

Co-creating Sustainable Urban Mobility Solutions for Guests and Citizens: The Experience in the Elba Island



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Abstract This chapter illustrates a co-creation approach engaging stakeholders and citizens to develop a shared agenda of sustainable transport solutions, responding to travel needs which are qualitatively and quantitatively different for residents and tourists. The chapter is articulated in three sections. The first section illustrates the co-creation approach and the topics addressed in all six DESTINATIONS demonstration sites where this approach has been used to a greater or lesser extent. The second section describes more extensively the application of the co-creation approach in the Elba island case, illustrating the process and its main outcomes, including the definition of a strategic agenda of goals and actions included in a draft Sustainable Mobility Plan for the whole Elba island, and a hypothesis of new bus services operating in the high season co-created with the engagement of managers from the regional Public Transport Authority (Osservatorio della Mobilità—Provincia di Livorno) and from the Transport Operator (CTT-Nord). The third section discusses some lessons that can be drawn from the successes and failures of the co-creation approach in the Elba case. The application has demonstrated the feasibility and suitability of the co-creation process to effectively engage stakeholders and groups of visionary citizens (the “change agents”) in the formulation of sustainable mobility plans and agendas. On the other hand, follow-up was lacking—no formal procedures to implement decisions based on the shared agenda were initiated—and the concluding section of the chapter discusses some reasons for this failure, and possible remedies for better anchoring the co-creation approach in future policymaking

Keywords Co-creation • Seasonal mobility • Stakeholders engagement • Scenarios

Abbreviations

LL	Living lab
PT	Public transport

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SMI Small-medium island
 SUMP Sustainable urban mobility plan

1 Introduction: Stakeholders Engagement to Co-create Sustainable Mobility Solutions

The amenities of small to medium island (SMI) destinations attract a population of tourists that share living in the islands with the resident population. Depending on geographical and accessibility circumstances, visitors can enjoy staying on an island for a day, a weekend, one or more weeks, or even for several months. As a result, the varying concentrations of tourists and the different duration of their stay entail different mobility challenges in different periods of the year. Residents and tourists use the same transport infrastructure, usually limited to a road network, as the critical mass for building a rail network is hardly achieved in SMIs. Moreover, SMIs usually can be accessed only by ferry at one or a couple of main ports, or with private boats. Due to the lack of suitable and affordable alternatives to private car use, a large proportion of visitors, therefore face an additional cost as they embark on their car even for short visits.

The Elba island in Italy—located only 1 h of ferry journey away from the Piombino port on the Tuscany mainland—is an emblematic example of SMI with serious mobility problems, which shape and constrain the economic development and quality of life on the island for the residents and tourists alike.

In the following sections, we illustrate a participatory process engaging groups of citizens and relevant stakeholders to set an agenda of priorities to improve future mobility to, from, and within the island, and the first steps undertaken in the context of the DESTINATIONS demonstration project to single out a fully fledged ELBA Sustainable Urban Mobility Plan (SUMP).

1.1 *The DESTINATIONS Challenge: Sustainable Transport Solutions to Meet Residents and Tourists Demand*

In any touristic destination, mobility is a key component of the daily experience of residents and tourists alike. The purposes and needs of mobility are, however, different for these two categories, reflecting seasonality, the varying daily demand patterns, and the typologies of mobility services that are needed to satisfy these demand patterns.

The common challenge for all six DESTINATIONS sites¹ is how to respond to travel needs which are qualitatively and quantitatively different for residents and

¹ Madeira, Limassol, Las Palmas, La Valletta/Malta, Rethymno, Elba.

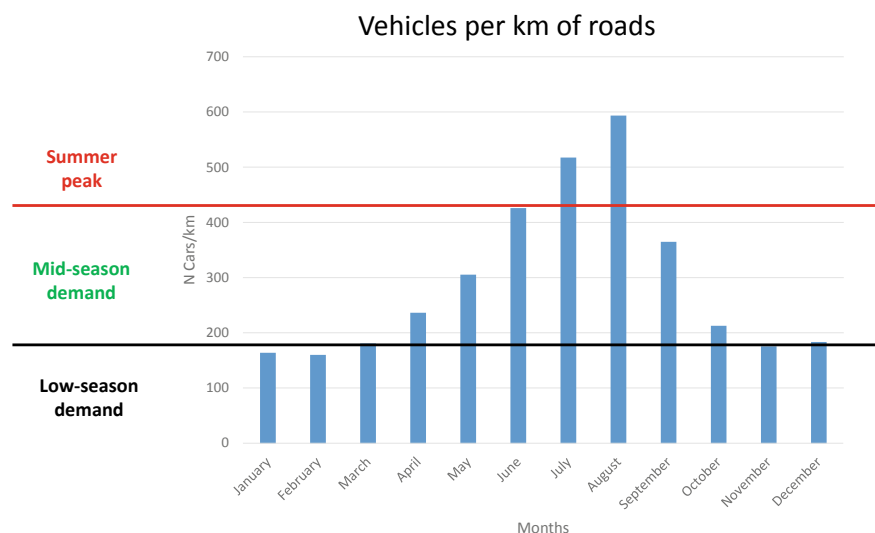


Fig. 1 Seasonality of transport demand in the Elba island

tourists. This challenge is exacerbated in small to medium size tourist destinations such as the Elba island—the smaller of the six demonstration sites, with a population of about 30,000 residents that grows at least fivefold in the high season.

