

Developing Car Clubs in Scotland: The next five years

Workshop report

December 2015



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Authors	John Pinkard, Susan Jeynes, Kate Gifford
Project manager	Susan Jeynes
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1 Introduction

This report has been prepared on behalf of Carplus, a not-for-profit, environmental transport NGO that promotes accessible and low-carbon alternatives to traditional car use in the UK. Amongst other things, Carplus delivers the Developing Car Clubs in Scotland (DCCS) programme on behalf of Transport Scotland.

The report summarises the findings of a workshop, held in June 2015, that was designed to gather feedback from stakeholders on how car clubs should develop in Scotland over the five years to 2020. The results reported herein should inform the development of a new car club development action plan for Scotland and feed in to ongoing government policy and funding processes.

1.1 What is a Car Club?

Car clubs provide vehicles to members on a pay-as-you-drive basis, providing much of the convenience of owning a car but without the hassle or costs of repairs, depreciation, insurance, servicing or parking. Car clubs tend to be organised on an area basis with cars located in clusters so that if one car is not available, a member will only have a short walk to access another car. Most car clubs enable members to reserve cars online, over the phone or by smartphone app, unlock the vehicle with their membership card or smartphone app and drive off.

Carplus has outlined five criteria that help to define a car club:

- 24/7 on-demand access;
- Self-service access;
- Cars located conveniently: normally local to home, workplace or transport hub;
- Ongoing access to the service following some form of sign-up and membership; and
- Members often feel mutual responsibility for the shared resource, hence the term car “club”. This also translates to loyalty to a brand and a desire to ensure that the service quality is maintained.

There are a number of variations on how car club schemes operate. In the UK, the main model to date has been the round-trip or ‘back to base’ scheme, where the member rents a vehicle from a designated bay, usually on-street and designated to the car club operator by the local authority, and returns it to the same location at the end of the rental period. A more recent innovation is the emergence of one-way ‘free-floating’ schemes, whereby cars are available for one-way rentals and can be dropped off at a location other than the pick-up point. The ‘free-floating’ scheme does have the potential to also be used for round trips. This document addresses round-trip, peer-to-peer, one-way and free-floating operations. For the purposes of this document the term ‘car club’ will be used to cover all these models, unless referring specifically to one particular model.

Types of car club

- **Round-trip car clubs** involve a car club member booking a specific car, located in a dedicated parking bay, for a period of time and then returning the car to the same dedicated parking bay before the end of the reserved time.
- **Fixed one-way car sharing** involves a member starting a reservation in an available car at a designated parking bay and driving to another designated parking bay, where the reservation ends. This model is most often used when electric vehicles are involved and a charging point is required.
- **Floating one-way car sharing** involves a member spontaneously identifying an available nearby car, reserving that car and driving it to their destination, wherever that may be. To end their reservation, they must park the car within a specified geographical operating area, allowing for one-way trips or round-trips.
- **Peer-to-peer car sharing** enables people with underused vehicles to offer them for rent to their neighbours and other members in the local area. Under this model, a car club service provider provides insurance cover for its members and takes a modest commission for arranging the hire and providing cover.

The various offers may appeal to different groups for different types of journeys. In complementing public transport, walking and cycling, car clubs allow people to build “mobility lifestyles” that mean they do not feel they need to own private cars to the same extent as they have done historically.

Innovation in how we use cars, particularly through new technology and the sharing economy, presents a unique opportunity to reshape how and why people travel. Car clubs are enablers of behaviour change, giving people an option of giving up their car which they would not otherwise have had. In doing so, car clubs have the capacity to make a significant contribution towards achieving government policy objectives, including those related to reducing private car dependency and use, decarbonising road transport in Scotland and supporting investment in walking, cycling and public transport use.

There is a growing body of evidence suggesting there is significant potential for further growth in the car club market, both geographically and in terms of its customer base¹. To achieve this, car club providers need to offer a customer-focussed solution that appeals to a wider market than currently, reflecting Scotland’s diverse communities.

As the following section demonstrates, Transport Scotland has been providing support to the development of car clubs in Scotland for a number of years.

1.2 Developing Car Clubs in Scotland Programme

Since November 2010, the Developing Car Clubs in Scotland (DCCS) programme, which is funded by Transport Scotland, has been providing technical and financial assistance to support development of urban and rural car clubs across Scotland.

¹ e.g. see: Steer Davies Gleave (2011) *Scotland Car Club Market Analysis* Carplus; Leeds (available for download at: <http://www.carplus.org.uk/scotland-car-club-market-analysis/>)

The aims of the Developing Car Clubs in Scotland programme are:

- To reduce carbon emissions from transport, and improve air quality in towns and cities;
- To reduce private car dependency by expanding the network into towns and cities across Scotland;
- To contribute to the wider public use of electric vehicles by increasing the number and usage of electric vehicles in the car club fleet;
- To work with public transport operators to integrate car clubs with their services;
- To reduce the barriers to car club membership – including working with operators to make it easier for members of one club to book a car from another;
- To contribute to the strengthening of rural communities and reduction of transport poverty through the development of car clubs in small towns and rural communities across Scotland.

