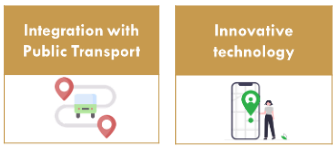
2.3 Brasov Metropolitan Area Car-pooling (RO)

Carpooling service enabled by a new platform developed in the framework of the SMARTA 2 project and implemented in three communities in the Brasov Metropolitan Area in Transylvania, Romania.



2.3.1 About Brasov metropolitan Area, Romania

Country	*Region*	*Target Area*	*Population*	*Population density*
Romania	Transylvania	1412,29 km^2	476,433 inh.	337 inh./km^2

The Brasov Metropolitan Area is located in Transylvania (central Romania), north of Bucharest.

The metropolitan area is bordered to the north by Bodoc and Baraolt Mountains, to the south by Ciucas Mountains, Barsa Mountains, Bucegi and Piatra Craiului Mountains, to the east by the Vrancei Mountains and to the West by the Persani Mountains.

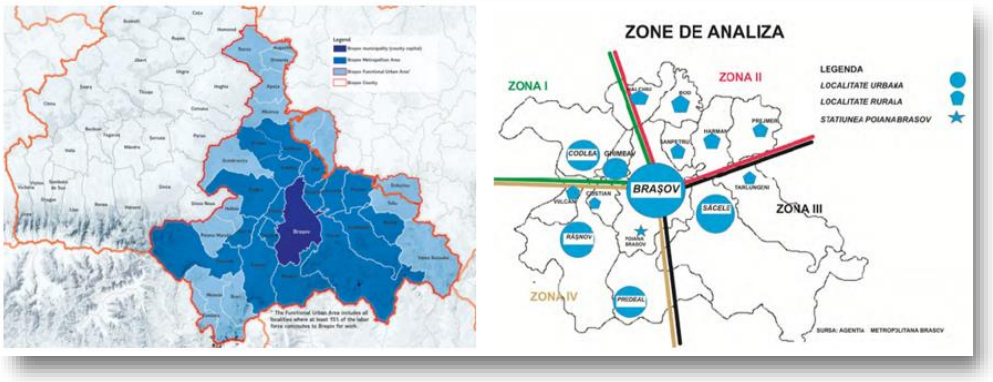


Figure 43 - Brasov city location and its surroundings

It consists of 18 local communities and has a total population of 476,433 inhabitants (2019). Since the Brașov region is mainly mountainous, tourists who come to Brașov can enjoy all winter sports activities. Furthermore, among other tourist attractions there are naturalistic visits to the Piatra Craiului Massif and Ciucas Mountains national parks or to the Persani Mountains where there are many protected areas and historical, cultural monuments and architectural sites.

About the mobility, most citizens commute to the centre of Brasov for their leisure activities or to work, study and access healthcare facilities. However, owing to the scarcity of the public transport offer in rural areas, they do so by using their own cars. This has exponentially increased the pressure on the road infrastructure and the traffic levels in the highways that connect the rural communities to the city centre of Brasov while it has also caused parking spots to become a commodity with high cost.

Currently, the traffic levels in Brasov are alarming and have even become a part of the electoral agenda.

Car-pooling does not have a tradition in Romania. More than two decades ago there was an informal ridesharing/car-pooling practice that came from a “hitch hiking” tradition back in the communism period. However, this practice is not envisaged by law and efforts are being made to stop this model. In the latest

years this type of ride-sharing/car-pooling decreased in frequency. Still small informal groups will keep on using this option, with predetermined pick up / drop-off locations in the proximity of transport hubs at the edge of the city. In Brasov, the demonstrator explored the best way to develop enough critical mass in the rural communities involved in order to update mobility behaviour and switch from private car-based mobility to the use of public transport and car-pooling as well as other more environmentally friendly means of transport (cycling, DRT, etc.).

2.3.2 Description of the Mobility Solution

The SMARTA 2 demonstrator of the Brasov Metropolitan Area focused on improving the use of an existing public transport service (recently redesigned in more inclusive manner and coordinated with the public transport service in the City of Brasov) combined with developing a completely new approach for shared mobility – the use of car-pooling instead of individual daily trips to and from the surrounding rural areas in and around Brasov City. As such, the demonstrator in Brasov focused on promoting shared mobility in rural communities in two complementing forms – public transport and car-pooling.

