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The Evolution of Car Share in the City of Sydney

The City of Sydney commenced a trial of car share in 2007. Subsequently the City adopted its Car Share Policy in 2011. In the City there are now over 21,000 resident members and more than 7,500 business members using over 680 vehicles provided by two providers. Car share in the City has been very successful.

The City is currently reviewing its Car Share Policy. This review has considered a number of issues associated with the growth of car share including the apparent privatisation of public space and guarding against the establishment of a monopoly business. Issues such as car share vehicle utilisation, costs and administration have also been considered as the City looks to balance the need to support reduced car ownership and limited on-street parking.

While there are many benefits of car share, issues have emerged as popularity has increased which were largely unforeseen in 2011 when the first Car Share Policy was adopted. These issues have been considered and explored as the 2011 Policy has been reviewed. The draft Car Sharing Policy has responded to these issues while supporting car sharing as a critically important component of the urban transport mix.

1 Introduction

This paper is focused on the evolution of car sharing in the City of Sydney LGA, from the initial trial in 2007, to the City's first Car Sharing Policy in 2011 and the more recent development of the current draft Car Sharing Policy. In developing and drafting the proposed policy, a number of issues have been explored.

On 4 April 2011, Council adopted a Car Sharing Policy, following a trial of car sharing which commenced in 2007. The objectives of the Policy were, and continue to be, to use limited on-street parking more efficiently, provide alternatives to private vehicle ownership, reduce traffic congestion and lower greenhouse gas emissions.

In the eight years since the trial commenced, car sharing has grown dramatically. Over 21,000 City residents and 7,500 City businesses have joined the scheme, at a rate of around nine a day. The City has already exceeded its target that 10 per cent of City households become car share members by 2016. This, in turn, has helped the City progress towards the broader sustainability targets listed in Sustainable Sydney 2030.

Specific policy changes in the draft Car Sharing Policy 2016 are:

- a) The allocation of spaces to car sharing operators until June 2020 only, after which time spaces may be subject to an Expression of Interest process.
- b) The introduction of a 'change of control' provision stipulating that spaces are non-transferable in the case of sale of an operator.
- c) Establishing administrative cost recovery as the basis for an annual fee for Authorised Car Share vehicle permits.
- d) Adoption of minimum usage and membership thresholds for new applications for car share spaces, with higher thresholds applying in areas with relatively high car share vehicle coverage.
- e) The introduction of standardised reporting that is published online and is open to third party auditing

These changes seek to maintain community confidence that car sharing spaces are justified, well-monitored, subject to competition, and managed as public space that cannot be transferred or on-sold. They would also provide the City with income to support the administrative costs incurred maintaining this oversight.

2 Car sharing growth

The City began providing dedicated parking spaces to car share operators in 2007. On 4 April 2011, Council adopted the City of Sydney Car Sharing Policy. This policy is now being reviewed.

Car sharing in the City of Sydney Local Government Area (LGA) has grown rapidly since 2011. There are now over 20,000 resident members, and 7,000 employee or business members. These members share approximately 680 vehicles on City-provided spaces (as well as shared vehicles within private car parks). There is an average of around 40 members per on-street space. The spaces constitute approximately 1.6 per cent of the City's (non-CBD) general street parking.

The City of Sydney adopted Sustainable Sydney 2030 in 2009 following extensive resident and business community consultation. Sustainable Sydney 2030 envisages a sustainable and efficient transport network with more options to walk, cycle, and use public transport. Car sharing is a key program to complement sustainable travel modes, and allow City residents to reduce their reliance on private vehicles.

Transport accounts for 12 per cent of greenhouse emissions in the City of Sydney. The City's carbon reduction strategy commits the City to reduce greenhouse gas emissions by 70 per cent. Car sharing is helping achieve this goal.