To date the DCCS programme has supported expansion of the Scottish car club network from three car clubs in 2010 to 18 car clubs supporting 24 communities today. Car club membership in Scotland has grown from around 4,500 members in May 2011 to around 8,500 members in September 2015, meaning membership has more than doubled in just over four years. The Scottish car club fleet is currently composed of over 300 vehicles, 23 percent of which are electric. This has grown from 133 vehicles in May 2011, none of which were electric.

Despite this significant progress, car clubs in Scotland are still at a comparatively early stage of development and have yet to become a widely recognised, mainstream mode of transport. Consequently, further development work is needed if the full benefits car clubs can offer are to be achieved.

1.3 Strategy Workshop

On Tuesday 23rd June 2015, Transport Scotland and Carplus hosted a strategic workshop that provided an opportunity for attendees to reflect on how car clubs in Scotland have evolved since the launch of the DCCS programme and identify priorities for the programme through to 2020.

Around 35 stakeholders attended the workshop, representing a variety of sectors, including car club operators, other sectors of the transport industry, local authorities, the Scottish Government, academia, a think tank, social enterprises and consultancies.

This report summarises and draws conclusions from the outputs of the workshop. The findings have also informed the development of two possible future scenarios for the DCCS programme: one based on incremental growth and one on more ambitious growth of car clubs in Scotland.

Readers should note that the views collated and summarised in this document do not necessarily represent the views of all workshop delegates or Carplus.

2 Analysis of Workshop Outputs

During the workshop, delegates were divided into four groups to discuss the following topics:

1. **2020 Vision:** Identify a coherent vision for what the car club network in Scotland will look like in 2020. If possible, this should include quantitative elements (number of members, every urban area over a certain size, etc.).
2. **Development Strategies:** Identify how the car club network in Scotland will be developed to realise the agreed vision for 2020. Ideally, this should identify one or more strategies for achieving the agreed vision and the roles played by key stakeholders, including the DCCS programme, in delivering these strategies.
3. **Funding:** Record views on how additional funding can be attracted into developing car clubs to help realise the agreed vision for 2020. Ideally, responses should take account of the existing development approach – i.e. replacing public sector spend on pool vehicle and grey fleet business travel with car club use.
4. **Role of Ultra-Low Emission Vehicles² (ULEVs):** Identify how we ensure car clubs continue to operate ultra-low emission vehicles including plug-in EVs, hydrogen vehicles, etc. to help realise the agreed vision for 2020. Ideally, responses should take account of the challenges faced by car club operators in making ULEVs available to their members.
5. **Integration with public transport:** Identify views on how integration between car clubs with public transport can be facilitated. This could be as basic as joint marketing; it could include the provision of car club cars at transport interchanges; and it could be as ambitious as through-ticketing allowing fully integrated car club and public transport journeys across Scotland.
6. **Interoperability:** Identify views on how integration between different car clubs and other forms of shared transport can be realised. Ideally, this should consider how operational barriers such as licence checks, revenue-share agreements between operators and ownership of individual members, etc. can be overcome.

This section summarises key responses to these topics generated during the workshop and reflects on how these points could impact on the DCCS programme. It should be noted that – as the topics are interrelated – the responses to each topic sometimes overlap.

2.1 2020 Vision

In broad terms, workshop groups variously indicated they felt the vision for Scotland's car club network should be aspirational, involving intensification, particularly in urban areas, with a focus on generating cost savings for public and private sector organisations and creating greater access to and use of vehicles to help 'normalise' car clubs within the broader mobility offer.

Each group identified a set of key themes they felt are important for a 2020 vision, along with a set of associated targets. These are summarised in Table 1, below.

² In this report, ULEV means vehicles with fully electric powertrains, and cars with tailpipe emissions below 75 g/km of CO₂.

