

3.1 Flugs E-carsharing (AT)

Flugs is an electric car-sharing station-based system with 13 electric vehicles available to individual users (with valid driver license) for hire and located in thirteen different areas of East Tyrol Region in Austria.

<p>Integration with Public Transport</p>	<p>Good territorial coverage</p>	<p>Established brand</p>
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3.1.1 About East-Tyrol, Austria

<u>Country</u>	<u>Region</u>	<u>Target Area</u>	<u>Population</u>	<u>Population density</u>	<u>Visitors/year</u>
Austria	East Tyrol	2,020 km ²	48.833 inh.	24,17 inh./km ²	2,0 MI ¹⁶ overnight stays/year

The region of East Tyrol is the south-east part of the federal state of Tyrol.

The population ratio varies within the region, with the municipalities in the valley floor around Lienz being more populated than the ones in the peripheral valleys. More specifically, the capital Lienz is the biggest town, counting 11.844 habitants, with surrounding municipalities Nussdorf-Debant and Dölsach having 3.325 and 2.338 inhabitants respectively. Similar in size are the municipalities located in the region’s two main valleys: Mauterhorn in the Isel Valley counting 4.667 inhabitants (second to Lienz) and Sillian in the Pulster Valley, with 2.051 inhabitants.



Figure 50- Flugs E-carsharing car on East-Tyrol roads

Tourism in Osttirol is not particularly relevant compared to other touristic regions in the rest of Tyrol. However, the region has recorded over 2 million overnight stays per year in recent times, with a slight majority of tourists in the summer season, compared to winter. The tourist data for Lienz shows that overnight stays by German guests form the largest group with 46%, followed by overnight stays by Italian and Dutch tourists with 14% each. While the winter sports areas of Hochstein and Zettlersfeld led to strong growth in winter tourism, Lienz recently benefited above all from day tourists who use the Drau Cycle Path from San

¹⁶ Source: <https://project-transalp.eu/en/sitipilota/east-tyrol/#:~:text=Tourism%20in%20Osttirol%20is%20not,per%20year%20in%20recent%20years.>

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Candido to Lienz. Today, tourism is controlled by the Osttirol Tourism Association, with Lienz belonging to the Lienz Dolomites region¹⁷.

The main mobility challenges in East Tyrol are the following: limited extension of the area covered by the public transport network (with the presence of several underserved hubs and settlements); low public transport service frequency during the weekend; few connections in the early morning or late evening when shift workers (and particularly women, who often work part-time) have to commute; few opportunities for CO₂-friendly vacation offer for tourism; high car-dependency from locals.

3.1.2 Description of the Mobility Solution

Flugs¹⁸ is an electric car-sharing station-based system operated in East Tyrol Region. The main goal of the Flugs system is to reduce the number of trips made with private cars by individuals and families and propose an alternative solution to owning 1st, the 2nd, or 3rd car. The service is also included in a broader sustainable vision consisting of providing an open, connected, multimodal, and rural environment where smart and sustainable mobility can be promoted for the local population and tourists.

The overarching objectives are:

- Providing more flexible and affordable mobility for residents and guests in rural areas to push sustainable mobility solutions and link the last mile in travel chains;
- Increasing the awareness for sustainable mobility, changing the mobility behaviour of the citizens away from private cars, reducing the costs for private mobility;
- Increased understanding of people choices linked to their attitudes (e.g. ecological minded, traditional minded, innovative minded) to tailor future sustainable mobility solution to users' needs.

Target user groups and needs

The main target users are the local inhabitants including private companies and public service sector employees, although the service can also be used by tourists and visitors. In East Tyrol, the main hub is the capital Lienz, with the bulk of the enterprises – save those in the gastronomy and tourism sector – concentrated mostly in and around it.

Owing to the geography of the area and the disperse settlement, the average travel distance to most workplaces is approximately 20km; East Tyrol is indeed, a commuting region, with the capital Lienz having almost four times more inbound (6.948) than outbound (1.776) employed commuters. Most commuters are driving to Lienz from the surrounding or peripherally located municipalities, indicating a spatial mismatch between the supply and demand of labour. In addition to these commuters, Lienz hosts daily approximately 2.400 educational commuters. Apart from work or study purposes, people often travel to Lienz to access healthcare facilities, hospitals, or for their leisure activities or everyday exchanges (e.g. post). However, most people who travel to Lienz for these activities use the private car for their trips.

