STARS

Shared mobility opporTunities And challenges foR European citieS

Research and Innovation action
H2020-MG-2016-2017

Report on Dissemination & Public Communication Activities

Deliverable D7.6

Version n°1

Authors: Mathilde Bazin-Retours (LGI), Marko Horvat (ICLEI), and Esti Sanvicente (LGI).

www.stars-h2020.eu

The STARS project received funding from the Horizon 2020 Programme under the grant agreement n°769513

DISCLAIMER

The content of this deliverable reflects only the author's view. The European Commission and INEA are not responsible for any use that may be made of the information it contains.

Document Information

Grant Agreement	769513
Project Title	Shared mobility opporTunities And challenges foR European citieS
Project Acronym	STARS
Project Start Date	01 October 2017
Related work package	WP 7 – Dissemination, exploitation, stakeholder engagement and awareness raising
Related task(s)	All tasks in WP7
Lead Organisation	LGI
Submission date	08/04/2020
Dissemination Level	Public

History

Date	Submitted by	Reviewed by	Version (Notes)
23/03/2020	Mathilde Bazin-Retours (LGI)	Marco Diana (Polito)	N°1
24/03/2020	Marco Diana (Polito)	Mathilde Bazin-Retours (LGI)	N°2
04/04/2020	Mathilde Bazin-Retours (LGI)	Marco Diana (Polito)	N°3
08/04/2020	Mathilde Bazin-Retours (LGI)	Marco Diana (Polito)	N°4

ABOUT STARS

STARS - Shared mobility opporTunities And challenges foR European citieS – aims to explore the diffusion of car sharing in Europe, its connections with technological and social innovations, as well as its impacts on other transport modes (private car, bike, walk, taxi, public transport…). The new aspect of STARS lies in the studies on the implications and impacts of car sharing, rather than on the implementation of the system itself, as it has been done before.

Led by the Politecnico di Turino, STARS gathers multidisciplinary car sharing experts in the fields of transport engineering, environmental psychology, and industrial economics. For 30 months, they adopt a co-modality approach, considering the real effects of car sharing on other travel modes, the (new) travel demand, and the mobility needs of European citizens.

The final objective of STARS is to measure the benefits related to the diffusion of different car sharing services, in addition to comparing their costs. Moreover, a policy toolkit, including guidelines and recommendations, will be designed to provide European mobility stakeholders and policymakers with a support tool which will help them make the right decisions in developing the best strategies for implementing environment-friendly and cost-effective car sharing services.

More information: www.stars-h2020.eu

Coordinator contact

Marco Diana
Politecnico di Torino
Corso Duca degli Abruzzi, 24
10129 Torino, TO (Italy)
h2020stars@gmail.com

Table of contents

List of figures

SUMMARY

According to the Detailed Communication, Dissemination and Exploitation Plan (D7.1 submitted in January 2018 and updated in August 2018), a set of tools and channels have been developed and a range of actions have been performed all along the STARS project lifetime. All activities and results carried out to promote STARS from M1 to M30 are going to be extensively presented in the following report. In addition, this document provides an update of the STARS exploitation plan based on the STARS results and beyond the project lifetime.

KEY WORDS

STARS, car sharing, European transports, mobility, communication, dissemination, exploitation, followers, views, participants, subscribers.

INTRODUCTION

The main purpose of this report D7.6 is to outline all the communication, dissemination, and exploitation activities that have been carried out in STARS, from 01/10/2017 to 31/03/2020. These activities have been continuously monitored and realigned when needed. In addition, they are based on the overall communication and dissemination strategy of STARS (D7.1). Submitted in January 2018 and updated in August 2018, the deliverable D7.1 includes the main communication objectives of STARS which are to:

- communicate and disseminate the project's activities and objectives, and contribute to the uptake of its results.
- centralise and make available all possible relevant public reports and results of the project.
- inform and educate citizens and policymakers (at local, national and European level) about STARS and the different car sharing services.
- boost engagement of the existing European car sharing community.
- promote and ensure European and international visibility for STARS and its associated activities.
- support the implementation of new car sharing strategies through an 'Innovation Camp', (organised during the last six months of the project), and a policy toolkit specially designed for local, national and European policymakers.

Furthermore, D7.1 lists a series of target groups and key messages that were used to conduct all the STARS communication, dissemination, and exploitation activities. The tools and channels identified in D7.1 were also implemented to reach the communication objectives that were set for the project.

1 Monitoring dissemination & communication activities

Monitoring and measuring the results and impacts of each dissemination & communication activity carried out in STARS was directly linked to each channel and tool used. For instance, Google Analytics was used to understand how many users visit the website, which pages are the most viewed, the geographic location of online visitors… Additionally and to track the dissemination activities, an event calendar was created and shared with all the partners to coordinate their participation in events and conferences: upcoming and attended events, audience profiles, number of participants…

All the results at M30 presented in the table below will be detailed later in this deliverable:

Channel/tool	Monitoring method	KPIs expected	Results at M30
Public events (attended by partners)	Via the event calendar above-mentioned	• Number of events • Number of participants per events	• 39 events • Maxi number of participants per events: 700

			• Mini number of participants per events: 5
Workshops & Innovation Camp	NA	• Number of participants	• Workshop in Umea: 15 participants • Workshop in Bremen: 100 participants • Innovation Camp: 92 participants
Scientific publications	NA	• Number of papers published	• 5 papers published • 3 papers under review
Webinars	NA	• Number of participants • Number of shares on social media • Number of likes on social media	• N°1: 22 participants • N°2: 20 participants
EU channels	NA	Number of mentions	2 mentions
Public website	Google Analytics via monthly data collection	• Number of page views by the end of the project • Top page views • Number of users • Average time per session • Top user countries	• 46 499-page views • 20 231 users • Top page views: home, news: car sharing business models in Europe, about • Top user countries: Germany, USA, France
Twitter	Monthly data collection via Twitter itself	• Number of followers • Number of tweets • Best impressions per tweet	• 547 followers • 1 625 tweets published • Best impressions per tweet: 388k
LinkedIn	Monthly data collection via LinkedIn itself	• Number of followers • Number of posts	• 69 followers
Project video	Via Vimeo, the platform which hosts the video	Number of views by the end of the project	303 views

Newsletters	SendinBlue reports for each newsletter distributed	Number of subscribers by the end of the project	63 subscribers
Media & newsletters mentions		Number of mentions in the media	7 mentions in a media and/or newsletter
Policy brief	NA	Number of views/downloads Number of copies distributed	• Around 300 copies distributed • 201 views on the STARS website
Policy toolkit	NA	Number of views/downloads Number of copies distributed	Just submitted
Factsheets	NA	Number of views/downloads Number of copies distributed	Factsheet 1: 64 views Factsheet 2: just submitted Factsheet 3: just submitted
Press releases	NA	Number of views/downloads	• PR1: 58 views • PR2: 15 views

2 Dissemination strategy: results & outcomes

2.1 Events & conferences

2.1.1 Attended by partners

Presenting the project's results at events or booking a stand to disseminate the knowledge acquired was a key action in STARS to maximise its impact. Brokerage meetings in the transport, shared mobility and car sharing sectors were some of the types of events that partners attended.

An event calendar was created and shared with all the partners to coordinate their participation in events and conferences. It includes specific sections to track their characteristics: type of event, audience profiles and the number of participants.

Since the beginning of the project, the STARS partners **attended 39 specific events, conferences and/or workshops in 12 countries in Europe** (Austria, Belgium, Cyprus, France, Germany, Iceland, Italy, Latvia, Netherlands, Sweden and UK) and around the world (Brazil and USA), giving oral presentations, presenting posters, being invited to talks, and/or distributing STARS promotional materials.

External events	Location & dates	Activity	Number of participants
Shared mobility rocks!	Aalst (Belgium) – 21/03/2018	Conferences	175
Workshop on legal regulations for car sharing stations in public street space	Bremen (Germany) – 24/01/2019	Workshop	33
5th SUMP conference	Nicosia (Cyprus) - 14-15/05/2018	Conferences + STARS workshop & stand	420
International Sustainable Transitions Conference	Manchester (UK) - 11-14/06/2018	Conferences	260
Press conference on results of car sharing survey	Bremen (Germany) – 05/07/2018	Press conference	300k readers
Politecnico di Torino & Universidade de Sao Paulo (USP) exchange as a part of the International Urban Cooperation (IUC) program	Sao Paulo (Brazil) – 28/02/2018	Conference	25
Politecnico di Torino and Escola de Engenharia Mauà exchange as a part of the International Urban Cooperation (IUC) program	Turin (Italy) - 15/05/2018	Conference	17
Sustainability weeks	Turin (Italy) - 6/7/2018	Workshop	40
RENN conference on sustainable neighbourhoods	Hanover (Germany) – 09/06/2018	Conference	105
Presentation and discussion on the STARS results with Federal Ministry for the Environment, Nature Conservation and Nuclear Savety (BMUB)	Berlin (Germany) - 18/09/2018	Other	5
CIVITAS Forum 2018	Umea (Sweden) - 19-21/09/2018	Conferences + STARS workshop and stand	20 (workshop attendees)

Presentation and discussion on STARS results with city authority Frankfurt am Main (Referat Mobilitäts- und Verkehrsplanung)	Frankfurt am Main (Germany) - 27/09/2018	Workshop	10
MAMBA Seminar	Riga (Latvia) - 27/09/2018	Workshop	60
Berlin IFA SHIFT event	Berlin (Germany) – 03-05/09/2018	Conference	200
Information on STARS results for German car sharing operators	Frankfurt am Main (Germany) -24/10/2018	Workshop	20
CSA carsharing conference 2018	Paris (France) 16-17/10/2018	Conference	150
Polis Conference	Manchester (UK) 22-23/11/2018	Conference	15
Seminar 'Mobility as a Service: come cambia la mobilità?'	Turin (Italy) - 30/11/2018	Workshop	46
Wocomoco 2018	Rotterdam (Netherlands) - 06/11/2018	Conference	27
Expert workshop on measuring the impact of car sharing on mobility behaviour	Berlin (Germany) - 13/11/2018	Workshop	12
National conference in transport research	Gothenburg (Sweden) - 15-16/10/2018	Conference	50
Annual meeting of Environmental psychology area group	Gothenburg (Sweden) 08-09/11/2018	Conference	35
Autonomy & the Urban Mobility Summit	Paris (France) 18-20/10/2018	Conferences	100
Shared Mobility Summit	Chicago (USA) 05-07/03/2019	Conferences	around 700
ACI EUROPE Airport Commercial & Retail Conference & Exhibition 2019	Reykjavik (Iceland) 18-20/03/2019	Conferences	unknown
City2Share workshop on Carsharing	Munich (Germany) 19/10/2018	Workshop	25

Workshop: Il Car Sharing a Milano, quale evoluzione?	Milan (Italy) -09/04/2019	Workshop	110
European SUMP conference	Groningen (the Netherlands) 17-18/06/2019	Conference	460
CIVITAS Forum 2019	Graz (Austria) 02-04/10/2019	Conference	170
Presentazione 3° Rapporto Nazionale sulla Sharing Mobility	Rome (Italy) 27/06/2019	Conference	325
CeCar 4th Annual Conference	Gothenburg (Sweden) 13-14/06/2019	Conference	unknown
Swedish Transportation Research Centre Conference 2019	Linköping (Sweden) 22-23/10/2019	Conference	unknown
International Conference in Environmental Psychology	Plymouth (UK) 04-06/09/2019	Conference	unknown
Transportation in the age of digitalisation	Gothenburg (Sweden) 26/09/2019	Conference	unknown
Autonomy & the Urban Mobility Summit	Paris (France) 16-18/10/2019	Conferences	510
Festival della Tecnologia	Turin (Italy) 08-10/11/2019	Exhibition	65
Hypermotion	Frankfurt (Germany) 26-28/11/2019	Conference	280
Polis Conference	Brussels (Belgium) 27-28/11/2019	Conference	65
Results from road transport research in H2020 projects	Brussels (Belgium) 04-05/12/2019	Conference	110

2.1.2 STARS events

Two European-wide dissemination workshops were organised to share the results of the project with determined relevant stakeholders:

- ★ STARS mid-term workshop at month 12 in Umea (Sweden)
- ★ STARS final workshop at month 29 in Bremen (Germany)

Workshop during the CIVITAS Forum:

Gathering 15 participants, **the STARS mid-term workshop** was organised by ICLEI as part of the CIVITAS Forum in Umea (Sweden), on the 20th of September 2018 (Day 2). The objectives, the venue and context details, the profiles of the participants, the presentation of the staff organisation and

facilitators, and the results of the workshop were presented in the **Deliverable 7.3 – Proceedings of stakeholder workshop n°1** (submitted in October 2018).

