



**Sharing
Cities
Sweden**

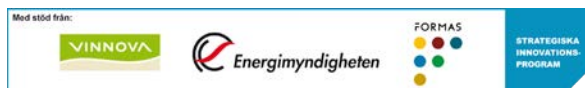
A NATIONAL PROGRAM FOR
THE SHARING ECONOMY IN CITIES

Sharing Business Models

A strategic project by Sharing Cities Sweden on conducting an international investigation of novel business models for the sharing economy in cities

FINAL REPORT 2020

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Sharing Cities Sweden aims to put Sweden on the map as a country that actively and critically works with the sharing economy in cities. It is a national program with a budget of 12 million euro over 4 years. Sharing Cities Sweden is a part of Viable Cities - a strategic innovation program for smart and sustainable cities.

The objectives of the program are to develop world-leading test-beds for the sharing economy in Stockholm, Gothenburg, Malmö and Umeå as well as develop a national node to significantly improve national and international cooperation and promote an exchange of experience on sharing cities.

Sharing Cities Sweden launched strategic projects to investigate the emerging sharing economy in cities in Sweden and support the activities of the test-beds and national node. The strategic projects cover the topics of digital platforms, business models, small towns, behavioural economics, social drivers and future scenarios.

This is a report brief on the key findings of the strategic project by Sharing Cities Sweden on conducting an international investigation of novel business models for the sharing economy in cities.

Report title: Sharing Business Models

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Executive Summary

The Sharing Business Models project investigated the impact of new sharing business models in cities by building on the 'ecologies of business models' framework, which takes inspiration from processes in nature by investigating the competing, symbiotic and co-existing business models, in a city context. The focus of the project was on understanding carsharing, and the broader mobility context and sustainability trends, for the cities of Gothenburg, Malmö, Stockholm and Umeå (Sweden), as well as in Manchester (UK). It investigated the landscape of carsharing, as well as the broader sustainability and mobility trends and the role of local decision-makers.

In the Swedish context, despite a tradition of carsharing through various (cooperative) initiatives, carsharing seems to have limited foothold yet in terms of participants and usage per participant. The carsharing market is still rather niche and complementary to existing (private) car usage in cities, rather than a replacement, as car ownership is still steadily on the rise. This indicates that new sharing business models (or better public transport options) would be desired that more effectively cater for the real needs of citizens and entice them to reduce private car ownership, thus reducing overall environmental impacts.

In the UK context, there has been a recognisable development of carsharing since around 1999, and the establishment of a national coordination body – Carplus – from 2000. How carsharing is organised is subject to a range of experiments in action. There was piecemeal development of car clubs in the UK from the late 1990s – beginning in Edinburgh – until around 2007 that reflected different models. There was more rapid growth from 2007. This is mainly due to growth in London and the political, strategic promotion of carsharing.

During the project, a variety of potential roles for local decision makers in cities became clear. These include:

- 'Governing by provision and authority', where the local government initiates the issue at hand,
- 'Governing by partnership and enabling', where the issue is initiated and run collaboratively between the local government and others, and
- 'Governing through volunteers' (e.g. NGOs or citizens), where the process lies in the hands of other actors than the local government and the role of the local government is mainly to support or facilitate.

While all governing modes have a role and a purpose in the sharing economy, it is still important that cities reflect on the actual implications of their engagements and ask critical questions such as: if carsharing (or other types of sharing) is actively encouraged, does it lead to reduced negative impact on the environment, or does it sustain reliance on cars and increase negative impact? The project illuminated this need to remain critical about the sustainability impacts of new business models and investigate them in their wider context.



Introduction and background

Sharing Business Models is a strategic project by Sharing Cities Sweden on novel business models for the sharing economy in cities. It investigated the impact of new sharing business models in cities by building on a metaphor of ecological dynamics in natural ecosystems – the ‘ecologies of business models’ framework. It did so via an empirical focus on sharing platforms, starting with mobility and carsharing as specific themes.

