



SuSMo

Sustainable Shared Mobility

Transition guidance tools on Behavioural Change

May 2021



Co-funded by the
European Union



agenzia per l'energia e
lo sviluppo sostenibile



Executive summary

Shared sustainable mobility has the potential to support the decarbonisation of the transport system. As part of the SuSMo project guidance and training materials are developed that will support change agents in making the shift towards shared sustainable mobility. Research identified the following areas for further work:

- Behavioural change
- Private sector engagement
- Policy, regulation and procurement
- Evaluation of the impact

There is a lack of knowledge on the role of behavioural change in the transition towards transport decarbonisation. Regarding both end users as well as stakeholders responsible for the implementation of shared mobility. To better understand how shared mobility schemes can be implemented, a survey was conducted among stakeholders in car sharing systems in Stockholm. Analysis of the collected data concluded that to facilitate behavioural change, there is a need for both a good structure, contracts and clear responsibilities between stakeholders, and for cities to increase their knowledge on effects and benefits of sharing schemes and guidance on how to implement sharing schemes.

Three major recommendations are given to increase the knowledge, and thus facilitate behavioural change, when establishing car-sharing schemes:

- 1. Provide clear incentives to establish car-sharing schemes within existing housing projects and areas**
- 2. Use a structured method for monitoring and evaluation of car-sharing projects**
- 3. Adopt a strategy for shared mobility**

To facilitate behaviour change, it is recommended to:

- Increase knowledge of shared vehicle schemes among stakeholders
- Increase the commitment and conviction of creating good, long-lasting schemes
- Facilitate decisions with clear roles and responsibilities
- Facilitate implementation of shared services with common strategy frameworks
- Share and discuss the success of the shared vehicle service

Introduction

The SuSMo (Sustainable Shared Mobility) Project aims to catalyse systemic change by instigating behaviour change, enabling connections and collaborations, and removing barriers through policy change. SuSMo brings together leading European municipalities with experts in the transport sector to provide decision-makers with tools and knowledge to maximise the benefits and mitigate the negative impacts of shared mobility modes. Funded by EIT Climate KIC, SuSMo was launched in 2019 and has worked with city representatives and private sector shared mobility providers to establish the key needs and priorities for the effective deployment of sustainable shared mobility. Research has identified the following areas for further work:

- Behavioural change
- Private sector engagement
- Policy, regulation and procurement
- Evaluation of the impact

This report describes the results of the investigation on attitudes and behaviour at an institutional and policy level among key stakeholders in the car-sharing sector. Giving recommendations how to facilitate an effective and positive behavioural change.

Theory of Change

In collaboration with the SuSMo team, MOTION (project to develop evaluation methodology at a project level) has identified the transformative outcomes, processes that need to be activated to promote transformational change, with regards to behavioural change, this resulted in figure 1 on the next page.

These transformative outcomes reflect and review the activities, outputs, and inputs of an ongoing project within the context of Theory of Change. To increase the transformative potential and allow for a structural learning, it is necessary to examine and review the underlying convictions, theories and dominant models that apply. Reassessing the criteria against which an innovation is evaluated is an additional challenge towards achieving systemic change.

The application of the proposed transition tool will provide decision makers with a better understanding of how cities can facilitate systemic change to achieve quick and optimal integration of low carbon urban shared mobility into their existing public transport system.

In regard to private sector engagement, the SuSMo project is working with public and private sector representatives to gain an understanding of different use cases helping to align goals and vision; To bring a change of perspective for those within the shared mobility system and help to manage expectations of the public and private sector. Ultimately this will enable the conditions for shared mobility to be well integrated into the transport system and result in decarbonisation.