As shown in Fig. 1 below related to the Elba island “cars carrying capacity”, the seasonality of transport demand is really a wicked problem for small-medium tourist destinations, as the whole transport system supply (road network, public transport services, parking space, etc.), which is designed for the resident population in the low season (winter), finds itself severely under stress already in the mid-season (May, June, September), and dramatically so in the high season (July, August).

The proxy used to measure the “cars carrying capacity” is the number of vehicles per km of road infrastructure. The latter is dimensioned for a rural territory—the whole island hosting overwinter about 30,000 residents mostly concentrated in Portoferraio (about 13,000 inhabitants) and for the rest distributed in 6 other small municipalities—with a pressure of about 200 vehicles per km in the winter season. This pressure, however, grows to a range between 200 and 400 vehicles in the mid-season, and rises to something between 500 and 600 vehicles on an average day in July and August, with the inflow of private cars embarked in Piombino.

Moving around the island in the high season is difficult, congestion on the roads and at the parking spots available at the beaches and in the small towns is high, which severely constrains the freedom of mobility of both residents and tourists. In July and August, the island experiences a level of demand equivalent to a city of 150,000 inhabitants, but the transport infrastructure (the road network) is unchanged, and the supply of transport services (bus lines, flexible services) is direly insufficient.

1.2 Co-creation Methodology

Finding sustainable transport solutions for the different requirements of the low and high season is really a major challenge, which was addressed in the Elba demonstration case engaging local and regional stakeholders and groups of citizens in a co-creation process. The Elba island is an emblematic example of a polycentric region, and it was necessary to consider the different needs and requirements of the seven municipalities within a unique co-creation and planning process.

The co-creation process was designed applying the Poly-SUMP methodology and guidelines (Poly-SUMP, 2014) to the Elba reality. It further relied on (Kocak et al., 2014), for what concerns the peculiar aspects of planning sustainable mobility with participatory approaches in polycentric regions.

Finally, at the core of the Poly-SUMP methodology, the Future Search approach (Weisbord & Janoff, 2010) was applied and adapted to the Elba context, with the organization of a “future workshop” engaging citizens and stakeholders in future thinking. As shown in Fig. 2 below, the future-thinking approach leads participants to develop a critical view of the past, devising at the same time possible solutions in the future and finally elaborating actions for the present, having in mind strategic-long term goals.

2 The Experience in the Elba Island

The everyday—“business as usual”—scenario of mobility in the Elba island during the high season (July–August) features:

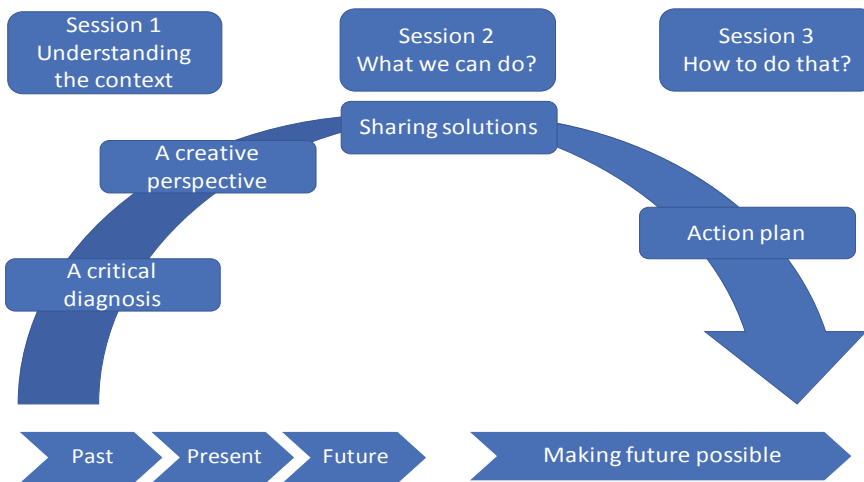


Fig. 2 Future search workshop structure

- A very high percentage of people using private vehicles for intra-island mobility (private cars are used by 80% of tourists), resulting in significant congestion levels in the summer period and the overall cutback of accessibility. The concentration of arrival/departure traffic flows in Portoferraio exacerbates congestion in the central part of the island;
- very high traffic flows crossing the centres of the different Municipalities due to the lack of bypass roads;
- a low use level of Public Transport (PT) services (only 14% of the PT offer). The mobility offer is fragmented in terms of ticketing, information, marketing, and coordination between extra-urban and urban services, failing to comply with the emerging needs of integrated solutions.

The aforementioned problems raise a wide range of issues that negatively impact the overall quality of the environment, citizens life, and tourists' experience, such as the traffic congestion in the city centres of the seven municipalities (especially in the evening), parking congestion in the areas of the most popular beaches, and road safety issues (especially for biking).

A general mobility plan for the whole Elba island would be needed to address these problems, but none has been established so far. Regulation frameworks are instead available that primarily concern the access and parking within individual municipalities, with no comprehensive, island-wide vision and policy.

However, different municipality documents recently claimed to build an “Elba SUMP” for the whole island—especially the Elba Sustainable Energy Action Plan (Patto dei Sindaci, 2014) that includes sections focused on mobility solutions.

Now, a full-fledged Elba SUMP is needed, and it should consider the main mobility challenges and measures to address the different—and somehow conflicting—travel needs of residents and tourists.

2.1 *Citizens and Stakeholders' Participation*

Building a vision for the whole Elba island sustainable mobility was the main ambition of the citizens and stakeholders participation process organized as one of the DESTINATIONS measures.

