

Ostana Mobility Experiment

A Survey for Implementing
Sustainability In Mountain Tourism



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Community
of
Ostana

What is a future model of mobility for the community of Ostana?

A field experiment, questionnaire survey and design thinking excursion.

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1. Overview

Students of the Masters in Economics and Communication with a major in International Tourism at the University of Lugano, Switzerland, attended the Sustainable Tourism Colloquium course taught by Dr. Tobias Luthe.

The course aimed to deepen knowledge and understanding related to sustainability and international tourism, specifically in the context of resilience and mountain livelihoods. In an introductory seminar, students received an overview on the most recent advances in transdisciplinary sustainability science, and its relation to tourism. Sustainable tourism, permaculture/ agro-forestry, mobility architecture, renewable energy and “alpine urbanism” are examples of specific topics that were introduced. Between the 25th and 30th of May, students followed a field trip to Ostana, Piedmont, Italy, where they prepared and executed an experiment with tourists including a questionnaire survey regarding transport and mobility concepts for the community.

During their stay, students met members of the community, visited local businesses which recently developed (e.g. the permaculture gardens) and touristic attractions, like the Il Bosco Incantato and the Agriturismo. During this time, students were asked to participate in reflective thinking and to provide creative ideas and solutions. Furthermore, students were engaged in a design thinking workshop using their creativity and innovative spirits to provide ideas concerning realistic or futuristic sustainable mobility concepts for the rural area of Ostana and the Po Valley.

The Sustainable Tourism Colloquium enabled students and local residents to cooperate toward finding sustainable mobility solutions that fit the particular case of the rural Ostana community. Although teaching several concepts in a classroom environment is certainly important, the experience of “learning by doing” and practically applying the attained knowledge in a real case scenario provided students with a very unique and hands-on experience. Therefore, the colloquium is conceived as a

win-win situation for the students and the community residents as it fostered learning and development for all participants.

The following pages will provide a description of the community of Oстана, the procedure and results of the field experiment, and the student's design thinking proposals on possible mobility concepts.

2. Introduction

Previously, sustainability was often defined as the way biological systems endure and remain diverse and productive. However, the 21st-century multi-faceted concept of sustainability, requires a more comprehensive definition. Today, it refers to the need to develop sustainable models necessary for both the human race and planet earth to survive. Thus, sustainability is a balancing act. The *United Nation's 1987 Report of the World Commission on Environment and Development: Our Common Future* noted that sustainable development meets the needs of the present without compromising the well-being of future generations. The same concept is defined in the *Brundtland Commission (1987)* and the *Earth Summit in Rio de Janeiro (1992)*.

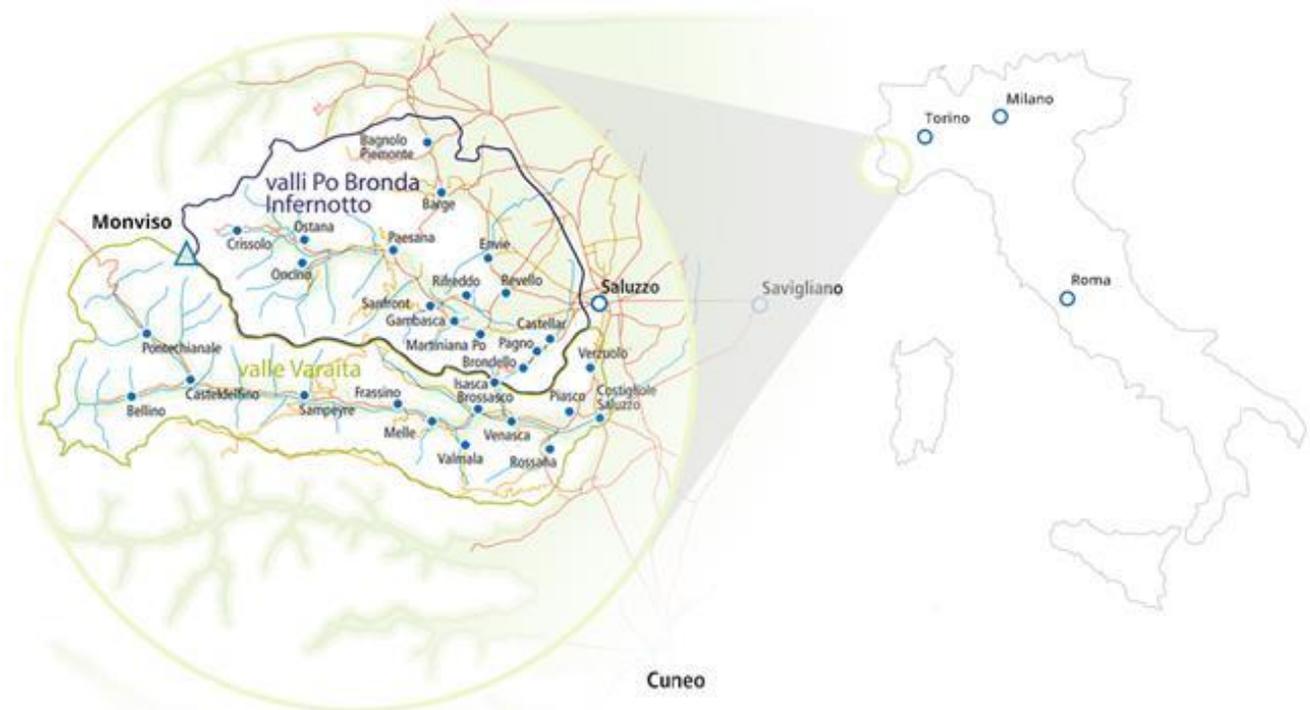
This concept continues to expand in scope. In 2000, the *Earth Charter* broadened the definition of sustainability to include the ideas of a global society “founded on respect for nature, universal human rights, economic justice, and a culture of peace”. Therefore, to achieve these lofty goals, humans will have to re-examine their policies on environmental protection, social responsibility and economic practice. Thus, the term sustainability encompasses two main challenges: first, not a single definition is universally accepted, which contributes the second challenge of misleading use of the word, at times narrowly focused on economic exploitation.

Sustainable development is frequently illustrated as overlapping or concentric circles representing the triple-bottom line equilibrium or incorporation of the environment, the society and the economy (IUCN, 2008). Due to the imperfection of these models, Luthe (2016) developed a quantifiable and comprehensive model that sets the environment (ecosystems and carrying capacity) the foundation, which must not be outbalanced by economic and social well-being, binding cultural values and technological enhancements. It is notable that this model is fostering community empowerment and people's participation.

In order to have successful sustainability, entrepreneurs need to engage in innovative supply and everybody must reflect about sustainable consumption habits. In tourism, this particularly concerns transportation systems. The United Nations declared 2017 as the “International Year of Sustainable Tourism for Development” encouraging long-term views in relation to objectives and adapted strategies. At the same time, it challenged multiple researchers who argue that the globalization of tourism, due to and leading towards increased mobility, can never be sustainable, because a much greater set of resources is needed to fulfil the needs of these additional visitor flows.

3. The Community of Ostana

Ostana is an alpine community belonging to the broader territory of the Po Valley in Piedmont, Italy. The community stretches alongside a south facing mountain slope in the Po Valley, in front of the majestic Monte Viso. Ostana is well known and has easy road access with approximately 1.45h from Torino (80 km) and 1.5h from Cuneo (69 km).



The community experienced a substantial crisis when the local population shrank from about 1300 to only 5 inhabitants at the end of the 20th century. Since the mid-80s, Ostana decided to build on the quality of architecture and landscape, and on knowledge and traditions as ways to reactivate the town. From the mid-80s onwards the local community has been an important reference point for the restoration and enhancement of alpine architecture.

The architectural structures represent the most evident and recognizable elements of this created landscape, are also an area of conflict in terms of modernization, sustainability, and renovation, since legal regulations prevent construction of new structures and only permit renovation that coincides with traditional techniques. However, some

steps have been taken in order to overcome these challenges, such as the creation of poly-functional structures that are able to satisfy a variety of needs for the community.

A recurring element of this territory is without doubt stone, which is the main material of the landscape and for the construction of houses. Stone is used for walls, for covering the roofs, the outdoor and indoor pavements. Stone structures are built by using a highly specialized technique, which is very labor intensive, expensive, and requires a level of expertise. Additionally, sustainability concerns arise in terms of energy efficiency. For example, solar panels do not comply with the aesthetic legal requirements for stone roofs.