Table 1 - Key Themes

Theme	2020 Targets Identified During Workshop	2015 Benchmark	Business as Usual	Actions Required To Achieve Workshop Targets
Car club locations	<ul style="list-style-type: none"> • Car club operations established in almost all towns with a population of over 20,000 residents. • Car club operations established in 50 locations. • A social enterprise model used for rural areas. 	<ul style="list-style-type: none"> • Car clubs are currently established in 24 locations in Scotland. • There are 29 urban areas with a population over 25,000 (5 with car clubs) and 7 urban areas with a population of 20-25,000 in Scotland (no car clubs yet). Between them, these areas contain approximately half of Scotland's population. • There are car clubs in 4 of Scotland's 7 cities (Aberdeen, Dundee, Edinburgh and Glasgow) and ongoing car club development work in the other 3 (Inverness, Perth and Stirling). • A social enterprise model is already in use in rural areas, although further development appears possible. 	<ul style="list-style-type: none"> • One focus of current work is preparing car club feasibility studies for local authorities. Amongst other things, these typically highlight the benefits of switching grey fleet and / or pool vehicle mileage to car club vehicles. As there are only 32 local authorities, some of which are less likely to accrue significant benefits from the provision of car club services, this approach to car club development is likely to generate diminishing returns. • The average cost of funding the development of urban car clubs is typically significantly higher than for rural schemes. However, they are much more likely to achieve financial sustainability, often in just 1 to 2 years. Achieving financial sustainability is generally much more challenging for rural schemes. • It may be more appropriate to develop peer-to-peer car clubs in rural areas where there is not sufficient population 	<ul style="list-style-type: none"> • Assuming that development of new car clubs begins to grow exponentially (as the sector becomes more established and better known), these targets could be achieved using similar (or slightly higher) levels of support as at present. • Consideration should be given to how private sector organisations can be encouraged to take up car club membership.

Theme	2020 Targets Identified During Workshop	2015 Benchmark	Business as Usual	Actions Required To Achieve Workshop Targets
			<p>density to support traditional car clubs.</p> <ul style="list-style-type: none"> In urban areas, the development of other car club models including one-way in Scotland is also likely to occur by 2020. 	
Car club membership	<ul style="list-style-type: none"> There is potential to grow back-to-base and peer-to-peer car club membership in Scotland to 100,000 by 2020, but integration with other modes should allow even greater growth to 150,000 + members by 2020. Increased membership numbers. 5% of the population (households or driving licences) are members (twice 2015 membership?). Membership to expand at the same rate as the number of car club vehicles. 	<ul style="list-style-type: none"> In September 2015 there were c. 8,500 members in Scotland. This represents c. 0.2% of the population of adults (aged 17+) that had a full driving licence in 2012. In 2012, 68 per cent of adults (aged 17+) had a full driving licence. This represents c. 3.62 million residents. Achieving a car club membership target of 5% of this figure means setting a target of c. 181,000 members. There were an estimated 2,372,780 households in Scotland in 2011³. Assuming one member per household, this means that 0.36% of Scottish households are 	<ul style="list-style-type: none"> On average 78 new car club members join car clubs in Scotland every month. Assuming the same rate of growth over the next 5 years, this would mean c. 13,400 members by 2020. 	<ul style="list-style-type: none"> Trying to reach 100,000+ members by 2020 is extremely ambitious. Achieving between 17,000 - 20,000 members by 2020 is likely to be a challenging but achievable objective, given sufficient investment.

³ <http://www.scotlandscensus.gov.uk/statistical-bulletins>

Theme	2020 Targets Identified During Workshop	2015 Benchmark	Business as Usual	Actions Required To Achieve Workshop Targets
	<ul style="list-style-type: none"> • 100,000 members by 2020. • 20,000 members is achievable. • 12,000 members. 	<p>currently car club members. Achieving 5% of households being members would mean setting a target of c. 120,000 members.</p> <ul style="list-style-type: none"> • In June 2012 there were 41 members per vehicle; now there are 27. This is because several new car clubs have been launched, but it takes a while for membership to grow. 		
Number of car club vehicles	<ul style="list-style-type: none"> • 5,000 vehicles by 2020. • 3,000 cars. 	<ul style="list-style-type: none"> • In October 2015 there were 310 car club vehicles in Scotland, representing c. 27 members per vehicle. 	<ul style="list-style-type: none"> • If membership grows to c. 13,400 (i.e. 'business as usual' growth) and the number of members per vehicle remains the same then the Scottish car club fleet would increase to c. 495 vehicles. 	<ul style="list-style-type: none"> • If membership grows to 17,000 – 20,000 then the car club fleet would increase to c. 630 – 740 vehicles, which appears to be ambitious but achievable. • 5,000 vehicles would require c. 135,000 members to support sustainable operations and 3,000 vehicles would require 81,000 members, neither of which appear to be achievable targets.
Type / environmental performance of car club vehicles	<ul style="list-style-type: none"> • 50% of fleet to be electric vehicles? • Electric vehicles commonplace / 	<ul style="list-style-type: none"> • In October 2015, 23% of Scotland's car club fleet was electric and 96% of cars were EURO 5 or 6 compliant. 	<ul style="list-style-type: none"> • The provision of adequate charging infrastructure and the high initial cost of vehicle purchase are likely to be key barriers to achieving these 	<ul style="list-style-type: none"> • Adequate resourcing of infrastructure and vehicles would be required to achieve these targets.