¹⁷ <https://de.wikipedia.org/wiki/Lienz> ; Land Tirol, Publikationen Statistik.

¹⁸ <https://www.osttirol.com/it/mobilita/mobilita-in-osttirol/flugs-e-carsharing/>
<https://flugs.moqo.de/>
<https://flugs.moqo.de/cars>

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Involved Bodies

The key involved stakeholders are the following:

- *Regional Management East Tyrol (RMO)*: the Regional Development Agency with competencies on sustainable mobility project, initiatives and strategies. As the local coordinator of the SMARTA2 Project, RMO has been promoting and coordinating the service with the support of the local administrations and the collaboration with businesses and private stakeholders (e.g. the banks);
- *Regionalenergie East Tyrol (REO)*, the e-car sharing provider in East Tyrol, responsible for the operation and maintenance of the service;
- *Verkehrsverbund Tirol (VVT)*, local public transport operator;
- Municipalities of Lienz, Oberlienz, Obertilliach, Sillian, local public authorities engaged for the installation of the additional e-car sharing station within the SMARTA2 Project;
- Chamber of Commerce; Chamber of Labour.

Mobility services provided/addressed

The main characteristics of the service are the following:

- 13 electric vehicles (RENAULT ZOE, BMW I3, VW Golf) available to individual users (with valid driver license) for hire and located in thirteen different areas¹⁹, with one vehicle in each area;
- The vehicles can be booked at any time via the carsharing app. Each FLUGS must be brought back to the respective location and connected to the charging station for subsequent use by other users. If the parking space at the charging station is occupied, users are to park in another parking lot and report it to the service hotline (available 24 hours a day every day of the week)
- Registration is free. Users can choose between two types of tariffs:
 - "Tauernwind"(without fixed monthly fees):
 - 4,50 EUR / hour (or 5,50 €/hour depending on the vehicle) and 0,25€/Km;
 - 51,00 EUR / day (100 kilometres included); 99,00 EUR / weekend tariff Fri-Sun (200 kilometres included);
 - Daily rate 24h: 51,00 €/day including 100 Km, thereafter 0,25€/Km;
 - Weekend flat rate: 99,00 €/day, including 200 Km, thereafter 0,25€/Km.
 - "Dolomitenglanz"

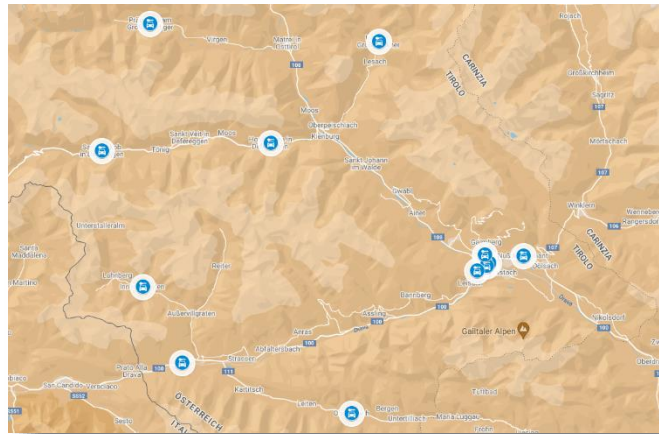


Figure 51 - Flugs E-carsharing geolocalised stations

¹⁹ Lienz / Steger Garten (near the train station); Hopfgarten i. Def. Gemeinde; St. Jakob i. Def. Gemeinde; Lienz / Michaelsplatz (hinter Dolomitenbank); Sillian Raiffeisenbank; Lienz / Reimmichlstraße 2 (Autohaus Plössnig); Lienz / Steger Garten; Innervillgraten Gemeinde; Nußdorf-Debant Gemeindeplatz; Prägraten Gemeinde; Obertilliach Gemeinde, Dorf 4; Lienz / Brixner Platz (Friedensiedlung); Gemeinde Kals.