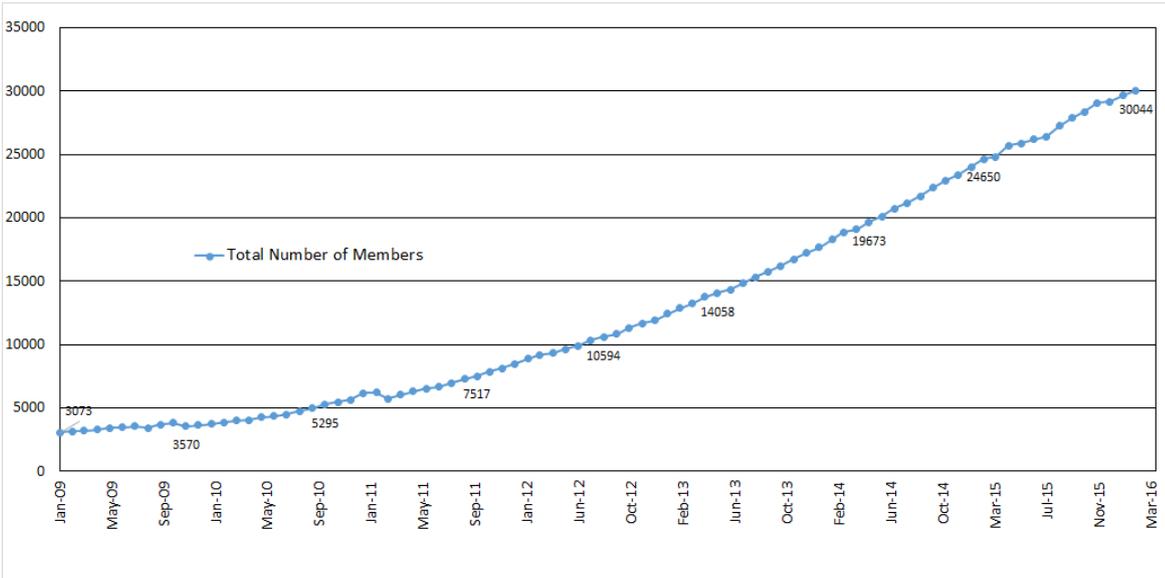
Dedicating car sharing spaces on-street is a significant factor in supporting the growth and competitiveness of car sharing. Members can quickly find and return cars to safe and highly visible locations, which increases the convenience, safety and competitiveness of sharing in comparison with car ownership.

Membership numbers are a useful guide to growth in car sharing, however, actual vehicle usage is a more precise and reliable indicator of local demand. It is for this reason that the draft Policy includes monthly vehicle usage thresholds as part of the application process for new spaces.

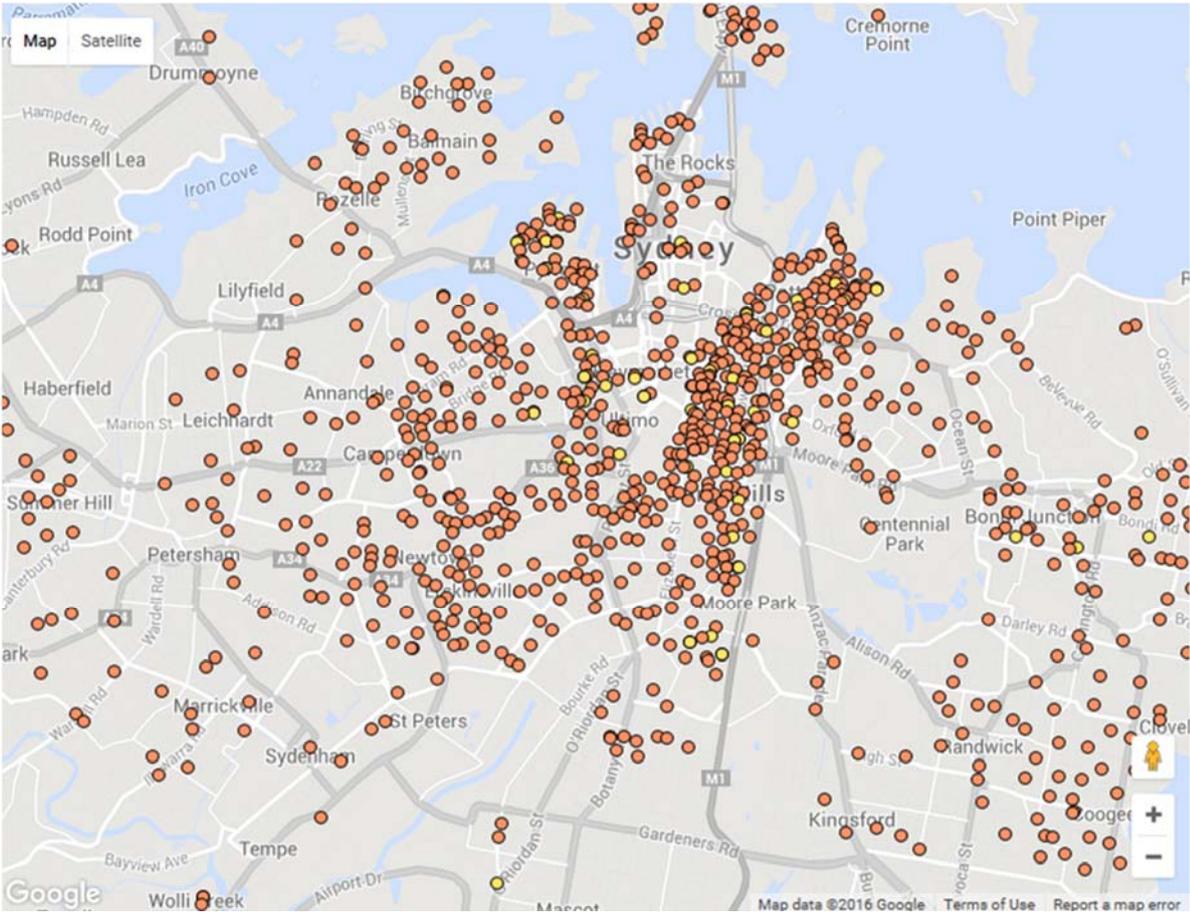
Car sharing operators report to the City the number of members currently registered to drive their vehicles. This number does not include a driver who has terminated a membership, and is consequently no longer eligible to drive.