Theme	2020 Targets Identified During Workshop	2015 Benchmark	Business as Usual	Actions Required To Achieve Workshop Targets
	<p>mainstream.</p> <ul style="list-style-type: none"> All vehicles to be Euro 6 or ULEV. Focus on air quality and carbon emissions. 		<p>targets.</p> <ul style="list-style-type: none"> Most rural car clubs have basic Carplus accreditation, meaning they only need to replace their vehicles every 8 years. Unless funding is provided, by 2020 some rural clubs may still have the same vehicles as today, meaning they will not necessarily be ULEV or Euro 6. Car club operators are reluctant to use EVs because of the risk of the user not charging it ready for the next user. Car clubs require active remote monitoring of battery charge and someone to go and plug it in if necessary. The downtime for charging between bookings means that cars cannot be used as intensively. Use of rapid chargers is impractical, as cars cannot be left plugged in indefinitely, so someone needs to unplug the car after 30 minutes of charging. 	
<p>Distance travelled by car club vehicles</p>	<ul style="list-style-type: none"> 5,000,000 miles by 2020. 	<ul style="list-style-type: none"> Vehicles in Scotland's car club fleet travelled c. 1,541,586 miles during 	<ul style="list-style-type: none"> If 'business as usual' growth in car club membership is achieved and the average miles per vehicle for 2015 is 	<ul style="list-style-type: none"> The mileage target proposed during the workshop represents very ambitious growth of c. 3.3 times the

Theme	2020 Targets Identified During Workshop	2015 Benchmark	Business as Usual	Actions Required To Achieve Workshop Targets
		2014/15.	achieved, then the target would be c. 2,544,000 miles.	2015 figure. <ul style="list-style-type: none"> • If membership grows to between 17,000 – 20,000 and the average mileage per vehicle is similar to 2015 figures then the target would be c. 3,240,000 – 3,800,00 miles. • There is a strong case to be made that it is not appropriate to aim to increase mileage in any mode of transport.

2.2 Development Strategies

Delegates identified a number of key strategies that are likely to underpin successful delivery of the themes they identified as being important to a 2020 vision. The roles played by key stakeholders, including the DCCS programme, in delivering these strategies were also discussed.

A summary of the key points recorded during these discussions can be found below. It is likely that the DCCS programme could play an active role in supporting all these strategies, although in most cases, successful delivery will also be dependent on other stakeholders and actors.

Evidence-Based

A number of comments made by workshop attendees suggest they believe the development of car clubs in Scotland should be informed by a robust evidence base. Given the rapid and ongoing changes in this sector, the car club development action plan should be updated on a regular basis in response to changes in the evidence about how best to support growth in the car club market and support the delivery of policy objectives.

Marketing

Delegate feedback suggested a focus on the following was likely to support achievement of the vision:

- **Market research**, this would include understanding different stages of market development; the demographic change that takes place when people join a car club (particularly in terms of car ownership, culture, life, cost savings on transport). It will also be useful to understand how and where car clubs add value and to identify who needs to be approached to further develop new car clubs.
- **Product and Place**, including a focus on building the success of car clubs in particular locations and with specific demographics, as well as with particular groups- this might be in terms of strengthening and grow existing locations or achieving a more socio-economically diverse membership. Other objectives might include ensuring that almost all public sector organisations are members and providing fully integrated services in partnership with other public transport operators. It was recognised that different car club models may be suited to different places.
- **Promotion**, it was felt that car club operators need to clearly articulate and promote the benefits of car clubs including how it can fit in with people's lifestyle, convenience, etc. This could be done through provision of case studies and providing personal view points. Delegates felt that more cross-promotion with public transport was required and consideration of further links with car sharing and providing incentives for joining up might be required. Car club membership is most likely to increase where members are educated about the cost savings to be made if they become a member and also start to think more actively about the travel options available for each journey.

It was noted that car club services need to be promoted in different ways to different stakeholders. For instance, whilst promotion of the environmental improvements car clubs can

deliver may not necessarily resonate with members of the public, public sector stakeholders are likely to respond positively to support for this important policy objective.

Attendees indicated that, over the next five years, in addition to residential demand, the following markets will probably be important in terms of growing the use of car clubs amongst a wide range of potential users, who could benefit from car clubs:

- Local authorities
- NHS trusts
- Non-departmental public bodies (quangos)
- Major employers (private sector)
- Public transport operators
- New housing developments

Whilst car club operators have a clear role in promoting their services to existing and prospective members, it is likely that the DCCS programme could help to increase the overall impact of marketing activities. This could, for instance, involve carrying out and publishing relevant market research, investigating what kind of car club services are most likely to succeed in different settings, developing and distributing case studies, delivering campaigns to raise awareness about the benefits of car club membership and encouraging individuals and organisations to join a car club.

