

4.5 Shared Use Mobility Agency, Elba (IT)

ICT platform for planning, offering, coordinating, and managing different ride sharing services integrated with the (conventional and/or flexible) Public Transport (PT) service, specifically designed for the island of Elba in Tuscany (IT). Users could get all information on the mobility services available in the island and, on the other side, could become potential mobility service providers of shared trips, through the notice board, the key component of the Agency allowing users to share rides (trips request and offer)



4.5.1 About Elba, Italy

<u>Country</u>	<u>Region</u>	<u>Target Area</u>	<u>Population</u>	<u>Population density</u>	<u>Visitors/year</u>
Italy	Tuscany, Elba island, the third biggest in Italy	225 Km ²	32.000 residents in the whole island	139 inhabitants /km ²	450.000 visitors/year with a daily presence of about 30.000 people/day in the summer

With an area of 225 km² Elba Island is the largest island of the Tuscan Archipelago (within the Province of Livorno) and the third largest in Italy. Large parts of the island are rural, with many dispersed villages/origins, concentrated destinations (beaches, discos/bars, etc.) and few main attraction destinations (main ferry port area, high schools, hospital, etc.). The territory is extremely fragmented, being divided into 7 Municipalities, each counting between 1.800 and 4.700 inhabitants except one (Portoferraio with about 12.000). Overall, the Elba residents are around 32.000. Elba can be considered as a “spread” urban area served by main interconnection routes, often narrow and steep and not designed for high volumes of traffic. Since the ‘50s, Elba is a renowned tourist location, chosen by national and foreigner guests for summer vacation periods. The main economic activity in Elba is related to the tourism in the HO.RE.CA sector: mass tourism (including daily visitors) during the summer period and niche-tourism during the off-peak seasons (e.g. bikers, etc.). A second relevant activity is related to the maritime transport (Elba is



Figure 69 - Elba Island

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connected from Portoferraio with the main inland harbour Piombino with more than 30 ferry trips per day in each direction during summer) and the fishing (including fish tourism) and agricultural activities. Moreover, in the last decade, an increasing number of B&B has been registered (as in many other cities and rural areas) representing another evolving aspect of Elba economic context. The Elba Island suffers from a high tourist seasonality, especially on summer, when the share of tourists can reach an average 80-85% of the entire population, causing significant variations in the public transport services demand. In the past few years, in particular after COVID, Elba registered a relevant decrease of foreign tourists and in parallel a notable increase of Italian tourists generally reaching Elba with their own car.

The high seasonal mobility demand is not appropriately and efficiently managed by the available PT services. There are no suitable integrated solutions and during the summer tourist season the main road axes are overcrowded by cars. The number of PT users increases during the summer-touristic period but the overall utilization rate remains very low considering the total number of tourists arriving in the island.

4.5.2 Description of the Mobility Solution

The Shared Use Mobility Agency (*SUMA*) is a platform for planning, offering, coordinating and managing different ride sharing services (e.g. shared taxi and volunteer lift giving) integrated with the (conventional and/or flexible) Public Transport (PT) services and for providing info-mobility services to better answer to resident and tourist mobility requirements. *SUMA* was designed for Elba Island (Tuscany, Italy) within the Horizon 2020 [CIVITAS DESTINATIONS](#) project. *SUMA* allows the centralization of information relating to PT and mobility services, as well as the networking/coordination of different service providers (in particular operators of bike/scooter/car/boat rent services). *SUMA*'s innovative aspect mainly lies in the fact that users have a unique point of access to all information on the overall mobility offer of the island in a consistent and efficient way (information, booking, etc.) and that it functions as a “broker” for the management of the user trip request and the different flexible and ridesharing services offer integrated with conventional PT services. Finally, *SUMA* was designed for being easily adapted to a wide range of transport service schemes, territorial contexts and background conditions and is also open to a wider range of other added-value tourist service.

SUMA helps responding to the mobility needs of low demand areas through the coordination and integration of ride sharing solutions with the overall mobility and PT. *SUMA* main objectives were:

- to provide a coordinated mobility offer including collective and private modes encouraging tourists and residents to use alternatives to private cars to move around the island, thus enhancing Elba's attractiveness;
- to increase the use of ride/asset sharing services, thus reducing the use of private cars and the related traffic congestion;
- to reduce transport-related emissions, by aggregating the demand and improving the transport service efficiency;
- to integrate sustainable transport modes with Public Transport and increase the PT offer quality.