The majority of members pay a monthly fee of some kind, and are consequently unlikely to retain membership if they no longer intend to use the service. It is possible that some members on plans that do not require a monthly fee may not have formally ended their membership, but do not intend to drive again.

Car share membership January 2009 – March 2016



Car share spaces in City of Sydney, March 2016



3 Benefits of car sharing

Since the Car Sharing Policy was adopted by Council in 2011, the academic literature on car sharing has increased substantially. There is a strong consensus that car sharing programs produce significant environmental, transport and economic benefits, and do so at very modest cost relative to other transport initiatives.

There is strong international and Australian evidence that availability of car sharing reduces household vehicle ownership, reduces vehicle travel, and reduces associated greenhouse emissions and air pollution.

The London School of Economics and Arup (March 2012) found that car sharing is a 'greatly positive social investment'. The primary benefits, (reduced congestion, noise and carbon dioxide) are significant even with changes in key assumptions, such as members per vehicle.

The benefits of providing car sharing spaces in the City of Sydney were independently assessed in 2012 by SGS Economics and Planning, and found to outweigh costs by 19:1. The principal benefits identified included reduced private vehicle travel, reduced greenhouse gas emissions, reduced resident and business car ownership costs, and health benefits associated with greater walking, cycling and public transport by car sharing members. At the time of the study, there were approximately 10,000 car sharing members in the City of Sydney, with an average of 22 members per car. Given the growth in membership and the increased number of members per vehicle it can be assumed that the benefits of car sharing within the City have increased since 2012.

Research for the City of Melbourne found that each car share vehicle results in a reduction of nine vehicles owned by members, while a report by GHD found Melbourne members reduce their annual private car travel by 50 per cent. Carplus, the UK peak non-government organisation fostering car sharing, found car share members drive 57 per cent less than other Londoners.

The UK Automobile Club estimates that the average car in London is parked for 97 per cent of the time. Carplus, a UK NGO supporting the growth of car sharing, found that for each car share car in London, 17 privately owned vehicles were either sold or their purchase avoided in the previous 12 months. With residents giving up private ownership of cars, this frees up parking spaces for other residents and paying drivers.

The Centre for Transport Studies at Imperial College London found that round-trip car sharing results in net decreases of greenhouse gas emissions, as did the Rand Corporation in the US. Another US study found carbon dioxide emission reductions between 27-54 per cent and 4-13 vehicles sold or avoided per shared vehicle.

Policy support for car sharing is widespread globally, with more than 900 cities around the world formally supporting car sharing. The Mayor of London has declared 'Our Roads Task Force is fully supportive of this forward-thinking industry, one which offers massive benefits in terms of reducing congestion, improving air quality and reducing competition in the battle for kerbside parking'.

Support generally takes the form of provision of space on-street or in municipal car parks, with a small number of services, such as Paris' AutoLib, directly contracted by the municipal government. European national rail operators have also provided, or formed partnerships with, car sharing services.