The Elba SUMP co-creation process was an instance of responsible research and innovation activity, aiming to align the DESTINATIONS measure—the drafting of the SUMP for the whole island—with the values, needs, and expectations of society—which were concretely represented by the citizens and stakeholders invited in the process. The interaction of science and societal perspectives is a crucial aspect of the process, as illustrated in Fig. 3 below.

Ideally, the full co-creation process should include five stages:

1. **Engage and empathize:** identify and invite local actors most affected by the topic (sustainable mobility), potentially interested to change the status quo.

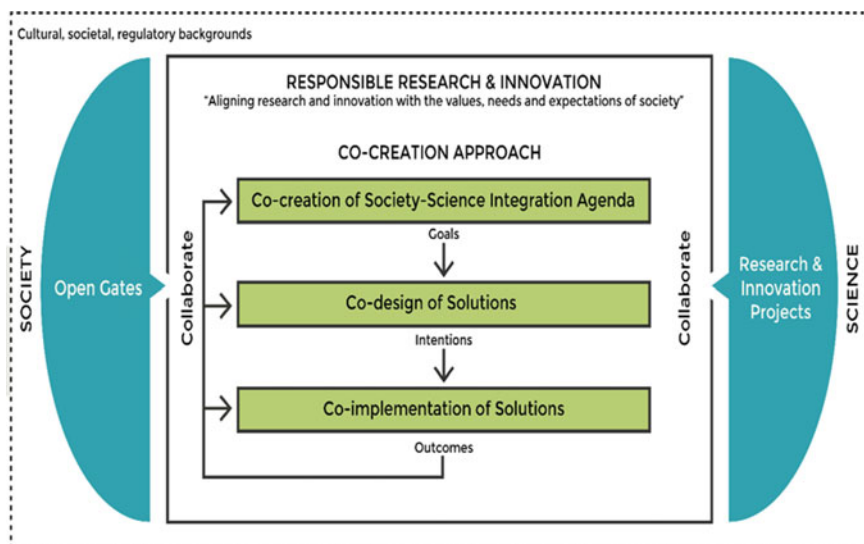


Fig. 3 Science and Society co-creation approach

- They are engaged as “change agents”, not in their capacity of representatives of a specific stakeholder category.
2. **Frame a shared agenda:** map the whole set of stakeholders concerned with the topic using a consistent framework to identify government, business, civil society, technical (e.g. transport operators, planners, etc.) stakeholders in place. Invite the stakeholder representatives and the change agents to a “future framing” workshop, using a Future Search methodology (Weisbord & Janoff, 2010) to structure the event. The outcome of this step is a framing agenda—the “agenda of needs for change” listing the sustainable mobility priorities.
 3. **Co-design solutions:** based on the agenda of needs for change, a more detailed list of actions is sorted out and included as a key measure set in a first draft of SUMP. A “practicability” check and a fine-tuning of the most important measures are carried out with the relevant technical and administrative stakeholders (those that would be in charge of controlling and/or implementing the measure).
 4. **Collaborative planning:** the measures passing the practicability check are further processed by performing a full technical, economic, normative, and financial feasibility analysis, and an ex-ante evaluation of their expected outcome and impacts against the SUMP baseline. Technical stakeholders are more heavily involved in this stage, as they would be the main actors in the next stage of implementation too.
 5. **Collaborative implementation:** the final step of the co-creation process aims to anchor the collaborative work undertaken in the previous steps in the administrative process, delivering a concrete set of new policies, regulations, decisions

taken by relevant public authorities in a coordinated fashion, responding to the priorities and solutions formerly discussed with the engaged stakeholders and change agents. In the Elba case, the first collaborative implementation step would be the formal approval of a whole Elba SUMP inspired by the outcomes of the co-creation process, and its implementation and continuous evaluation and monitoring by means of a set of strategic Key Performance Indicators (KPI).

In the Elba DESTINATIONS case, the first three stages have been successfully completed, while the last two stages were beyond the scope of the demonstration activities.

The identification of the different stakeholders was an important pre-condition underlying the overall consultation and stakeholders' involvement. Considering the specific socio-economic context of the island, we have identified the stakeholder categories more involved and interested in improving the mobility situation and quality of life, environment and development opportunities for the island, as well as small groups of active citizens, the so-called "change agents":

Stakeholders: actors interested in discussing the plan and actions for sustainable mobility in the island from their perspective, including:

- Public authorities with regulatory, planning, management and control competencies over transportation in the island (Region, Province of Livorno, Municipal Administrations);
- Other public bodies with complementary skills (e.g. the National Park of the Tuscan Archipelago);
- Private and PT operators (e.g. taxi, rental vehicles agencies, Local PT operators, etc.);
- Company and/or individual technology experts and planning of mobility and services;
- Entrepreneurial associations (hoteliers, chamber of commerce, etc.);
- Civil Society and Environmental Organizations (Legambiente, etc.);
- Local and regional media.

Change agents: Individuals that share the purpose of the initiative and are interested in contributing to the formulation of the plan and the implementation of the interventions. They are asked to contribute with ideas and proposals to formulate the agenda of priorities for improving mobility and quality of life on the island. In practice, they have been organized in small groups of citizens participating in the living labs² organized by DESTINATIONS in the municipalities of Rio and Portoferraio.