This joint workshop was organised in collaboration with the MoTiV project, a STARS sister project. ICLEI established the agenda, managed the registration process, and organised the project promotional stand. On the other hand, LGI communicated and promoted the STARS mid-term workshop on the project's website and social media accounts through content and visuals. Indeed, the STARS mid-term workshop was announced on the STARS website in a "news" post which received **52 views** since its release, on 30rd of August 2018: http://stars-h2020.eu/2018/08/30/starsmotivworkshop/

STARS final event in Bremen:

The STARS final event in Bremen was organised as a two-day event. Day 1 was an international event and gathered **more than 100 participants.** Among the participants, three of the most active Uptake cities joined (Budapest, Varna and Sofia). This first day event was facilitated by international speakers and car sharing experts from across the world:

- Lewis Chen from Singapore
- Luisiana Paganelli Silva from Australia
- Adam Cohen from the USA
- Arndt Batzner from Switzerland

ICLEI and the City of Bremen organised a workshop in order to "test" the mobility practitioners' toolbox and its applications in the SUMP cycle, and gather final remarks on possible improvement. More than 40 participants joined the workshop and took part in the car sharing quiz (organised by ICLEI). Questions had been taken from the STARS project and the format chosen to be more engaging. Thus, participants remained in alert on information presented during the day, which provided a competitive character between each group and allow to share and disseminate the main results of the project in a "gamified" way.

Day 2 dealt with the integration of car sharing into housing developments by establishing low-cost housing in interaction with mobility services, ensuring the sustainability of housing projects and achieving new environmental qualities. The following presentations about successful projects from Germany and Belgium were given:

- Jan Lange, Verkehrclub Germany "housing guides mobility"
- Markus Lange-Stuntebeck, StattAuto Munich
- Hans-Georg Kleinmann, neighbourhood association „Nachbarn 60" Cologne
- Minze Walvius, Advier (Delft)
- Jörn Ehmke, Housing company GEWOBA, Bremen

LGI supported the City of Bremen in the promotion and communication of the STARS final event organised in February 2020 with announcements on the project website and social media accounts.

- News post 1: http://stars-h2020.eu/2020/01/08/come-to-bremen/: **186 views**
- News post 2: http://stars-h2020.eu/2020/02/19/final-event-in-bremen/: **232 views**

Car sharing Innovation Camp

The Car Sharing Campout was held in Paris from 14-15 October 2019. LGI designed a dedicated website to promote this event: www.carsharingcampout.com, including a logo, registration form, speakers' profiles, agenda, etc… A total of **92 participants** registered for this 2-day event. During the Campout, LGI was in charge of live tweeting (messages, pictures and/or videos). A Twitter wall was projected on the main screen. It included the latest tweets published from the STARS Twitter account, the retweets from other users and the tweets mentioning the Campout and/or the STARS project. Pictures and presentations of the Campout were available on the STARS website in the ensuing days. Outcomes and results of the Campout are detailed in the deliverable D7.7 – Report on outcomes of the Innovation Camp (submitted in March 2020).

- News post 1: http://stars-h2020.eu/2019/07/09/join-us-at-the-car-sharing-campout/: **31 views**
- News post 2: http://stars-h2020.eu/2019/10/18/pictures_campout/: **101 views**
- News post 3: http://stars-h2020.eu/2019/10/22/http-stars-h2020-eu-2019-10-22-first-edition-of-the-car-sharing-campout-in-paris/: **142 views**
- Events post: http://stars-h2020.eu/event/car-sharing-campout/: **188 views**

2.2 Scientific publications

A number of scientific publications were prepared with the lead of the academic partners of the consortium. They were either published in top scholarly journals in the transportation research field or presented in some of the conferences that are mentioned in the STARS conference monitoring plan.

Title	Date of publication	Author(s)	Journal/Magazine
Entlastungswirkungen von Carsharing-Varianten - Vergleichende Befragung von Kunden unterschiedlicher Carsharing-Angebote	01/11/2018	Willi Loose & Gunnar Nehrke	Internationales Verkehrswesen:
A multimodal perspective in the study of car sharing switching intentions	29/12/2019	Riccardo Ceccato, & Marco Diana	Transportation Letters
More friends than foes? The impact of automobility-as-a-service on the incumbent automotive industry	02/03/2020	Peter Wells; Xiaobei Wang; Liqiao Wang; Haokun Liu; & Renato Orsato	Technological Forecasting and Social Change, Vol. 154
Mobility styles and car sharing use in Europe: attitudes, behaviours, motives and sustainability	02/03/2020	Cecilia J. Bergstad, Andrea Chicco, Marco Diana & Erika M. Silva Ramos	European Transport Research Review

Car sharing perspectives in a business as usual scenario: Findings from the STARS project	April 2020	Andrea Chicco, Marco Diana, Jeffrey Matthijs & Johannes Rodenbach	TRA - Transport Research Arena
Boundary spanning in business model innovation and socio-technical systems: an exploration	Under review	Peter Wells & Liqiao Wang	Journal of Business Models
Car sharing and the rising automobility service ecosystem: insights from service-dominant logic	Under review	Hoakun Liu & Peter Wells	Transportation Research Part D: Transport and Environment
Evaluating car sharing switching rates from traditional transport means through logit models and random forest classifiers	Under review	Riccardo Ceccato, Andrea Chicco & Marco Diana.	Transportation Planning and Technology

STARS followed the open access policy of Horizon 2020 by providing online access to scientific information that is free of charge to the end-user and that is reusable. STARS scientific information referred to peer-reviewed scientific research articles (published in scholarly journals), articles, conference papers and research data.

Once finalised, the above articles will therefore be normally open access both at the publisher website under either the gold or green open access scheme and on the STARS webpage on the CORDIS website. In all cases, it will also be available as final draft post-refereeing in the institutional repositories of the academic partners POLITO and CU.

2.3 Datasets

STARS is fully complying and committed to **the Open Research Data Pilot.** Thus, and following the provisions of the Data Management Plan (D1.1.), it already published the three datasets coming from experimental activities that have been performed during the project lifetime. These will be accessible to the public through the Zenodo platform after an embargo period, during which additional scientific papers will be finalised.

Dataset title	Author(s)	Zenodo access
Shared mobility opporTunities And challenges foR European citieS (STARS) - Work Package 2 - Tasks 2.1 - 2.3	Johannes Rodenbach, Jeffrey Matthijs, Andrea Chicco, Marco Diana & Gunnar Nehrke	http://dx.doi.org/10.5281/zenodo.3596637

Shared mobility opporTunities And challenges foR European citieS (STARS) - Work Package 4	Érika Martins Silva Ramos, Cecilia Jakobsson Bergstad, Andrea Chicco, Merritt Polk, Gunnar Nehrke, Johannes Rodenbach, Jeffrey Matthijs & Marco Diana	https://zenodo.org/record/3661118
Shared mobility opporTunities And challenges foR European citieS (STARS) - Work Package 5, Task 5.1	Chicco Andrea, Diana Marco, Nehrke Gunnar, Ziesak Michael, Rodenbach Johannes & Matthijs Jeffrey	https://zenodo.org/record/3731284

2.4 Webinars

During the STARS project, two webinars were organised mostly to involve the STARS Uptake cities, but also to present the project and its result to the general public. The webinar methods, questions and results are described more thoroughly in deliverable D5.1 – Mobility scenarios of car sharing: gap analysis and impacts in the cities of tomorrow, and annex 2 of the same deliverable.

Webinars were also recorded and made available on the CIVITAS Learning Centre and STARS website:

- Webinar n°1
- Webinar n°2

Webinar n°1:

The first webinar, titled "Car sharing outlook in the EU", was attended by **22 participants**, out of which five Uptake cities: Budapest (Hungary), Cluj-Napoca (Romania), Oradea (Romania), Sofia (Bulgaria) and Warsaw (Poland). During the webinar, Uptake cities had a designated slot to give a short presentation about their cities' mobility outlook and their expertise on car sharing.

Webinar n°2:

The second webinar, titled "Bringing car sharing into the European cities" was attended by **20 participants,** out of which the five Uptake cities. Similar to the first webinar, the Uptake cities had been given a dedicated timeslot for their introduction and reflection on urban mobility situation in their city, with a special focus on car sharing in case it operates there.

2.5 European dissemination channels

Providing information and news on European-funded programmes and projects, the CORDIS portal was used to publish one "news" post and one "events" post:

- News post: https://cordis.europa.eu/news/rcn/129588/en (30/08/2018)
- Event post: https://cordis.europa.eu/event/id/147299-join-us-at-the-car-sharing-campout (12/07/2019)

3 Communication strategy: results & outcomes

According to the overall communication and dissemination strategy of STARS outlined in D7.1, a set of activities and actions was implemented to maximise the impact of the project and boost awareness on the results and milestones reached during the 30 months of the project.

3.1 Public project website

Built and maintained by LGI, the public STARS website was officially launched in December 2017: **www.stars-h2020.eu**

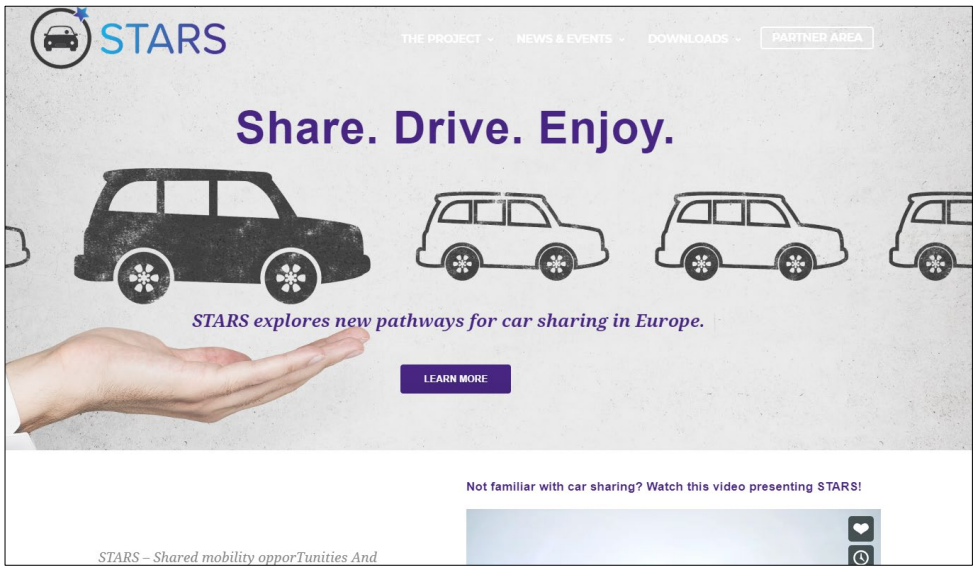

Figure 1: STARS website

It was regularly updated and promoted, and played a key role in the project as the main information point and delivery channel for results and progress achieved. It relayed the key messages to the target audiences, informed on events, publications or activities of interest for the STARS community, and fostered participation among the consortium members. The website was also the central tool for dissemination: any stakeholder could access information and knowledge or contact relevant partners.

