to use the system. People who are not aware of car share do not know how it works and sometimes imagine it is more complicated than it actually is. Running demonstrations would be a way to let people try the process of booking and accessing the car, for example, perhaps reducing the psychological barrier and triggering a better understanding of the advantages of car share.

- Give incentives, discounts, or other benefits, in partnership with providers, to enable residents to try car share, especially in areas where the uptake is slower and the Council wishes to increase it (i.e., Elwood, St Kilda East and Middle Park). For example, by granting free or discounted subscriptions to potential members, or by offering cost free short rental periods for residents who use public transport.

- In general, the initiatives could be focused on:
  o Keeping current users.

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o   Addressing potential members and encouraging them to become car share users.

o   Targeting households with two or more cars, stimulating them to reduce the number of private vehicles and use car share when an extra vehicle is needed.

Building Awareness

The City of Port Phillip can play a more significant role in building awareness of the service it manages by continuing existing promotion activities and committing to additional new activities.

Car share services create significant benefits to the local community, and are possibly one of the most under-rated things that Council does for the community. Additional ways of building awareness amongst the community could include:

- More communication about car share services in the Divercity eNews and on the News & Media section of Council's website.

- Additional signage using Council branding near each car share bay such as on the footpath or parking sign pole.

- Promotion and awareness raising at festivals and events.

- Inclusion of car share service options in a welcome pack for all new residents.

- Create a vignette advertisement for display on Council's website, outdoor screens and in the lobby of Council venues.

- Leverage competitions and events to find novel ways of engaging with people and teaching them about the benefits of car share services.

Council should also track the awareness of car share services over time in their annual surveys. This is important because those in the community unaware of car share services, could be the very people who would benefit most (particularly in terms of inclusion or reducing the cost of living).

7.5   Continue engaging and collaborating with service providers while evolving the 'franchise model' to implement the Catchment Based Network approach

The City of Port Phillip has a fruitful relationship with car share providers, communicating frequently with them to get feedback on the measures implemented, and asking for relevant information about their local operations.

The Council should maintain these relationships with service providers (involving them in decision-making processes where appropriate) and continue to understand their operational needs, to ensure initiatives implemented will be feasible and sustainable.

In terms of costs passed on to operators (and borne by residents who use the service) the best practice analysis leads to the following recommendations:

- Maintain the one-off fee that covers cost of physical works for bay installation.

- Maintain the current annual resident parking permit fee (treat the car as if it is a resident's vehicle).

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- Develop an approach to accept or offer payment (as franchise fee) for bays that are in high (or low) demand.

The two existing fees (installation and annual permit) are considered appropriate and align with best practice.

The need to encourage services to be provided in areas that might be considered less financially viable, generates the need to offer a 'franchise' payment for a service provider willing to provide the service to these communities. This will increase inclusion within the Port Phillip community. However, best practice would ensure that this process would be cost-neutral.

Council officers can make the process cost-neutral by either pairing-up car spaces for offer in future allocation rounds in such a manner that provides a high viability space to a service provider only if they also agree to serve a low viability space in a location that fills a coverage gap.

An alternative approach could operate like a tender for the best 10% of spaces (in terms of likely viability). These would attract offers of additional annual payment from the service providers. Any such annual payments would be directed to the Sustainable Transport Reserve and those funds would be used in a second tender seeking service providers to install cars at less viable locations based on an annual payment (from the Sustainable Transport Reserve) for the services.

7.6 Partner with CSPs to investigate the potential of car sharing in specific areas

The City of Port Phillip should partner with CSPs to investigate feasibility of potential car share bay locations in the service coverage gaps identified once the Council has adopted a service coverage goal.

Factors to consider when developing the network include

- Public transport nodes.
- Homes Victoria sites.
- Areas with high population density .
- Areas with high proportions of zero car households.

Council should then develop a network map of preferred long-term car share locations based on the key factors identified above and through any other analysis of the key factors that influence demand for car share services.