Infrastructure

Delegates noted the public sector should play an ongoing role in car club development by facilitating improvements to and / or the expansion of related infrastructure, for instance including signed and lined parking bays and charging infrastructure for electric vehicles.

Operational Models

Workshop delegates recognised that a mix of operational models are likely to be important over the next 5 years. It was acknowledged that the 'back-to-base' model is likely to remain the dominant approach, although other models such as 'one-way' and 'free-floating' could play an increasing role in larger urban areas. Community-owned schemes and peer-to-peer car clubs were seen to be more likely to succeed in areas with higher levels of rurality. It was acknowledged that it could be beneficial to support pilot schemes that trial new or under-utilised delivery models in Scotland and to monitor the performance of different models over time.

Integration

Delegates acknowledged that network complexity may increase as different business models blur. However, they noted the important role car clubs can play in supporting 'door-to-door', integrated transport provision, particularly in urban areas. Feedback suggests delegates believe the ongoing development of car clubs in Scotland should include a strong focus on integration

with different modes of transport (including active and other more sustainable forms of travel) and interoperability between car club operators.

For instance, this could involve intensifying support for and provision of car club vehicles at transport hubs (e.g. bus and rail stations), offering consumers the ability to seamlessly book and pay for vehicles from different car club operators and / or offering integrated, multi-modal journey planning, ticketing and payment systems (e.g. via national entitlement cards). A clear link between these strategies and smart and intelligent mobility was identified and the potential link to autonomous vehicles was noted (although this has greater implications beyond the five year strategy period).

In order to progress the integration agenda, a broad range of stakeholders will need to be engaged, potentially including (but not necessarily limited to) Transport Scotland, Scottish Enterprise, local authorities, public transport operators, car club operators, car hire operators, car manufacturers and / or technology developers. Key topics for discussion may include how to resource the development and management of associated technology, pricing and insurances required to deliver integrated services.⁴

Delegates recognised that the DCCS programme could play an active and extremely positive role as an information broker and facilitator of this process.

Leverage Existing Policy

Planning Gain

Workshop attendees noted that planning gain negotiated through Section 75 agreements could be more widely used in Scotland to help secure car club vehicles, parking and / or related vehicle charge points. Planning authorities may benefit from pooling funds derived from planning gain and using them in a small number of strategic car club projects.

However, delegates recognised that progress in this area is constrained because there is not currently any national guidance on the promotion of car clubs through the planning system and there are no national standards for car club infrastructure that can be applied by planning authorities. The inclusion of car clubs into planning agreements relies largely on the guidelines in place at a local level. Further promotion could include the development of case studies or specific reference to the role of car clubs in travel plan guidance.

Air Quality Management

Local authorities across Scotland are required to review and assess the air quality within their geographical areas and to develop and implement strategies to improve air quality. The role car clubs could play in helping local authorities respond to air quality issues was highlighted by delegates. For instance, a car club with ultra-low emission vehicles has the potential to have a positive impact on local air quality and help local authorities to meet EU air quality standards.

⁴ N.B. Carplus is already actively working with a number of key stakeholders to promote integration (including CalMac, ScotRail, etc.).

Over the next five years the DCCS programme could work with one or more local authorities to investigate the impacts car clubs can have in areas designated as having poor air quality. For instance, the recent publication of the *Cleaner Air for Scotland* strategy may generate opportunities for Car Club operators to work with local authorities to improve air quality under schemes that may be taken forward under the National Low Emissions Framework.

Corporate Focus

Delegates acknowledged the ongoing importance of corporate support for car clubs, particularly whilst private membership grows. Public and private sector organisations stand to save money, cut emissions and reduce duty of care risks by supplementing or replacing their pool and / or grey fleets with car club vehicles.

It was suggested that the DCCS Programme should continue to support corporate uptake of car-club services by commissioning feasibility studies and providing support to organisations that operate a grey and / or pool vehicle fleet to ensure the benefits that can be delivered by car clubs are understood and corporate membership of car clubs continues to grow.

Monitoring & Evaluation

Delegate comments indicated they believe there is a clear and ongoing role for the DCCS programme to monitor and evaluate car club development in Scotland (e.g. via the Carplus Annual Survey). Key metrics are likely to include (but may not be limited to) the following:

- Number of members;
- Number of cars;
- Car type (e.g. hybrid; EV);
- Number of light goods vehicles (i.e. vans) in fleet;
- Vehicle usage (hours / miles); and
- Distance travelled;
- Average, maximum and minimum NCAP rating of car club fleet;
- Vehicle emissions of the car club fleet – including average, maximum and minimum CO₂, PM₁₀ and NO_x ratings;
- Average, maximum and minimum Euro rating of car club fleet; and
- Changes in these metrics over time.