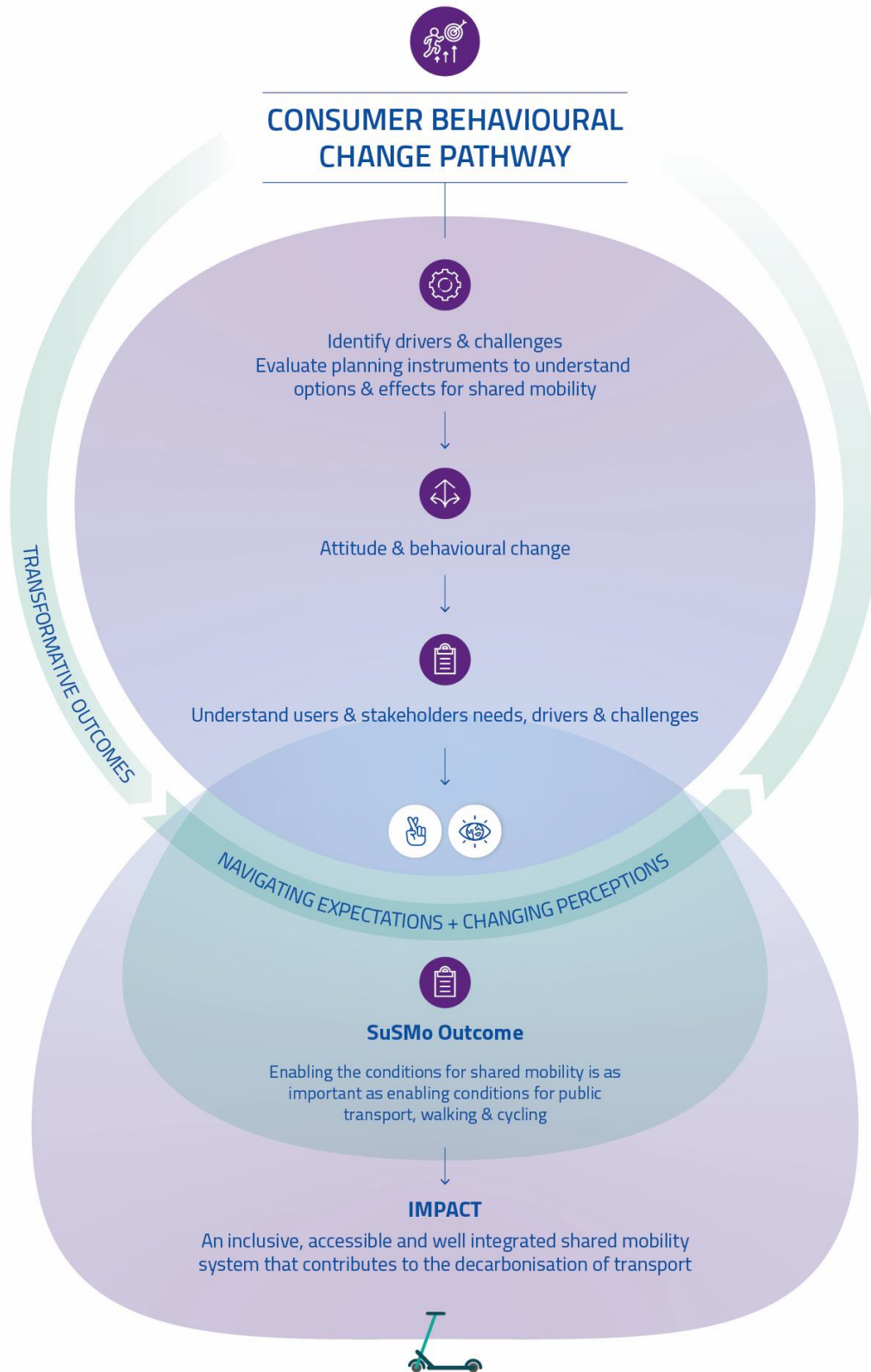


Figure 1: Theory of Change – Behavioural Change

Behaviour change

Methodology

The report is based on existing experiences from car-sharing services in housing areas, and interviews with officials from the City of Stockholm, property owners and car-sharing operators. The interviews have been conducted with the aim to get a deeper understanding on how the car-sharing services work and what challenges that can be found. In a second step, the interviews have been analysed from a behaviour change point of view, to form recommendations to speed up implementation.

Behaviour change framework

Within SuSMo, car-sharing has been treated as a “new mode” in the transport system even though car-sharing schemes have existed for more than 20 years and are widely spread over Europe. The reason for that is that car-sharing has not yet experienced a real breakthrough, the market penetration in Stockholm is as low as 2%.

Keeping that in mind, the theory of diffusion of innovations has been used to describe the dissemination and evolution of car-sharing in the market, together with general behaviour change theory.

The four elements that influence the dissemination of a new idea according to diffusion of innovations:

1. The innovation itself
2. Communication channels
3. Time
4. A social system

The five phases an individual goes through when adopting a new idea or habit according to general behaviour change theory:

1. Knowledge
2. Conviction
3. Decision
4. Implementation
5. Confirmation

The survey carried out in Stockholm shows that the biggest barriers for car-sharing schemes to be successful and evolve on the “diffusion of innovations-ladder”, have been communication, time and the social system. Starting with the social system, it has in many reports been established that the existing society has been built for the privately-owned car. This is obvious when looking at street layout in urban and suburban areas but is also prominent in urban planning and traffic policies and tax regulations which all favour owning a car. The social norm of owning a car has grown strong based on these policies. Regarding time, during the 20 years of existence of car-sharing schemes there have been a few disruptive moments that could have favoured a deeper market penetration, above all the economic crisis in the end of the 00s. This report does not analyse why, but there are hints that now is a good time (climate is higher on the agenda, digitalisation is more mature). It is also clear that the communication around car-sharing can be much improved by all involved stakeholders, especially regarding the division of responsibilities in communications issues.