7.7 Integrate car share with public transport and other shared transport services

Explore ways to further integrate car share with local transport networks, especially with walking, bike riding, public transport, and shared micro-mobility, leveraging the innovative approach already applied to other modes by the City of Port Phillip. This integration could consider all types of car share operations available in the city (station-based/roundtrip and peer-to-peer), but also previewing a possible uptake of other types, such as free floating. Examples of possible initiatives include:

- The establishment of multimodal mobility hubs, in areas with concentration of public transport modes and with potential to incorporate other shared mobility modes operating in the city, following the examples of Bremen, Ghent, Milan,

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Munich, and San Diego. For example, this could be done by improving areas around public transport stations or similar hubs for potential users with car share vehicles.

- o These mobility hubs could be implemented around train stations, and connective tram and/or bus stops, including especial parking areas for car sharing, bike sharing, scooter sharing, and bike parking facilities.

- o The regional approach proposed in section 7.8, in coordination with different surrounding municipalities, would be crucial for the success of these initiatives.

- o Locations to consider for feasibility include the surroundings of: Bay St., in Port Melbourne; Bridge St. and Station St., in Port Melbourne; Victoria Ave and St. Vincent Gardens, in Albert Park; Clarendon St, on both extremes, in South Melbourne and Albert Park; Mills St. and Danks St., in Middle Park; Park St. and Fitzroy St., in St Kilda; along Fitzroy St., The Esplanade, and Carlisle St. in St Kilda, Balaclava Station, as well as along Chapel St. in the intersection with Carlisle St. in St Kilda East; the area between Ripponlea Station and Brighton Rd, in St Kilda East; Glen Huntly Rd and Ormond Rd, in Elwood; and different points along St Kilda Rd, mainly around St Kilda Junction, High St, and Domain Rd.

- The development of a Municipal Shared Transport Services Strategy, including other shared modes operating in the municipality, to plan them as part of the broader transport system and integrate them more strategically with the local initiatives.

7.8 Support a greater Melbourne approach to car share

Encourage developing greater Melbourne approaches to car share with input from inner Melbourne M9 councils and the Municipal Association of Victoria (MAV), similarly to the approaches applied by the "Future Mobility Taskforce", led by the London Councils, and the Metropolitan Bay Area Carsharing Strategy Plan, in San Francisco. This could be done by acknowledging that the use of urban space (and, in this case, car share vehicles) is not conditioned to the invisible borders of councils, and that the providers operating in the region are the same to facilitate a more successful implementation of car share, with unified and more consistent approaches. Examples of possible initiatives include:

- Partner with M9 Councils to standardise data collection and reporting, and other management approaches.

- Partner with M9 Councils and CSPs to develop regional targets.

- Engage State Government to provide regional approaches to transport integration.

- Pilot a system that could be replicated in other areas of the region, with a similar and consistent approach. For example, by developing a regional Car share Action Plan or Strategy, in a similar way to how IMAP cities have been addressing the recent bicycle infrastructure issues – "vision for a better connected bike path across 5 councils – need a collaborative effort and partnership"- meeting 28/08/2020 (IMAP Inner Melbourne Action Plan, 2020).

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7.9   Consider how kerbside parking Vpermits can improve operations

The implementation of Vpermits provides an opportunity to rethink kerb space allocation, usage, and management, and develop new approaches. The City of Port Phillip should consider best practice ways to allocate and manage parking spaces, acknowledging multimodal behaviours, using a mobility hubs approach.

Digital permits in particular offer a way to streamline the vehicle permitting process for car share service providers. These will make it easier to update vehicle number plate details and switch cars between spaces. This permitting system could also make it much easier to operate a floating bay allocation system whereby a car share vehicle can be parked in any of a number of parking spaces within a designated block of the street.

This proactive approach could bring different benefits in terms of reducing the number of private vehicles and car trips in the municipality. However, it requires changes in the regulatory system to accommodate other types of mobility in more efficient and sustainable ways.

A possible approach could compare or translate the reasonings applied for the recent arrangements set up for parklets to the car share implementation. These arrangements indicate current ways of thinking about and pricing public parking spaces in the municipality for the use of local businesses.

7.10   Retain the qualification requirements for service providers

Continue to allow multiple providers to operate in the municipality and fulfill users demands, provided they meet the requirements established by the Council, enabling the market to evolve naturally.