To make available useful and relevant information for online visitors, it was decided that the website should address the needs and questions that would most likely interest external stakeholders, or online visitors, such as:

- what the project is about
- what the project is delivering, and why
- who the project's partners are
- what the latest news and events of the project are
- where to find more information on the topic or related topics

Three main sections were used to communicate and disseminate information:

- **Newsroom:** relevant activities, milestones and results of the project
- **Events calendar**: list of past and upcoming events, organised within the framework of STARS, or by other organisers relating to the project
- **Downloads:** public deliverables/reports, the final policy toolkit, the bi-annual electronic newsletters, and all the communication and promotional materials (press releases, flyers, posters, photos, and videos) produced during the project

	Number of users	Number of sessions	Number of page views
Year 1	3 742	5 121	9 780
Year 2	3 680	5 002	9 141
Year 3	12 809	16 371	27 578
Total	**20 231**	**26 494**	**46 499**

3.2 Twitter

Figure 2: STARS Twitter account

A STARS Twitter account was created: **@StarsH2020**

Twitter was used as one of the main channels to build the project's community online, and disseminate the project results. The two main objectives set for Twitter were to:

- maintain closer relationships and engage with the target audiences, as well as disseminate knowledge on the diffusion and effects of existing car sharing services in Europe.
- bring the research carried out in STARS closer to the general public and policymakers (at local, national and European level), and inform them on potential environmental and cost-effectiveness implementation of car sharing services in European cities.

Twitter served as a channel for the mass distribution of news published on the website, advertised events attended by STARS partners, and promoted the engaging content generated by the project. The partners involved in the communication activities closely monitored related content generated by other social media accounts, shared it and helped disseminate it.

Year 1	Year 2	Year 3 (M29-M30)
• total: 291 followers • total: 404 tweets published • best impressions per tweet: 3 891	• total: 441 followers • total: 330 tweets published • best impressions per tweet: 388k	• total: 547 followers • total: 1 625 tweets published • best impressions per tweet: 1 197
Growth		
+150 followers from Y1 to Y2 +106 followers from Y2 to Y3		

3.3 LinkedIn

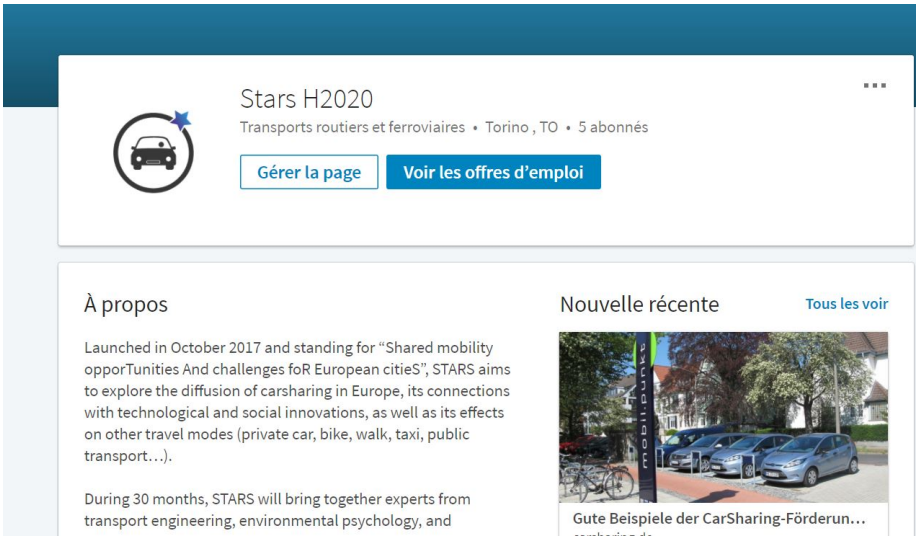

Figure 3: STARS LinkedIn account

A STARS LinkedIn page was created: **www.linkedin.com/company/stars-h2020**

LinkedIn also served as a channel for the mass distribution of news published on the website, advertised events attended by STARS partners, and promoted the engaging content generated by the project. The partners involved in the communication activities closely monitored related content generated by other social media accounts, shared it and helped disseminate it.

Year 1	Year 2	Year 3 (M29-M30)
• Total: 31 followers • Top likes per post: 19 • Top shares per post: 16	• Total: 62 followers • Top likes per post: 50 • Top shares per post: 11	• Total: 69 followers • Top likes per post: 5 • Top shares per post: 3

• Top impressions per post: 581	• Top impressions per post: 102	• Top impressions per post: 118
Growth		
+31 followers from Y1 to Y2 +7 followers from Y2 to Y3		

3.4 Project video

A short video presenting STARS and its key objectives was produced and is available on the project's website ("homepage" and "promotional materials" section). It was displayed at different events and conferences, among others, during the CIVITAS Forum 2018. The STARS video has been viewed **303 times.**

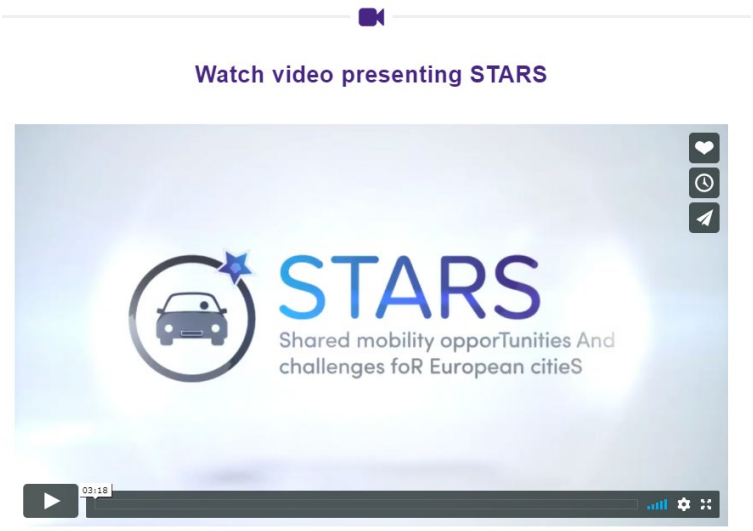

Figure 4: STARS video

3.5 Electronic newsletters

Four bi-annual newsletters were distributed electronically to inform the STARS community on the latest achievements of the project, outputs and relevant events, conferences or workshops. At month 30, the distribution list comprises **63 subscribers:**

- ★ **Newsletter n°1** released on 4 May 2018 to the STARS community at large: 67 unique opens **(open rate: 39,1%)** and 24 clicks.
- ★ **Newsletter n°2** released on 27 September 2018 to the STARS community at large: 23 unique opens **(open rate: 53,49%)** and 8 clicks.
- ★ **Newsletter n°3** released on 5 March 2019 to the STARS community at large: 28 unique opens **(open rate: 54,90%)** and 7 clicks.
- ★ **Newsletter n°4** released on 2 December 2019 to the STARS community at large: 33 unique opens **(open rate: 55,93%)** and 13 clicks.

The STARS bi-annual newsletters can be viewed online at the following link:

http://stars-h2020.eu/newsletters/

Figure 5: The STARS four newsletters

3.6 Press releases

One press release was distributed and shared on the STARS website and social media accounts to announce and promote the STARS Car Sharing Innovation Camp (cf. D7.7):

- Car Sharing Innovation Camp Jump-Start City Programmes (17/07/2019): **58 views**

More recently, a press release was published and shared on the STARS website and social media accounts to announce the end of the project and highlight the key results and outcomes of STARS:

- STARS end with key solutions to strengthen car sharing benefits in Europe (26/03/2020): **15 views**

3.7 Media mentions

The STARS project was mentioned at 7 times:

- Informed Cities newsletter released in February 2019
- Informed Cities newsletter released in October 2019
- TRIMIS newsletter released in November 2019
- Bremen local newspaper Weser Kurier. released on 14/02/2020 (in German)
- Canal Energia released on 14/02/2020 (in Italian)
- Corriere del web released on 14/02/2020 (in Italian)
- Recover Web released on 14/02/2020 (in Italian)

3.8 Corporate materials

Based on the project's visual identity designed in the first months of the STARS project by LGI (logo, templates for partners presentations and deliverables), printed materials were produced and distributed at different events and conferences. All are available on the STARS website at the following link: http://stars-h2020.eu/promotional-materials/

3.8.1 STARS flyer

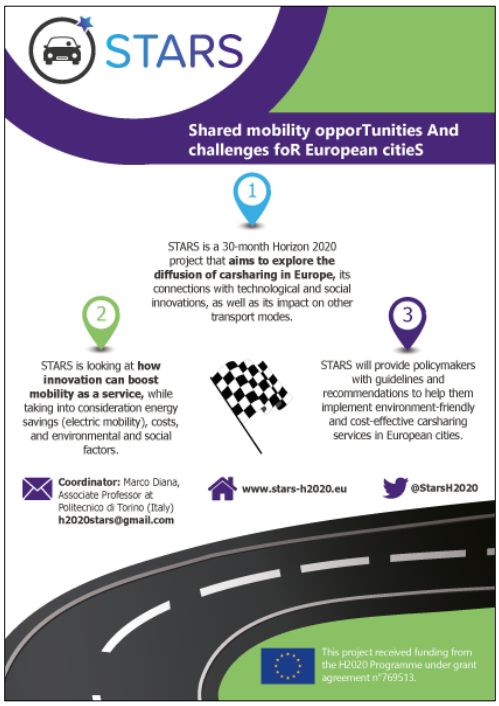

Figure 6: STARS flyer

The STARS flyer is a two-sided A5 which includes the STARS main messages, keywords, consortium members, and the expected results of the project. **More than 600 copies** were distributed during the STARS project.

3.8.2 STARS roll-up

The STARS roll-up was designed and used by partners to promote and present the project at different events and conferences.

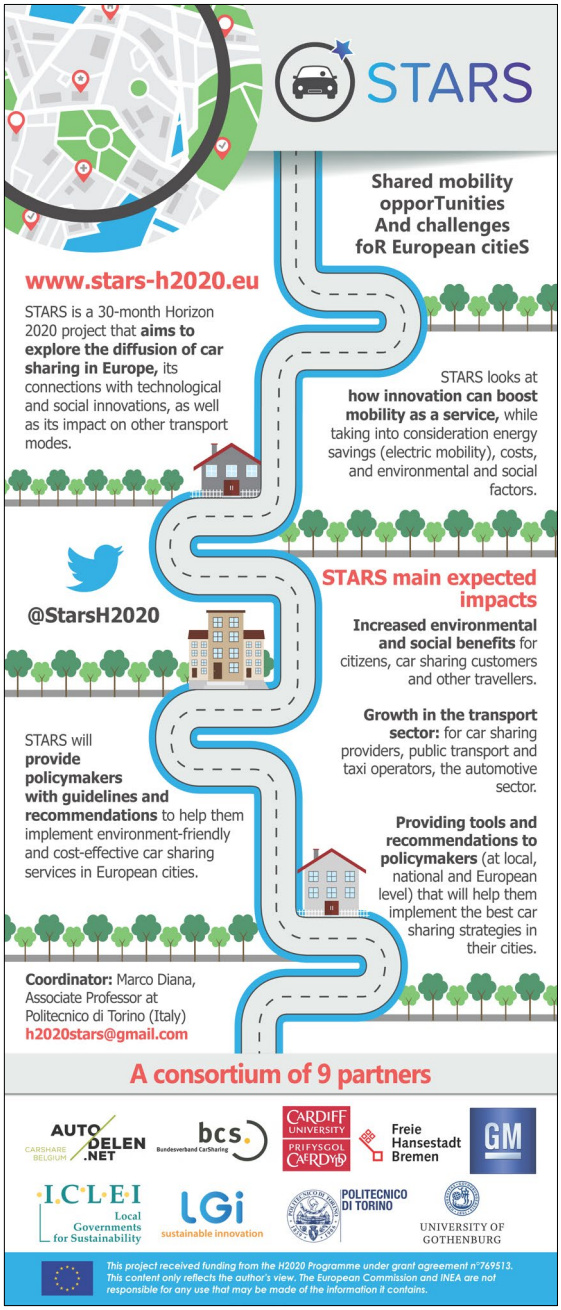

Figure 7: STARS roll-up

3.8.3 Special flyer

For the STARS mid-term dissemination workshop organised in Month 12, organised as a side event of the CIVITAS Forum 2018, taking place in Umeå (Sweden), LGI designed a special flyer (two-sided A6 format) to promote the workshop. **Around 100 copies** were distributed on-site.