At present, the renovation and the improvement of the architectural heritage have created a new identity and recognizability for this little mountain community, and consequently led to an economic and social rebirth. Notably, the smallest community of the Po Valley is at the same time an example for an intelligent architectural innovation and has recently been awarded with the admission to the association of the most beautiful villages of Italy, the “Borghi più belli d’Italia”.

Houses, architecture, cultivated land, terracing, alpine meadows, forests, and canals represent interdependent single elements of a sole integrated system. Therefore, today, a new vibrant community of 40+ permanent residents have been reviving this unique place, while new artists, entrepreneurs, friends and families are collaborating to prototype the future of sustainable living in the mountains. This has transformed Ostana into a pilot region for a new model of Alpine living and brought the town to the forefront of international chronicle, as it became great tourist magnet.

Currently, the main attraction of Ostana is its natural beauty and hiking trails. Popular tourist attractions are shown in Table 1:

Table 1 Ostana Tourist Attractions

Agriturismo “A Nostro Mizoun”	Restaurant, accommodation, local products, beautiful scenery
Il Bosco Incantato	Scenic walks, numerous wellness experiences, yoga, permaculture garden
Rifugio Galaberna	Restaurant, social hub, information point for local activities, adventure park
MonViso Institute	Hub for research, educational tourism, accommodation, permaculture garden
Polyfunctional Center “Lou Pourton”	Cultural event center, co-working place



However, the community faces some challenges. Although the population of Ostana is increasing, attracting new residents remains an important issue, as there is a lack of basic services (i.e. grocery store, pharmacy, shops) and job opportunities.

Another issue is the mobility and transportation options. The lack of well-maintained and safe road infrastructure and transportation means contribute to environmental, social and financial costs, either because residents need to drive to neighboring towns in order to meet basic

needs, or because of congestion problems. Especially in the summer and weekends, tourists' and residents' demand for mobility is in conflict. The high influx of vehicles and limited parking places lead to decreasing local and tourist well-being.

Attracting more tourists to the village is another challenge for the community, but at the same time presents an opportunity to develop a sustainable management plan in terms of mobility, tourism, and overall community resilience.

4. Ostana Mobility Experiment

4.1 Experiment Description

Being a tourist destination, Ostana is facing tourism mobility issues. For example, during high seasons (i.e. summer) and weekdays, there may be up to 300 cars clogging the small roads in the village, leading to environmental, social and financial costs. As a result, there is a need of finding an alternative concept for taking advantage of the interest of tourists in Ostana, while avoiding the negative side effects.

It is no secret that economic growth and energy have come at the cost of environmental ruin, and to face this challenge, sustainability experts are looking at ways in which they can slow or prevent pollution, conserve natural resources and protect remaining environments, in order to support a sustainable, healthy and happy population. From this point of view, an efficient and flexible transport system that offers intelligent and sustainable patterns of mobility is essential for the health, economy and standard of living of the community.

Ostana as a community is actively engaging in sustainable development. Its goal is to optimize the use of materials, energy and information in an intelligent and efficient way so as to minimize the environmental impacts of transport, while satisfying the local and foreign mobility needs of goods and people. Improving the mobility of passengers using means that are sustainable, safe and of high-quality is essential in order to reduce congestion.

To be able to develop sustainable policy plans, the community wants to understand people's perception, both regarding a decrease of the impact of car congestion and a change to more ecological transportation modes to reach Ostana.

The experiment intended to shed light on the preferences and willingness-to-engage of the local people and tourists so as to create a better and higher quality visitor experience. This would help improve

the overall sustainability of the community in its development attempting to meet the needs of the present without compromising the well-being of future generations.

What is an alternative concept for taking advantage of the interest of tourists in Ostana, while avoiding the negative side effects? How can the mobility demand of both tourists and residents be reconciled? The aim of the experiment is to shed light on a solution to these concerns.

To achieve the experiment's purpose, the community, the professor and the students collaborated in transdisciplinary research.

For changing undesired processes and enforcing desired processes (transformation knowledge), transdisciplinary research for sustainability investigates problems on a descriptive, normative and operational level. Given that sustainable development involves societal problem-solving based on research, the knowledge held by non-academic actors has an important role to play throughout the process of knowledge production. In turn, it concerns communication with the society involved (Hirsch Hadorn et al, 2003).

A framework for the community, the professor and the students' collaboration is shown on Figure 1:



Figure 1 Experiment Framework

4.2 Experiment Methodology

For this experiment, an *applied research* approach was conducted. The study undertaken aimed at answering questions about a specific problem and at providing guidelines on decision-making about particular courses of action or policies through valuable information, since decision-making situations can be classified on a continuum ranging from complete certainty to absolute ambiguity (Zikmund, 2003). The survey technique was used, because it is considered as the most appropriate technique for the collection of factual data.

The choice approach, which is a hypothetical method, was implemented and consisted in asking respondents to make choices based on a hypothetical scenario. Respondents are simultaneously shown two or more different alternatives and their characteristics and asked to identify the most preferred alternative in the choice. Because it focuses on tradeoffs among scenarios with different characteristics, choice approach is especially suited to policy respondents where a set of possible actions might result in different impacts. However, respondents may find some tradeoff difficult to evaluate, because they are unfamiliar with them. In this case, 6 scenarios were tested.

Primary data was collected through a questionnaire. The questionnaire was executed through in-person interviews, as they are generally the most effective for complex questions. It is often easier to explain the required background information to respondents in person, and people are more likely to complete a long survey when they are interviewed in person.

The collected data was entered in Microsoft Excel spreadsheet software and for the purpose of this report only descriptive statistics were executed.

4.3 Questionnaire Development

Three different questionnaire versions were developed for the experiment: one was designed for local people, whereas the other two were designed for tourists. Questionnaire versions designed for tourists were either highlighting the engagement of the community of Ostana in sustainable development or drawing attention to the community of Ostana being affected by car traffic and congestion. Tourists were given one of the two versions of the questionnaire.

All questionnaire versions were standardized, which means that all respondents were asked a standard list of questions, in standard order, with the same response options. The questionnaires were structured with open and closed-ended questions. Beyond the convenience provided to the respondents, the forming of questions assured the compatibility and the ease of coding and interpreting of the answers.

The questionnaire designed for local people (Refer to Appendix 1: Questionnaire Locals) mainly consisted of attitude statements in order to provide insight on their perspective of mobility in Ostana. It also included demographic questions.

The questionnaires designed for tourists (Refer to Appendix 2: Questionnaire Tourists) consisted of two parts: the first part included demographic questions, questions related to the reason of visiting Ostana, the activities undertaken, and respondents' attitude towards mobility and sustainability. The second part consisted of choice scenarios with variance of levels in the options provided. The respondent was asked to choose one option for each scenario, each having a set of different attributes (i.e. travel or waiting time, parking and travel cost, parking time) and a set of various transportation modes (i.e. car, chair lift, e-bike or shuttle). Offering variance of levels in the options helped in order to understand the importance of each attribute and transportation mode for each tourist. It also allowed to reveal the respondents' perspective towards the use of alternative ecological transport modes and to elaborate a forecasting of behavior.

The questionnaires were developed by the MonViso Institute in collaboration with the Institute of Economic Research (IRE) at the Università della Svizzera italiana in Lugano. All questionnaires were discussed between Dr. Tobias Luthe and the Master students before the experiment implementation. Necessary adjustments were made, and revised questionnaires were then translated from English to Italian language by the Italian speaking students of the class.

4.4 Experiment Implementation

The experiment was scheduled to be implemented on Sunday the 27th of May.

On the day of the experiment, students engaged with local people and tourists traveling to Ostana. During the entire day students maintained an information booth at a parking spot, the Lou Biviou, at the road entrance of Ostana and talked to visitors. Participants of the experiment were interviewed by the Italian speakers of the class, and were asked to leave their car at the parking area. A shuttle bus, or Navette, was available to transfer participants up to different drop-offs in the village at zero cost.

Advertising panels, handmade by students of the class, were placed on site explaining the purpose of the experiment.



The use of questionnaires can imply some disadvantages that need to be taken into consideration. Indeed, respondents might answer what they think/know the interviewer wants to hear rather than sharing their actual opinion. Although these hidden statements are unavoidable, it is essential to be aware of them. A solution that has been applied in our experiment was to combine questionnaires with observation. The interviewing procedure was supported by the experiment observation, where students were observing the procedure and took notes on different issues (i.e. the number of cars stopping, passengers' synthesis, passengers' attitude, experiment participants' mood). The

combination of interview and observation was ideal to offer the possibility to add comments about tourists' attitude towards the questionnaire and to ensure an appropriate interpretation of the experiment's results.