The City of Port Phillip could study possibilities to facilitate the deployment of different technologies and operational models that may emerge due to the fast changes that occur in the field, and consider their implementation, provided they fulfill the municipality's aims and bring benefits to the community.

Regarding the development of electric mobility as an opportunity to tackle climate change issues, a viable network of EVs (shared and private) depends on a widespread charging infrastructure and on a cultural uptake of the vehicles. Globally, every car share service provider has suffered from reduced use of electric vehicles due to a range of awareness issues including 'range anxiety'. Coupled with the higher cost of leasing and operation, as well as service reliability (when a user forgets to plug in the vehicle), the risks for service providers are significant.

Council should not impose special requirements on service providers that are not imposed on residents. This is the only way to ensure inclusion of residents who do not own a car and are reducing their impact on parking and traffic congestion for the benefit of those residents that do own a car.

Moreover, the components of the new regulatory framework for car share related to electric vehicles should be tailored to the local conditions, with flexibility to accommodate changes, and should consider inputs from car share providers. Criteria could be based on and aligned with:

- The municipality's objectives for car share.

- The real conditions of local CSPs.

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- The ability of a CSP to provide satisfactory services in terms of administrative, commercial, and operational issues, avoiding the transfer of eventual additional costs from operational requirements to users

7.11   Develop a more efficient data sharing system

Develop a more efficient and simplified data sharing scheme, that would also work as a monitoring and performance evaluation system. This would allow an accurate and representative understanding of car share demand and profile in the municipality, as well as ideally make analyses easier for the parts involved, especially the Council.

For example, this system could work as an analytical dashboard (with numbers, automatic interpretations, and graphs), fed with the most accurate and real-time information possible, including data from all CSPs. Service providers could add information straight to the system or keep sharing relevant information in the periodic reports (fixed or upon request) and in results from surveys with members. This system could help to measure the local impacts of car share and verify if the goals are being achieved, particularly considering issues such as reduced car use, congestion, and emissions, reduced need for parking spaces, increased active mobility and public transport use, as well as improved health conditions due to more active lifestyles.

These benefits are abstract, and it may be difficult to use them to advocate for car share if they are not measured regularly and carefully so that they become more concrete measures. This monitoring and evaluation system could also help to make these results more concrete, contributing to demonstrate the value of car share in the municipality. The existing fruitful relationship with providers would help to maintain and improve the effectiveness of this information system.

Although the City of Port Phillip already engages with the community, further understanding of the actual demand for car share in the municipality (by complementing data shared by operators with Inputs from residents and businesses) could also be part of this system. For example, this could be done by undertaking additional engagement with the community to collect inputs on a range of topics, including residents' awareness of the network, willingness to try the service, and views on acceptable walking distance to vehicles, through surveys or other consultation processes. Council could also ask for suggested locations for future car share bays, then match these with information from complaints and requests for car share bays.

This system could be consulted by decision makers on a regular basis, to inform analyses and decisions related to the development of initiatives for car share. A future Benefit Cost Assessment could utilise and complement this data system, helping to better understand the value of car share in the municipality. Information generated by this system could also be used to inform the community of the conditions and impacts of car share. The system could also include information from other shared mobility modes to enable a better understanding of their complementary nature in the transport system.

7.12   Engage with planners and CSPs to establish viable car share in developments

Keep encouraging the provision of car share in new developments, with the requirements already set for a more effective use of these vehicles, particularly in areas with potential for car share identified by the city; and promoting the regulatory changes needed to facilitate that. For example, by incentivising early car share usage in these areas through Green Travel Plans. Moreover, some ideas for early adoption include developers

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advertising that there will be car share vehicles on site, and car share bays being designated prior to being viable.

This idea could be implemented as a trial, setting up the bays before occupation, with signs indicating that a car share would be installed there later, and then add the vehicles when the building already has a level of occupation that would make car share operation commercially feasible. Permit conditions could also ensure that building developers and body corporates pay to enrol all residents in car share services and promote car share as part of their Sustainable Travel Plans.