² Living Labs (LL) are defined in a variety of ways and there is no standard definition of the concept, even though the basic idea is more or less consistent across sources. The European Network of Living Labs defines them as "a real-life test and experimentation environment where users and producers co-create innovations" (ENoLL: <http://www.openlivinglabs.eu/>). According to the European Commission, Living Labs have been characterized as Public-Private-People Partnerships (PPPP) for user-driven open innovation. Trying to find the lowest common denominator, a general definition is given by Bergvall-Kåreborn et al., 2009, defining them as a "user-centric innovation milieu built on everyday practice and research, with an approach that facilitates user influence in open and distributed innovation processes engaging all relevant partners in real-life contexts, aiming

Besides the above categories of stakeholders directly involved in the process, resident population, owners of second homes, and tourists are the key target groups to be considered, if the general aim of a better and more sustainable mobility is to be pursued. These target groups were represented in the composition of the “change agents” group as well, including champions of each category.

2.2 Co-creation Events

The co-creation process was implemented through a series of meetings (Future Laboratories) in various locations of the island. Meetings were upon invitation, and they always included an introduction by the organizers on the meeting purpose, followed by adequate time devoted to discussions, structured with the help of facilitators so that all participants can express their point of view and formulate proposals.

Two Future Laboratories held in Rio Marina and Portoferraio, with the participation of about 20 active citizens who are particularly interested in the theme of sustainable mobility and in the future development of the island.

Participants have used a mental map—reproduced in Fig. 4 below—to identify problems and their intervention priorities. This map helped participants to organize

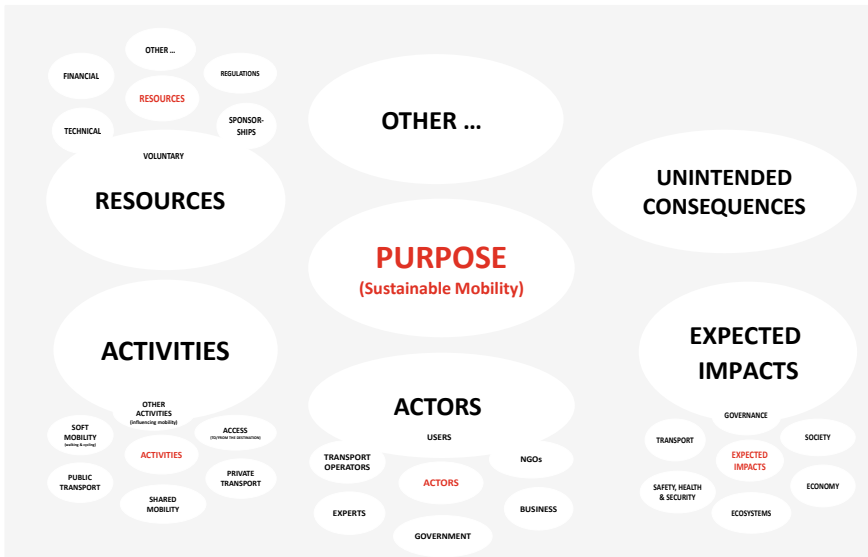


Fig. 4 Mental map of the sustainable mobility topics

to create sustainable values” (Bergvall-Kåreborn et al., 2009). What is striking about this definition is that it includes the goal of “creating sustainable values”, focusing more on the user integration in the context of a sustainability orientation and the real-world development environment.

their collective thinking, discussing the purpose of sustainable mobility, the actors concretely affected, the activities and resources needed to achieve the purpose, and finally the expected impacts and any idea of possible unintended consequences of sustainable mobility plans.

These elements were then used to prepare a broader discussion in the Elba Future Mobility Workshop (10–11 May 2017), where the same change agents and stakeholders' representatives have been invited to participate. The activities and results of this core event are described in a workshop report (Elba Sharing, 2017), disseminated to the wider public after the event.

The main outcome of the workshop was a “shared agenda of needs and actions for the future of mobility”. The workshop report also includes the full list of 30 participants, a combination of “stakeholders” and “change agents” engaged in a lively—and for most of them unusual—dialogue.

As a follow-up, the co-creation process continued after the core event to analyse the practicability of a new PT service re-organization, to meet seasonal and touristic demand. A “practicability study” was conducted involving the public authority (Osservatorio della Mobilità—Provincia di Livorno) and PT operator (CTT-Nord) in a number of meetings where the hypothesis of new bus service operation scheme was discussed in depth.

According to the new hypothesis, broadly the same volume of PT supply (measured in terms of seat.kms) would be redistributed with a grid of bus lines and services scheduled in connection with the ferries, a backbone fast and frequent service connecting Cavo in the extreme East to Marina di Campo in the West of the island, passing through the central town of Portoferraio, and a number of feeder lines to distribute passengers in the peripheral towns and attractive places (e.g. beaches, cultural, and naturalistic spots).

The practicability study—based on the analysis of origin-destination trips for leisure and touristic purpose, in addition to those for traditional purposes (school, work) already considered for planning the service during the schooling season (September–June)—has shown the convenience and economic feasibility of transforming the separate PT lines that during the winter connect peripheral municipalities to the central town (Portoferraio) into a web of integrated lines and PT rides connecting towns and attractive places across the island. More details are provided in the following Sect. 2.5. Figure 5 shows the future workshop and follow-up meetings venues.

2.3 *Shared Agenda for Action*

In all the future laboratories described above, the sustainable mobility topic has been introduced and contextualized to the Elba situation highlighting two macro-goals:

- Increase the number of tourists throughout the year (not only during summertime), offering transport alternatives to private car use within and for access to the island.



Fig. 5 The Elba experience: future mobility workshop and follow-up meeting

- Reduce congestion in the summer months.