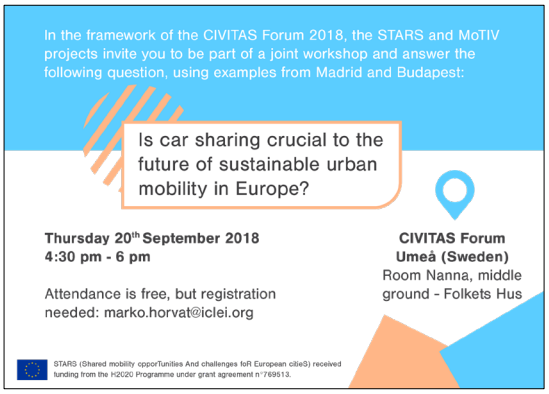

Figure 8: Special STARS flyer for the CIVITAS Forum

3.8.4 Policy brief

Prior to the 2019 European elections (Month 12), a specific policy brief on car sharing and its impacts (Deliverable 7.4 submitted in September 2018) was produced and distributed to European policymakers with the aim to push the project's outcomes into their political agendas. It provided **10 recommendations to help European policymakers and stakeholders** in the field of mobility implement the best car sharing solutions in their city. A more appealing version was designed to be promoted via the STARS website **(201 views)** and social media accounts. In addition, around 300 printed copies were sent to partners for them to distribute it to their networks.

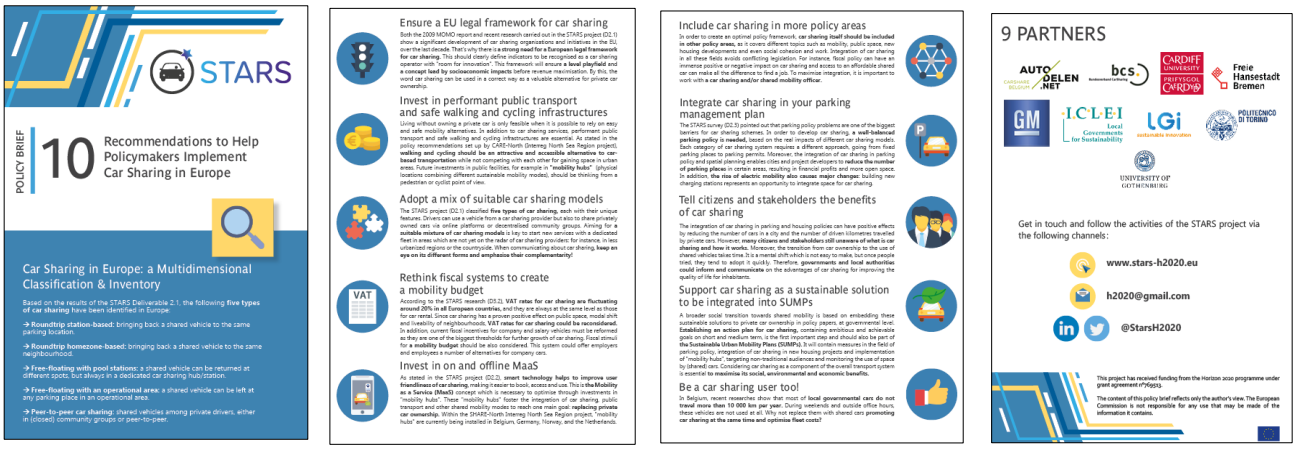

Figure 9: STARS policy brief

3.8.5 Policy toolkit

Written by the STARS partners and designed by LGI, **a car sharing policy toolkit** was produced at the end of the project (Month 30) and made available on the STARS website. Based on the STARS results, this document targeted European mobility stakeholders and policymakers by providing them

guidelines and recommendations (in the form of practical examples among others) to implement the best car sharing services whilst to consider their integration into Sustainable Urban Mobility Plans (SUMPs).

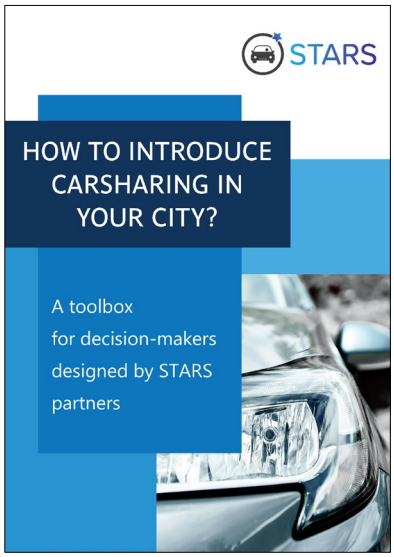

Figure 10: Cover page of the STARS policy toolkit

3.8.6 Factsheets

Between Month 24 and Month 30, three factsheets on the results of the project were produced and widely promoted on Twitter, LinkedIn, the STARS public website, conferences and through European networks and initiatives:

- ★ Factsheet 1: Results of the user/non-user study (WP4 – tasks 4.1 and 4.2): **64 views**
- ★ Factsheet 2: Results of the two case studies in Germany and Belgium (WP5 – task 5.1): just submitted
- ★ Factsheet 3: The decision support tool for policymakers (WP5 – task 5.4) (see section 3.8.5 Policy toolkit)

Figure 11: STARS factsheet n°1

3.8.7 Abstracts of deliverables

Abstracts of the STARS deliverables were produced to present the project's results in a more appealing and understandable way and made available for download on the project's website. In addition, a series of 10 visuals were created to promote and share key data generated in the project on Twitter and LinkedIn. The main objective was to engage online car sharing community and key stakeholders.

- http://stars-h2020.eu/wp-content/uploads/2018/10/Abstract-D-2.1.pdf
- http://stars-h2020.eu/wp-content/uploads/2018/07/Abstract-D-2.2.pdf
- http://stars-h2020.eu/wp-content/uploads/2018/07/Abstract-D-2.3.pdf

4 Update of the exploitation plan

4.1 Context and objectives

According to the Article 28 of the Grant Agreement, project partners must — up to four years after the period— take measures aiming to ensure 'exploitation' of its results by:

- using them in further research activities (outside the STARS project)
- developing, creating or marketing a product or process
- creating and providing a service
- or using them in standardisation activities

The present section focuses on exploitation and aims at:

- ensuring use of the knowledge generated during the project.
- maximising the impact of the project by defining strategies to exploit the results

4.2 Methodology and tools

The methodology used for drafting the STARS exploitation plan is **the Result-Strategy-Beneficiary (RSB),** a methodology developed by LGI.

RSB is based on an adapted version of the 6-3-5 brainwriting method and includes collective and individual sessions. The strategy considers all the results (achieved and expected), selects the most mature ones and identifies all the potential beneficiaries to define the most adequate strategy for each pair of "result-beneficiary" association.

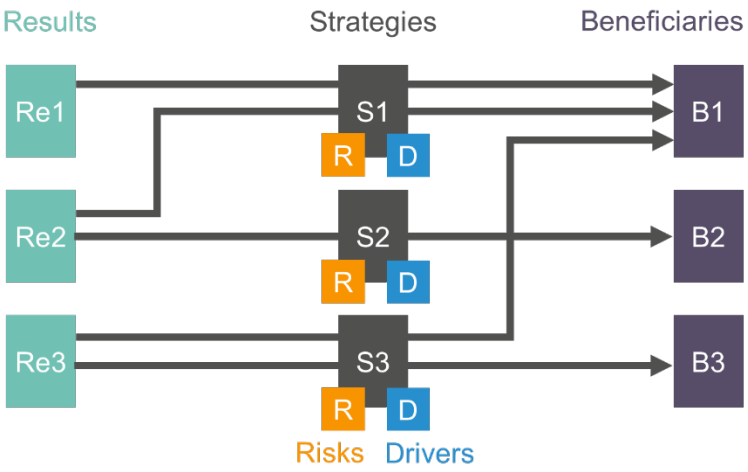

Figure 12: RSB methodology (LGI, 2018)

At the beginning of the task, a collective session was organised and facilitated by LGI during the 24M General Assembly of the STARS project. The objectives of the session were the following:

- open a discussion on exploitation vs dissemination/communication
- present the mapping of STARS results
- think out of the box and analyse how results can benefit different type of stakeholders
- facilitate the brainstorming exercise to define exploitation strategies for the main results of STARS
- discuss the steps to be conducted to define and formalise an exploitation strategy

In line with the RBS methodology, the process followed for this task was structured in five parts as presented in the next figure:

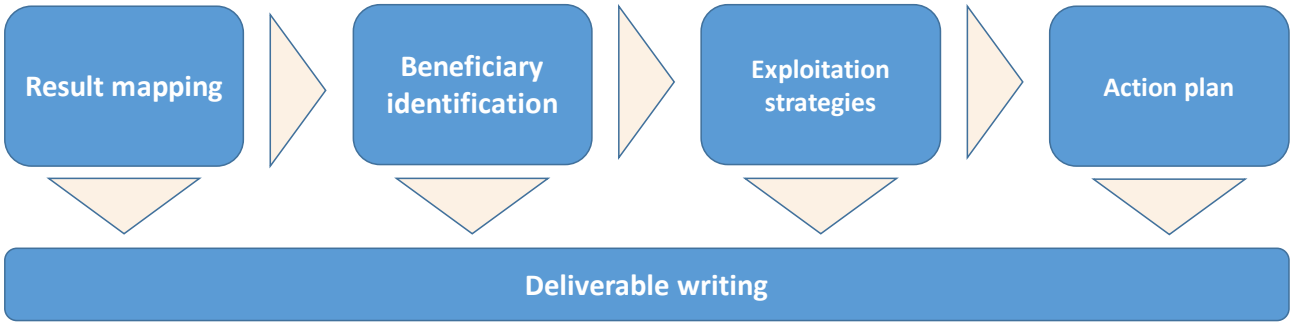

Figure 13: Process followed for drafting the exploitation plan

4.3 Results mapping

What are the project results?

The first step of the methodology was to identify and map all exploitable result of STARS. Based on H2020 exploitation guidelines of the European Commission, **12 different typologies of results were proposed to STARS partners.** Results can be a research roadmap, policy recommendations, report, platform, skill & knowledge, educational material, code of conduct, pre-standard, prototype, software, publication or data.

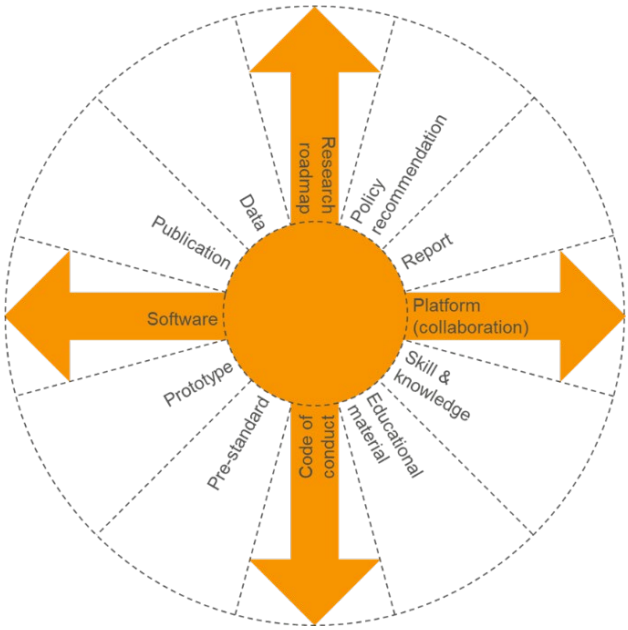

Figure 14: Adapted from the H2020 Common Support Centre (European Commission, n.d.)

4.4 Beneficiaries

Who is interested in these results?

The second step consists on identifying the potential beneficiaries of the result and analyse how results can benefit different type of stakeholders. Project partners often consider clients as the only beneficiaries. This methodology proposes to enlarge the scope and identify beneficiaries **within four categories of stakeholders:**

- ★ research communities
- ★ policymakers
- ★ industries and innovators
- ★ civil society

The following template was used for each exploitable result. In each category, beneficiaries were identified at local and European level.