The Shared Use Mobility Agency concept was developed in the framework of a SUMP (elaborated within the CIVITAS DESTINATIONS project) covering the whole island (the 7 small municipalities of the island and different rural areas). Elba SUMP had as main objectives the reconciliation and enhancement of the two main parallel axes of island mobility (collective transport and flexible/ridesharing services) as well as the reduction of the traffic congestion and negative environmental impacts.

Target user groups and needs

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SUMA mainly answered the mobility needs of:

- a) Tourist/visitors arriving in Elba without a car or willing to move in Elba without car;
- b) Residents living in dispersed rural areas out of the connection of conventional PT services.

The difficulty in finding correct and updated information on Elba public transport services, the inadequacy of PT services to deal with significant passenger increase (i.e. over 30% increase during the summer peak season) as well as their limited coverage in terms of frequency and served areas result in a low percentage of PT use covering only 14% of the overall mobility demand. SUMA tried to foster the use of PT services, by enabling access to information, search for transport options, travel planning, management of ridesharing service and by offering the possibility to drivers to give, on a voluntary basis, lifts to users.

Other target users were represented by bike/moto/car/rental services operators since their services offers are exposed and promoted by the SUMA platform in terms of available resources (i.e. information about nearest depots, the number of bikes typology availability, the tariffs and services times, etc. in case of a bike rental operator).

Final target users were represented by Elba Municipalities and entities involved in the mobility planning and control of transport services. SUMA was designed to share a repository for all the information and documents supporting the mobility and transport services planning for the Elba Island.

Involved bodies

The stakeholders included the Municipality of Portoferraio (responsible for the management of the Agency implementation and operation as coordinator of the other municipalities over the island); the Tuscany Region (as Authority regulating PT in the region); Local Administrations as Livorno shire and planners who could have used the data collected by the Agency for defining PT/mobility policies and plans; mobility (rental services) operators networked by the Agency; commercial operators (e.g. discos, restaurants, supermarkets, etc.) to be advertised as main points of departure or arrival of “shared trips”; third-party developers accessing the open data published by SUMA (based on the data collected from different systems/data sources and integrated) to develop new applications.

Mobility services provided/addressed

SUMA provided multimodal info-mobility services, so that users could get all information on the mobility services active in Elba island and, on the other side, SUMA allowed the users to become potential mobility service providers of shared trips (volunteer lifts giving). In fact, users could either ask other users to share a trip e.g. share a taxi) and could, at the same time, offer to share their own cars with other users for reaching a common destination.

The available metrics relates to estimation of target users made during the design phase to feed the CANVAS Business model of the mobility solution. In particular the following metrics were estimated:

- **N° Users in the year.** considering at least an average of 2 contacts per day for information on the mobility offer, rentals, mobility data and user reports, the annual estimation was about 1.400-1.500 contacts per year (throughout the first years of Agency operation)
- **N. of shared trips** In the first years of operation with normal tourists flow, an average of 10 shared trips per day was assumed for the peak tourist period (about 90 days), while for the other periods of the year an average of 1 shared trip per day. So, the total forecast was about 1.000 shared trips per year

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- **N° of rented vehicles in a year:** Assuming that out of the total of the 25 rental operators of the island, the 6 largest rented on average 6 vehicles (cars, bikes and scooters) per day for the peak period (about 70 days) and the other 19 on average 2 vehicles per day, there was an annual total of approximately 5.180-5.500 annual rentals. With the greater visibility provided by the Agency it was assumed an increase in rentals of at least 10%.

SUMA was operational only during the summer of 2020 for the testing period after the implementation, in order to understand the level of operation and acceptance by the market. Unfortunately, the Agency was scarcely used during that period. Only about 100 downloads of the Agency APP were registered. This low number was due to the advent of COVID, the related travel restrictions and impacts on the tourism sector.

The summer season of 2021 should have been the first year of real use; however, several issues and problems emerged during the implementation phase, although the design of the ICT platform (functions, components, architecture) was very detailed and defined on the basis of a large set of different use cases. Therefore, after the testing period, the Municipality of Portoferraio decided not to bring forward the Agency operation.