Having these macro-objectives in mind, stakeholders and citizens have developed a shared “agenda for changes” deemed necessary and feasible in the short (2020), mid (2030), and long term (2050). The strategic goal is improving mobility to/from and within the island, thus also contributing to foster economic development and job opportunities, better quality of life, and lower emissions. More specifically, the agenda describes priorities for:

- Improving the access to/from and the mobility within the island favouring soft mobility (walking, biking, sailing) and shared mobility (car-sharing and pooling);

- improving the environmental performance of private mobility and enhancing the use of PT (collective taxi, shuttle services, sea cabotage, urban and non-urban buses).

This “agenda for changes” was eventually elaborated with the participants at Elba Future Mobility Workshop. Adapting the Future Search methodology, the discussions to formulate the shared agenda were structured in three steps:

- In the first step, participants identified the main factors influencing the past evolution of mobility on the island.
- In the second step, the focus shifted on the future, identifying those factors representing risks and opportunities for future mobility. Participants also identified initiatives or actions that can be accomplished—including with their direct contribution—towards the realization of the likely future.
- In the third step, participants presented conclusions and suggestions and discussed initiatives to be developed to promote the shared Action Plan.

2.4 Strategic Mission and Target Actions for the Elba SUMP

The “agenda for changes” emerged from the participatory process eventually led to defining the strategic goals and targets for the “Elba SUMP” draft elaborated as one of the measures of the DESTINATIONS demonstration in the Elba site (ISINNOVA, 2018).

2.4.1 Strategic Mission

The mission statement for the Elba SUMP (Fig. 6) is framed in one sentence: “MAKE (IT) EASY”, meaning make *Elba Attractive and Sustainable all over the Year*.

The underlying key strategic objectives have been identified as follows:

1. Improving the maritime (Piombino-Portoferraio/Rio Marina/Cavo) and air (La Pila airport) access to the island;
2. Providing extensive transport information (Info-Mobility) to users and citizens;
3. Developing an integrated transport system (multimodality);
4. Enhancing e-Elba (electrical mobility);

Fig. 6 Mission statement for the Elba SUMP

MAKE

Elba
Atttractive and
Sustainable all over the
Year

5. Making the Elba island bike-friendly (bicycle mobility).

In addition, two strategic instruments were recommended as necessary initiatives to make the plan implementation concrete:

- A new strategic planning and mobility observatory in the island, with the participation of the relevant bodies (e.g. the Livorno Provincial Mobility Observatory, the 7 municipal administrations of Elba), open to a permanent consultation of stakeholders and citizens to sustain the co-creation process;
- A “Shared Mobility Agency”, supporting networking among mobility service providers, info-mobility services with dynamic data to inform users in real time, and the aggregation of mobility demand allowing for sharing car rides and/or services (e.g. sharing taxi rides, blablacar, hitchhiking certification, call for flexible service that can be activated for a minimum number of users, etc.) to residents and tourists.

2.4.2 Specific Target Actions

The Elba SUMP draft includes as specific targets the actions identified at the outset of the participatory process, in the shared agenda for action. These target actions are presented below:

- **Soft mobility (walking, cycling, by sea)—actions:**
Enhance the use of bicycles through the set-up of a network of unique off-road cycling lanes across the island.
Encourage small cabotage to connect the island beaches.
Sea connection between island ports with new generation boats (solar panels).
Infrastructure and recharging network for electric bicycles and scooters at inland sites of interest (cultural sites, hospitals, beaches).
Set-up of bike-sharing services.
- **Private and shared mobility—actions:**
Encouraging the use of electric vehicles (free parking, dedicated stalls, charging points, vehicle access restrictions to conventionally fuelled vehicles in urban centres).
Reconsidering parking policy in the inland: favouring intermodality, improving enforcement.
Providing car-pooling incentives.
Renewing transport signalling and information.
- **Local Public Transport—actions:**
Set-up of an application encompassing all mobility services in the inland.
Improve information on PT (timetables, GPS, info-trolleys).
Provision of new bus lines and use of eco-sustainable transport means.
Promotion of on-demand bus service.
Set-up of an application encompassing all taxi services in the inland.
Introduction of collective taxis for inter municipality routes.

Introducing additional passenger transport services during summer-time between St. Giovanni and Portoferraio.

- **Accessibility—actions:**

Improve the coordination between transport companies (timetables, local multi-modality services, integrated tickets).

Enhance transport services between Campiglia (Rail station) and Piombino (Port) in Tuscany.

Ensure better accessibility between Pisa airport and Piombino.

Encourage multimodality and interchange in Piombino Port for connections to Elba.

Incentivize the provision of private transport services, e.g. mini-cruises for coast to coast trips by sea.

Improve connections by air.

2.5 *Shaping Public Transport on Elba to Meet Seasonal and Touristic Demand*

Finally—as anticipated above—the main issue of the Elba SUMP that was further investigated in the co-creation process to further understand its practicability was the reorganization of the bus services (extra-urban lines) throughout the island in the summer season, to meet seasonal demand and the needs of tourists and residents alike.

The current transport network consists of a number of bus lines connecting towns and villages. Yet there is no coordination of their schedules with ferries coming into the island's three ports; Portoferraio; Rio Marina; and Cavo. This is particularly problematic during summer, the time of year when the island welcomes most of its visitors. New bus services are thus proposed for the touristic high season that would be coordinated with ferry arrival times. Whilst approximately the same volume of services would run, journey times and connectivity would improve significantly.