On another note, a small incentive was given to the experiment participants, connecting them to some tourist activities. Each participant was offered a wood coin as a local currency to be exchanged for a free coffee in various establishments of the community. The wood coins were handmade by the students.

The engagement of the community of Ostana was of major importance for the success of the experiment.

Sadly, this year the weather was not as good as planned, and therefore there were not many tourists coming to Ostana. Most of the cars that were stopped by the students were locals, but most of them were supportive of what was going on and appreciated the help to promote Ostana as an ecological friendly destination.



4.5 Questionnaire Analysis

The questionnaire was coded and analyzed using Microsoft Excel software.

Interviewed participants were represented by “visitors/tourists”. The sample used in the analysis for this experiment was 23 participants. Because different versions of questionnaires were executed and depending on which group a participant belonged, two different excel sheets summarized the coded data.

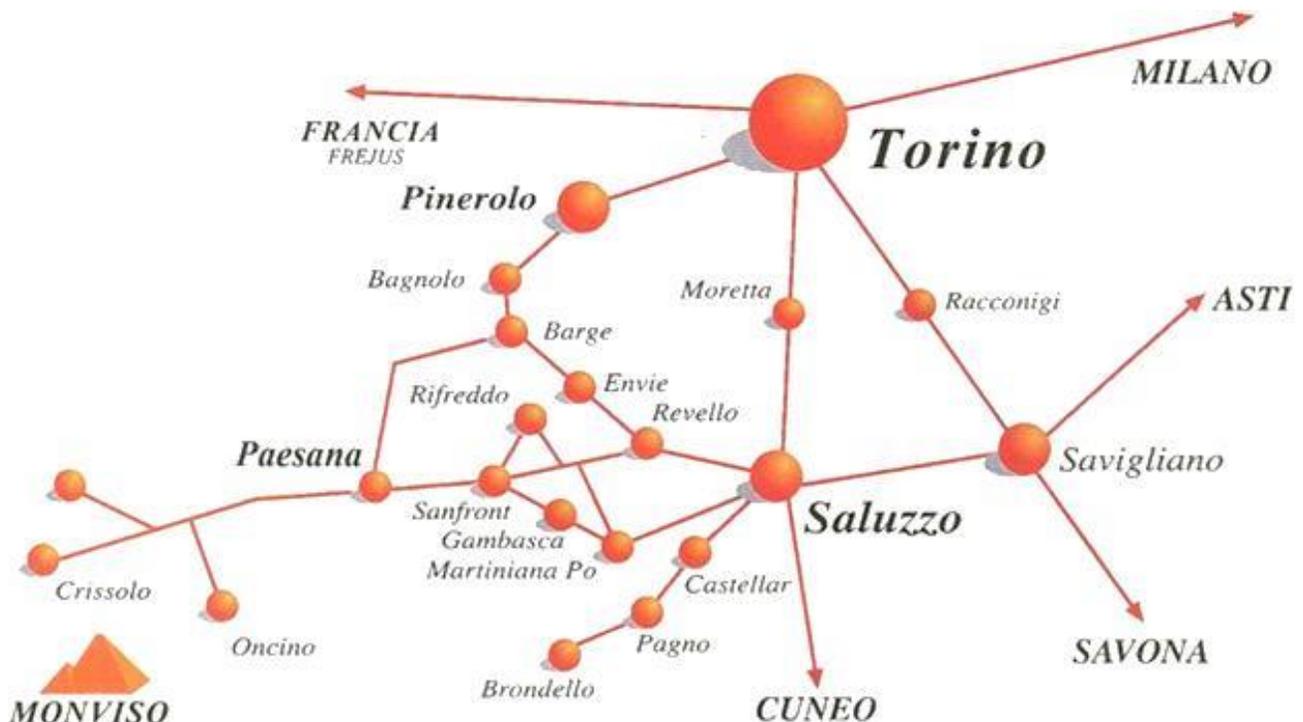
In general, Microsoft Excel was used to count the frequencies of different answers to each questionnaire question. They were then depicted graphically in pie charts and bar charts were applicable. The use of pie charts provides many benefits. First, they display relative proportions of multiple classes of data. Secondly, the size of the circle is proportional to the quantity it represents, and by this way it summarizes large data sets in visual form. In turn, it is visually simpler than other types of graphs, such as histogram or scatter plot. It requires minimal additional explanations and can be easily understood due to widespread use in business and the media. Additionally, Microsoft Excel was used to calculate an average in cases where it was applicable.

4.6 Experiment Results

The experimental results are represented into “visitor/tourists”.

Results: Visitor/Tourists

From 23 interviewed tourists, 96% were Italian national and the other 4% were French. They were traveling to Ostana mostly from the surrounding Torino region. The most frequent starting point were Torino, Cuneo, Bra and Revello.



The age range of the participants were between 30 and 71 years old, it is considered as middle-aged to seniors. The gender divided by 43% of the sample were male, whereas 57% were female.

The questionnaire version “Sustainable Development Experiment” was done with 48% of the overall participants, whereas the questionnaire

version “Transport Mode Experiment” was executed with 52% of the overall participants.

The majority of participants stayed in Ostana only for one day (85%), it means they were day-tourists. The first-time visitor was the highest percentage (34%) followed by the most frequent visitors that visit Ostana more than 10 times a year (30%), this means there was a possibility that they have a second home in Ostana.

Regarding the traveling group companion, the majority of participants specified that they were traveling with adults aged 31-60 (60%) followed by 61 years old and above (34%).

The most frequent activities planned during the day in Ostana (Q5/Questionnaire for tourists) were Hiking and Visiting Friends and Family.

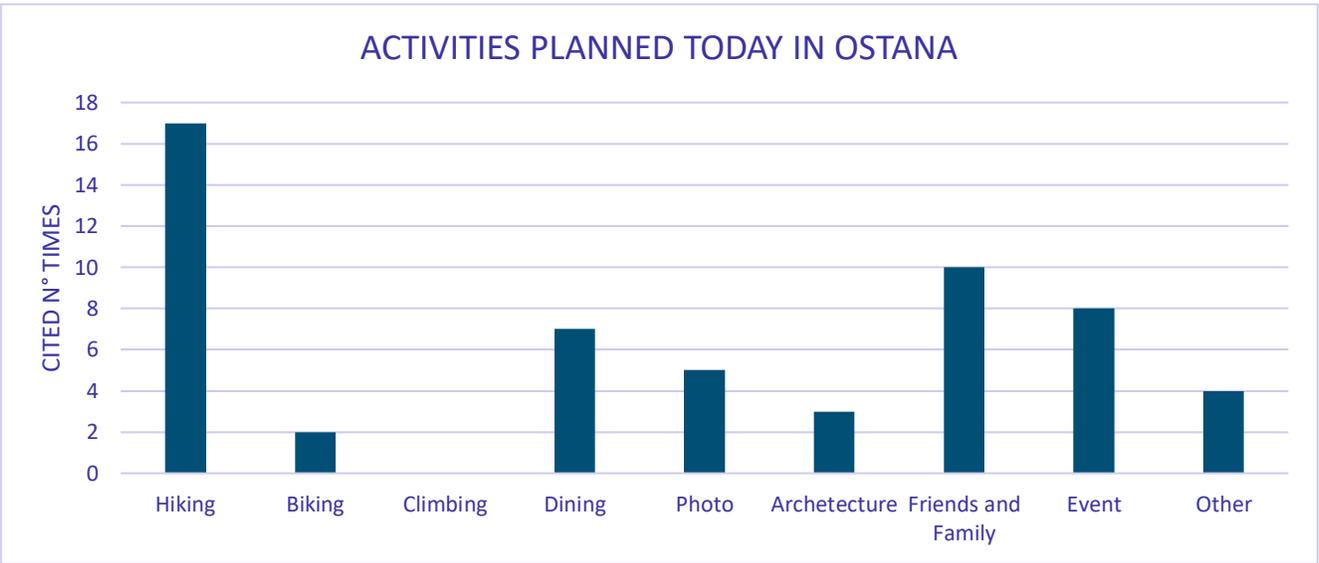


Figure 2 Activities planned in Ostana today / tourists

Participants were asked to provide level of agreement to statements regarding mobility preferences (Q6/Questionnaire for tourists). During the experiment, the perception of car traffic and congestion as disturbing is relatively scattered. On a scale of 1 (completely disagree) to 5 (completely agree) 48% of participants completely disagreed and 9% of participants completely agreed. 14% affirmed lacking knowledge to answer the question, whereas 19% did not answer the particular question.