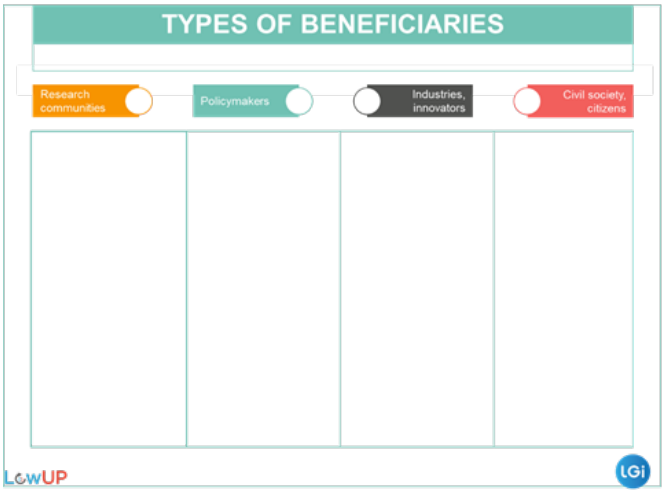

Figure 15: Templates to be filled in for each exploitable result

4.5 Exploitation strategies

How to reach beneficiaries?

The European Commission's guidelines define exploitation as "The utilisation of results in further research activities other than those covered by the action concerned, or in developing, creating and marketing a product or process, or in creating and providing a service, or in standardisation activities"[1]. The guidelines mention also that the exploitation activities must **"make concrete use of research results (not restricted to commercial use)"** (European IPR helpdesk, Making the most of your H2020 project, 2018). Another CE document indicates that exploitation should include "**all results generated during the project**"[2].

[1] European IPR helpdesk, Making the most of your H2020 project, 2018
https://www.iprhelpdesk.eu/sites/default/files/EU-IPR-Brochure-Boosting-Impact-C-D-E.pdf
[2] K. Ala-Mutka, Dissemination and Exploitation in Horizon 2020 – H2020 Coordinators' Day, 2015
https://ec.europa.eu/research/participants/data/ref/h2020/other/events/2017-03-01/8_result-dissemination-exploitation.pdf

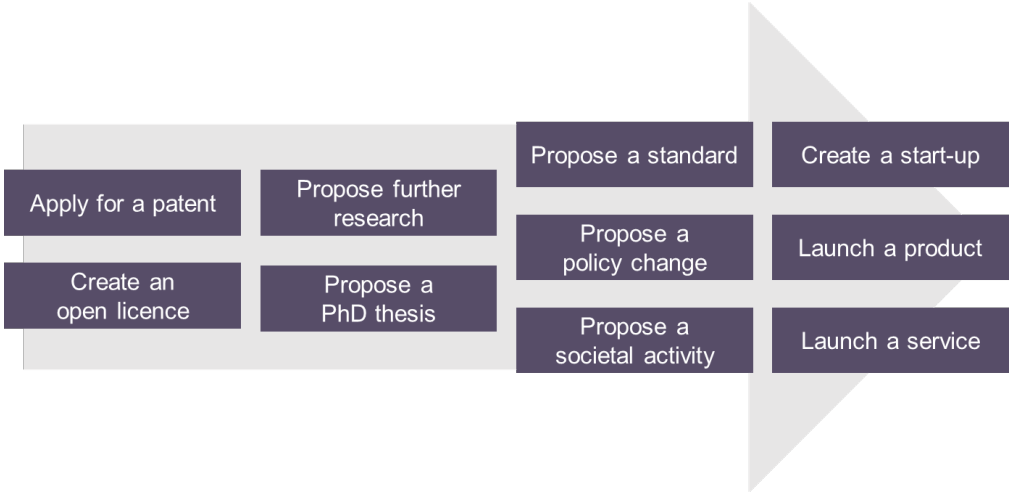

Figure 16: Possible exploitation strategies for H2020 results (adapted from the H2020 Common Support Centre)

The following template was used for each exploitable result. Exploitation strategies were defined and linked to the different beneficiaries.

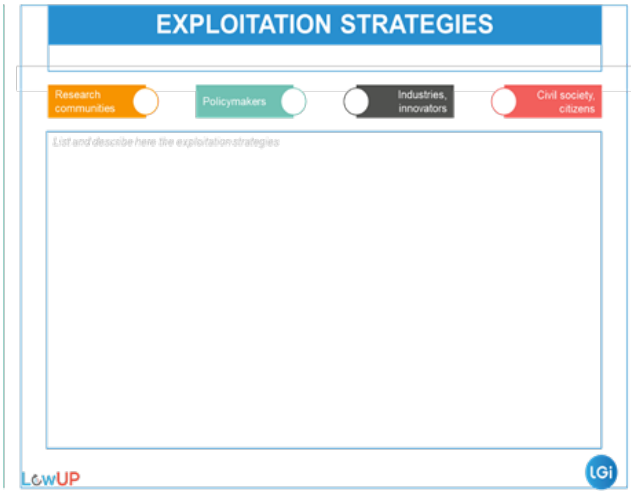

Figure 17: Templates used for each exploitable result

4.6 Elaborate an action plan

What actions to be done to achieve exploitation objectives? What obstacles to avoid?

The following template was used for each exploitable result. Strategies were broken down into sequential tasks to be carried out during and after the course of the project.

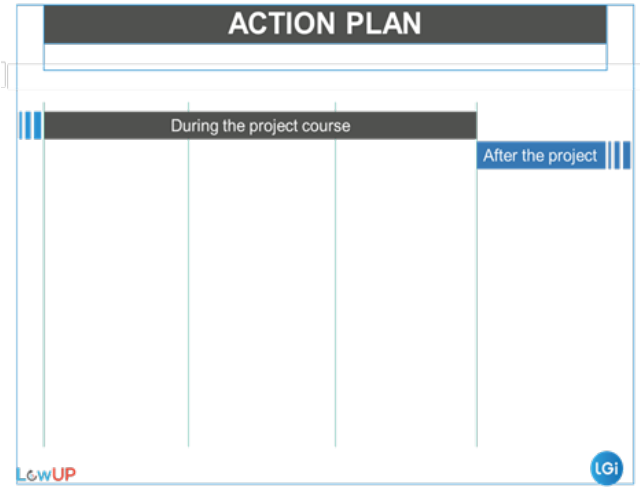

Figure 18: Template to elaborate an action

Finally, the last part of the project was dedicated to the development and formalisation of exploitation strategies.

4.7 Exploitation strategies & STARS results

The following section provides an overview of the results generated by the project and the related exploitation strategies to be delivered.

4.7.1 Overview of STARS results

Ten results were identified as the ones having more impact. Due to the research nature of the project, most of these results were prototypes, data, reports and skills and knowledge.

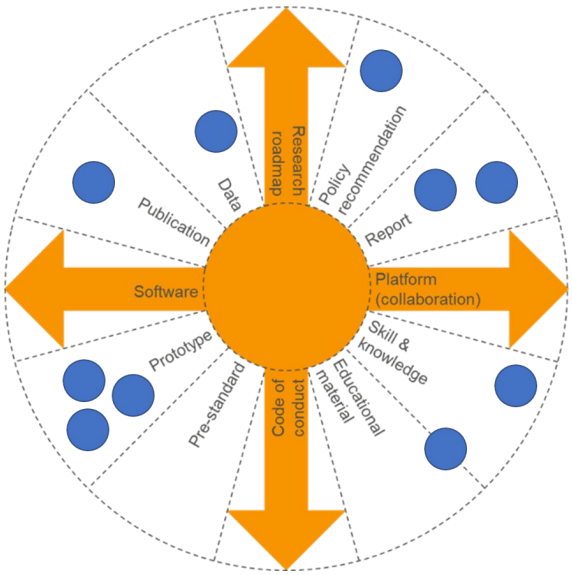

Figure 19: Overview of STARS results

4.7.2 Individual exploitation strategies

Eight project results with an individual exploitation strategy were selected to be studied more in detail. Exploitation aspects that were discussed and agreed, are summarised hereafter:

1- Comprehensive Psychological Model to predict car sharing intentions (from social and psychological factors):

Result description:

This result consists of a structural equation model (SEM) to predict car sharing use/intentions. The latent variables Attitudes, Perceived Behaviour Control (PBC), Perceived Usefulness (PU), Ease of Use (EU), Subjective Norms (SN), Trust, Personal Norms (PN) Environmental Awareness (EA) and Habit were tested along with sociodemographic variables to predict behaviour intention to use car sharing. The data were collected by STARS partners along EU countries with users and non-users of car sharing. The following figure depicts the "*Comprehensive Psychological Model for car sharing use" (CPM)* developed by UGOT.

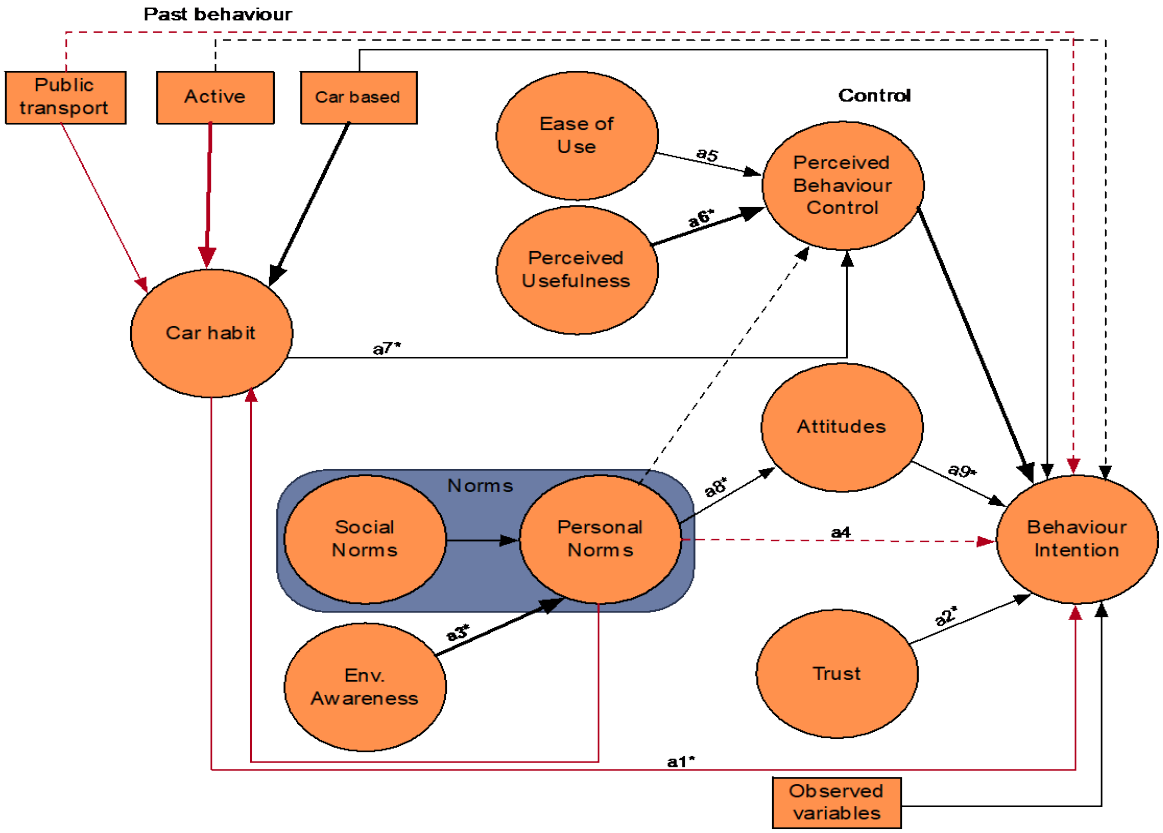

Figure 20: Integrative framework based on structural equation modeling (SEM) of behavioural intention to use car sharing in a near future

Note: straight lines indicate statistical significance (p-values < .05) for the relationships; dotted lines indicate non statistical significant relationships; the thickness of lines indicate the strength of the relationship; red lines indicate negative coefficients; black lines indicate positive coefficients; a1 to a9 indicate indirect effects; * indicates statistical significance of effects and bold indicate stronger effects. Indirect effects direction: being user of car sharing, female, higher income (non-significant),

older. Observed variables: car sharing use (users and non-users), gender, income (non-significant), age and number of car sharing services available in the city.