2.3 Funding

Attracting more funding into developing car clubs in Scotland should enable more to be achieved at a faster pace. This section summarises key points arising during discussions about how additional funding can be attracted into developing car clubs to help realise the vision outlined for 2020.

Evidence

A good evidence base that quantifies the benefits car clubs can deliver and provides insights into how best to build the car club market will help to make the case for continued and additional funding. Ongoing research is required to secure relevant, reliable and robust evidence, including the development of the Carplus Annual Survey.

Corporate Fleets (Public & Private Sector)

Transferring grey and pool vehicle mileage accrued by public bodies (including local authorities, NHS trusts and other public sector organisations) and private companies to car club vehicles can generate a number of operational benefits, including financial savings, emissions reduction and better management of duty of care risks. When organisations block-book car club vehicles, the income generated can also help to underwrite and accelerate the growth of a car club, thereby enabling members of the public and / or other organisations to access more car club vehicles more quickly, especially during the start-up phase.

Delegates indicated they would like to see the DCCS programme continue to support corporate membership of car clubs by funding feasibility studies and encouraging organisations to transfer grey and / or pool fleet miles to car club vehicles. There was also a suggestion it would be beneficial to ensure car club operators are aware they are permitted and encouraged to bid for the management of public sector fleets⁵.

In-kind Support

Some organisations, and particularly local authorities, have the capacity to offer in-kind support to car clubs. For example, the provision of permitted, lined and signed parking bays at no cost to a car club can contribute towards a positive business case for a start-up car club operation. In-kind support could also take the form of communication and marketing assistance.

Development & Regeneration

Planning gain derived from developer contributions can be used to support the establishment and / or growth of car club operations. Funds can be spent on individual developments or aggregated and used on more strategic car club projects. More generally, the planning process can be used to promote car-free and 'car-lite' development that is supported by car club operations.

Regeneration projects may also offer opportunities to direct funding towards the development of car clubs. This could, for example, involve including car club parking bays in a redesigned streetscape or residential redevelopment.

⁵ e.g. Via local government procurement portal, Scotland Excel or the Crown Commissioning Service.

EU Funding Opportunities

European funding may be available to support car club development, particularly in relation to operations that seek to trial or demonstrate new approaches, promote use of alternatively fuelled vehicles (e.g. using hydrogen fuel cells) or improve vehicle efficiency.

Scottish Funding Opportunities

There are a number of ongoing and potential future funding opportunities in Scotland that could be applied to car club projects. For instance, these include:

- Scottish Stations Fund;
- Scotland's Smart Cities initiative;
- Energy Saving Trust grant funding (e.g. Low Carbon Transport Business Loan);
- The Scottish Government's Smarter Choices, Smarter Places programme;
- Scotland's Business Improvement District programme;
- Air quality funding;
- Congestion charging⁶; and
- Funds generated by Low Emission and / or Clean Air Zones.

UK Funding Opportunities

There are a number of ongoing and potential future funding opportunities in the UK that could be applied to car club projects. For instance, these include:

- The Transport Systems Catapult;
- Innovate UK (formally Technology Strategy Board);
- Green Investment Bank funds; and
- Green infrastructure funding.

Community Funding Opportunities

There is potential for community groups to acquire funding from a range of sources to support car club development. For instance, car club projects could be supported by crowd funding, grants programmes and via community benefits derived from renewable energy projects in rural areas. Funding of this nature supports 'bottom-up' development of car clubs, thereby fostering greater community ownership and (potentially) increased use of car club vehicles.

Partnerships

A range of organisations are likely to have an interest in the success of car clubs and may be willing to contribute resources towards certain elements of car club operations. For instance, energy providers and vehicle manufacturers may well have an interest in increasing the use of

⁶ The Scottish Government has indicated that it does not intend to introduce congestion charging, but local authorities may introduce it to areas in their remit.

electric vehicles in car club fleets. In addition, manufacturers and developers may have an interest in supporting trials involving the use of new vehicle technologies.

There is also potential to apply revenue-sharing models to car club operations. For instance, a partnership agreement could be struck between a car club operator and a local authority, public transport operator or other organisation, that enables resources, risks and rewards to be shared. This could, for example, involve cross-selling services to rail customers.

Workplace Parking Levy

There is currently no legislative basis for a workplace parking levy (WPL) in Scotland. However, if this were to change, a WPL could be used to generate funding that could be directed to car club development work and other transport improvements.

Sponsorship

There may be future opportunities for car club operators to generate revenue by offering on-vehicle sponsorship deals (e.g. similar to London's 'Santander Cycles').

2.4 Low Emission Vehicles

Workshop attendees considered how to ensure car clubs continue to operate ultra-low emission vehicles (ULEVs), including plug-in electric and hydrogen vehicles. This section summarises the key points that were raised in the group discussions.