Domestically, car sharing is also supported by many local governments. In Sydney, councils which allocate dedicated on-street or public parking to car share vehicles include Inner West (Ashfield, Marrickville and Leichhardt), Botany Bay, Manly, Mosman, North Sydney, Waverley, Randwick, Parramatta and Willoughby. Car sharing is also supported by most councils in inner Melbourne, and more recently by authorities in Adelaide and Canberra.

In New Zealand, Auckland Transport has recently invited expressions of interest for an electric car sharing program, and Wellington City is currently exhibiting a car sharing policy.

There has been some international research assessing whether availability of shared cars increases total driving. Research from the University of California followed driving habits of members and non-members. It found that while some specific groups of car sharing members did drive more than before (e.g. students, committed environmentalists), the effect was more than offset by the large reduction in total driving achieved

by all members. As car sharing becomes more common and changes behaviour of 'mainstream' drivers, the total reduction in driving becomes more significant.

The availability of car sharing provides casual access to safe and modern vehicles by households and individuals who may not be able to afford the upfront cost of an equivalent vehicle.

Car sharing is also used extensively by community and non-government organisations, particularly those with occasional need for vehicles such as utilities and vans.

The more efficient use of on-street parking spaces facilitates the allocation of space to alternative modes that also require street space, including light rail, bus lanes, cycleways and pedestrian facilities.

The draft Policy will contribute to reducing passenger vehicle emissions from private transport. As car sharing members pay the marginal cost of their driving, they tend to drive less often and for shorter distances than private vehicle owners.

On-road emissions from car share vehicles are lower than the private fleet, because they have a much lower average age, and are subject to professional fleet maintenance.

The draft Car Sharing Policy maintains environmental criteria for vehicles on City streets. Following recent changes to the Commonwealth Government's Green Vehicle Guide, which discontinued the star rating system, the draft Policy now requires operators to ensure that passenger vehicles do not exceed 175 grams of carbon dioxide per kilometre. For other vehicle types, such as vans or utilities, operators must demonstrate to the satisfaction of the City that they are a high performing vehicle for their class.

Introduction of electric vehicles (EVs) in car sharing fleets may be beneficial as a means to familiarise drivers with electric vehicles and accelerate their uptake in the market. To date, only GoGet has trialled an electric vehicle in on-street spaces.

Internationally, a small number of car sharing services have operated with partial or full electric fleets. At this stage, given the high cost of electric vehicles, mandating the use of EVs may be counterproductive, as the emissions saved may be offset by the reduced use of car sharing as costs increased. However, the Expression of Interest process recommended in the draft Policy would allow the City to monitor EV costs over time, and progressively encourage greater use of hybrid or electric vehicles.

4 City of Sydney car sharing operations

In 2007, Council called for expressions of interest for access to on-street parking for car share vehicles. Three companies responded and a number of on-street spaces were made available. The City's 2011 Car Sharing Policy allowed eligible operators to request additional spaces as membership grows.

Car share companies apply to the City for additional dedicated on-street parking spaces by nominating a location, which typically responds to increased nearby membership or usage. The space is assessed for suitability by City staff, and considered by the Local Pedestrian, Cycling and Traffic Calming Committee (LPCTC) after local consultation undertaken by mail.

Since the introduction of the 2011 Policy, the City has considered applications for up to 10 car share spaces per month. Since October 2014, when the Policy review process began, the LPCTC Committee has considered a maximum of four applications for car share spaces per month to prevent speculative applications during the review of the Policy.

The City charges car share operators a one off fee for the installation of signage and line marking for each car sharing space. Each car share vehicle must also have an Authorised Car Share Vehicle Permit, which is currently set at the same rate as a resident's parking permit.

Car share operators are required to provide monthly reports on numbers and types of members (residents and business) per postcode and as well as the usage of vehicles itemised by space location. This enables the City to determine whether the use of spaces for car share is justified.

4.1 Options for managing growth

Car sharing membership in the City of Sydney continues to grow steadily, with current resident membership exceeding 20,000. International research indicates the potential market for car sharing at between 20 and 25 per cent of all drivers. This demand is likely to be highest in walkable areas already well served by public transport, as these are the neighbourhoods in which living without a private car is most practical.

Though the evidence is clear that car share cars reduce the total number of cars on the streets, continued allocation of spaces to car sharing can be contentious, particularly in neighbourhoods that have a high level of resident parking demand. The draft Policy proposes measures to maintain confidence that additional spaces are justified and will be well-used.