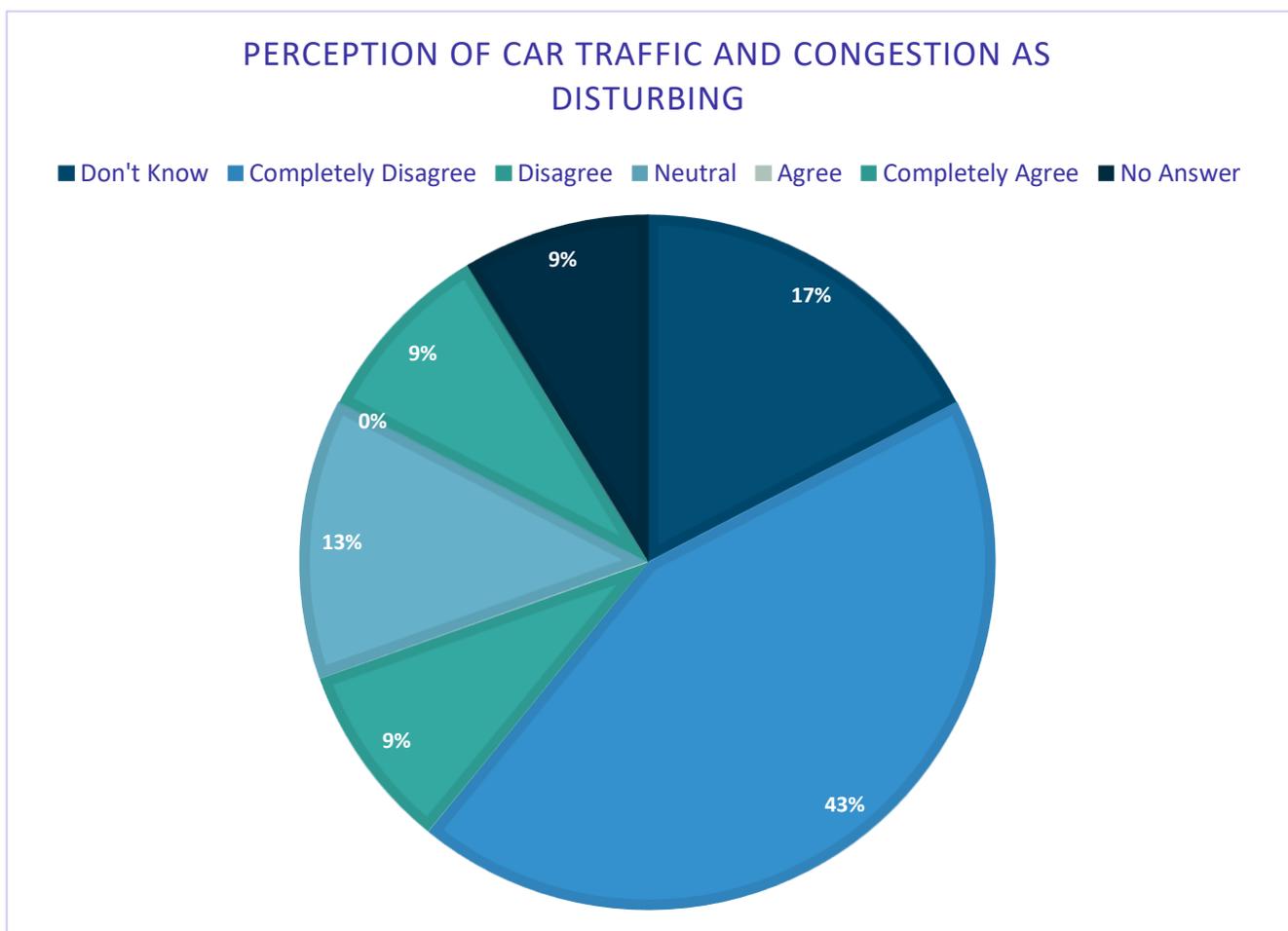


Figure 3 Perception of car traffic and congestion as disturbing (on a scale 1 to 5) / tourists

On the question about the existence of more ecological alternatives for cars arrival to Ostana, the majority of participants (44%) completely agreed to the statement that there should be more ecological alternatives for car arrival to Ostana.

ECOLOGICAL ALTERNATIVE TO CAR ARRIVAL IN OSTANA

■ Completely Disagree ■ Disagree ■ Neutral ■ Agree ■ Completely Agree ■ Don't Know

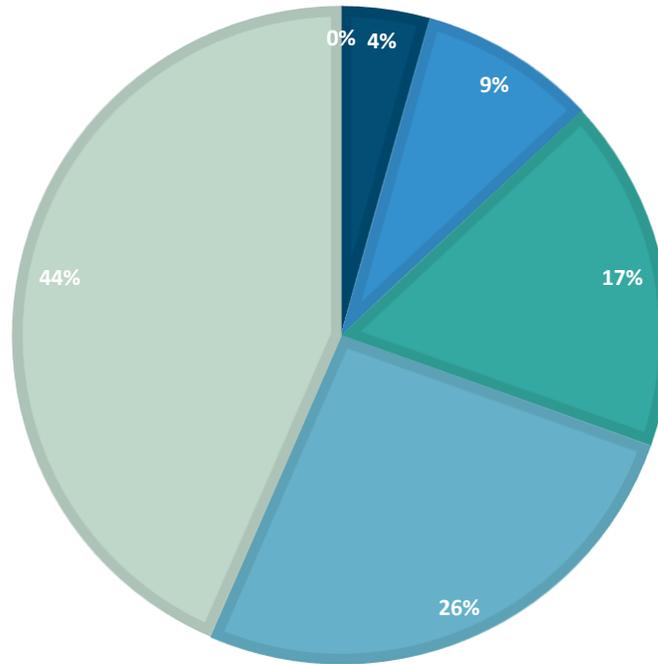


Figure 4 Ecological alternative to car arrival in Ostana (on a scale of 1 to 5)/ tourists

The following question was about: what if limiting car arrival to Ostana was a good thing, the majority of participants (48%) completely agreed with the statement. Whereas only 13% of participants completely disagreed that it was a good thing.

LIMITING CAR TRAFFIC WITHIN OSTANA

■ Completely Disagree ■ Disagree ■ Neutral ■ Agree ■ Completely Agree

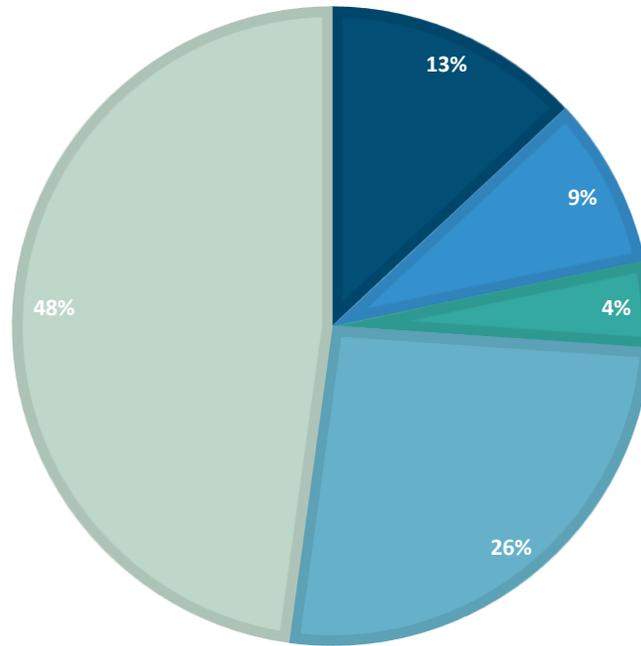


Figure 5 Limiting car arrival to Ostana is a good thing (on a scale of 1 to 5)/ tourists

On the last question in the mobility preferences that asked the respondents about an option if there were better service (like duration time-spent traveling and connection), the majority of the participants completely agreed on the idea of maximizing public transport to/from Ostana (29%).