In line with EU policy, manufacturers of conventionally fuelled vehicles (i.e. petrol or diesel) are constantly innovating and developing vehicle technologies to improve vehicle emissions in line with Euro emission standards. The average age of the Scottish car club fleet is significantly lower than for the overall Scottish vehicle fleet, meaning that car club vehicles generally produce fewer harmful emissions and are safer than the Scottish average.

In the UK, the average distance travelled per hire for car club vehicles is 34.1 miles (2014 figure), which is well within the typical (single charge) range of an electric vehicle. Battery (and other related) technology is improving rapidly, meaning that, in the near future, longer journeys are likely to become achievable on a single charge. Technologies supporting other alternative vehicle fuel types (e.g. hydrogen) are also advancing at a rapid pace, which will help make them an increasingly more attractive and cost-effective option for consumers.

The inclusion of alternatively fuelled vehicles in car club fleets also helps to support the achievement of government policy objectives. In 2013 the car club fleet was 24% diesel and 62% petrol, but in 2014 that had shifted to 10% diesel and 69% petrol, with hybrid and electric vehicles up from 14% to 21%. This demonstrates the key role car clubs can play in putting low and ultra-low emission vehicles on the road and introducing a growing number of consumers to the technology. In policy terms, this is a strong reason to continue providing support to the development of car clubs in Scotland.

Workshop delegates suggested they felt there is an ongoing need to monitor the composition and performance of the Scottish car club fleet and to compare and contrast this with the average vehicle fleet in Scotland. Data collected could also offer insights into how alternatively fuelled vehicles are used, and into consumer attitudes towards these vehicles, as well as the benefits of and barriers to use.

Attendees acknowledged there are commercial disincentives associated with including alternatively fuelled vehicles in car club fleets. For instance, uncertainty about which, if any, vehicle technology (e.g. hydrogen versus electric plug-in) will dominate future markets may make car club operators less willing to invest in alternatively fuelled vehicles. Alongside this, alternatively fuelled vehicles such as electric cars can be more problematic to operate, consumers can find them to be complex at first and the provision of related charging infrastructure is an additional burden (e.g. including capital costs, timescales, locations, etc).

For this reason, there may be a need for policy-makers to encourage operators to continue investing in alternative vehicle technologies. For example, encouragement could take the form of subsidies, grants (e.g. for trialling emergent technologies) or including specific targets for vehicle emissions and / or fleet composition in car club tenders. Another policy lever that could be applied is the use of low emission zones, potentially accompanied by fiscal incentives, to encourage the adoption of low and ultra-low emission vehicles.

The provision and management of charging infrastructure for electric vehicles was also identified as an ongoing challenge for operators of electric vehicles in car club fleets. Typically, charging infrastructure is owned and managed by third parties, meaning that addressing gaps in the network and responding to problems is outwith the control of car club operators.

Workshop attendees indicated there is a clear need to support (i.e. financially) the expansion of the charging network into appropriate locations, monitor its performance, ensure car clubs have fair access to the infrastructure, ensure pricing remains fair, provide clear and accessible information to consumers and aggregate charging services so consumers can access them with a minimum of fuss.

2.5 Integration with Public Transport

Workshop delegates considered how integration between car clubs and public transport can be facilitated. For example, integration could include the co-location of services, as well as joint promotion, journey planning and ticketing / payment. This section provides a summary of key points raised during the discussions on this topic.

Attendees saw a variety of opportunities to co-locate mobility services (e.g. cycle, taxi, hire car, bus and / or rail) in multi-modal transport hubs. The provision of associated infrastructure, facilities and services, such as dedicated cycle links and parking, showers, cycle repair services, cafés and charge points for electric vehicles, were also seen to be important to the success of the concept.

A number of barriers to integration were highlighted by delegates, including the need to offer consumers seamless journey planning, booking and payment systems. In commercial terms,

agreeing and managing revenue splits between service providers is likely to require careful negotiation. The challenges associated with retrofitting shared transport infrastructure into existing locations such as train stations were also identified as a barrier.

National public transport providers may also wish to see greater interoperability between car clubs so that public transport passengers can access vehicles from different clubs whilst only having membership of one club. This would enable passengers with a car club membership to travel by public transport to another location and use their membership to access vehicles provided by a different car club operator.

It was suggested that Carplus can and should play a key role in integrating car clubs with public transport services. This could, for instance, involve facilitating discussion forums between car club and public transport operators, offering information resources (e.g. case studies) or brokering funding to support the development and implementation of integrated service models. Delegates acknowledged that integration between public transport and car club services has the potential to open up new markets for partner organisations, and that this should help to incentivise stakeholders.