As shown in Fig. 7 below, a fast bus line traversing most of the island would form the backbone of this new system (main mobility corridor). Travelling from Cavo in the north-east to Marina di Campo in the west, it would pass through Elba's main town Portoferraio on the way. From the main corridor, a number of feeder lines would take passengers to peripheral towns and nearby tourist locations in 7 feed basins—the so-called *Ambiti di Mobilità Sostenibile* (AMS).

Turning the current bus connections from Elba's peripheral areas to Portoferraio into a single integrated, transport network, would thus transform mobility on the island for everyone's benefit.

To assess the practicability of the new scheme, a detailed analysis has been carried out, simulating a new organization of extra-urban lines and timetables for the summer season, summarized in Table 1.

Taking stock of the data provided by the local transport operators CTT-Nord, the number of stops, the distance (km) between stops, supply (seat.km), and demand

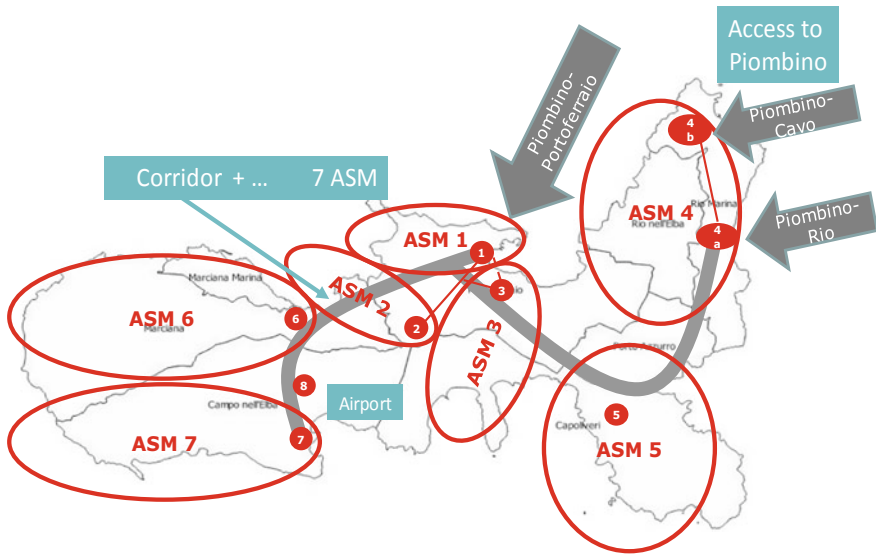


Fig. 7 Scheme of high season PT services

(passenger rides for different assumptions of tourist trip behaviours) indicators have been calculated.

Table 2 below compares the current mileage with the one emerging from the reorganization of transport services. It can be observed that the re-organization of transport services would determine a decrease in the total kilometres travelled, thanks to the rationalization of the routes, with a total reduction of 12,882 km, corresponding to a saving of €26,044 (evaluated at a direct cost of €2.021 per km).

In addition to the rationalization of the routes, the new scheme also entails an increase in the demand for PT: e.g. establishing timely connections between the bus schedules and the ferries (and flights) departing and arriving from/to the island.

The following map (Fig. 8) shows the main nodes of the network in the new scenario and for each node the specific factors that can induce an increase in the demand of PT (currently, the utilization rate of the road PT is indeed quite low).

3 Conclusions: Main Lessons Learned from the Elba Experience

Several useful lessons can be drawn from the experience of policy co-creation in the Elba island case. The co-creation approach was a success, insofar as it delivered a wealth of ideas and a coherent agenda to shift the mobility in the high season from the current unsustainable pattern towards a sustainable one. The first three steps of

Table 1 Organization of extra-urban bus services

	Current organization	Hypothesis of bus lines for the high season
Line 116	<ul style="list-style-type: none"> • Circuito Campo Elba • 12 bus rides Portoferraio-Marina di Campo-Pomonte-Marciana-Portoferraio 	<p>No changes envisaged</p> <p>16 bus rides Portoferraio-Marina di Campo (30 min duration). Time tables coordinated with ferries to Portoferraio</p> <p>10 bus rides coordinated with rides to Procchio and Marciana-Pomonte-Marina di Campo (90 min duration)</p> <p>10 bus rides coordinated with rides at Marina di Campo to Pomonte-Marciana-Procchio (90 min duration)</p>
Line 117	<ul style="list-style-type: none"> • 7 bus rides Portoferraio-Cavo • 3 bus rides Portoferraio-Capoliveri-Cavo 	<p>12 bus rides Portoferraio-Cavo (75 min). Time tables coordinated with ferries to a Portoferraio, Rio Marina, Cavo</p> <p>12 bus rides coordinated with rides at Bivio Mola to Capoliveri (10 min)</p>
Line 118	<ul style="list-style-type: none"> • 5 bus rides Portoferraio-Bagnaia • 6 corse Portoferraio-Lacona 	<p>12 bus rides San Giovanni-Lacona (via Colle Reciso)-Bivio Lacona-Bivio Bagnaia-Bagnaia (35 min). Exchange parking at San Giovanni. Possible extension to Nisporto</p> <p>Coincidence at Bivio Lacona and Bivio Bagnaia with rides of the corridor Portoferraio-Cavo</p>
3006 BIODOLA	6 bus rides Portoferraio-Biodola	<p>8 bus rides Portoferraio-Villa San Martino-Biodola. Exchange parking at Villa San Martino. Rides planned until sunset</p>
3006 VITICCIO	6 bus rides Portoferraio-Viticcio	<p>8 bus rides Portoferraio-Viticcio. Rides timetables until dinner time</p>