Main objective of the Mobility Solution

The concept of the Brasov Demonstrator was to introduce shared mobility (car-pooling) combined with public transport in 3 rural communities in the Brasov Metropolitan Area based on a community building approach and to increase the ridership levels for public transport services linking the rural communities with a major adjacent urban center.

The three communities were:

- Cristian – located in the west of Brasov city (it is a 1 village community);
- Bod – Located in the north of Brasov, it is comprised by the main village – Bod – and a small hamlet – Colonia Bod (Colony);
- Prejmer – Located in the north – northeast part of Brasov, it includes 2 villages (Prejmer and Lunca Calnicului) and a small hamlet - Stupinii Prejmerului – which is practically a continuance of the Prejmer Village.

The focus was on using public transport regular services instead of private cars combined with alternatives such as DRT, car-pooling, cycling to transport hubs, etc. The approach was to support rural community members in acknowledging their role and responsibility in the problem (traffic congestion, air pollution) and in defining the solution that best answered to mobility needs and territorial challenges.

An online platform was developed to facilitate the use of car-pooling by acting as a matchmaker between the offer (of rides) and the demand. The app was operated by the Brasov Metropolitan Agency as part of the Brasov demonstrator operations.

Target user groups and needs

The target users were inhabitants from 3 rural communities who needed to travel to the main city, Brasov (Cristian, Bod, Prejmer) to their leisure activities or to work, study and access healthcare facilities.

Involved Bodies

- Brasov Metropolitan Agency for Sustainable Development. Association of public bodies supporting local administration in the local development process. Project leader in the region and coordinator of the project;

- Cristian Municipality - Involved in organizing PT at local level, supporting the entire pilot in Cristian;
- Bod Municipality - Involved in organizing PT at local level, supporting the entire pilot in Bod;
- Prejmer Municipality - Involved in organizing PT at local level, supporting the entire pilot in Prejmer
- RATBV SA - PT operator at regional level involved in organizing the incentive scheme to promote PT usage.
- Brasov Municipality- Involved in organizing PT at local level, providing support for the incentive scheme
- Brasov Metropolitan Association for the Sustainable Development of Public Transport -Supporting the actions involving the public transport operators
- Local businesses - Support the pilots by getting involved in in the incentive scheme Promoting the pilot
- Ride sharing stakeholders - Can get involved in providing effective alternatives to the use of the private car.

The Brasov Metropolitan Agency is an association of public bodies representing the communities in the Brasov City Regio and it has been promoting and coordinating the service with the support of the local administrations (Brasov, Cristian, Bod, Prejmer) and with the collaboration of local businesses (e.g. local shops by getting involved in in the incentive scheme).

The public transport operators at local and regional level has been involved in creating the incentive scheme together with Brasov Municipality (e.g. parking spaces in Brasov for groups using car-pooling, providing access rights to specific areas).

The Brasov demonstrator was built on the premise that being a bottom-up approach, a community organizing effort was required. Focus groups and local community meetings were organized in each of the 3 rural communities. These meetings were supposed to serve as a framework to promote the use of the platform and also to allow community members to interact with each other and build trust in order to use the car-pooling opportunities. Due to COVID-19, social distancing rules hindered the whole process of developing a car-pooling community.

Mobility services provided/addressed

A web-based app should have been developed within the SMARTA2 demonstrator framework, in order to foster the adoption of more sustainable travel patterns in the 3 rural communities that were part of the demonstrator. However, only a web-based platform was developed (and not the application) although nowadays a downloadable application on the phone is quite necessary for a functional service. The automatization was very basic. The subscription process was mandatory but was free of charge.

From the beginning, one of the essential elements was that of integrating a layer of technology within the rural mobility eco-system in order to ease its use, as well as to increase attractiveness for the target group which was shown to be technology literate / interested.

Within the platform, a communication module was developed to allow the matchmaking of drivers and passengers and allow them to communicate and synchronize and efficiently organise a carpool service. The platform also included a module for public transport where information about available routes, tickets, etc was available for users.

The platform also included an incentive mechanism that would allow trips made through the platform be changed into points. Such points could be exchanged for various “rewards” – vouchers for local businesses

that showed support for the SMARTA concept. Unfortunately, no rewards were claimed because of the very low number of trips.