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- fixed monthly basic fee of €5,50/month;
 - 2,50€/hour (or 3,50€/hour depending on the vehicle) and 0,25€/Km (7:00 a.m to 8:00 p.m.);
 - 0,50€/hour and 0,25 €/Km from 8:00 p.m. to 7:00 a.m.
 - Daily rate 24h: 38,00 €/day including 100 Km, thereafter 0,25€/Km
 - Weekend flat rate: 99,00 €/day, including 200 Km, thereafter 0,25€/Km
- Users over 21 years old in possession of a KlimaTicket Tirol of VVT can use the fleet of electric cars of floMOBIL, Beecar and FLUGS operator since a partnership between the car sharing operator and the local public transport operator is in place to offer integrated ticketing. Users can pay a one-time fee of 100€ to purchase the Car-sharing Tirol2050 card (online on the VVT website or at the VVT customer center). The period of validity corresponds to the period of validity of the annual ticket. Users receive 20 free hours of car-sharing use. Once the 20 hours have been used, users pay 4 euros for each additional hour. The number of kilometres is unlimited.

Ridership and other key metrics/results

A specific survey²⁰ was developed during April and May 2021 targeting local inhabitants in East Tyrol pilot area. The survey received 371 answers in total. Key results can be summarised as follows:

- *Awareness and acceptance:*
 - 135 respondents (36%) have at some point heard about the service in their area;
 - Out of the 135 respondents aware of the service, only 42 had used it before (11% of the total);
 - In terms of satisfaction level, 33% of the 42 respondents are very satisfied, 36% are satisfied and 21% are very dissatisfied.
- *Limiting factors (i.e., aspects to be improved):*
 - (poor) coverage of the service (make the service available at more places);
 - Availability/frequency of the service (make the service available more frequently);
 - Cost of the service (make it cheaper).

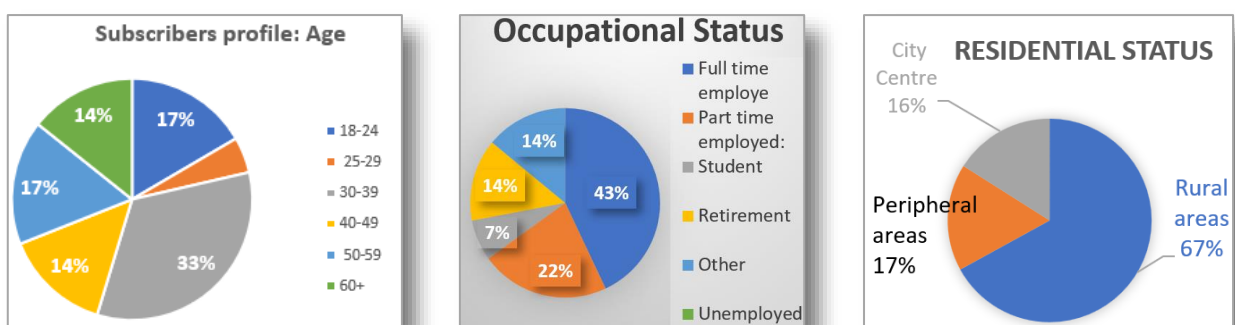


Figure 52 – Profiles of service subscribers

²⁰ Surveying populations in rural areas – Quantitative Evidence from East Tyrol, accessible at https://ruralsharedmobility.eu/wp-content/uploads/2021/05/Survey_report_East-Tyrol_final.pdf

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Supporting technologies

The Flugs E-carsharing service is supported by the following tools:

- A website for registration to service;
- An app “MOQO” (for car, bike, and scooter sharing in the area) for registering, validating driver’s license, and storing means of payment. The app allows booking the service, selecting the vehicle and location, and the booking period;
- Each car is equipped with an on-board device GPS based, allowing registered users to book, locate and unlock the car through the MOQO app;
- A central control room application, at disposal of the operator for service and fleet managing and monitoring activities.