In terms of adapting to the future development of electric mobility, the new regulatory framework could require wired bays for car share in new developments, leaving the infrastructure ready for an eventual installation of electric car share systems in future.

7.13   Use car share to complement the Council's fleet

The City of Port Phillip could use car share to complement or replace the corporate fleet vehicles. This is an efficient way to reduce operational cost and make Council resources (the standard fleet vehicles) available to members of the public for use outside business hours. This operational change has been made by the City of Adelaide and La Trobe University, and both organisations have saved significant operational expenditure while improving access to vehicles for their workforce (because every car share vehicle becomes a potential Council vehicle) and wider community.

Shared vehicles could be used for work related trips during business hours (blocking some vehicles for exclusive use of council staff) and remain available for bookings from general members during other periods, such as evenings and weekends. The Council could also use zero emissions vehicles as part of this service. The savings generated from this initiative could also contribute to a cost neutral car share management system.

Cities that implemented this option have seen significant reduction in costs related to their fleet management and experienced a more efficient use of vehicles, as they tend not to remain idle in between staff working hours. Additionally, by implementing this practice, local governments tend to learn how to calculate the benefits of car share for their business communities, by transferring concepts and lessons related to the benefits they achieve by using car share. The impact can be transformational with a significant increase in business productivity.

7.14   Summary of recommended policy changes

Policy improvement suggestions include:

- Adopt a Catchment Based Network approach to growing the car share network, to establish a flexible and agile (but simple) regulatory framework, capable of meeting community demand for car share services.

- Focus on coverage and inclusion to ensure the car share network is providing reliable services for the whole Port Phillip community, improving reliability in high-demand areas and filling coverage gaps in the existing network.

- Adopt a goal that 95% of households and businesses are served by car share within 250m of their property.

- Adopt a goal that 60% of households and businesses are served by car share within 150m of their property.

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- Retain the membership goal of achieving 10% of the resident population as car share members, which currently would be approximately 13,362 people by 2026[2].

- Investigate the key factors that influence car share network expansion and use of the service.

- Develop a full network plan with future car share station locations across the whole municipality and use that plan as the basis for prioritising the future release of spaces.

- Study possibilities to ensure vehicle availability in each car share pod, according to the profile of each area (considering demographics, density, urban form, and transport provision).

- Consider the feasibility of allocating car share bays more than twice a year.

- Apply an experimental approach to the changes, with pilots.

- Build awareness, membership, and the *Social Licence to Operate, by playing a more significant role in promoting car sharing and communicating the* benefits and value it adds (not only to users), with a sharp, effective, and compelling message.

- Continue engaging and collaborating with service providers and continue to understand their operational needs, to ensure initiatives implemented will be feasible and sustainable.

- Partner with CSPs to investigate feasibility of potential car share bay locations in the service coverage gaps identified once the Council has adopted a service coverage goal.

- Establish multimodal mobility hubs, in areas with concentration of public transport modes and with potential to incorporate other shared mobility modes operating in the city.

- Encourage developing greater Melbourne approaches to car share in partnership with inner Melbourne M9 councils, the Municipal Association of Victoria (MAV), and CSPs, to standardise data collection and reporting, as well as other management approaches.

- Continue to allow multiple providers to operate in the municipality and fulfill users demands, provided they meet the requirements established by the Council, enabling the market to evolve naturally.

- Facilitate the deployment of different technologies and operational models that may emerge in future, and consider their implementation, provided they fulfill the municipality's aims and bring benefits to the community.

- Establish components related to electric vehicles in the new regulatory framework for car share tailored to the local conditions, with flexibility to accommodate changes, and considering inputs from car share providers.

- Engage with planners and CSPs to establish viable car share services in developments, particularly in areas with potential for car share identified by the city; and promoting the regulatory changes needed to facilitate that. For example:

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[2] *Based on ForecastID population forecast of 133,619 residents in 2026*

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- o Ensure building design locates car share vehicles in the optimal location and enables public access to car share vehicles while restricting public access to the rest of the building.
- o Set permit conditions to ensure that building developers and body corporates pay to enrol all residents in car share services and promote car share as part of their Sustainable Travel Plans.
- o Require wired bays for car share in new developments in the new regulatory framework, leaving the infrastructure ready for an eventual installation of electric car share systems in future.