A number of approaches to the allocation of new spaces have been considered, and are discussed below. The approaches are consistent with the relevant RMS Technical Direction.

The three alternative approaches considered are discussed below.

4.1.1 No formal restriction on rate of allocation

The 2011 Policy does not formally restrict the number of spaces that may be considered per month by the LPCTC Committee.

Between 2007 and 2013 the City dedicated an average of 10 on-street spaces per month, consistent with monthly membership growth of 200-300. For administrative reasons, the City has generally not considered more than 10 applications per month since mid-2012.

As stated above, a limit of four spaces per month has been applied since mid-2014 to prevent speculative applications during the review period.

This approach has enabled car share operators to respond to increased demand, and prevents existing members being crowded out by new members competing for the same number of vehicles.

4.1.2 Cap on total spaces in the City

The City considered a fixed maximum number of on-street spaces. This could be achieved with the establishment of a limit on spaces allocated to car sharing, either with a fixed number for the LGA or by setting caps as a percentage of parking spaces in an area.

This alternative would arbitrarily limit the uptake of car sharing, potentially suppressing demand by residents and workers, reducing the total public benefit associated with car sharing, and constraining a transport option that is consistent with the City's strategic objectives for liveability, sustainable transport and connectivity.

A cap on spaces would also be inconsistent with rapid population growth in the City, particularly in the southern renewal areas. Car sharing in these neighbourhoods is critical for residents who are generally not eligible for parking permits, and who may not have off-site parking.

4.1.3 Tiered approach

A 'tiered' approach would set minimum usage and membership thresholds for new applications, with higher thresholds applying in areas with relatively high car sharing coverage while encouraging the growth of car sharing.

This approach will maintain confidence that additional spaces are justified.

The recommended approach is as follows:

- Precincts with fewer than 3.5 per cent car share spaces - In parking precincts where on-street car share spaces account for less than 3.5 per cent of available kerbside parking, the City will allocate spaces requested by an authorised car sharing operator where it can demonstrate that each of the three nearest spaces held by the operator was used at least 18 times per month on average over the period of the preceding three months. (This equates to average use of three bookings in five days).
- Precincts with 3.5 per cent or more car share spaces - Once the 3.5 per cent threshold is reached, applicants for additional dedicated spaces would be required to demonstrate significant demand. The City will allocate spaces requested by an authorised car sharing operator where it can

demonstrate that each of the four nearest spaces held by the operator was used at least 25 times per month on average over the period of the preceding three months. (This equates to average use of five bookings in six days).

4.2 Change of control provisions

'Change of control' restrictions are intended to prevent on-street spaces being treated as tangible private assets.

The proposed introduction of a 'change of control' provision would stipulate that on-street parking spaces are non-transferable. In the event of a change of control of an operator (due to merger, acquisition, etc), their eligibility to use currently allocated on-street parking spaces would lapse. While the City may re-allocate the spaces to the new operator without calling for expressions of interest, this decision would be at the discretion of the City.

The intent of the change of control clause is not to prevent funders taking equity stakes in business, nor prevent normal acquisitions and divestments. It is intended to protect the public interest in circumstances such as:

- a) Attempts to 'sell' or transfer spaces among competitors
- b) Acquisition or takeover of one operator by another, thereby reducing or eliminating competition;
- c) Opportunistic bidding into an Expression of Interest (Eoi) process with the intention of acquiring spaces that can be 'cashed out' to other operators.

4.3 Fees

The City has not previously sought to charge car share operators an ongoing fee for use of the dedicated on-street parking spaces, other than recovering installation and removal costs and requiring each car to have annual Authorised Car Sharing Parking Permit. This recognises the considerable public benefit car sharing offers and the emerging nature of the industry.

Given the growth in car sharing, it has been appropriate to review the City's fee settings.

As the majority of car share operators are not listed companies, current business performance and profitability is unknown. Research suggests that the car sharing industry internationally is not highly profitable, with the long established Swiss Mobility Carsharing scheme operating with a profit margin of five per cent.

Research has identified three different policy approaches used by local government to car share parking. The first views car sharing as a public good, justifying the allocation of public resources. The second sees car sharing as a 'sustainable business', with public benefits justifying moderate support. The third sees car sharing as a conventional commercial operation that should be expected to bear the full cost of operations.