Organizational set-up and institutional arrangements

SUMA responsible/coordinator was the Municipality of Portoferraio. SUMA would have required an appropriate staff to be operated/managed. Basically, the planned organization structure was defined as follows, in terms of involved staff:

1. a supervisor,
2. two operators for daily management (working in turns),
3. a technician for network management and first-level interventions.

The operational procedures were defined in order to allow the following activities: update/management of the static contents of the information channels (web portal, APPs, etc.), monitoring of connectivity and data exchange between the SUMA platform and external ITS/databases, update/ management of documents to be manually uploaded on the repository of mobility observatory, interactions with mobility (rental services) operators networked by the SUMA, supervision of ride sharing service management component.

For managing the above listed activities, in the first period the staff should have been composed by 1 technician, as team member of the Municipality of Portoferraio. Regarding the daily management, the intention of the Municipality was to appoint a cooperative of young people for a period of 3 years delegating all the planning, management and evaluation activities.

Supporting technologies

SUMA was based on an ICT platform with the following main components:

- a. Open Data Layer (for the collection and integration of the data coming/transmitted from/by different data sources under a centralized and standardized data format). The data are available to the other components and exposed as open data;
- b. Provision of the info-mobility services: through the elaboration of the data integrated by the Open Data Layer component and provision on a mobile app and web-portal.
- c. Management of the service operators networking and support to mobility observatory. This component networks the rental service offers exposing info and availability.

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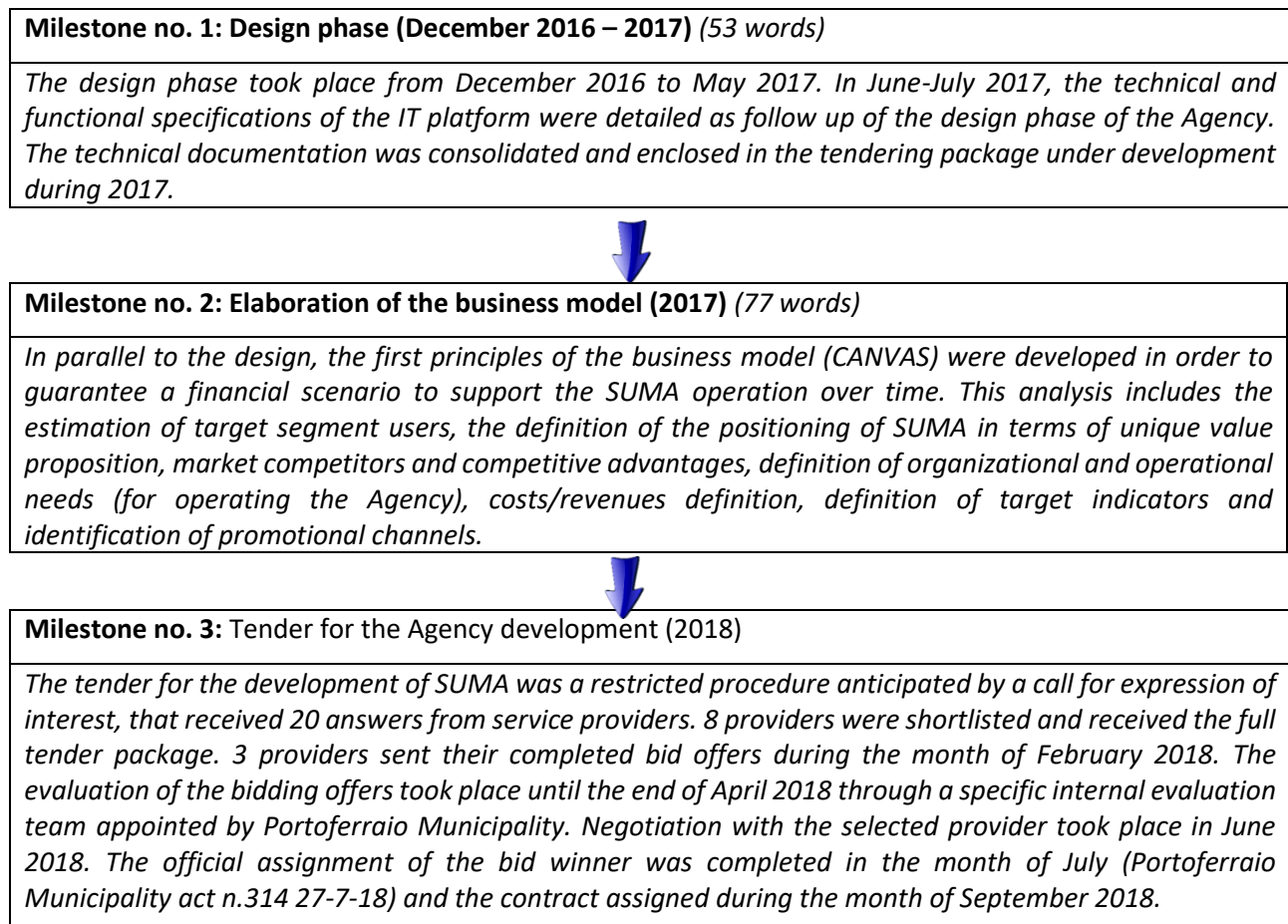
- d. Provision and management of ride sharing services based on “Message board for sharing trips” allowing to answer to different use cases: to share a trip on private vehicle (in the short time, planning it in advance according to holiday dates), hitchhiking, share a taxi trip.