7.15 Summary of operational improvement suggestions

Operational improvement suggestions include:

- To encourage CSPs to install vehicles in locations that fill coverage gaps in the network and increase inclusion within the Port Phillip community, including:
  - o Ask CSPs for ways to encourage them.
  - o Allow floating vehicles for a 6 or 12-month trial period (to be defined in collaboration with CSPs).
  - o Pair up car spaces in highly valued areas with spaces in areas that have no service, to enable high use of one location to offset the risk of low use at the other location.
  - o Survey neighbourhoods and seek local support for service expansion.
- Review and make necessary improvements to the process for reporting illegal parking in dedicated car share bays and finding an alternative location to park a vehicle.
- Investigate having flip signs to allow temporary relocation of car share vehicles due to events or road roadworks in car parking space.
- Develop marketing campaigns to reinforce the positive contribution of car share to the community.
- Encourage advocates and champions in the community, to share their stories about car share services among residents who are not acquainted with car share.
- Implement engagement and education initiatives to raise awareness of car share and its potential positive factors among the community.
- In partnership with providers, find new and novel ways to demonstrate how to use the car share service.
- Provide incentives, discounts, or other benefits, in partnership with providers, that encourage residents to try car share services.
- Add more communication about car share services in the Divercity eNews and on the News & Media section of Council's website.
- Add signage using Council branding near each car share bay such as on the footpath or parking sign pole.
- Promote and raise awareness of car sharing at festivals and events.

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- Include car share service options in a welcome pack for all new residents.

- Create a vignette advertisement for display on Council's website, outdoor screens and in the lobby of Council venues.

- Leverage competitions and events to find novel ways of engaging with people and teaching them about the benefits of car share services.

- Track the awareness of car share services over time in their annual surveys.

- Maintain the one-off fee that covers cost of physical works for bay installation.

- Maintain the current annual resident parking permit fee (treat the car as equal to a resident's vehicle).

- Develop an approach to accept or offer payment (as franchise fee) for bays that are in high (or low) demand.

- Consider how kerbside parking Vpermits can improve operations, by exploring best practice ways to allocate and manage parking spaces, acknowledging multimodal behaviours and using a mobility hubs approach.

- Develop a more efficient and simplified data sharing scheme (as an analytical dashboard), that would also work as a monitoring and performance evaluation system, fed with the most accurate and real-time information possible, including data from all CSPs.

- Undertake additional engagement with the community to collect inputs on a range of topics, including residents' awareness of the network, willingness to try the service, and views on acceptable walking distance to vehicles, through surveys or other consultation processes.

- Ask the community for suggested locations for future car share bays, then match these with information from complaints and requests for car share bays.

- Include information from other shared mobility modes in the informational system to enable a better understanding of their complementary nature in the transport system.

- Implement strategies for early adoption of car sharing in new developments:

  o Developers to advertise that there will be car share vehicles on site, and car share bays being designated prior to being viable.

  o Set up car share bays before occupation in new developments, with signs indicating that a car share would be installed there later, and then add the vehicles when the building already has a level of occupation that would make car share operation commercially feasible.

- Use car share to complement or replace the corporate fleet vehicles.

- Review and make necessary improvements to the process for reporting illegal parking in dedicated car share bays and finding an alternative location to park a vehicle.

- Investigate having flip signs to allow temporary relocation of car share vehicles due to events or road roadworks in car parking space.

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8   Conclusions and Next Steps

The City of Port Phillip can use the insights and suggestions provided in this report to implement an approach that will enable further expansion of the car share network and impact positively in the public acceptance of the service, maximising the community benefits of car share.

Critical next steps to strengthen the robustness of implementation approaches include:

- Investigate the key factors that influence car share network expansion and use of the service.
- Adopt coverage targets for residents and businesses.
- Develop a network map of preferred long-term car share locations based on Homes Victoria sites, public transport nodes and the key factors identified.
- Determine a feasible frequency to perform the car space allocation process.
- Identify the priority bays to be included in each round of the bay allocation process.

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