Engagement aspects

Several engagement activities and initiatives have been pushed over the years, with a significant boost during the implementation of the SMARTA2 Project. These include:

- The publication in 2017 of the “E-Mobility Strategy East Tyrol 2030”, a local policy instrument that promoted a fast and coordinated shift towards e-mobility within East Tyrol, in support to the enlargement of e-carsharing in the region. This strategy was developed together with local public authorities.
- The commitment of the Regional Government of Tyrol to promote the e-carsharing system by providing special funding opportunities for municipalities.
- Regular table discussions with relevant stakeholders of the SMARTA2 demonstrator, supporting the e-carsharing systems with different activities (testing events to promote e-carsharing, direct mailings for information dissemination, role models in newspaper, etc.).
- Consultation and validation workshop (on 28/01/2020, in the context of SMARTA 2 – Demonstrators project). The aim of this workshop was to discuss and validate the most urgent rural transport challenges in the region, identify issues that may unfold during the preparation and implementation of the demonstrator and discuss relevant mitigation actions, and finally, establish a common understanding regarding the expected impact of the demonstrator in East Tyrol. The workshop was attended – amongst others – by representatives of the municipalities, a representative of a local bank, the energy provider and RMO.
- A SMARTA2 awareness raising campaign including a website, flyers, testimonial video clips, ads in the largest weekly newspaper, the largest online platform and at the local radio, a press release and press conference, as well as info-days in every municipality in which a new carsharing station was installed.
- Provision of financial incentives to users of the services. These included free public transport tickets for a period of 2 months for approximately 130 users, within the SMARTA2 demonstration period.

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3.1.3 Timelines and milestones

Milestone no. 1: 2015 - Launch of the service

Launch of the service with one shared e-car in the city of Lienz, as part of the implementation of social projects under the coordination of the association “Energy Impulse East Tyrol” with the aim to improve the quality of life in the region of East Tyrol.



Milestone no. 2: 2016 – New operator

The system is overtaken by “Regionalenergie Osttirol (REO)”, an agricultural and forestry local Cooperative established in 1996 grouping forest owners in East Tyrol and Carinthian communities. The Cooperative manages the service with dedicated staff with relatively low workforce (staff trained to perform multiple functions). A call center is available 24 hours a day every day



Milestone no. 3: 2017-2018: First expansion of the service

The system is expanded, reaching 9 locations and 9 vehicles. Integrated ticketing and multimodal trip planning of e-carsharing with public transport buses becomes available



Milestone no. 4: 2019: SMARTA2 Demonstration Project kicked off

Kick-off of the SMARTA 2 Project demonstration, consisting of:

- *Extension of the service with 4 new e-carsharing stations in Oberlienz, Lienz, Obertilliach and Sillian, with one new car each, reaching 13 areas in total with 13 vehicles;*
- *Around 300 free carsharing and public transport tickets;*
- *Implementation of several communication activities in order to spread the word about the initiative.*



Milestone no. 5:

A new and simpler registration and booking app is released in mid-2021 to make easier the process of registration and booking. The vehicle fleet is used not only for local journeys, but for parcel services (medical products) and community transport (e.g. Gemeindemobil) with volunteers as drivers as well. This increased the range of the services and the efficiency of usage. Following the idea of Mobility as a Service (MaaS), the same booking app can be used for bike sharing in the province as well. No further changes

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have been made neither in terms of additional areas covered nor service offered (i.e., the vehicles available in each of the areas).

3.1.4 Long-term assessment

Success, Durability and Expansion

The service is still up and running and recently has also been promoted to visitors and tourists. Over 2023, it is planned to reinforce the integration with the public transport service by offering a combined (intermodal) booking platform of public transport and e-carsharing.

Regionalenergie East Tyrol (REO) connects East Tyrol and Upper Carinthia through the FLUGS e-carsharing service, and thus create important infrastructure for the rural area in collaboration with the local partners. FLUGS eCarsharing enables all users to drive through East Tyrol and beyond in a climate-friendly, flexible way and at affordable rates. However, eCarsharing is not yet as well accepted in the rural areas as REO would hope it would be. Anyway, REO depends on the subscriptions and use of the users to the service; so, to be able to continue to maintain the locations, rise them and increase the sales, it needs that more users use the service. For this reason, REO invests and believes in dissemination and communication activities through the rural population. It has still to be clarified if and how the system will evolve in the future. It is still not clear whether the plan is to expand the e-car sharing network in the area.