This strategic project thus provided an empirical testing ground for the ‘ecologies of business models’ framework. It analysed ‘ecologies of business models’ for carsharing business models in Gothenburg, Malmö, Stockholm and Umeå (Sweden), as well as in Manchester (UK).

While business models have been analysed in isolation, this project argued for the need to understand the impact of business models within their wider context, in particular in relation to other business models. This is important because sharing business models make use of existing resources and infrastructures. For example, carsharing might still take up road and parking space. If carsharing (or other types of sharing) is actively encouraged, does it lead to reduced negative impact on the environment, or does it sustain reliance on cars and increase negative impact?

The ‘ecologies of business models’ perspective builds on a metaphor of ecological dynamics in natural ecosystems to investigate how new sharing business models influence existing ones through mechanisms such as competition, symbiosis and mutualism – mechanisms also found in nature (Boons & Bocken, 2018). To test the concept in practice, we investigated how carsharing business models co-evolved in the four Swedish cities.

Approach and outcomes

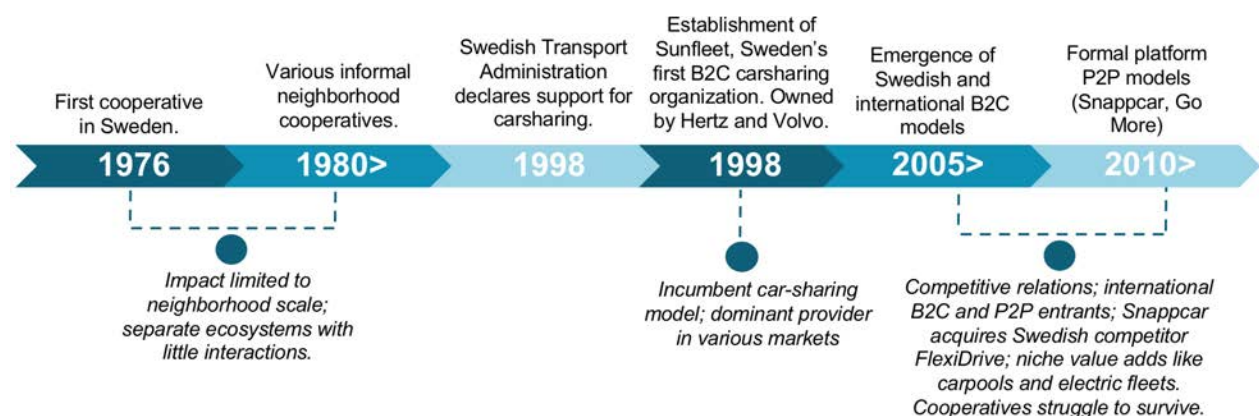
We first analysed carsharing initiatives in in Gothenburg, Malmö, Stockholm and Umeå. In these four Swedish cities, cooperative models, business-to-consumer (B2C) models and peer-to-peer (P2P) models evolved (Table 1 and Figure 1). We also investigated trends in public transport and car ownership in the Swedish context.

Table 1. Typology of carsharing in Sweden (Bocken et al. 2020)

	Cooperative model	Business-to-Consumer (B2C)	Peer-to-Peer (B2C)
Fixed spot	Bilpoolen, Sambil	Sunfleet, MoveAbout	Snappcar, GoMore
Free floating		Aimo	

Carsharing in Sweden began already in the 1970s with non-profit P2P cooperatives, where neighbours would pool together resources to own cars collectively and participate in carsharing. With national government support, carsharing models began to proliferate from the late 1990s onwards. This was supported by the use of technology to facilitate carsharing relationships, as users could easily book cars through apps. Carsharing membership doubled approximately every two years and more competition between carsharing businesses emerged, but legislation at the national level has been slow to accommodate different business models.