Responsible for exploitation: UGOT

Potential beneficiaries

The beneficiaries for the model are the following and will be approached in priority:

- **Research communities** in the transport area and in Northern Europe: Chalmers University of Technology, University of Gothenburg, The Institute of Transport Economics (Norwegian Center for Transport Research, TØI), The Swedish National Road and Transport Research Institute (VTI), and Centre for Climate Change and Social Transformations (CAST, led by Cardiff University). Victoria University in Melbourne (Australia) has also been identified.
- **Policymakers**, firstly at national level, such as the City of Gothenburg, the City of Stockholm, the City of Malmö… But then any municipality in Europe could be as well.
- **Innovators** in Sweden as first. This includes specially car sharing service providers like UBIGO, Sunfleet, Miveo, Aimo and Maven. Car sharing service providers at European level will also be mapped.
- **Civil society** like students in UGOT and Chalmers University of Technology, and citizens in Sweden.

Exploitation strategies

As a broad range of stakeholders are considered as beneficiaries of this result, a mix of exploitation strategies is considered:

- **Propose further research** to improve the model: this could include more testing or studying other variables.
- **Create an open license** so the model is open access.
- **Propose policy change**:
  - Develop campaigns that focus on an audience that still haven't developed strong habits of use of private car, such as children and young adults.
  - Develop campaigns that focus on increasing people's perception that they can change their behaviour, instead of only focusing on motivational campaigns to promote environmental messages. In addition, include in campaigns further motivation boosters, such as costs saving, space saving, or time saving.
  - Facilitate the implementation of car sharing operators that doesn't compete with the use of public transport or active travelling.
- **Propose societal activity**:
  - Develop interventions that prevent the development of strong habits of use of private car.
  - Bring the youth into the discussion and problematization around transportation.

Action Plan

During the course of the project:

- Use STARS WP2 results for mapping beneficiaries at European level (especially innovators).

- Planning of publications with the model for 2020 and 2021.
- Discuss future research plans within academia and with possible collaborations outside of academia.

After the project:

- Elaborate a dissemination plan to approach beneficiaries.
- Draft publications in relation to the model for approaching the research community.
- Presentations at European conferences and seminars.
- Integrate the results in university education about these factors in relation to sustainability and transport urban planning issues.
- Apply for funding (at Swedish national level but also look for opportunities in H2020).
- Discuss importance of these factors for understanding and improving implementation of car sharing with beneficiaries (especially policy makers).
- Participating in CAST3 as an international collaboration helping out with Swedish workshops.

2 - Database of car sharing organisations in Europe and their characteristics

Result description

This result consists of a database including 186 cases from 25 countries. Every case represents one car sharing organisation. This database was built with help of every partner of the STARS consortium and consists of data which could be found on the websites of car sharing services. Basic information such as the type of operational system, the booking logic, type and the number of cars were gathered.

Responsible for exploitation: Autodelen.net

Potential beneficiaries

Here identified beneficiaries are mainly limited to Belgium. Nonetheless, being the database referred to 25 Countries, this product would be of interest for a much broader community. This is possible especially if the open source database is created (see below). How does the consortium can support Autodelen.net to widen the geographical scope of exploitation?

The beneficiaries for the database are the following and will be approached in priority:

- **Research communities** in Belgium at first: e.g. VUB Brussels, University of Ghent, University Hasselt and KU Leuven. Belgian National Planning Bureau (they make (economic) predictions on a range of societal topics).
- **Policymakers:** A priority would be the biggest Belgian cities doubting on which car sharing types to support (i.e. Antwerp, Brussels, Ghent, Liège and Leuven), administration of Flemish regional government responsible for mobility and regional ministry for mobility. Partner cities

[3] https://www.cardiff.ac.uk/psychology/research/social-and-environmental/centre-for-climate-change-and-social-transformations-cast

from other European projects will be also mapped out (Groningen, Aalborg, Amsterdam and Gothenburg).

- **Innovators** like Belgium car sharing operators (Partago, Cambio, Dégage, Poppy …), project developers (housing), and insurance companies in Belgium.
- **Civil society**, data can be used for awareness, info sessions

Exploitation strategies

- **Create an open source database (in English),** a free community database with the source code available to the general public to use. The online database contains an overview of all car sharing operators and can be updated. People have also the option to download the full excel file to use for research.
- **Create an open license** for sharing the data generated in the case study of Flanders. The license terms could include the free use or redistribution of the data against the possibility for the research community and policymakers to analyse and exploit the data for additional researches.
- **Launch new services**: With the knowledge acquired in this project, Autodelen.net intends to launch new value-added services. This could include an advisory service for members.

Action Plan

During the course of the project:

Use STARS WP2 results for mapping beneficiaries at European level (especially innovators).

- Refine the database for external use.

After the project:

- Dissemination actions -> Prepare infographics on the impact of different car sharing operators (car ownership, use of different modes of transports)
- Dissemination event on the impact of different car sharing models for policy makers of all levels and presentation of the database.
- Integrate infographics and overview of car sharing in the existing presentation for info sessions.
- Launch advisory service for members.

3- Policy brief

Result description

Based on the STARS research that has been carried out so far, which revealed interesting information on car sharing providers, users and cities, a policy brief for car sharing was established. The aim of this policy brief is to launch 10 general recommendations for car sharing in Europe, in order to inform and activate policy makers and stakeholders on all levels.

Responsible for exploitation: Autodelen.net

Potential beneficiaries

Although the first target is policymakers, a broad range of beneficiaries for the policy brief is identified:

- **Research communities:** academics and other research institutions working on similar projects about shared mobility and interested in the policy conclusions of the STARS project.
- **Policymakers:** European Commission, members of European Parliament, national and regional governments and parliaments and local authorities across Europe.
- **Industries** like car sharing services and public transport operators.
- **Civil society:** e.g. (local) interest groups for safer, cleaner and more livable cities, cycling federations and advocates of public transport.

Exploitation strategies

- **Propose a policy change** to help policymakers implement car sharing in Europe.

Action Plan

During the course of the project:

- The policy brief has been circulated many times during the STARS project, via the consortium newsletter. Autodelen.net also forwarded the policy recommendations to a great amount of European contact addresses, both from European Parliament and Commission.

After the project:

- This policy brief will continue to be used and spread during international events on sustainable and shared mobility, hoping policy makers will take these recommendations into account.

4- Knowledge and skills of different car sharing variants and car ownership and mobility behaviour

Result description

This result is related to the knowledge acquired in WP2, but especially in WP4 in relation to the research conducted on user profiles of different car sharing variants, determinants of car sharing use and structural conversion models.

Responsible for exploitation: Bcs

Potential beneficiaries

The beneficiaries identified are the following:

- **Research communities** in particular in Germany, like the Institute for Social-Ecological Research (ISOE) , Technische Universität Dresden (TU Dresden), KIT and Goethe-Universität — Forschung an der Goethe-Universität.
- **Policymakers**: At City level (i.e. Frankfurt, Koln, Stuttgart, Dusseldorf), at Federal State Level (i.e. Berlin, Hamburg), and at Federal government level.
- **Mass platforms** like Ubigo, Urbi, Mobility Inside and Whim.

- **Civil society**, especially international organisations in the sectors like: the international organisation for public transport authorities and operators (UIPT), the Association of German Transport Companies (VDV), and associations of German cities.

Exploitation strategies

- **Create an open license** for sharing the data generated in the case study of Germany. The license terms could include the free use or redistribution of the data against the possibility for the research community and policymakers to analyse and exploit the data for additional researches.
- **Launch new services**: bcs will integrate the knowledge on socioeconomic results and behavioural change observation in its respective business. As an exploitation strategy, bcs intends to launch new value-added services. This could include an advisory service for members.

Action Plan

During the course of the project:

- Use STARS WP2 results for mapping beneficiaries at European level (especially innovators).

After the project:

- Prepare infographics on car sharing variants and car ownership and mobility behaviour.
- Dissemination event on car sharing variants and car ownership and mobility behaviour.
- Integrate infographics for info sessions.
- Launch advisory service for members

5- Car Sharing Campout

Result description

The Car Sharing Campout was part of WP7 and aimed to tackle some of the challenges cities are facing in their car sharing programmes. Bringing together key automotive players, mobility researchers and organisations working to improve future challenges in mobility, the Car Sharing Campout included state-of-the-art innovation workshops to help create breakthroughs for cities.

Responsible for exploitation: LGI

Potential beneficiaries

The car sharing campout brings together a broad range of stakeholders, so beneficiaries are identified within the four categories. Priority beneficiaries are identified in France.

- **Research communities:** public institutes in France like Vedecom and Iffstar, Pôles de competitivité like Moveo, ID4Car, SYSTEMATIC, Véhicules du future and I-trans.
- **Policymakers:** in particular municipalities in France like Paris, Lyon, Lille, Strasbourg, Nantes. Also, DG mobility and transport at EU level.

- **Industries** like public transport operators (RATP and SNCF); automakers like PSA, Renault and GM; event organisers in the sector, like AUTONOMY, Makesense and Vivatech.
- **Civil society**: transport association like UITP and citizens in general.

Exploitation strategies

- **Launch a turnkey service dedicated to municipalities and large groups**: The turkey service will consist on organising and managing a sharing mobility campout. This includes as well the design of adapted methodologies for ideation and solution development.
    - Service for municipalities that have mobility challenges: The service will include the mapping of start-ups and service providers in line with the city needs/pains and gains (stakeholder identification). The second part of the service will be THE CAMP: a complete workshop to solve real challenges in the implementation of sharing mobility in cities.
    - Service for large groups developing their own technology: The service will include contacting first cities and understand their needs & pains & gains. The second part of the service will THE OPEN INNOVATION CAMP: a serial of sessions with start-ups to design and develop together innovative solutions.

- **Open license of methodologies:** the methodologies developed will be shared through an online toolbox. The license terms could include the free use or redistribution of the methodology.

Action Plan

During the course of the project:

Mapping of potential clients

- Market study: Benchmark of current similar services

After the project:

- Prototype the service – get feedback on the model through contacts – re prototyping and commercial plan.
- Look for co-funding in H2020.

6 - Survey to understand car sharing impacts

Result description

Car sharing impacts are strongly related to the kind of service provided but also to the mobility context in which they occur. This finding is one of the main STARS legacy. Only the use of a mobility survey, which is based on traditional questions deriving from the transport planning theory enriched with specific car sharing elements, may give a real explanation of what is behind the adoption of such services to different stakeholders. The use of surveys, especially in a structured way (e.g. longitudinal survey administered to a panel every year), is the base monitoring activity to evaluate the evolution of such new mobility service. Results coming out from this mobility survey may help decision-maker in addressing policy actions aimed to increase the benefits for both, citizens and

companies that provide such services. On the other hand, information collected through the survey may be exploited by service providers to understand the real needs of their customers, to implement a tailored service for current users effectively and, at the same time, which might be more attracting to future customers

Responsible for exploitation: POLITO

Potential beneficiaries

The beneficiaries for the survey are the following:

- **Research communities** specifically dealing with car sharing impacts, like the Swiss Polytechnic Institute, University of Berkeley and TU Delft.
- **Policymakers** such as municipalities in Italy like Turin and Bologna that are particularly keen in the implementation of car sharing.
- **Industries** like car sharing service providers at European level (mapped out in WP2).
- **Civil society** like TInnGO Italian hub.

Exploitation strategies

- **Further research to improve the survey**: new emerging trends observed in other studies, or additional innovative mobility services such as those related to micromobility may be investigated by adding some questions to the survey.
- **Launch a service "ready to use" to municipalities** with consulting/advice: the survey is already implemented and tested. It can be distributed simply by showing the web link on social networks, web pages and by sending it with emails and even mail. The outcome may be exported in various formats (csv, xls, xlsx and sas). POLITO may rather assist municipalities in tuning questionnaire contents and analyse the results to provide an informed advice to cities facing specific challenges of having given policy priorities.
- **Create an open license**: according to the above guidelines, the license terms could include the free use or redistribution of the survey against the possibility for the university to analyse and exploit the data for additional researches.

Action Plan

During the course of the project:

Survey tested.

- Feedback on the survey design and achievable results.
- Exchange with Autodelen, Bcs and CarUK.
- Exchange with TInnGO hub.