Learnings & recommendations to speed up transition

A good structure, contracts and responsibilities go hand in hand with increased knowledge of effects, benefits of sharing schemes and guidance on how to implement the schemes. Both aspects are needed to create sustainable car sharing systems (and other shared vehicle systems) that are part of and leading the transition towards a carbon neutral future.

Recommendations on structure and strategy

Based on the study from Stockholm three major recommendations are given to increase the knowledge of establishing car-sharing schemes:

Provide clear incentives to establish car-sharing schemes within existing housing areas. The biggest potential to reach a transition towards lower car ownership is by making it easier for car-sharing, bike-sharing and other shared vehicles operators to establish in existing housing areas. The City administration need to govern and incentivise, but always in cooperation with other relevant stakeholders. Clear driving forces need to be identified in order to create change.

Use a structured method for monitoring and evaluation of car-sharing projects. Without a regular monitoring of the extent of established car-sharing or other vehicle services and how they are used, knowledge will never increase. The City administration should be responsible for developing a clear structure, which also will form the basis of which data the property owners and operators are required to share. With increased knowledge the agreements and requirements will be increasingly better.

Adopt a strategy for shared mobility. It is recommended to, within the sustainable urban mobility plan or similar policy document, include a section of how shared mobility should be dealt with in the city and how shared mobility can help to accelerate the transition towards the climate goals.

Recommendations on attitudes and behaviour

A large part of facilitating change deals with attitudes and behaviour. Both to increase awareness and collaboration between stakeholders and also to reach potential users. Based on the study in Stockholm and earlier experiences, the following recommendations are given on how to change attitudes and behaviour towards a higher use of shared sustainable vehicles.

1. **Increase knowledge** of shared vehicle schemes among involved stakeholders. Increased knowledge and understanding are the first steps to all changes and will open for success in further steps.
 - Property developers and owners need to improve their knowledge of the operation of shared services and of user needs.
 - City officials need a better knowledge on how services work and under what circumstances. Mapping existing schemes and developing a structure for monitoring is a good start.
 - Operators need to share more of their information to partner stakeholders.

2. **Increase commitment and conviction** of creating good, long-lasting schemes.
 - The City administration should in collaborations with operators and developers form frameworks and agreements on how to deal with shared vehicle systems. Frameworks will form the basis for long-term services.
 - Awareness raising among decision makers is needed to underline the importance of shared sustainable mobility and to later on facilitate implementation of shared vehicle schemes.
 - The City administration should establish a framework for monitoring shared services over a larger area. This is important to get an even distribution over an area so the services will be easily accessible for all.
 - A recommendation to the City administration is to form and launch incentives programmes for involved stakeholders as a way to increase commitment.

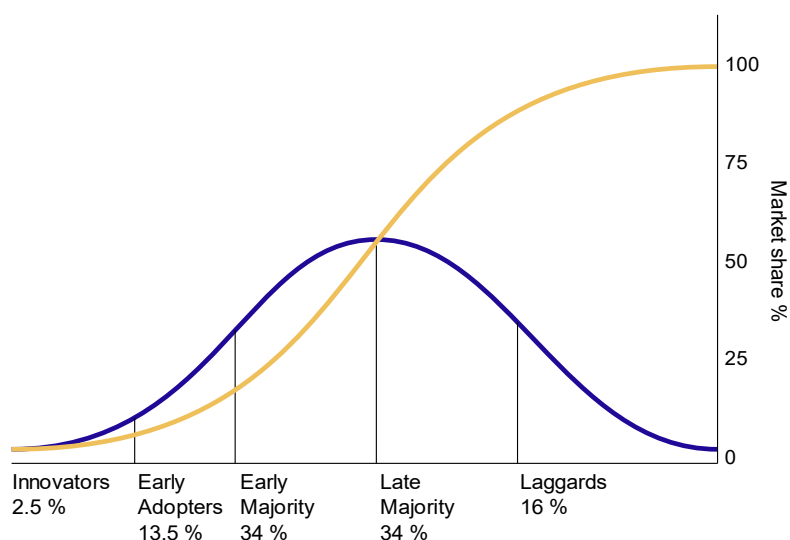


Figure 2: The diffusion of innovations according to Rogers. With successive groups of consumers adopting the new technology (shown in blue), its market share (yellow) will eventually reach the saturation level. The blue curve is broken into sections of adopters. Source of image: Researchgate.