BETTER OPTIONS FOR PUBLIC TRANSPORT ARRIVING IN OSTANA

■ Completely Disagree ■ Disagree ■ Neutral ■ Agree ■ Completely Agree ■ No answer

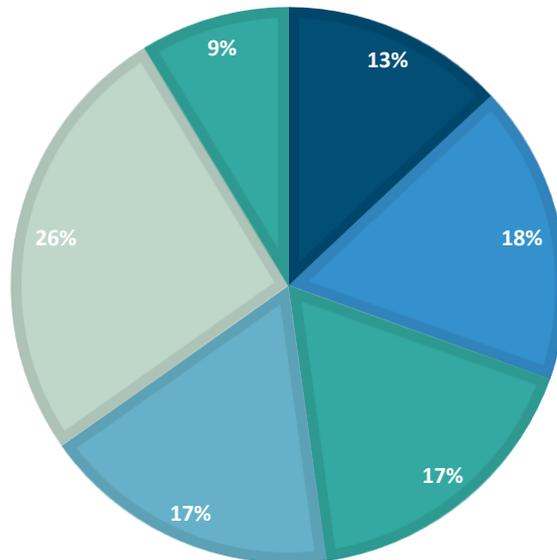


Figure 6 Better options for public transportation in Ostana (on scale of 1 to 5)/ tourists

4.7 Experiment Observation

During the experiment day, students were divided in four groups starting in the early morning until the evening.

Observing the procedure, students took notes on number of cars stopping, number of passengers and their comments, place of origin and type of transportation mean.

Due to the bad weather, the number of visitors was lower than on an usual Sunday in Ostana.

The total number of cars observed were 21. The big majority of visitors were couples traveling for leisure or single passengers travelling for work.

Also, there were people travelling by bike and the total number of those were 2.

The big majority of passengers travelling to Ostana were from nearby areas of Piedmont. There were locals or neighbors coming to Ostana for work purpose.

However, there are various motivations for people to come to Ostana. As it is already mentioned, some of them were tourists coming for leisure (day tourists mainly), some of them work in Ostana, some are locals or second home owners.

Various reactions of people were noticed during the experiment. Due to the bad weather, some people were not willing to get out of the car in order to fill out the questionnaire. On the other hand, some were happy to contribute by answering the questionnaire but with the help of interviewers as they were confused about the second part of the questionnaire where they were asked to choose a scenario.

There were visitors who preferred to take the paper with them, fill it out during their stay in Ostana and to bring it back later.

During the experiment, students noticed that some people were not willing to stop the car and others who said they know what it is about but they are simply not willing to participate.

However, visitors were impressed by the wooden coins offered in exchange for filling out the questionnaire, especially because they are made by students. Also, many of them said that they would rather keep the coin as a souvenir than give it in exchange for a coffee which made students satisfied as well.

Furthermore, they found it very positive that a group of students from Lugano came to Ostana in order to help the community.

As already mentioned, due to the bad weather there were some difficulties during the experiment day. The number of visitors was lower than usual but we can conclude that the experiment was successful – at least for a qualitative analysis – giving new suggestions that can be taken into consideration by the community of Ostana.

4.8 Suggestion for Future Version of the Experiment

During the Mobility Experiment, some limitations and disadvantages appeared that need to be considered for the future. Thankfully, these issues didn't affect in a negative way the whole procedure. They only prove that a series of measures should be taken in order to improve the whole process.

First of all, the lack of awareness of the local community was an important issue. More specifically, some of the locals didn't really know nor understand why a Mobility Experiment was taking place in the area. The interviewers had to explain and inform them. A fact that was time consuming. Some of them responded that they couldn't really see any serious mobility issues-problems in the area. For that reason, they didn't want to participate. Moreover, there were people, who didn't think that the experiment is important and as a result they refused to participate too. A good solution for the lack of awareness could be the organizing of a small event only for locals, where they could be further informed about the project.

Additionally, the number of the participants decreased this year. Possible and probable explanation is the weather forecast. According to it, bad weather conditions were expected and as a result affected in a negative way the potential visitors of the area, that preferred to visit another place or postpone their visit.

In-depth interviews are an important qualitative research method that can lead to valuable results related to the people's behaviors and needs. In this case, the way that the research questionnaire was designed had some weaknesses. Both the interviewers and the participants had to think hard, recall and evaluate. But some of the

participants were in a hurry and they wanted to give a quick answer without really think deeply. There were also some people that believed that the mobility problem will never be solved in the area. A useful suggestion could be the cooperation between the local community and the professionals during the process of creating and designing the questionnaires in order to be more relevant. Generally, the locals should have the opportunity to help and volunteer if they are willing to do it.

An important issue that should be considered for the future is the place where the experiment takes place and its safety. The experiment takes place in a road turn. For the needs of the experiment, there were two big umbrellas and tables. The visibility and the comfort of it should be improved. For example, in the afternoon, when it started raining heavily, the interviewers faced many difficulties, because they couldn't be protected from the rain and the cold. As a result, they had to leave. We should also mention that there is always the risk of congestion and accidents because of the drivers' frustration or possible lack of attention.

There should be more signs and indications in the area. The experiment booths should be more inviting and call people to action. For example, there must be clear signs for the parking spaces and the free coffee. More maps could also be helpful. This way the drivers' attention could be attracted and more people would be interested in participating.

In order to face the problem of people that don't have much time in the parking, it could be helpful to put surveys in Rifugio Galaberna.

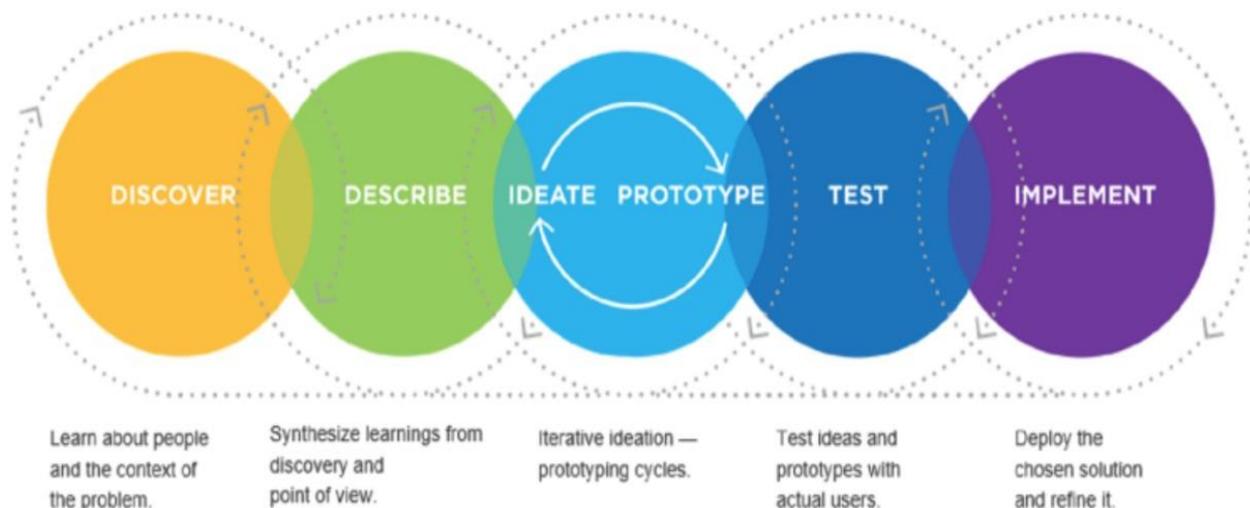
The interviewers' groups need to be more organized and well trained. Each member should have clear tasks and follow the rules.

In conclusion, the shuttle service could also be improved. The waiting time needs to be reduced and for that reason there must be a timetable with all the time schedules. The drivers should be more professional and really stick to the route. It would be really beneficial if the drivers were able to explain the questionnaires so that the visitors are able to fill them out in the shuttle bus or in the bars. Finally, a direct shuttle to Agriturismo should be implemented.

As a final suggestion, a few local products could be presented in the booth in order to promote the local production.

5. Design Thinking

On Tuesday 29th of May, students participated in a Design Workshop concerning the development of sustainable tourism in the Ostana community. They were asked to come up with design solutions pertaining the mobility improvement in addition to design of a future model of alpine urbanism in Ostana (in 10 years) taking into consideration some significant issues such as money constraints, nature resources and locals wellbeing. Also, the substantial and controversial issue to be taken into account is sustainability and attracting the responsible tourist to behave ecofriendly.