Funding and Financing

Concerning the business model, it has to be noted that at the moment the car-sharing company is developing the pilot mainly for commercial reason (i.e., be present in the area as energy provider) and not for the carsharing business.

FLUGS eCarsharing is partly outsourced, indeed, the booking platform is supplied by MOQO, and the telemetry is provided by Convadis. REO offers FLUGS eCarsharing service, and it deals with the maintenance activities, site support, processing, billing, evaluations, public relations, marketing, and other internal assets. The only sponsor is RMO, that deals with promotion and dissemination activities. In addition, RMO organised a funding project IWB from March 2021 to October 2022. However, there has been some delay on the project and no costs of this have been funded yet; it is still all in progress.

The revenues (provisional data 2.000,00 €/month) are able to cover partially the fixed costs of the fleet (the monthly total operational cost is around €530 per car corresponding to 6.360€ per car/year not including the working hour of the employee managing the service 20h/week; the capital costs (including the establishment costs for initial phase (car stickers for branding, installation of the carsharing system, prepayment of the leasing for the e-car) is around € 6.300)).

Why is it considered a good practice?

Flugs is providing a flexible and affordable mobility solution for residents and tourists in different rural; this contributes to increase the awareness for sustainable mobility, changing the mobility behaviour of the citizens away from private cars, reducing the costs for private mobility; it also tries to reduce the need for the second and third car per household. The service is also integrated with the public transport information system.

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3.1.5 Transferability considerations

CONTEXT PECULIARITIES	TRANSFERABILITY CONDITIONS
<p>In Austria and East Tyrol, there is an overarching objective to build an attractive area where people can live without being forced to have two or three cars per household. In the meantime, RMO is developing projects and strategies to keep people living in rural areas and attract more tourists. Municipalities are interested to offer affordable and environmentally-friendly mobility solutions. The Flugs service contribute to two overarching environment strategies recently adopted: i) “So goes Tirol 2050” (2016) on sustainable mobility, and ii) E-Mobility Strategy East Tyrol 2030” (2017), to ensure a coordinated shift to e-mobility. The presence of a local cooperative interested in taking the initiative of operating a carsharing service and business is another significant factor.</p>	<p>The SMARTA2 pilot in East Tyrol showcased the benefits of using a structured approach with multi-stakeholders to tackle mobility issues in rural areas. The engagement process of stakeholders carried out both at the level of users and of local stakeholders could inspire other similar rural sites/areas. The introduction of multi-modal ticketing to provide first and last-mile connections to existing public transport services can support the long-term sustainability of the service, maximizing the use of existing resources. The Flugs e-carsharing is attractive for environment-aware users and has good physical and digital accessibility. Car-sharing as a mean to reduce the need to own a 2nd or 3rd car per household could have potential. The transferability might depend on the availability of necessary equipment for maintenance and operation.</p>
DIFFICULTIES ENCOUNTERED/WEAKNESS	LESSONS LEARNT
<p>Difficulty in actively engaging a car sharing provider. Rural areas are not so attractive to build a business case for investment. In rural areas, there are less users, so they need other motivations for being involved. Finding suitable locations for the e-car sharing stations might not be so easy. There are structural issues surrounding planning restrictions in the design and construction of infrastructure to support space for things such as car-sharing.</p>	<p>The service provides a means of shared mobility with relatively low workforce (staff trained to perform multiple functions). Working with businesses and private stakeholders (e.g. the banks) is easier compared to dealing with the citizens, as they have specific “behavioural objectives” to achieve, such as changing the mobility behaviour of their employees toward sustainable transportation. They mostly have two or more cars in their business. It may suit them to provide infrastructure for car-sharing vehicle(s) and/or the recharging point. Free testing phases are very important, so clients can make first experiences with the system and register themselves.</p>

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**Main data sources**

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Website sources

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