After the project:

- Look for funding opportunities, both at national and European level.
- Define target cities
- Define the level of interest

7 - Inventory of existing business models in car sharing

Result description

In relation to WP 3, five archetypical or generic business model frameworks were analysed in car sharing schemes: 1) free-floating with an operational area; 2) free-floating with pool stations; 3) roundtrip, home-zone based; 4) roundtrip, station-based; and 5) peer-to-peer (P2P). The study identified two to four organisations operating under each of the five business models, reflecting on their unique setup and value proposition through the Business Model Canvas. Building on this, each of the five business model classifications was then examined based upon its specific strengths, weaknesses, opportunities and threats (SWOT). Finally, first implications of car sharing for the overall automotive industry were highlighted.

Responsible for exploitation : GMGPS-T & LGI & CU

Potential beneficiaries

The beneficiaries for the inventory of business models are the following:

- **Policymakers:** City Councils, Local politicians and Federal State.
- **Industries** like owners of corporate fleets, such as municipalities and companies. And car sharing service providers at European level.

Exploitation strategies

- The inventory of existing business models for car sharing and identification of new ones allows GMGPS-T to increase knowledge and adapt the business model of its MAVEN platform (carsharing tool). In this sense, new services may be launched. Socioeconomic results and behavioural change observation will be of added value for defining new services.
- As an academic partner, CU intends to make use of the knowledge on car sharing business models and strategies by publishing in scientific journals of high impact (more a dissemination strategy).
- LGI intends to launch new value-added services, including an advisory B2B service for car sharing innovators.

Action Plan

During the course of the project:

- Inform beneficiaries about the aim of the project, invite them to specific project events, build a professional network.
- Planning of publications for 2020 and 2021.

After the project:

- Planning of scientific publications for 2020 and 2021 (CU).
- Presentations at European conferences and seminars.
- Elaborate a dissemination plan to approach beneficiaries.
- Presentation of BMs to dedicated networks (that are already in place) and feed them into new legislation (considering the different BMs) -> policymakers.
- Approach company fleet managers and housing projects directly when they develop new projects that touch the issue of mobility.
- Definition of the advisory service (LGI).

8 - Review of the impacts on the automotive/automobility industry

Result description

This result is related to the analysis on the impact of car sharing in terms of vehicle sales and substitution patterns, and the investigation on impacts on public transportation and ridesharing.

Responsible for exploitation: GMGPS-T & CU

Potential beneficiaries

The beneficiaries for data are the following:

- **Research communities** in the transport area: Chalmers University of Technology, University of Gothenburg, The Institute of Transport Economics (Norwegian Center for Transport Research, TØI), Institute of Transport and Logistics Studies (ITLS), RMIT university,
- **Innovators** in the area of sharing mobility and public transportation.
- **Civil society**: transport association like UITP and citizens in general.

Exploitation strategies

- Propose further research to include other variables of investigation and look at other scenarios.
- The analysis on car sharing business strategies is of added value for GMGPS-T for refining their sharing mobility strategy and designing new services within MAVEN.
- As an academic partner, CU intends to make use of the knowledge on the automotive sector potential impact on vehicle sales and substitution patterns by publishing in scientific journals of high impact (more a dissemination strategy).

Action Plan

After the project:

- Planning of scientific publications for 2020 and 2021 (CU).
- Presentations at European conferences and seminars.
- Definition of the advisory service (LGI).
- Elaborate a dissemination plan to approach beneficiaries.
- Apply for funding (at national level but also look for opportunities in H2020)

4.7.3 Joint exploitation strategies

Two project results with a joint ownership were selected to be studied more in detail. Exploitation aspects that were discussed and agreed, are summarised hereafter:

1 - Knowledge and skills at policy level

Result description

The results stemming from the STARS project, such as the decision support tool and the policy brief are valuable guidelines for policy makers, mobility practitioners and all stakeholders involved in the urban mobility planning.

Co-exploitation: ICLEI & LGI

Potential beneficiaries

As mentioned before, beneficiaries for the training include mobility practitioners and all stakeholders involved in the urban mobility planning (also associations of biking and walking). A special target audience for the decision support tool for are policy makers preparing, developing and implementing a Sustainable Urban Mobility Plan (SUMP). A SUMP is a general guideline for mobility planning, and the STARS products such as decision support tool for policy makers and policy brief present an important set of knowledge in how to embed car sharing in the mobility planning process. Thus, these results are to be exploited beyond general dissemination efforts with a specialised and tailored training programme.

Exploitation strategies

- **Launch a 'Train-the-trainer' service** for mobility practitioners in the Member States where the uptake of car sharing business models are low. The timing of this exploitation activity is after the STARS project has ended, and it would involve ICLEI and LGI as primary partners for setting up the activities. First step would be to identify one of the 7 Uptake cities involved in the STARS project. ICLEI and LGI would then organise one Train-the-trainer workshop in that Uptake city, where also other city representatives of that Member State are invited. For example, if the Uptake city would be Sofia, Bulgaria, other interested cities would be invited to join the train-the-trainer workshop. ICLEI, LGI and other consortium experts would train the future trainers from these cities. Future trainers would be mobility practitioners and representatives from cities attending the workshop. They will receive knowledge, tools and guidance on STARS results and products that they will be able to implement in their cities and teach other mobility practitioners in their respective cities. This will also ensure the projects legacy as these cities will familiarize themselves with the innovative STARS products and results, that will later be included in the mobility planning in their cities.

  The workshop will be divided in two parts. The first part will cover the theoretical aspects linked to STARS results, such as business models, policy recommendations etc. The second part will provide hands on training approach and active experience exchange between the consortium experts and replicability of the policy brief and decision support tool in their city.

  The group of 'trainees' should be relatively small to allow for efficient discussion. Hence, no more than 10 cities/trainees are expected at the workshop. The training would normally be conducted in English language, since the "trainers" are the consortium partners not necessarily native language speakers of the Member State.

  Upon completion of the training, trainees/city representatives will become messengers of how car sharing business models, planning tools (decision support tool) and policy brief can contribute to the implementation of car sharing scheme(s) in or inclusion of them in their SUMPs.

  All training activities would produce videos and podcasts that will then be made available on the STARS online platform.

Action Plan

During the course of the project:

:

- Gather and document the knowledge from "Uptake cities".
- Analyse the needs of the cities regarding knowledge on car sharing.
- Identify Uptake cities willing to involve other cities in their country.
- Identify the potential STARS consortium partners that would conduct.

After the project:

- Find national contact points (people).
- Establish dates for the training.
- Invite & organise events to present the service.
- Conduct the TTT workshops based on STARS results.
- Document and disseminate videos, podcasts and other TTT results on STARS online platform.

2 - Decision support tool for policy makers

Result description

This is one of the main outputs of the research conducted in STARS and it consists on a decision support tool to help stakeholders exploiting at best the potentialities of car sharing and to faster shift to shared mobility. The work will shed a light on the untapped treasures car sharing can offer and unravel the sharing idea to municipalities, companies, fleet owner, housing companies and all multimodal enthusiasts and take you to the path to sustainable, future-proof mobility that gets rid of the muff of the ever-same dead-end road of the car-oriented city.

Co-exploitation: to be defined

Potential beneficiaries

Five target beneficiaries were identified

- **City politicians.**
- **National authorities.**
- **Public transport operators.**
- **Corporate fleet managers.**
- **Housing developers**

Exploitation strategies

- **Create an open license** so the decision-making tool is open access for other all cities: the tool presents specific recommendations for each target beneficiary. For defining car sharing

goals, taking up stakeholder views, defining priorities, setting the frame, implementing the scheme and reviewing the decision.

- ★ Through the knowledge gained during the project (especially regarding the needs of German users) the city of Bremen propose **new societal activities in line with the content of the toolbox**.

Action Plan

During the course of the project:

- ★ Content definition and design of the decision tool

After the project:

- ★ Dissemination

4.8 Further exploitation channels and conclusions

Task 7.4 - Exploitation of the results aims at developing an action plan to ensure that the results of the STARS project will be used after the end of the project to ensure its legacy and to maximise its impact. Deliverable D5.1 – Mobility scenarios of car sharing: gap analysis & impacts in the cities of tomorrow presented a mapping of the results generated by the project, a total of **10 results were identified** as the ones having more impact. The different exchanges with the partners through specific interviews and a dedicated workshop were used to cocreate the exploitation strategies for these results. The summary of results presented in the following table, cover both individual exploitation strategies and joint ones.

Result	Type of result	Exploitation strategies
Comprehensive Psychological Model to predict car sharing intentions	Prototype/ Research model	• Propose further research to improve the model: • Create an open license so the model is open access. • Propose policy change: • Propose societal activity:
Database of car sharing organisations in Europe and their characteristics	Database	• Create an open source database, a free community database with the source code available to the general public to use. • Create an open license for sharing the data generated in the case study of Flanders. • Launch new value-added services, including an advisory service for members
Policy brief	Policy recommendation	Propose a policy change to help policymakers implement car sharing in Europe.
Knowledge and skills of different car sharing	Knowledge and skills	• Create an open license for sharing the data generated in the case study of Germany.

variants and car ownership and mobility behaviour		• Launch new value-added services, including an advisory service for members.
Car sharing campout	Prototype of service	• Launch a turnkey service dedicated to municipalities and large groups. • Open license of ideation methodologies.
Survey to understand car sharing impacts	Prototype	• Further research to improve the survey. • Launch a service "ready to use" to municipalities with consulting/advice. • Create an open license.
Inventory of existing business models in car sharing	Report	• GMGPS-T intends to adapt the business model of its MAVEN platform (carsharing tool) and launch new services. • CU intends to make use of the knowledge on car sharing business models and strategies by publishing in scientific journals of high impact. • LGI intends to launch new value-added services, including an advisory B2B service for car sharing innovators.
Review of the impacts on the automotive / automobility industry	Report	• Propose further research to include other variables of investigation and look at other scenarios. • GMGPS-T to refine their sharing mobility strategy and designing new services within MAVEN. • Publishing in scientific journals of high impact (more a dissemination strategy).
Knowledge and skills at policy level	Knowledge and skills	Launch a "Train-the-trainer" service for mobility practitioners in the Member States where the uptake of car sharing business models are low.
Decision support tool for policy makers	Publication/tool	• Create an open license so the decision-making tool is open access for other all cities: • Propose new societal activities in line with the content of the toolbox.

Besides what identified in D7.1 - Detailed Communication, Dissemination & Exploitation Plan (issued on 31/01/2018 and revised on 21/06/2019), in this final part of the project some further hints for exploitation emerged in discussion with the project Technical and Innovation Manager, based in particular on these observations:

- Especially for the **8 Individual exploitation strategies,** identified potential beneficiaries **are in some cases limited to the national territory** of the partner responsible for exploitation. This is clearly explained by the fact that with no extra resources, too much effort would be requested to **broaden the territorial scope of the exploitation**. Nonetheless, some of the results are of interest for a much broader community, therefore putting in place instruments and strategies to widen the geographical scope of exploitation (through existing or new partnerships) would be an asset. This apply in particular to strategies #2, 4, 5 and 6. Therefore, a list of potential resources to be implemented is proposed hereafter. This shall be considered as a starting point, since the search for specific funding or support for a wide exploitation will continue after the end of the project;
- There are **some categories of potential beneficiaries** who are not considered in the individual exploitation strategies but could be successfully activated in order to enhance the project results exploitation potential. Some suggestions are provided hereinafter;
- Forms of **citizens' active involvement** can be explored as well, in particular in terms of data sharing and "citizen science" experiences. This could especially help in guaranteeing continuous updating of data;
- STARS academic partners do not have considered in the short term the possibility to **create a spin-off/a start-up** to offer capacity building, technical assistance and consultancy to public administrations on their mobility and MaaS policies. Nonetheless, this solution could be better explored as a possible commercial exploitation of results in the medium-long term.