What is design thinking?

Design Thinking is a methodology used by designers to solve complex problems and find desirable solutions for users. A design mindset is not problem-focused, it's solution focused, and action oriented towards creating a preferred future. Design Thinking draws upon logic, imagination, intuition, and systemic reasoning, to explore possibilities of what could be - and to create desired outcomes that benefit the end users.

According to this definition we have some solutions for some complex problems by implementing a special methodology which in Ostana case is the back-casting methodology consists of three steps. It is an innovative way of designing a vision. In former vision designing it was supposed to step towards future from present but back casting methodology begins with the end in mind and move backwards from the vision to the present and finally move step by step towards the vision.

Ostana Design Thinking

Students were engaged in Design Workshop talking to the mayor to apprise them the priorities of the community and the significant inhabitant's preferences about tourism development in their community realizing the risks to prevent such, as losing the tradition, changing too much or becoming a place for the rich people. Ostana locals recognized that the tradition like every other thing in this world should change but they believe in change not in being over, like changing in the agriculture in terms of emerging of organic garden or changing in architecture somehow between tradition and modernity like Ostana new constructions (MonViso Institute). In design solution for Ostana community it is important to think about construction of new infrastructure and amenities to being independent from villages like Crissolo or going far away to Paesana. Connectivity and accessibility should improve in adequate way to facilitate tourist arrivals to points of existing and potential interests and connect Ostana to other villages. In an overall view design proposal should engage young locals in development and revitalization of the village, preservation of traditions like Occitan languages, bring about the local income growth, economic development, keeping in to consider the sustainability. Students

elaborated design proposals in sketches would be viewed in design thinking at the appendix.

6. Conclusion

In the year of 2018, the community of Ostana still remains a remarkable example on how remote alpine villages are undergoing transformation in order to keep being attractive for both residents and potential tourists. As it seems, transportation and mobility are two of the most important factors for fueling said transformation process. While sustainable methods of transport are clearly around and available, the true challenge lies in finding the right balance between implementing these technologies and preserving the local nature and culture.

The biggest takeaway of our stay in Ostana was, that not only the visitors influence the community of Ostana, but that there are also certain factors that influence the visitors, namely the weather. Especially in alpine regions, the weather can change swiftly, and rain can linger around for several days. For a destination like Ostana, that offers beautiful vistas and adventurous hiking paths, the weather can be a very decisive factor for visitors whether they want to come visit the place or stay at home. While you certainly cannot control the weather, there are two alternative way to go for the community. Either offer additional activities for bad weather situations or try to attract visitors that do not mind the occasional bad weather.

While the somewhat bad weather had a certain impact on the overall number of visitors during our day of observation, the overall tendencies seemed to support the observations made by the results of the previous year. One of the key factors whether to go for the shuttle bus or to take up the own car was the wish for independence. While residents, workers, and families clearly preferred to take up their own car, other visitors (e.g. couples without child or younger people) were quite open to leave their car behind and to take the shuttle bus. As mentioned by last year's report, parking is still an important factor which however has not much improved yet. While most people agree on the idea of taking alternative ways in order to reach Ostana, there absolutely has to be a proper spot to leave the car.

In order to reach a certain level of sustainability, it important that all of the actors work together. In the case of Ostana that seemed to be fortunately the case. Positive feedback from both the community and the visitors allowed us the reevaluate the importance of the transformation that is currently occurring in the village. In the moment there are still some issues that need to be overcome like the dependence on the weather and the lack of infrastructure at the crossroads leading up to Ostana down in the Po Valley. Through the right choice of mode of transportation and additional investments, these factors however can be improved rather quickly.

As for the near future, it remains to be seen how the residents invest in their community in order to make it an attractive destination for tourists all year long and how the changes affect the community as a cultural space. An ongoing repetition of the mobility experiment would be recommended to measure both the flow of visitors and their impact on the local environment.

- 10: Il mezzo di trasporto da Lei scelto, ha un impatto sulla comunità di Ostana. Il traffico causato dai visitatori ha un serio impatto sulla salute dei residenti e sull'ambiente circostante e, in quanto visitatore, le viene chiesto di tenere in considerazione questa problematica. Quale delle seguenti opzioni sceglierebbe per raggiungere Ostana da qui (strada della valle principale/parcheggio)?

Scenario 1 <i>Tempo di percorrenza</i> <i>Costo del parcheggio</i> <i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i> <i>Tempo per parcheggiare</i> <i>Tempo d'attesa</i> <i>Nr. di stazioni e-bike a Ostana</i>	Macchina 15 min. 1.50 €/ora 5 min.	Navetta 18 min. 2.00 €/pp 10 min.	E-bike 35 min. 1.00 €/pp 3	Seggiovia 15 min. 4 €/pp 3 min.
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 2 <i>Tempo di percorrenza</i> <i>Costo del parcheggio</i> <i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i> <i>Tempo per parcheggiare</i> <i>Tempo d'attesa</i> <i>Nr. di stazioni e-bike a Ostana</i>	Macchina 12 min. 2.50 €/ora 10 min.	Navetta 15 min. Free 10 min.	E-bike 30 min. 2.00 €/pp 1	Seggiovia 18 min. 2.00 €/pp 4 min.
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 3 <i>Tempo di percorrenza</i> <i>Costo del parcheggio</i> <i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i> <i>Tempo per parcheggiare</i> <i>Tempo d'attesa</i> <i>Nr. di stazioni e-bike a Ostana</i>	Macchina 18 min. 2.50 €/ora 1 min.	Navetta 12 min. 2.00 €/pp 8 min.	E-bike 30 min. 3.00 €/pp 1	Seggiovia 12 min. 4.00 €/pp 5 min.
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 4 <i>Tempo di percorrenza</i> <i>Costo del parcheggio</i> <i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i> <i>Tempo per parcheggiare</i> <i>Tempo d'attesa</i> <i>Nr. di stazioni e-bike a Ostana</i>	Macchina 15 min. 3.50 €/ora 5 min.	Navetta 18 min. 2.00 €/pp 5 min.	E-bike 35 min. 3.00 €/pp 2	Seggiovia 15 min. 4.00 €/pp 3 min.
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 5 <i>Tempo di percorrenza</i> <i>Costo del parcheggio</i> <i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i>	Macchina 12 min. 3.50 €/ora	Navetta 12 min. 2.00 €/pp	E-bike 40 min. 1.00 €/pp	Seggiovia 18 min. Free
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<i>Tempo per parcheggiare</i> <i>Tempo d'attesa</i> <i>Nr. di stazioni e-bike a Ostana</i>	1 min.	10 min.	2	5 min.
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 6 <i>Tempo di percorrenza</i> <i>Costo del parcheggio</i> <i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i> <i>Tempo per parcheggiare</i> <i>Tempo d'attesa</i> <i>Nr. di stazioni e-bike a Ostana</i>	Macchina 18 min. 1.50 €/ora 1 min.	Navetta 12 min. 4.00 €/pp 10 min.	E-bike 40 min. 2.00 €/pp 3	Seggiovia 18 min. 2.00 €/pp 5 min.
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix 2: Questionnaire for Tourists: version 2

Turismo e Mobilità Sostenibile – Il caso di Ostana, Piemonte -- Questionario per Turisti 2018

- 1: Dove ha iniziato il suo viaggio oggi?
- Dal luogo in cui vivo (Comune / Nazione) _____ / _____
 - Dal luogo in cui pernotta come turista (Comune / Nazione) _____ / _____
- 2: Gentilmente, specifichi chi sono i suoi compagni di viaggio (incluso sé stesso):
- Numero di bambini con meno di 15 anni: _____
 - Numero di adulti tra i 16-30 anni: _____
 - Numero di adulti tra i 31-60 anni: _____
 - Numero di adulti tra i 61+ anni: _____
- 3: Quanto prevede di fermarsi ad Ostana? _____ ore oppure _____ giorni
- 4: In media, quante volte all'anno visita Ostana?
- Questa è la mia prima volta
 - 1-2 volte
 - 3-5 volte
 - 6-10 volte
 - più di 10 volte
- 5: Quali attività pensa di svolgere a Ostana? (scelta multipla)
- Escursionismo
 - Ciclismo
 - Arrampicata
 - Mangiare
 - Fare fotografie
 - Apprezzare l'architettura
 - Passare tempo di qualità con amici e/o familiari
 - Partecipare a un evento (se sì, quale:)
 - Altro (per favore specifichi:)
- 6: Specifici quanto è d'accordo con le seguenti affermazioni:
"Quando mi trovo a Ostana, mi sento disturbato da traffico e congestione automobilistica."
- Totalmente in disaccordo (1) (2) (3) (4) (5) Totalmente d'accordo (0) non saprei

“Dovrebbe esserci un’alternativa più ecologica all’automobile per raggiungere Ostana.”