Table 2 Mileage of extra-urban bus services

	Current situation		New scenario	
	Daily (km)	Summer season (km)	Daily (km)	Summer season (km)
Linea 116	1,946	180,293	1,664	156,378
Linea 117	910	86,139	1,016	95,510
Linea 118	366	34,877	363	34,148
Linea 3006	262	26,248	305	28,638
km total	3,484	327,556	3,348	314,674

Factors inducing more PT demand:

- A: New and/or shorter routes
- B: More rides and comfortable schedules
- C: Guaranteed connections between rides
- D: Park & ride
- E: Connections with ferries
- F: Connections with flights

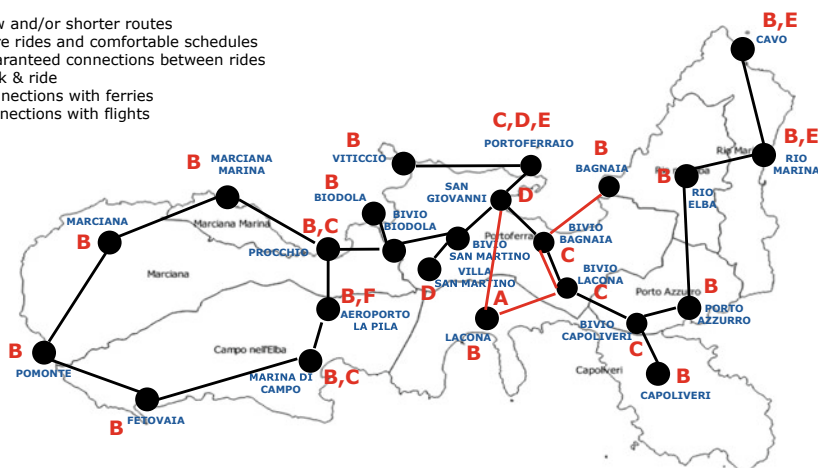


Fig. 8 Map of the high season bus network (new scenario)

the approach—engage and empathize, frame a shared agenda, co-design solutions—were successful in delivering a coherent set of goals and target actions shared by the stakeholders and the citizens engaged in the process—the “agenda of needs for change”—and led to co-create a new scenario of bus services to meet resident and tourist demand during the high season—from mid-June to mid-September and during the week-ends in the other mild weather months (March, May, October, November)—engaging managers of the regulation authority (Osservatorio dell Mobilità–Provincia di Livorno) and PT operator (CTT-Nord) in the analysis of practicability of this solution.

The further steps—collaborative planning and implementation of the solutions sketched in the draft of the Elba SUMP—were beyond the reach of the DESTINATIONS demonstration activities. In fact, the whole co-creation process is likely to produce the desired impact only by bringing the desired agenda and the new local PT plan to the real world of policy implementation. This would imply a further step, with the concrete commitment of the policymakers—in our case the Mayors of the 7 municipalities of the island and the regional authority in charge of mobility planning (the Province of Livorno)—to approve and launch the implementation of the SUMP for the whole island.

On one hand, we can therefore draw positive lessons about the performance of the co-creation approach and its effectiveness to frame the collaboration between different regulatory, business, and civil society actors that usually work in isolation or even distrust each other, thanks to the co-creation environment and dialogue that was helpful to combine different perspectives and achieve a mutual understanding of the needs and challenges for the future of mobility in the island. On the other hand, important lessons should be learned about what is needed as a prerequisite to

really anchor the co-creation process in the policy implementation chain and deliver a concrete impact.

Perhaps the most important lesson coming out from the Elba experience—and especially the success of the living labs and the “Future of Mobility” workshop—is that different stakeholders—which know each other only superficially and often carry strong prejudices against each other—and active citizens can meet and work together very effectively to discuss and devise a common vision of what should be done—in our case delivering an agenda for sustainable mobility and better quality of life for residents and tourists. This can happen if a trustful environment and process are created by the managers and facilitators of the co-creation process. The workshop of May 10–11 2017 was an absolute novelty for most of the participants, who never met before with a common purpose in mind to assess and decide. The event helped most of the participants to understand and in some cases to change their beliefs about what is needed to improve and make the mobility in the island more sustainable.

This is encouraging. Co-creation processes as experienced in Elba should be generalized to cope with complex and multifaceted policy issues and complex problems that usually require to take decisions at different levels of government. This would entail a “governance transition”, transforming a hierarchical model where the responsibility to make decisions is allocated according to the principle of subsidiarity³—from the lower (citizens, private sector) to the higher (local, regional, national, EU) level of government—into a “circular model” where decisions are designed, negotiated and ultimately deliberated after a co-creation process initiated by a group of “change agents” (or “visionary leaders”). The circular model engages representatives from the different public governments and agencies, the private sector, and civil society, with the support of experts to feed with technical knowledge and manage the process as appropriate. This advocated transition in the model of governance is illustrated in Fig. 9 below.

The main problem with the co-creation approach illustrated above is that its greater strength—creating a “neutral” and trustful dialogue where people with different competencies and powers are free to express their ideas and devise new solutions to common problems, without the urgency of negotiating and deliberating administrative decisions—is also potentially its main weakness. Indeed, the whole process delivers a shared agenda and roadmap for action that depends on its implementation upon decisions that should be approved and then pursued by different actors and level of governments, according to their administrative competencies and procedures.