Users could also apply for a free bus pass – the idea being that the more you use the bus pass, the more trips you unlock, thus generating a snowball effect. The services were free of charge, and there were some incentives (e.g. getting points in local shops), but during the pandemic more and more barriers came up e.g. shops did not want to get into projects where they encouraged people to share their cars because of the social distancing rules.

Ridership and other key metrics/results

Three online surveys were conducted, starting before the launch of the platform. The following diagrams sum up the results obtained:

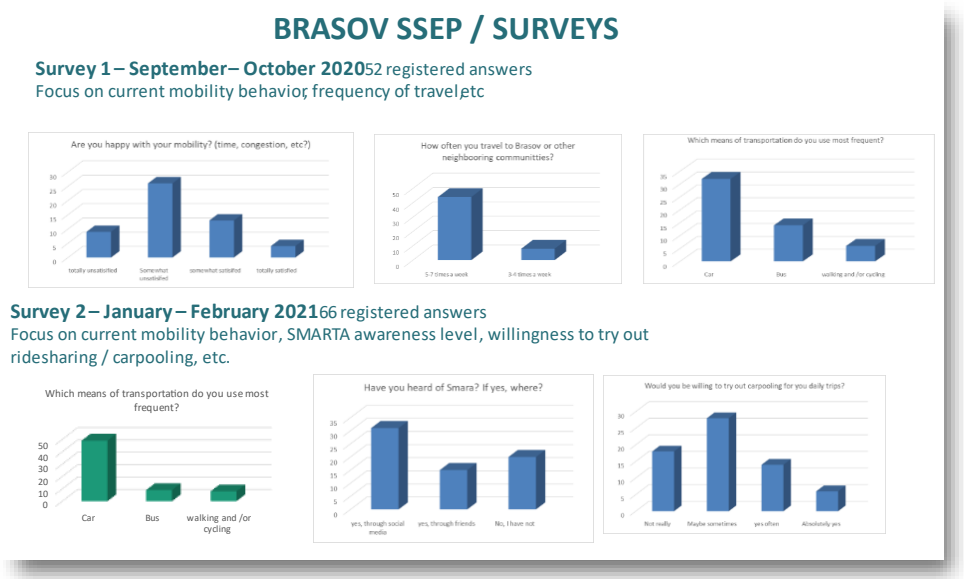


Figure 44 - Main results of the Brasov surveys

- 47% have heard at some point about the service in their area. Out of the 108 respondents aware of the service, only 37 had used it before (18% of the total);
- In terms of satisfaction level, 22% of the 37 respondents are very satisfied, 40% are satisfied and only 3% are very dissatisfied.

The main origin and destination point were the 3 communities (Bod, Chritian and Prejmer) travelling to the main city Brasov. Bod, Christian and Prejmer were originally selected because they had very different typologies:

- Bod: village lagging,
- Chrisitian: quite close to the city, lot of residential development, major economic players in the area,
- Prejmer: really closed community.

Disabling factors (i.e., aspects to be improved):

- the geographical availability,
- the frequency,

- the usability of the service.

Subscriber profile

Age groups	Residential status	Occupational status
- 18-24 years: 8,11% - 25-29 years: 24,32% - 30-39 years: 48,65% - 40-49 years: 13,51% - 50-59 years: 2,70% - 60+ years: 2,70%	- Rural areas: 58% - Peripheral areas: 22 % - City Centre: 20 %	- Full time employed: 58% - Part time employed: 19% - Student: 20% - Retirement: 3%

Result data

	M13	M14	M15	M16	M17	M18	M19
Number of users in the platform	0	0	0	20	26	4	2
Number of drivers	0	0	0	12	12	2	1
Number of passengers	0	0	0	8	11	16	22
N° of Car-pooling trips	0	0	0	15	22	32	40
Bus tickets distributed	0	0	0	0	3	2	1
Bus trips using free bus tickets	0	0	0	0	19	34	44

Supporting technologies

A web-based platform was developed but not the related application. In the platform there is a module that allows the owner-driver of the car to meet with the people who request the ride and thereby organize an efficient car-pooling. There is also information relating to public transport such as timetables and ticket costs as well as a system of rewards relating to car-pooling trips carried out.

Currently, the web-based app www.mobilitaterurala.com / www.mobilitaterurala.ro is not functioning.