Totalmente in disaccordo (1) (2) (3) (4) (5) Totalmente d’accordo

“Limitare il traffico di automobili all’interno di Ostana sarebbe positivo.”

Totalmente in disaccordo (1) (2) (3) (4) (5) Totalmente d’accordo

“Preferirei arrivare ad Ostana esclusivamente con i mezzi pubblici se ci fossero delle opzioni migliori (durata del viaggio, connessioni, ...)”

Totalmente in disaccordo (1) (2) (3) (4) (5) Totalmente d’accordo

7: Genere: ●M ●F

8: Anno di nascita: _____

9: Nazionalità: ●IT ●FR ●CH ●DE ●AT ●Altro_____

- 10: La comunità di Ostana è attiva nell'ambito dello sviluppo sostenibile. In quanto visitatore, le viene gentilmente richiesto di partecipare a questo fine, riducendo l'impatto del traffico automobilistico decidendo coscientemente di utilizzare una modalità di trasporto più sostenibile. Quale opzione sceglierebbe per raggiungere Ostana da qui (strada della valle principale/parcheggio)?

Scenario 1	Macchina	Navetta	E-bike	Seggiovia
<i>Tempo di percorrenza</i>	15 min.	18 min.	35 min.	15 min.
<i>Costo del parcheggio</i>	1.50 €/ora			
<i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i>		2.00 €/pp	1.00 €/pp	4 €/pp
<i>Tempo per parcheggiare</i>	5 min.			
<i>Tempo d'attesa</i>		10 min.		3 min.
<i>Nr. di stazioni e-bike a Ostana</i>			3	
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 2	Macchina	Navetta	E-bike	Seggiovia
<i>Tempo di percorrenza</i>	12 min.	15 min.	30 min.	18 min.
<i>Costo del parcheggio</i>	2.50 €/ora			
<i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i>		Free	2.00 €/pp	2.00 €/pp
<i>Tempo per parcheggiare</i>	10 min.			
<i>Tempo d'attesa</i>		10 min.		4 min.
<i>Nr. di stazioni e-bike a Ostana</i>			1	
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 3	Macchina	Navetta	E-bike	Seggiovia
<i>Tempo di percorrenza</i>	18 min.	12 min.	30 min.	12 min.
<i>Costo del parcheggio</i>	2.50 €/ora			
<i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i>		2.00 €/pp	3.00 €/pp	4.00 €/pp
<i>Tempo per parcheggiare</i>	1 min.			
<i>Tempo d'attesa</i>		8 min.		5 min.
<i>Nr. di stazioni e-bike a Ostana</i>			1	
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 4	Macchina	Navetta	E-bike	Seggiovia
<i>Tempo di percorrenza</i>	15 min.	18 min.	35 min.	15 min.
<i>Costo del parcheggio</i>	3.50 €/ora			
<i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i>		2.00 €/pp	3.00 €/pp	4.00 €/pp
<i>Tempo per parcheggiare</i>	5 min.			
<i>Tempo d'attesa</i>		5 min.		3 min.
<i>Nr. di stazioni e-bike a Ostana</i>			2	
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 5	Macchina	Navetta	E-bike	Seggiovia
<i>Tempo di percorrenza</i>	12 min.	12 min.	40 min.	18 min.
<i>Costo del parcheggio</i>	3.50 €/ora			
<i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i>		2.00 €/pp	1.00 €/pp	Free

<i>Tempo per parcheggiare</i>	1 min.			
<i>Tempo d'attesa</i>		10 min.		5 min.
<i>Nr. di stazioni e-bike a Ostana</i>			2	
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scenario 6	Macchina	Navetta	E-bike	Seggiovia
<i>Tempo di percorrenza</i>	18 min.	12 min.	40 min.	18 min.
<i>Costo del parcheggio</i>	1.50 €/ora			
<i>Costo del viaggio (A/R, gratuito sotto i 15 anni)</i>		4.00 €/pp	2.00 €/pp	2.00 €/pp
<i>Tempo per parcheggiare</i>	1 min.			
<i>Tempo d'attesa</i>		10 min.		5 min.
<i>Nr. di stazioni e-bike a Ostana</i>			3	
Scelta:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix 3: Further results for the tourists questionnaire