Marketing of integrated services is likely to be pivotal to success. For instance, this could involve the use of joint marketing by partners to key market segments, including the promotion of the practical (e.g. seamless integration between modes, cost and time savings) and lifestyle (e.g. car free or 'car-lite' living) benefits the integrated services offer consumers.

2.6 Interoperability

The final topic discussed by workshop delegates involved considering how integration between different car clubs and other forms of shared transport can be realised. Amongst other things, groups considered how operational barriers such as licence checks, revenue-share agreements between operators and ownership of individual members can be overcome.

Delegates noted that there are already examples of good practice, for instance in Switzerland, Montreal and Gothenburg. They also noted that interoperability already happens to some extent in the UK, but that more work is required to improve and expand the offer. It is possible that – over time - consumers will increasingly demand that this happens.

One group suggested the process of improving interoperability would be facilitated by the government providing strong encouragement to operators to engage with the topic, for instance, through including a requirement for interoperability in tender processes and / or the provision of strategic (funding or other) support.

Car club operators and shared transport providers also have the capacity to progress this agenda. This could include the development of commercial agreements that enable things like reciprocal membership, sharing of licence check data, revenue-sharing and seamless insurance cover. It could also involve investment in the development, promotion and implementation of technologies and tools that facilitate a seamless user experience of booking and accessing multiple car club and / or shared transport services.

3 Summary and Interpretation

This section summarises and interprets the outputs from the June workshop (see Section 2). In particular, it presents two draft vision statements, based on incremental and ambitious growth scenarios. Both scenarios are supported by high-level action plans.

3.1 Draft Vision Statements

Vision for Incremental Growth⁷

By 2020:

- Car clubs will be established in an additional 26 new urban and rural locations, including an additional 8 operations in urban settlements with over 25,000 residents and a further 2 new operations in settlements with between 20-25,000 residents.
- Car club membership will have reached around 13,500 and the number of car club vehicles available to members will have grown to c. 500.
- Approximately 35 percent of the car club fleet will be electric vehicles, with all fleet vehicles being either ultra-low emission or Euro 6 standard.

Vision for Ambitious Growth

By 2020:

- Car clubs will be established in 50 new urban and rural locations, including an additional 15 operations in urban settlements with over 25,000 residents and a further 4 new operations in settlements with between 20-25,000 residents.
- Car club membership will have reached around 20,000 and the number of car club vehicles available to members will have grown to c. 700.
- Approximately 50 percent of the car club fleet will be electric vehicles, with all fleet vehicles being either ultra-low emission or Euro 6 standard.

We also anticipate that a wider range of car club models may have been introduced, for example one-way floating or one-way point-to-point in one or more major locations.

3.2 Outline Action Plans

Actions for Incremental Growth

Achieving incremental growth will involve delivering a range of different measures at an intensity similar to the DCCS programme during 2015/16. A range of other measures outwith the DCCS programme will also need to continue to be delivered at a similar intensity.

⁷ In this report it is assumed that the word “incremental” means ‘business as usual’, or continued support at broadly similar levels to past support.

In particular, support for car club development should focus on actions associated with:

- Generating and communicating a relevant evidence base to help ensure car club development is informed and as effective as possible.
- Effective identification of and marketing to target audiences, including members (e.g. current and prospective, private and corporate, urban and rural, etc.), and other stakeholders (e.g. planning authorities, developers, operators, etc.).
- Engaging with and delivering car club feasibility studies including public and private sector organisations to help stimulate increases in corporate membership and generate 'in-kind' and other support.
- Enabling / encouraging car club operators to participate in public sector tenders for fleet and hire vehicles.
- Enabling / encouraging local authorities to replace grey fleet use/pool car use in public sector fleets with car club vehicles.
- Facilitating improvements to / expansion of associated infrastructure (e.g. charging infrastructure, parking bays, etc.).
- Increasing the level of support for car clubs generated via planning gain and associated with regeneration schemes.
- Identifying and helping interested parties secure funding from other sources, such as EU, community and partnership funding.
- Provision of ongoing support for adoption of low emission vehicles, including continued expansion and maintenance of the EV charging network.

Actions for Ambitious Growth

Under an ambitious growth scenario, the high-level actions associated with the incremental growth scenario would also be implemented, but at a significantly higher level of intensity. In addition, funding and policy support for car club development would also focus on actions associated with:

- Trialling different operational models in different operating environments (e.g. policy support to facilitate one-way operations).
- Achieving greater integration between modes) and interoperability between different car club operators.
- Actively examining other ways that car clubs could be used to tackle climate change and air quality issues.

3.3 Next Steps

The results reported herein will be used to inform the development of a new car club development action plan for Scotland and feed in to ongoing government policy and funding processes. Thank you to all of the workshop attendees who took the time to help us develop this report, both on the day and through subsequent comments.