The physical architecture was based in “cloud” structure with architecture developed with SOA approach based on different standards as W3C (web services), XML formats for the data exchange and more popular standards was used like DATEXII, SIRI, etc. depending on the typology of system to be interfaced.

Engagement aspects

While SUMA was being designed, several concertation meetings were organised to provide participants with information about the benefits of an improved public transport system and a safer and more sustainable mobility. These events saw the active involvement of different Elba Municipalities, commercial activities (hotels), local interest groups and associations, citizens, public transport operators, taxi services, car rental companies, bicycle rental operators. In particular, car and bike rental companies, taxis and shipping companies would have been mainly involved in the provision of data related to their services as well as in the promotion of the Agency. By providing a common repository for all the information and documents supporting the mobility and transport services planning for the Elba Island, SUMA would have supported the interactions among different 7 local Municipalities in order to integrate the different mobility approach in a possible unique policy and control the different transport services operated in summer and winter periods.

4.5.3. Timelines and milestones



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**Milestone no. 4:** Development of the Agency Platform (2018 – 2019)

The selected provider developed the Agency platform and related APP during the year 2019, following all specifications elaborated during the design phase. Several issues and problems emerged during the implementation phase, although the design of the ICT platform (functions, components, architecture) was very detailed and defined on the basis of a large set of different use cases. These difficulties postponed the release of the first demo version.

**Milestone no. 5:** Testing of the Agency Platform (2020)

The first developed demo version of the SUMA platform and related mobile application was released and tested during the summer of 2020 in order to understand the level of operation and acceptance by the market. However, the advent of COVID 19 was the main cause of its only minimal use in 2020 by citizens and tourists (only 100 downloads of the APP)

**Milestone no. 6:** No-Go decision (2021)

The very limited use of SUMA and the consequent lack of data relating to the use of the various modules prevented any changes or improvements from being made to maintain or to increase users' satisfaction. Moreover, the difficulties in defining the appropriate management structure for the maintenance of the Agency, as well as the not clearly defined and detailed business agreements with the mobility (rental services) operators led the Municipality of Portoferraio to not pursue with the Agency operational start-up.

4.5.4 Long-term assessment

Success, Durability and Expansion

SUMA was implemented but did not enter into operation. The main reasons were:

- scarce use of SUMA during the testing period in 2020 (due to COVID emergency) that prevented the collection of real data regarding the level of utilization and quality assessment of SUMA Agency by the different users, involved operators and stakeholders. This didn't allow evaluation of SUMA impacts nor the definition of possible improvements to the platform on the basis of the users' feedback;
- difficulties in defining the appropriate management structure for the maintenance of the Agency;
- not clearly defined and detailed business agreements with the mobility (rental services) operators.

Therefore, SUMA has not been expanded at all, neither in functionality nor in coverage area and has not been replicated elsewhere. However, the concept and Agency functionalities were presented elsewhere, in particular to the Mobility Agency of Bologna (Emilia-Romagna region in Italy) that selected this mobility solution as the most interesting and, possibly, replicable measure for Bologna and its province within the CIVITAS DESTINATIONS project.