Figure 1. How carsharing evolved in the Swedish context (Bocken et al. 2020)



The four Swedish case cities - Stockholm, Gothenburg, Malmö and Umeå - followed a similar pattern with the emergence of cooperative models, followed by an expansion into B2C and P2P models. The P2P models were fairly recent, and cooperative models and B2C models mostly co-existed with little interactions. In terms of fleet size, eventually the car manufacturer owned company Sunfleet became most dominant in the cities. Sunfleet started as a partnership between Volvo and Hertz, whose initial value creation was selling private vehicles (Volvo) and renting vehicles (Hertz). Within



the “ecologies of business models” perspective, it has been suggested that established firms can maintain their positions if they adopt carsharing as part of their operations, because they generally have the resources and infrastructure to pose a threat to competitors. Sunfleet for example, benefitted from early entrance into the carsharing market where it established itself as the leading market force. Today, it is wholly owned by Volvo and is Sweden’s largest privately-owned carsharing organization with almost 50,000 members and locations all over Sweden. Experimentation with other business models occurred, with organizations like MoveAbout providing the most viable competition for B2C and B2B carsharing, but many did not scale up or ceased to exist.

Regarding the impacts on the environment (e.g. congestion, air quality), biking, walking and public transit remain top priorities in the four cities. Perhaps it is not surprising that carsharing does not have a clear strategic role or priority in the cities, given that public transportation and bicycling remain highly viable in Sweden. It is also important to note that different carsharing models have different impacts; P2P uses existing idle vehicles (owned by individuals) while B2C relies on companies procuring new car fleets during any expansion. Yet, despite this, we found that public procurement has been used often to support B2C carsharing.

Overall, carsharing seems to have limited foothold yet in terms of participants and usage per participant. The carsharing market is still rather niche and complementary to existing (private) car usage in cities, rather than a replacement. Car ownership, measured through new car registration is still steadily on the rise in Sweden. This indicates that new sharing business models would be needed (or better public transport options) that would more effectively cater for the real needs of citizens and entice them to reduce private car ownership, thus reducing overall environmental impacts.

In the UK context, similar trends can be identified. Whilst initially carsharing (car clubs) were user-led innovations, there has been a recognisable development of carsharing in the UK since around 1999, and the establishment of a national coordination body – Carplus – from 2000. Different car sharing models have emerged from cooperative sharing to commercialised services. These involve a handful of commercial operators and up to a few dozen other providers at different points in time. How carsharing is organised – the interests involved, the operators, the pick-up, drop-off and charging structure, the types of vehicles, whether they are for-profit or mutual concerns – is subject to a range of experiments in action.

This produces configurations that are fluid and change over time, due to, for example: new operators and mergers between existing operators, shifts to partial or total ultra-low emission fleets, payment methods, internet technology and GPS technology advances. There was piecemeal development of car clubs in the UK from the late 1990s – beginning in Edinburgh – until around 2007 that reflected different models. There was more rapid growth from 2007. This is mainly due to growth in London and the political, strategic promotion of carsharing. There has also been strategic carsharing (car club) network promotion in Scotland. Elsewhere in England and Wales, carsharing growth has remained piecemeal and patchy.



Conclusions and recommendations

During the project, a variety of potential roles for local decision makers in cities became clear. These include:

- 'Governing by provision and authority', where the local government initiates the issue at hand
- 'Governing by partnership and enabling', where the issue is initiated and run collaboratively between the local government and others, and
- 'Governing through volunteers' (e.g. NGOs or citizens), where the process lies in the hands of other actors than the local government and the role of the local government is mainly to support or facilitate

It was found that the four Swedish cities made use of all three governing modes. However, the focus was on 'governing by authority' and 'governing through partnership'. Projects focused on governing through volunteering were typically initiated by the city, but then run formally by an NGO. In the UK 'governing through partnership' was identified as an important mode of governing, where collaborations between the cities and carsharing organisations were developed. While all governing modes may have a role and a purpose in the sharing economy, it is still important that cities reflect on the actual implications of their engagements.