Funding opportunities for post-project exploitation

In order to raise resources to broaden the scope of the project results exploitation, **EU funding programmes** can be considered at first. The upcoming Horizon Europe is the elective instrument for academic partners and specific call for proposals will be identified in order to continue and fine-tuning research on these topics. Nonetheless, other EU funding programmes can be considered, targeting especially the public sector, to apply project results in real contexts in EU Member States. LIFE programme (either "Environment and resource efficiency" strand for application of new solutions or "Environmental governance and information" strand for dissemination, campaign and citizen awareness – for the period 2014-2020, while the new programme 2021-2017 includes a strand on Circular economy and quality of life and another on Mitigation and adaptation to climate change) appears to be a good instrument to pursue STARS objectives; European for Citizens programme (Town Twinning and Networks of Town) - after checking yearly priorities - could support transfer of best-practices and case studies amongst European Cities. To this regard, it will be necessary to check if the new Rights and Values Programme 2021-2027 will include these actions in the Citizens engagement and participation strand. Other EU funding programmes targeting non-EU countries, e.g. TAIEX for IPA and ENP Countries could be explored (TAIEX Environment and Climate Regional Accession Network - ECRAN, Twinnings, …). Concerning cooperation with Third Countries, it is worth mentioning the International Urban Cooperation programme (IUC) that promotes, among the others, city pairings (up to now 33 pairings concern urban mobility).

Besides EU funding programmes, **private funding** shall be also explored. **Grant-giving foundations** supporting public administration programmes or actions in the environmental and climate change sector are playing an important role at European level. In its 2018 report featuring a detailed analysis

of the environmental grants of 87 European public-benefit foundations[4], the European Foundation Centre registered a growth of 8.6% in total environmental grants compared to the previous edition (2016). When climate & atmosphere, energy, and transport are added together they account for €171.6 million, up from €94.8 million in 2014, an increase of more than 81%. Nonetheless, it is highlighted how little funding, relatively speaking, is directed to work on transport (just 1.9% of all grants). Therefore, proposing innovative tools and solutions that intertwine the transport sector with actions in the domain of environmental sustainability and climate change mitigation (climate change was the thematic issue category receiving the most funding) may be attractive for such grant-givers.

In particular, the European Climate Foundation allocated 4,7M euros in 2018 for the Clean transportation strand and could be interested in the project results and in supporting further development. Establishing contacts with the Funders' Forum for Sustainable Cities should also be considered. The Forum was created in 2011 and aims to increase philanthropy's role and effectiveness in advancing sustainable and inclusive growth in cities; tackling urban poverty, promoting equitable development and opportunities; and strengthening local governance and citizen participation in local decision-making. Finally, an analysis of national grant-giving foundations is strongly suggested, in order to identify those having specific programmes that can support STARS outputs uptake (e.g. Cariplo Foundation in Milan, Italy has some funding schemes for innovative sustainable urban mobility solutions).

Outside Europe, a search of private foundations and other donors that might support the uptake of STARS results and the enlargement of scope of further research, is advisable. The cooperation could be two-fold, according to the funding model of the donors:

- In case of **grant-giving foundations**, specific calls on sustainable cities and sustainability mobility should be searched. To name a few: Michelin Foundation supports projects worldwide and has a specific granting scheme on Sustainable mobility; the OAK Foundation has a specific strand on Climate change, where they support projects meant to build cleaner, safer and healthier cities.
- In the case of **operating foundations**, achieving their goals directly through their own operations, partnership can be proposed, in order to transfer knowledge generated within STARS and help them informing new actions inspired by STARS outcomes. To name a few: Shell Foundation, operating on access to energy and sustainable mobility (under this second strand, the specific goal "Improving the safety, affordability, reliability, and inclusiveness of Urban Mobility services" is included); the Asia Foundation, operating on 18 Asian Countries, includes a programme entitles "Increase environmental resilience" with a specific action on increased incorporation of environmental considerations into national and urban plans and policies.

Some potential stakeholders that could benefit from the uptake of STARS results are as follows:

- **Economic Regulatory Authorities,** including both national regulators and local regulators in big-scale cities. Economic regulation of public services is meant to ensure that such services are competitive, effective and sustainable. A recent study by the Florence School of Regulation analyses the disruption created by shared mobility in the funding of transport

[4] European Foundation Center (2018), Environmental funding by European foundations - volume 4 [Available online: https://www.efc.be/uploads/2019/03/Environmental-Funding-by-European-Foundations-Volume-4.pdf]

infrastructure[5]. In general, the study recognises the benefits of shared mobility in terms of reduction of private car use. However, it identifies possible short-term negative effects on the revenues of long-distance railway and coach operators. It also points out other potential risks, which include capturing the revenues through commissions charged by platforms mediating mass-transit services (Mobility as a Service), free-riding and lower tax contributions. Regulatory authorities may play a role in reducing these risks. To this aim, a deep comprehension of the mechanisms underlying the market of sharing mobility, the different business models involved, and the different fallouts in terms of public policies is very relevant to inform appropriate regulatory policies. To this extent, the STARS results and data can be a useful source of information for regulators and shall be promoted among this specific target. Contacts with both institutes making research on regulatory issues (e.g. Florence School of Regulation, Turin School of Local Regulation, …) and regulatory authorities are strongly recommended (Italian Regulatory Authority for Transports, French Regulatory Authority for Transports, Portuguese Transport and Mobility Authority, to name a few). The Network of Economic Regulators coordinated by the OECD could be contacted in order to identify countries where Regulatory authorities for transports are set and to reach them.

- **Innovative consulting firms in the field of sustainable urban planning and smart city projects,** who might be interested in benefiting of the open-licence results and data of STARS and on the integration of the project tools (e.g. the tool supporting decision-makers) into their consulting instruments. Just to provide a few examples, beneficiaries could be companies like: Smart Cities Consulting providing also advice to municipalities on urban mobility; Planet Idea, winner of the Start-up Europe Awards 2017 – Italy, category Smart City, a competence centre consulting with clients on how best to integrate innovation into urban areas.
- **Mobility aggregators and app developers** (companies developing platforms/apps to manage MaaS). In 2019 KPMG international published its KPMG Global Strategy Group's Mobility 2030 report[6]. According to this study, the challenge of creating mobility solutions lies in aggregating several modes into a simple-to-use solution. There are many examples around the world where customers can travel on different modes of transport (from different providers) via one payment platform. Although such services are typically restricted to public transport, new, integrated private/public versions are emerging. The study itself mapped a few of them. Others can be identified amongst the candidates and winner of the European Start-up Prize for Mobility. One of these aggregators took part to the STARS campout in Paris in October 2019 (Lab Box).
- **Organisations active in development cooperation** and in EU tenders for technical assistance and capacity building projects, especially for public administration, in order to stimulate them to include the project results, and in particular the Decision support tool, in their methodologies when designing their projects. Actors of the development cooperation can be easily reached posting information on the Capacity4Dev portal. Direct contacts with single organisations can be also activated, identifying them through platforms like Assortis, Development Business or EuropeAid Contracts.
- **Data journalism experts.** Data journalism promotes data-driven coverage of topics. According to the International Encyclopaedia of Journalism Studies, 'data journalism has been

[5] Finger, Bert, Kupfer, Montero, Wolek (2017), Research for TRAN Committee – Infrastructure funding challenges in the sharing economy, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels [Available online: http://cadmus.eui.eu//handle/1814/46429]

[6] KPMG International Cooperative (2019), Mobility 2030: Transforming the mobility landscape [Available online: https://assets.kpmg/content/dam/kpmg/xx/pdf/2019/02/mobility-2030-transforming-the-mobility-landscape.pdf

defined as the analysis and visualisation of digital information for news stories, news infographics, and interactive presentations. At European level, there is a European Data Journalism Network (EDJNet) that operates with the support of the European Commission and groups a consortium of media and data journalists from all over Europe. A partnership with data journalism experts could lead to two positive results: first, providing journalists with fresh data on a topic which is still under-debated in this specific domain (a search in the EDJNet database with the keyword 'car sharing' produced only 1 article as a result); secondly, processing "raw" data to transform them in attractive infographics and interactive graphics, in order to reach a wider audience.

Finally, besides the fact that **network of cities** has already been mentioned in the exploitation strategies and that ICLEI itself is an important network, identifying and establish contacts with new ones can be important. It is worth mentioning here C40 CITIES, whose research contributes significant understanding of how city governments deliver emission reductions and climate resilience based on the world's most comprehensive database of city climate action. In particular, C40 CITIES includes a Mobility Management Network. Moreover, the Solutions Database managed by the International Urban Cooperation initiative can be a good showcase to inform non-EU cities on the project results and stimulate their uptake. This database compiles companies, research institutions, and other solution providers from across the world who can provide the technical expertise to help cities develop more sustainably.

Active citizenship

Because data produced by the project need to be constantly up to date in order to be exploited, forms of collection of data involving directly citizens can be also explored.

- **Citizen science** is a powerful instrument that enables citizens to participate in the scientific research process in different possible ways: as observers, as funders, in identifying images or analysing data, or providing data themselves. This allows to broaden the possibility for researchers to collect data but also leads to democratisation of science and to stakeholders' engagement and public participation (another objective of STARS). In the case of STARS, collaboration of citizens in providing fresh data about e.g. mobility habits, intermodality, behaviour when using car sharing services, would be an important contribution to further research. Some examples of citizens science projects in the domain of mobility already exist, e.g. the app enviroCar; CitieS-Health project, WeCount project, to name a few. Therefore, exploring the possibility to implement citizens science strategies would be important, partnering both with app developers and with car sharing service providers. Special attention shall be devoted to privacy concerns.
  Moreover, the City Science Initiative promoted within the JRC Science Hub Communities provides an opportunity for cities, city networks, experts and the services of the European Commission to reinforce their cooperation and strengthen the science and policy interface. STARS experts can join the community in order to share project outcomes and establish new contacts for their uptake. One of the themes of the community relates to 'Sustainable mobility' and is led by the City of Cluj (Romania).
- **Ambassador label**: in close connection with the service of train-the-trainers developed in Joint Strategy 'Knowledge and skills at policy level', a label of 'STARS Ambassador' can be designed, in order to strengthen the sense of community amongst sharing mobility experts and empower their visibility in a wider network of territories. The project website could be

enriched with an Ambassadors database, where a short profile and contact details of all the STARS experts is publicly available. In this way, cities, local administrations, service providers and any other interested stakeholder could search the closest expert and get in direct contact with him or her. The network would also be proposed amongst schools to invite ambassadors for communication activities with pupils and students. Ambassadors could also be invited to stimulate citizens engagement activities in their areas, establishing partnerships with different local organisations, with a specific focus on targeting wider groups of the population.

A new start-up?

Besides funding specific STARS prosecution (e.g. finetuning of the research, surveys in new cities, uptake of the decision support tool or organisation of the camp out), some private foundations or investors could be interested in **capitalising start-ups or spin-offs** based on project results. An interesting source of information is the European Start-up Prize, one of the biggest awards in Europe for sustainable mobility initiatives, organised under the patronage of the European Parliament and of the European Commission. It is interesting to note that among the 2019 Top 150 candidates to the Prize 2nd edition of the acceleration programme) most are app or technology developers, while innovation consultants or policy developers do not appear in the list. This shall suggest that there is space for innovative services in this field.

CONCLUSION

The communication, dissemination, and exploitation activities that have been carried out in STARS, from 01/10/2017 to 31/03/2020 reached the communication objectives set up at the beginning of the project in the Detailed Communication, Dissemination and Exploitation Plan (D7.1 submitted in January 2018). Thus, the key project's activities and results were communicated, shared and disseminated via the different channels and tools initially identified as relevant: public project website, social media accounts (Twitter and LinkedIn), electronic newsletters, corporate materials distributed at events and conferences…

Moreover, relevant public reports and results of the project were centralised and made available to read directly on the public website (dedicated section). Some abstracts of deliverables were produced in order to be promoted and shared on the STARS Twitter and LinkedIn accounts. The different workshops organised, the Innovation Camp hold in Paris, plus the policy brief and policy toolkit produced in the project, allowed to reach policymakers (at local, national and European level) and increase awareness about car sharing and the different solutions to implement it. In addition, audiences on the STARS website and Twitter and LinkedIn accounts had shown a real online engagement from the existing European car sharing community and mobility experts, but also from the citizens.

Lastly, this deliverable provides an update of the STARS exploitation plan (task 7.4) based on the STARS results and beyond the project lifetime. This exploitation plan aims at ensuring that the results generated by STARS (data, reports, skills, knowledge…) are used after the end of the project. Thus, 10 results were identified and presented previously to ensure the STARS' legacy and maximise its impact.