3. Facilitate decisions with clear roles and responsibilities.

- Early in the planning process it is advisable to be clear on roles and responsibilities. A recommendation is that the City administration develops a suggestion on which stakeholder is responsible for what and when. The suggestion should be agreed on for each project or establishment.
- Communication is one particular role to clarify. Property developers, owners and operators need to agree on the best communication strategy with the aim to get as many users as possible.

4. Facilitate implementation of shared services.

- Frameworks, agreements and incentives programmes should all contribute to the implementation of the services – communication strategies, incentives programmes for users.

5. Share and discuss the success of a shared vehicle service.

- Feedback of the success of a scheme is a vital ingredient in maintain a behaviour and a commitment. Regular meetings following up the progress of service should be set up.
- All stakeholders should be invited to regularly discuss and update the existing frameworks, agreements and requirements based on new findings, experiences and knowledge.

A **behaviour change framework for potential users** should be set up with the following elements:

- Awareness raising of the benefits of using shared sustainable mobility.
- Advice and support for on-boarding and how to use a vehicle or digital platform.
- Development of incentives programmes making it attractive to use a shared vehicle.
- Regular feedback on inhabitants use, gains and comparison to their neighbours or other relevant groups.

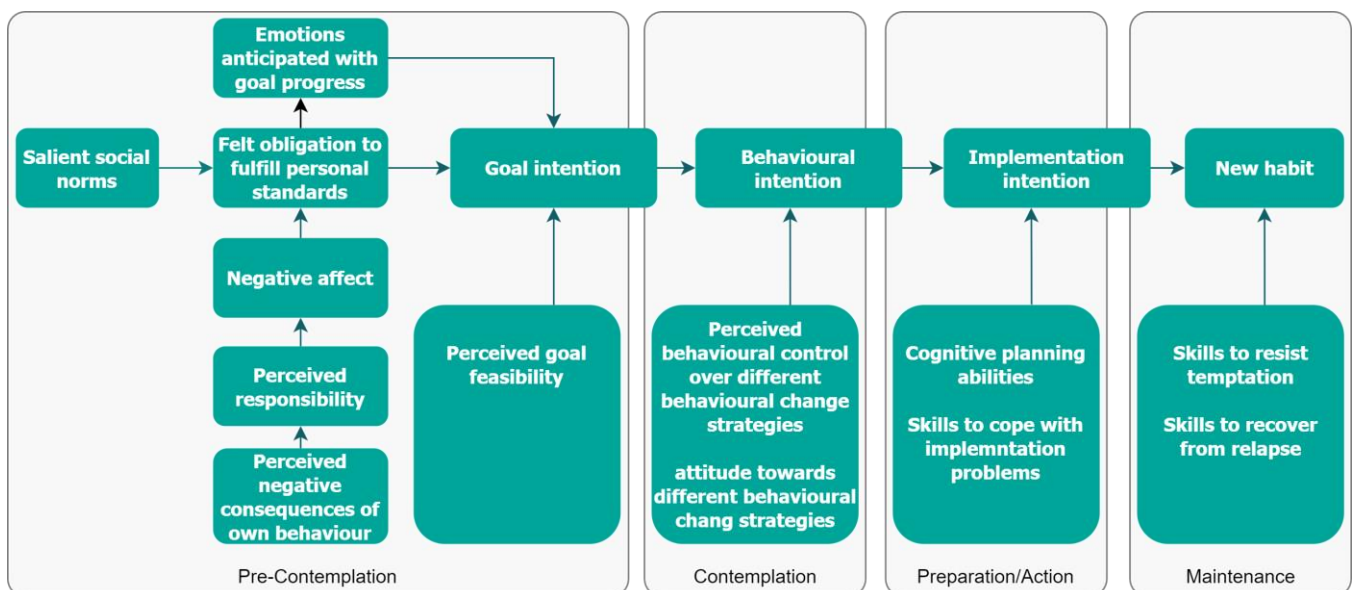


Figure 3: Max Self Regulation Model: applying theory to the design and evaluation of Mobility Management projects (EU MAX 2009, MaxSem).

Successful model for behavioural change

To speed up the implementation and use of shared cars and other types of shared vehicles, there is first of all a need to increase knowledge of among all stakeholders, knowledge about the schemes, operation and about benefits. Secondly the implementation must be facilitated with clear strategic frameworks, agreements and roles covering the planning, operation and evaluation phases, where both public and private stakeholders are involved. Last, long-lasting schemes will increase commitment and methods for sharing and discussing results and data will make the shared vehicles schemes a success.