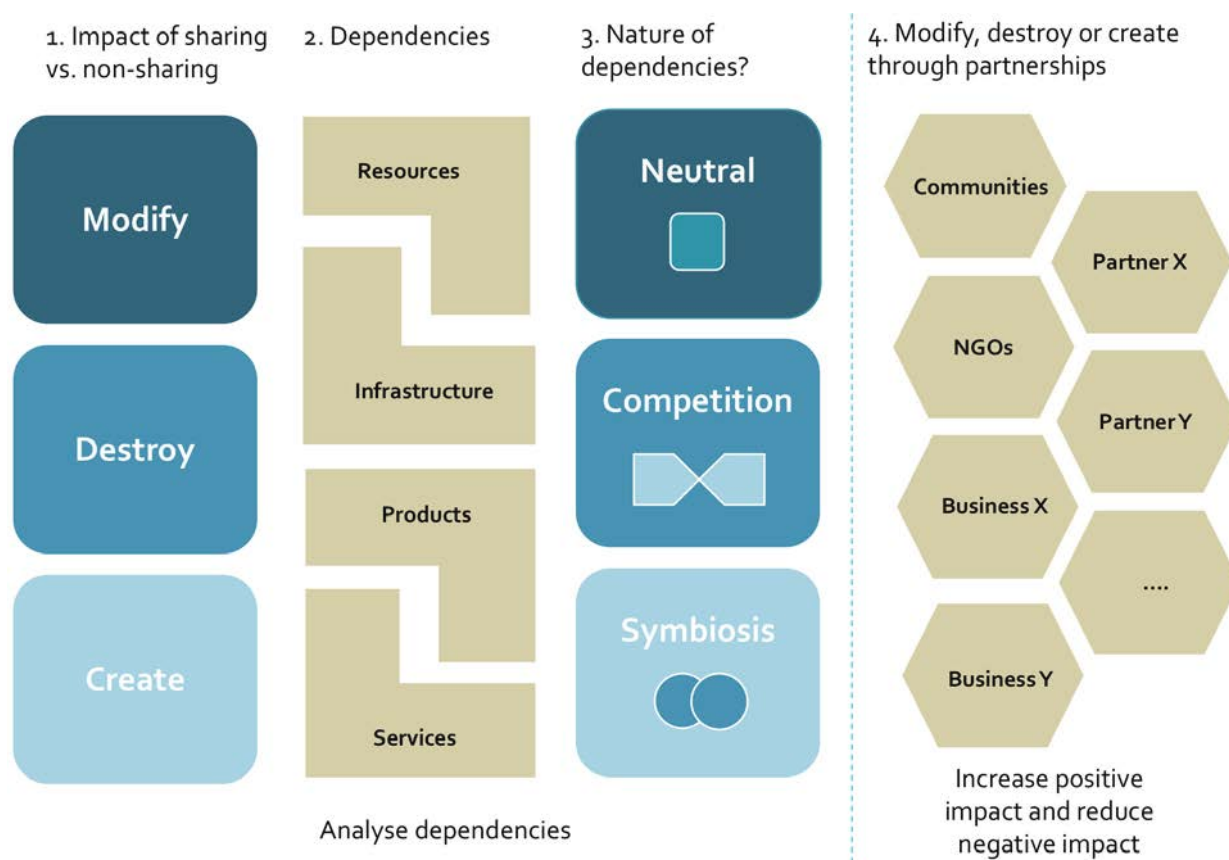


1 Be aware of how new sharing business models relate to others

Consider how 'sharing' is thought to impact on existing, non-sharing activities:

- What are the dependencies on existing city resources, infrastructures, products and services? In the case of carsharing, carparking spots might compete with other valuable public spaces.
- What is the nature of these dependencies (e.g. neutral, symbiotic, competing)? For example, does carsharing compete with public transport and do people then use less of it?
- What can you do to increase positive impact and reduce negative impact? Can you work with others to build services that are beneficial to all or most, rather than some? What do the initiatives mean for patterns of competition and cooperation within the network of business models?