Funding and Financing

The operation of the Agency should be self-sustained without any planned subsidies considering the revenues generated by the Agency itself. A business model for the long-term financial viability of SUMA must

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be detailed at the very beginning. On the basis of the elaborated business model, a first hypothesis (which could vary significantly) of the annual operating estimated costs after 2020 was

- Staff for operation and small software maintenance: n. 2 persons x 30,000 €/year = 60,000 € /yea.
- Offices rent (600 € /month) = 7,200 € /year
- Platform and technologies maintenance 12,000 € /year
- Various expenses 7,000 € /year
- Promotional Campaigns 8,000 € /year

Total 94,2001 € /year.

These costs of the management (staff operation, software maintenance of the platform, etc.) could be covered by the external revenues deriving from these first hypothesis:

- a. **annual fee** (to be established on the basis of the performance of the first 2 years of activity), to be requested at the time of registration to users (both users and commercial activities/operators);
- b. **annual contribution from renting operators** (bikes, cars, scooters, boats, etc.);
- c. **contribution from interested commercial operators** (e.g. discos, restaurants, shopping centres, etc.) as main points of departure or arrival of “shared trips”, in order to increase their attractiveness and safety level;
- d. **possible contributions from local administrations or consultancy companies** interested in the documentation and data on mobility and transport accessible through the appropriate “Open Data Layer” of the technological platform;
- e. **services/studies realised by the Agency of mobility and transport**, over the time (such as collecting and analysing traffic conditions, advertising on the portal, mobility management analysis etc.);
- f. **management, in the future, of shared mobility services as part of the PT service contract.**

Why is it considered a Good Practice?

SUMA faces and answers the mobility needs of low-demand areas, coordinating the available transport/mobility offer. It allows the integration of ride sharing services with Public Transport and also the integration of other relevant components of the mobility system (integration of data, payment tool, user information and feedbacks, service KPI validation and evaluation tools, etc.). Moreover, SUMA can be easily adapted to a wide range of transport service schemes, and background conditions and it is not limited to transport and mobility services, but also potentially open to a wider range of other added-value tourist services. It can be considered as a first “step” of a future MaaS scenario and provides B2C (Business to Customer) services allowing the coordination/interaction of the different mobility stakeholder and operators.

4.5.5 Transferability Considerations

CONTEXT PECULIARITIES	TRANSFERABILITY CONDITIONS
The SUMA concept is not strictly related to a specific territorial area such as an “island” nor small-medium size “urban areas”, but can be personalised on the	Key conditions for the transfer of the concept are:

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<p>requirements and characteristics of rural areas or small/large urban areas. SUMA also allows the integration of other relevant components of the mobility system (integration of data, payment tool, user information and feedbacks, service KPI validation and evaluation tools, etc.). However, at the beginning of the implementation and official launch phase the support of the Local Authorities (municipalities) in terms of resources and preliminary organisation is necessary.</p>	<ul style="list-style-type: none"> -the possibility to cover the initial investment costs, in particular for the ICT platform realisation -the technical capacity required to manage the Agency - an effective promotional campaign among the target users (tourists in particular) -the need for maintaining good cooperation among the involved stakeholders the number of rental operators that should increase during the Agency initial phase of demonstration -the need to establish a detailed business plan with the estimation of all costs and revenues.
<p>DIFFICULTIES ENCOUNTERED/WEAKNESS</p>	<p>LESSONS LEARNT</p>
<p>The weakness of the future operation of SUMA are identified in the following: a). financial viability to be proven (over time) b). need for maintaining good cooperation among the involved stakeholder c). the number of rental operators networked (as follow up of the set of agreement to expose their services on the Agency d). the supporting IT platform of SUMA should be demonstrated to allow an easy operation by the involved staff.</p>	<p>Two clear prerequisites should be taken into account for the possible success of the SUMA Agency: achievement of clear, effective and positive results (from the platform implementation and organisational aspects to the achieved “real number” of rides) during the testing phase the ride/asset sharing services should have been planned as “support” and complementary mode of PT service and should be clearly defined in the SUMP</p>

References for further details
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