The 2011 Car Sharing Policy takes the first approach. Research conducted for the City found the City's support for the scheme, in the form of dedicated car sharing parking spaces, generated a net present value of \$203 million, representing a significant return on Council's in-kind contribution (predominantly forgone parking revenue and administrative expense). Since that time, the City has modestly reduced the in-kind contribution by charging a \$2,350 establishment fee to dedicate each new car sharing parking space.

The following three fee options have been considered with all options maintain the existing one-off charge for installation and decommissioning of car sharing spaces.

4.3.1 Retain existing car share permit fee

The City could retain the current annual car share permit fee, which is set at the price of a standard resident's parking permit (\$52). This would reflect the substantial public benefits identified by SGS Consultants, and be consistent with the City's sustainability focus. It is also consistent with the City's exemption of residents (the primary users of shared vehicles) from paying for on-street parking.

Retention of the existing fee would maximise the City's support for car sharing. However, it would maintain an administrative subsidy that no longer appears necessary to maintain a viable and large scale car sharing industry in the LGA.

4.3.2 Full cost recovery

A number of jurisdictions seek to recover the forgone revenue from the conversion of a pay parking space to a car sharing space.

It is estimated that 34.5 per cent of car sharing spaces (224) would otherwise be pay parking (with exemptions for residents' vehicles displaying a residential permit) and each could have earned an average annual revenue of approximately \$4,250. Total revenue forgone is thus estimated at approximately \$950,000 per annum, representing approximately 2.6 per cent of total 2014-2015 parking meter income.

However, each car share space also reduces the number of permit-bearing vehicles that would otherwise park on-street without charge. On the assumption that each space avoids 8-12 vehicles, and half of those would otherwise be parked on-street, the 224 car share spaces in pay parking areas may have avoided the issuing of between 896 and 1,344 resident parking permits. This is likely to mitigate, at least in part, the reduction in revenue. An accurate estimate is difficult to establish, as the City has not previously sought to quantify the revenue impact of a resident parking permit in a pay parking area such as Pyrmont or East Sydney.

The City does not generally impose pay parking costs on residential vehicles, and it would be counter-productive to impose parking costs only on those residents who share cars. Research for the City of Melbourne found that charging full-cost fees would reduce membership. A similar result would be expected for the City of Sydney and would be counter-productive in growing car share membership further.

4.3.3 Recover administrative and infrastructure costs

Administering the car sharing policy, and monitoring reports and compliance is estimated to cost \$150,000 per annum, including staff time, auditing costs and light maintenance. Spreading this amount across approximately 680 spaces would result in an annual permit fee of \$225 per space.

This approach has the benefit of a clear basis for the fee and the potential to reduce the fee over time as the number of spaces increases. This approach recognises that the relationship between the administration cost and number of spaces is not necessarily linear.

4.4 Competition

Competition between car share operators has the potential to reduce user costs, improve services and appeal to a broader range of customers. The City's support for car sharing is currently competitively neutral: any car share scheme operator, provided it meets the City's criteria, is entitled to request access to dedicated on-street car share parking spaces.

The City's initial EOI for access to car share spaces was followed by the 2011 Car Sharing Policy which allows operators to request additional spaces as membership grows. In practice, only GoGet has consistently grown and sought new spaces. There are now 680 spaces, 605 of which are used by GoGet. The remainder are used by Hertz 24/7.

Limits on either the installation rate or the total number of car share spaces have significant implications for competition and market access for new entrants. This is particularly the case in areas where car sharing coverage is already high.

The following options were considered to address competition for a finite supply of on-street spaces.

4.4.1 Partial or rolling EOI

The City could annually offer a proportion of established car sharing spaces to the market in a rolling EOI, open to both incumbent and new car sharing operators. Spaces subjected to an EOI would be selected to balance potential viability of new operators with the needs of existing members.

This approach has the benefit of allowing new entrants to enter the market with a small but viable allocation of spaces, while limiting the inconvenience faced by existing members if some spaces were reallocated. However, there is a risk that many members may find reallocation of any spaces undermines certainty as to the long term availability of convenient car sharing, and dissuades further uptake

While theoretically attractive, an annual EOI process also carries a very high administrative overhead, which would compel substantially higher fees to recover costs.

4.4.2 One-off Expression of Interest for all existing spaces

The City could establish an open EOI process for its existing on-street spaces, replicating the EOI conducted in 2007. Were the City to incorporate all car sharing spaces, it could award space to either a single or multiple operators. This is a relatively common approach internationally.