Figure 2. Ecologies of business models visualisation

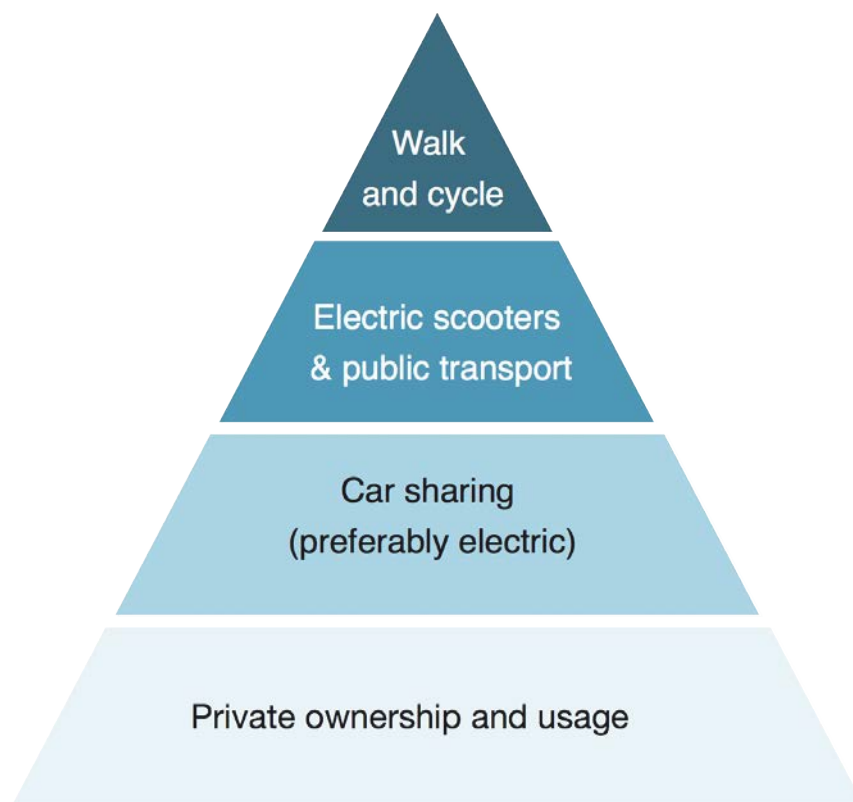


2

Be aware of the mobility hierarchy

When deciding what policies to pursue and initiatives to support, one needs to be aware of the 'mobility hierarchy', presenting which modes of transport are most preferable from an environmental (and health!) perspective. Rather than putting the emphasis on carsharing, it may be a better option to expand walking and cycling areas and infrastructures, which has the potential to lead to environmental as well as individual health benefits.