Engagement aspects

- The community engagement approach was centred around online tools in order to attract a digitally literate target group.
- With the advent of the COVID-19 pandemic, the project was unable to organize previously planned community-building events. As a result, the level of involvement and outcome has dropped significantly from the initial expectations.
- Community members were informed by phone about the benefits of joining the Brasov SMARTA2 experience.

- A consultation workshop was held on 09/12/2019 in Brasov with the aim to co-decide with the local mobility stakeholders the specific areas where Brasov's demonstrator would have taken place. The workshop was attended by the rural communities' public administration representatives, the public transport representatives, and Brasov's Metropolitan Agency representatives.
- In order to promote the registration in the platform, incentives were set up for inviting new users (through on-line social networks).
- The public transport operators at local and regional level were involved in creating the incentive scheme together with Brasov Municipality (e.g. parking spaces in Brasov for groups using car-pooling, providing access rights to specific areas).
- An important issue that came up during the SMARTA2 project was related to the need to include in the SUMP a specific section about the car-sharing.

2.3.3 Timelines and Milestones

The SMARTA 2 demonstrator of the Brasov Metropolitan Area was focused on improving the use of an existing public transport service combined with developing a completely new approach for shared mobility: the use of car-pooling instead of individual daily trips to and from the surrounding rural areas in and around Brasov City. The demonstrator was launched in August 2020, and currently mobilitaterurala.com /mobilitaterurala.ro platform is not functioning

No milestones could be identified except for the launch of the platform and relate activities.

2.3.4 Long-term assessment

Success, Durability and Expansion

The service is not operating anymore since it proved to be not sustainable for the following main reasons:

I) There was no business model behind it;

II) COVID-19 hit hard when it was launched, so social distancing rules had to be followed and therefore car-sharing was not an option. The pandemic affected the mobility solution very hard, social distancing rules have made it close to impossible to develop a car-pooling community, to bring people together into community-building events or to allow relative strangers to become car-poolers. As a result, the level of involvement and outcome dropped significantly from the initial expectations due to:
   - Decreased demand for travel – people working from home, schools working online
   - Social distancing made promoting ride sharing and the use of public transport almost counter intuitive
   - Protection measures imposed at local and national level in order to restrict travelling
   - Local businesses pulling out of supporting the demonstrator and affecting the incentive scheme
   - People reverting to / focusing on the use of the personal car as a "safety bubble" and a mean of coping with the prolonged pandemic
   - Staff shortages in partners and stakeholders that delay planned activities;

III) There was not enough budget for maintaining a coordination team;

IV) There was a high competition with similar car sharing apps having a proper business model extra services to offer.

The service was not replicated in other areas of Romania.

Funding and financing

An amount of € 8.500 were invested in the development and maintenance of the IT platform, but there was no budget for the coordination centre.

Why is it considered a Good Practice?

Within the SMARTA 2 Project, the Brasov Metropolitan Agency for Sustainable Development mobilized an initiative to promote a carpooling experience for rural dwellers, encouraging residents to share their trips and reducing the individual daily trips made with a private car. It was the first-of-its-kind initiative in the area which aimed to reduce the traffic generated from rural areas to the city center, which was delivered in conjunction with an awareness-raising campaign on sustainable mobility and public transport.

2.3.5 Transferability considerations

CONTEXT PECULIARITIES	***TRANSFERABILITY CONDITIONS***
The context experienced is very interesting as many commuters travel to the capital Brasov daily from the surrounding metropolitan area.	The results obtained, with the recorded progressive increase of car-pooling trips from month 16, demonstrate that if there had not been the COVID-19 emergency and the App had been developed, the service would have been successful. In order to implement this solution it is necessary to: -establish contacts with local communities to assess mobility needs and co-create shared mobility solutions; -identify possible source of funding for the development of the web and app carpooling platform, or, eventually, assess the conditions to make use of existing one; -design and plan a proper awareness raising campaign focused on sustainable and shared mobility options; -identify a proper business model to finance the solution in the short, medium, and long term.
DIFFICULTIES ENCOUNTERED/WEAKNESS	***LESSONS LEARNT***
The COVID-19 emergency has blocked any aggregation of people and therefore the non-permissability of car-pooling activities. The weakness of the service is that only the platform was developed and no the related App	The implementation of a carpooling service using a new digital platform needs to be anchored to a well-defined business model and a proper communication and dissemination campaign. Local sponsors need to be engaged to implement an incentive scheme, especially at the launch of the service.