Offering a contract to a single operator for a fixed period of time may have implications for competition including preventing innovation by competitors for the duration of the contract period; and reducing the existing diversity of operators.

A procurement process that invites only a single operator could be perceived to favour the dominant incumbent operator, given their substantial scale and the prospect of user backlash should 88 per cent of existing car share scheme members be forced to change operators. Smaller operators may not be able to scale up to take all offered parking spaces in one tranche and thus be locked out of the market. This would be avoided by an EOI that explicitly envisages multiple operators on a fixed term contract, or by EOI terms that required existing memberships to be honoured by new operators.

In either case, the City may need to provide advance notice of a future expression of interest process, or otherwise exclude the newest car share spaces, some of which may have been very recently installed at the operator's cost.

4.4.3 Deferred Expression of Interest

As an alternative the City could set a date beyond which it may, at its sole discretion, subject any or all car share spaces to an EOI for future use. This reaffirms public control of car sharing spaces, while ensuring some competition in the provision of car sharing. This is the recommended approach in the draft Policy.

In setting a date for a future EOI within the draft Policy, the City sought to provide sufficient policy certainty to foster continued car sharing uptake during a period of rapid population growth, particularly in the southern renewal areas. This approach also acknowledges that the City does not have sufficient information to consider an EOI process at the current time.

4.5 Data confidentiality and integrity

In assessing applications for new car sharing spaces, aggregate data on nearby spaces is published online in the LPCTC Committee's business papers. Other usage data of individual car sharing spaces has been generally treated as commercial in confidence. It is recommended that, through the proposed Policy, neighbourhood-level information of membership and vehicle usage be published online every three months.

It is proposed to introduce a standardised reporting template with additional data required from operators, including total bookings, average bookings per month, average duration of bookings, and minimum and maximum usage of any one space. The enhanced data gathering and administration will be covered by the annual fee for car share vehicles.

Additional information, particularly regarding vehicle use is hoped to assist in increasing public confidence in the management and value of on-street car share spaces, while exposing underperformance by any operator to the scrutiny of competitors and the public.

To ensure confidence in the data reported by operators, it is proposed that an obligation to submit to a third party audit (or audits) commissioned by the City is introduced.

4.6 Off-street dedicated car sharing spaces

The proposed amendments to the draft Car Sharing Policy deal only with the management of car share parking spaces on City streets and the City's parking stations.

The installation of car sharing parking spaces in new developments has been modest. Subject to approval and resources, the City will carry out work to understand the reasons for this and find out what options there may be to provide information on the benefits of car sharing to prospective developers and off-the-plan purchasers.

Ideally, future work will also consider what actions could be taken to encourage provision of car sharing spaces in existing strata developments. In many cases, existing developments may be suitable for car

sharing vehicles, but the approval and strata management processes can be onerous. Uptake may be improved by a clear guide for residents and owners' corporations.

4.7 Termination

The termination clause contained in the draft Policy essentially defines a contract period for the use of car sharing spaces. It is anticipated, given the success of car sharing, that future contract periods would be defined through an Expression of Interest process. The terms of a future EOI process have not been set, and can reflect contemporary opportunities and priorities, as well as innovations in the provision of car sharing.

In the absence of defined contract periods, there may be a risk that the City's policy is construed by an operator as an indefinite right over an on-street car sharing space. The defined contract period protects the City's legal position.

5 Peer-to-Peer Car Sharing

Given the popularity in peer-to-peer services in recent years, it is worth adding a note on this in the context of car sharing. Peer-to-peer car share operators allow members to rent out their personal vehicles directly to other members, typically neighbours. As the vehicles are owned by residents, they generally use resident parking permits or private parking, and the City consequently has no regulatory or oversight role.

Peer-to-peer operators (not individual owners) may apply for a dedicated car share space, but they would then need to comply with the City's reporting and vehicle requirements, such as minimum availability of the vehicle to other users, monthly reporting of usage and membership and, limits on type of vehicles. This is unlikely to suit vehicle owners that wish to have some discretion over when and with whom they share their vehicle.

6 Conclusion

Car sharing within the City of Sydney has been very successful since its introduction in 2007. The draft Car Sharing Policy looks to update the 2011 Policy and address a number of issues that have emerged as car sharing has grown in popularity. Australian and international experience has been invaluable in reviewing the 2011 Policy, but it is important to also consider local issues.

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