Figure 3. Mobility hierarchy for sustainability



3 Think about different roles in the sharing economy

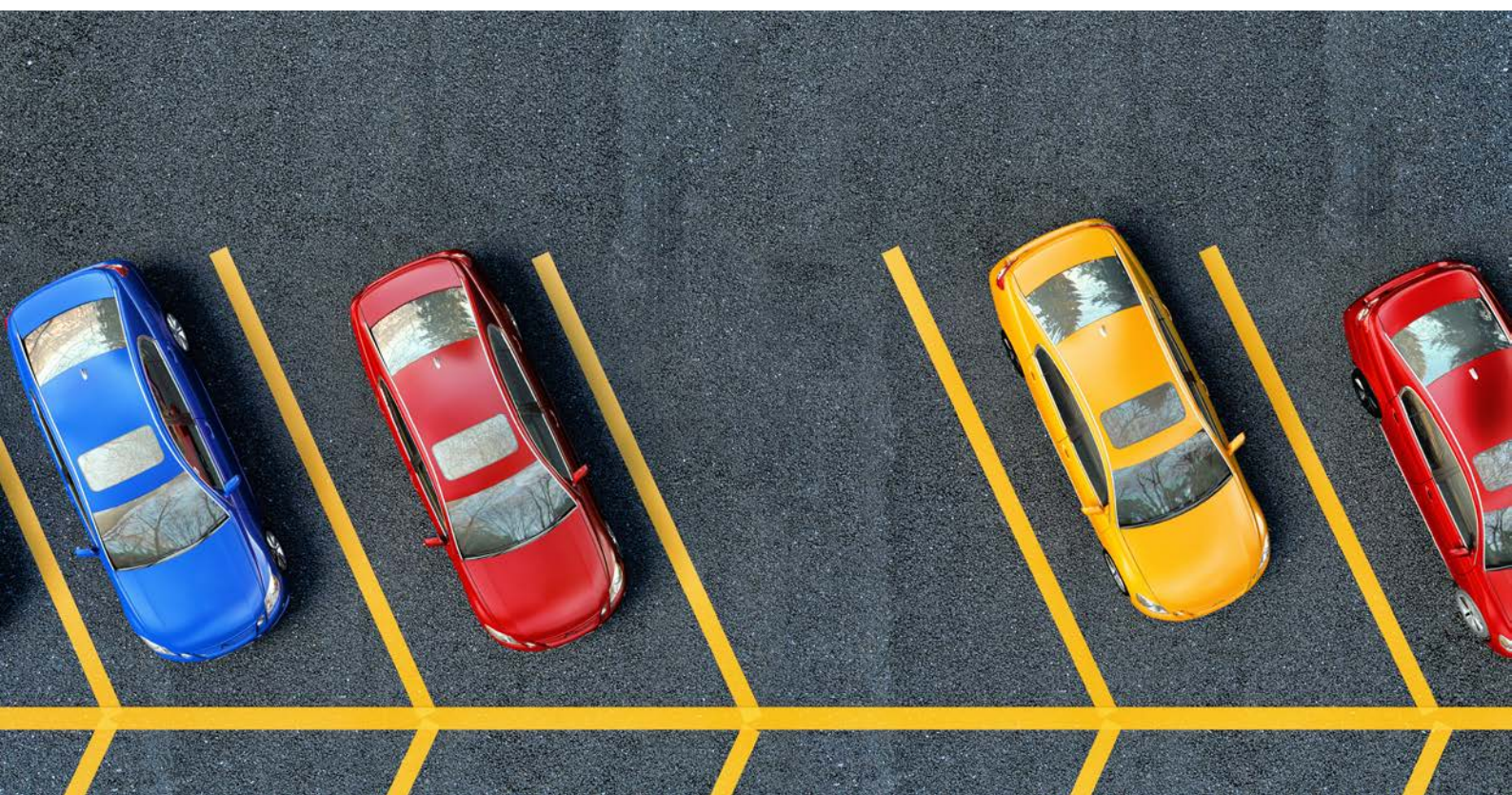
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- 'Governing by provision and authority'
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First, in the transformation towards the sharing economy, a city might need to decide on leading this process, in particular when private companies compete for space and market share. The proliferation of scooter, bike sharing and car sharing schemes within city boundaries shows the need for intervention to solve issues of competition for space.

Second, 'trust' is a critical lever in the sharing economy: Swedish cities as public actors are typically seen as highly trustworthy and have been important partners in many experimental projects, such as in the sharing test beds in the four cities. In the UK context, the local authority in Manchester and the wider metropolitan authority in Greater Manchester have been centrally involved in numerous experimental projects with various public and private sector partners.

Third, while the reason for involvement might not always be clear from the start, it should be noted that local governments might enjoy additional benefits, for instance when 'governing through volunteers'. Vitality is strengthened and as well as the quality of life in the location where the initiatives are implemented.



Want to learn more?

Bocken, N., Jonca, A., Södergren, K., Palm, J. (2020). Emergence of Carsharing Business Models and Sustainability Impacts in Swedish Cities. Sustainability. [Read more.](#)

Palm, J., Södergren, K., & Bocken, N. (2019). The Role of Cities in the Sharing Economy: Exploring Modes of Governance in Urban Sharing Practices. Energies. [Read more.](#)

Boons, F., & Bocken, N. (2018). Towards a sharing economy–Innovating ecologies of business models. Technological Forecasting and Social Change. [Read more.](#)

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