Accordingly, the final step—anchoring the co-creation in the formal decision-making process to initiate technical planning, implementation, and evaluation of

³ In a nutshell, according to this principle the competence to decide is given to the lower level of government that can solve the problem, so that solutions to small problems—without spill-over effects on others—can be decided directly by the citizens or private business themselves, while solutions that would have a significant impact at local, national, or international (EU) level shall be decided by the corresponding level of government. In practice, the solutions to wicked problems always require the competence of different levels of government, and this makes the decision process often overwhelmingly complicate and slow.

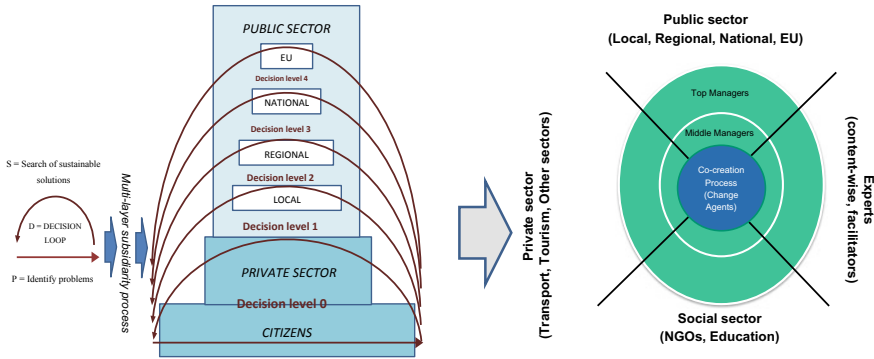


Fig. 9 Decision-making loop: from multi-layer subsidiarity to co-creation of solutions

measures—is really crucial to generate an impact, and it is often the most difficult to accomplish. For this reason, a truly successful co-creation of policies would require, to support the implementation of the full cycle of five co-creation steps we described above, a convinced endorsement and commitment of the key local and regional policymakers and/or CEOs of the agencies that play important roles in the implementation of the sustainability agenda.

As a matter of fact, a true policy commitment was present in the Elba experience only from the Mayors of the municipalities partners of DESTINATIONS—Rio and Portoferraio—and at the regional level from the Province of Livorno (Osservatorio della Mobilità) and Transport Operator (CTT-Nord). As for the latter, the participation in the co-design of the new bus services scenario was, however, limited to the technical managers, and the measures recommended in the draft SUMP plan are as yet not endorsed—at the time of writing—by any political deliberation.

This lukewarm political response is mostly due to the narrow scope of factors that drive local policymakers, who tend to focus on issues and problems affecting the single municipalities, with no real attempt to join forces to find and implement strategic solutions for the whole island. In addition, there are strong vested interests that play against any policy aiming to find alternatives to private car transport and avoid congestion in the high season: the huge and easy earnings for well-established operators in the island market—the ferries, parking lots, and other car travel chain operators—would be reduced by shifting to sustainable mobility modes. To be successful, any policy transforming the mobility in the island should therefore consider the stranded costs of the incumbent operators (primarily the ferry companies, but not only) and/or the changes needed to adapt their business practices, to find compensatory measures when appropriate.

An answer to this challenge—that could prove effective in the medium term, if not immediately—has been suggested in the shared agenda and draft SUMP plan: to gradually transform the “Elba Sharing” Agency—a DESTINATIONS measure described in another chapter of this book—in an “Elba Mobility Agency” fully participated by

the key authorities—the 7 municipalities and the Province of Livorno—with competences for the regulation of new bus and shared mobility services over the whole island, also including the Port Authorities (Piombino, Portoferraio, Rio) and the airport in order to deal with the regulation of the access traffic to the island.

The whole island mobility matter would thus be administered by the Agency, taking care of mobility planning and the tendering of PT, coherently sharing services and parking. This same Agency should continuously manage co-creation processes to engage the relevant stakeholders and groups of citizens in the formulation, co-design, monitoring, and evaluation of sustainable mobility solutions.

References

- Bergvall-Kåreborn, B., Eriksson, C. I., Lund, J., & Ståhlbröst, A. (2009). A milieu for innovation: Defining living labs. Retrieved September 8, 2020, from https://www.researchgate.net/publication/228676111_A_Milieu_for_Innovation-Defining_Living_Labs.
- Elba Sharing. (2017). Quale futuro per la mobilità di turisti e residenti all'isola d'Elba? Sintesi dei risultati dell'incontro del 10–11 Maggio 2017. Workshop Report (available on demand).
- Kocak, N., Adell, E., Ljungberg, Ch., Ljungberg, C., Sessa, C., Giuffre, G., & Pietroni, F. (2014). Planning sustainable mobility in polycentric regions: Testing a participatory approach in six regions of Europe. *Transportation Research Procedia*, 4, 327–346.
- ISINNOVA. (2018). Il Piano Elbano per la Mobilità Sostenibile – Bozza (available on demand).
- Patto dei Sindaci. (2014). Piano d'Azione per l'Energia Sostenibile dell'Isola d'Elba, in collaborazione con Provincia di Livorno, Struttura di Coordinamento.
- Poly-SUMP. (2014). The Poly-SUMP methodology: How to develop a sustainable urban mobility plan for a polycentric region – Guidelines, European Commission. Retrieved September 8, 2020, from <https://www.eltis.org/sites/default/files/trainingmaterials/polysump-sump-guidelines-final.pdf>.
- Weisbord, M. & Janoff, S. (2010). *An action guide to finding common ground in organizations & communities* (3rd ed.). Berrett-Koehler.

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