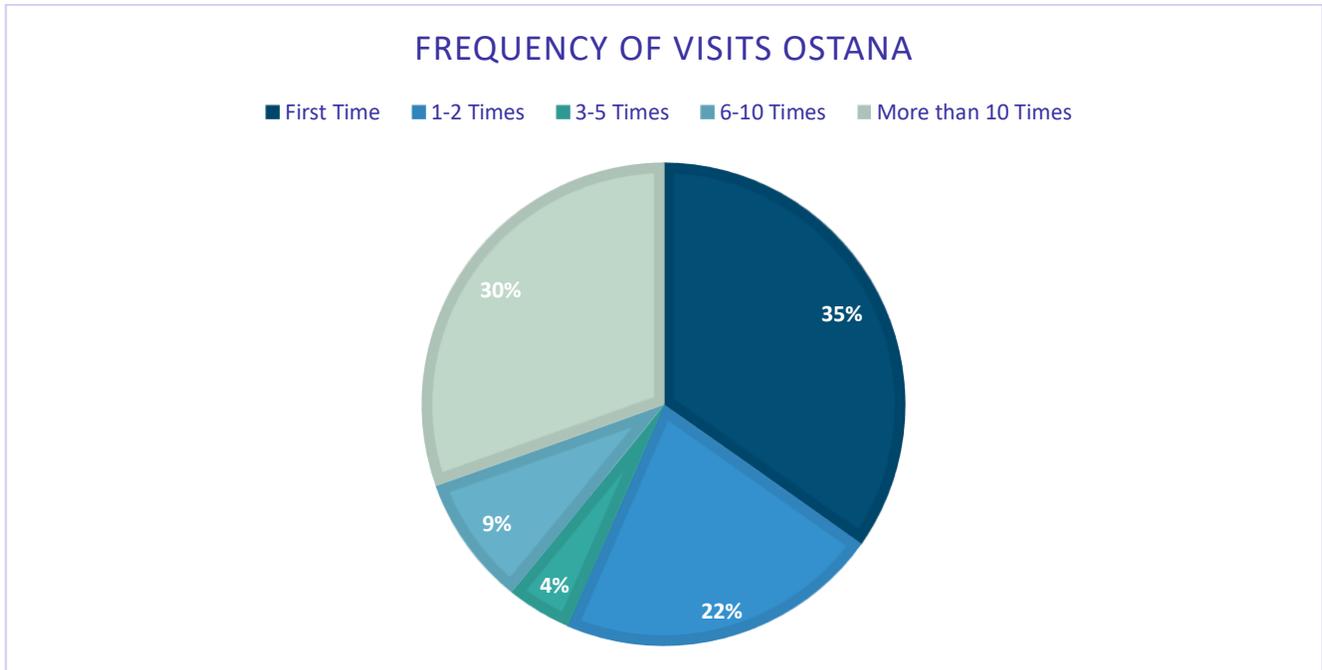


Figure 7 Frequency of How many times the tourists come to Ostana

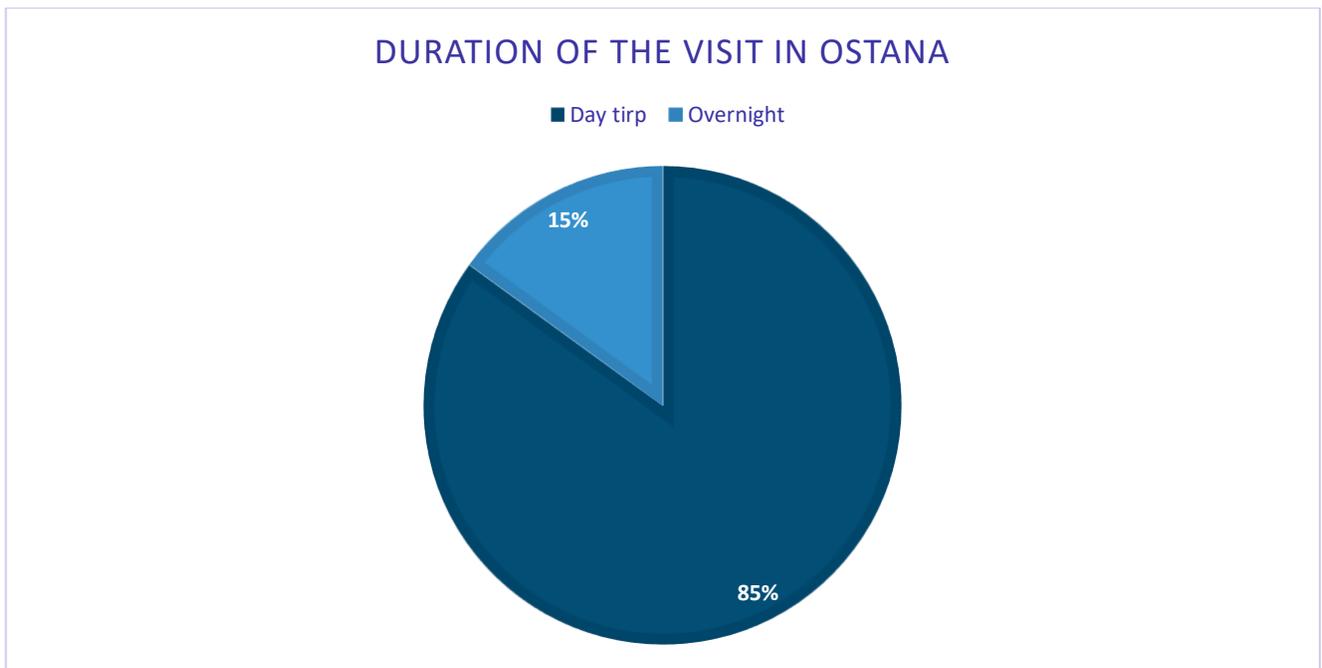


Figure 8 Frequency of overnights or day trips

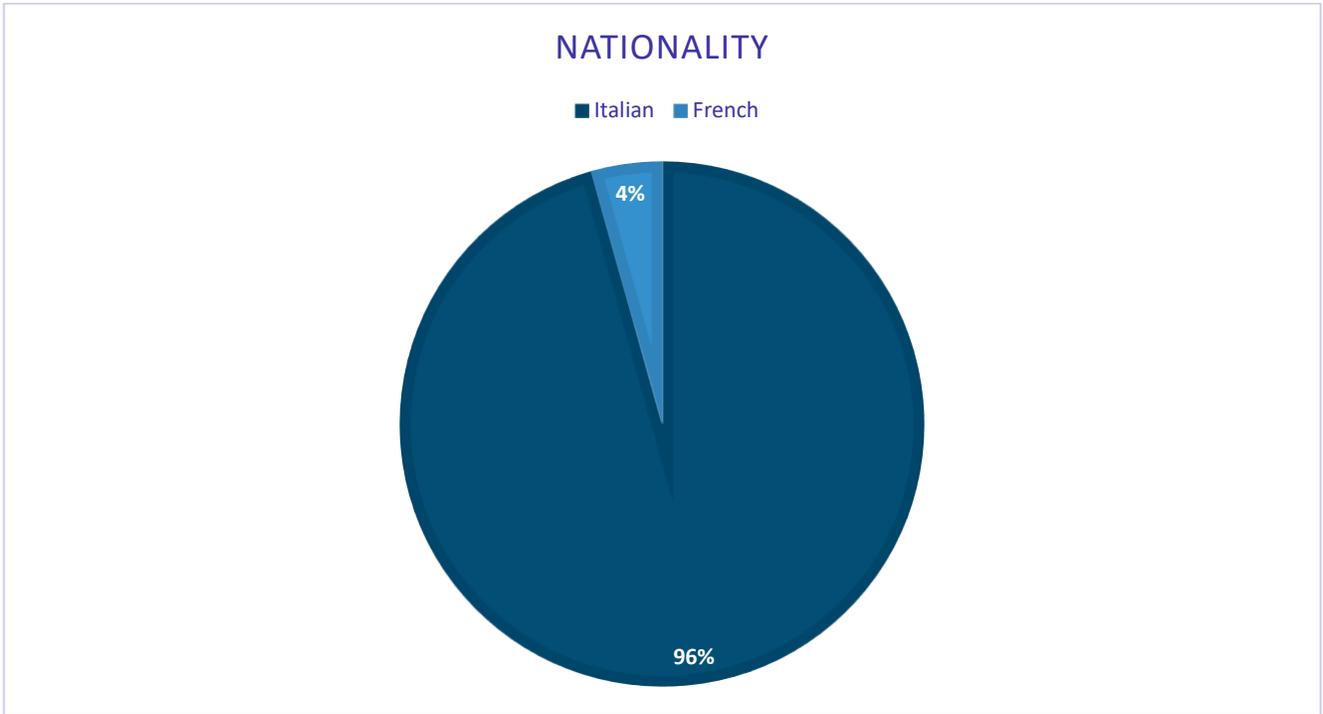


Figure 9 Nationality of Tourists

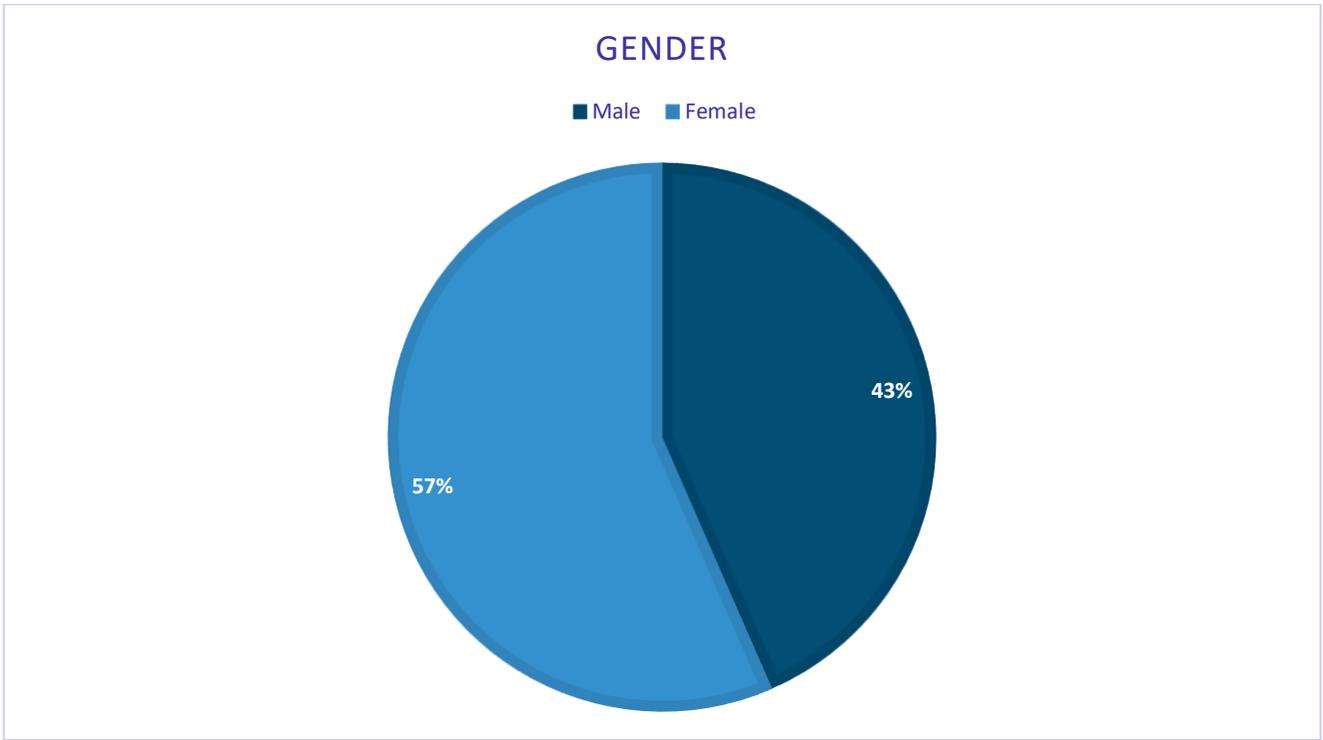


Figure 10 Gender of the tourists

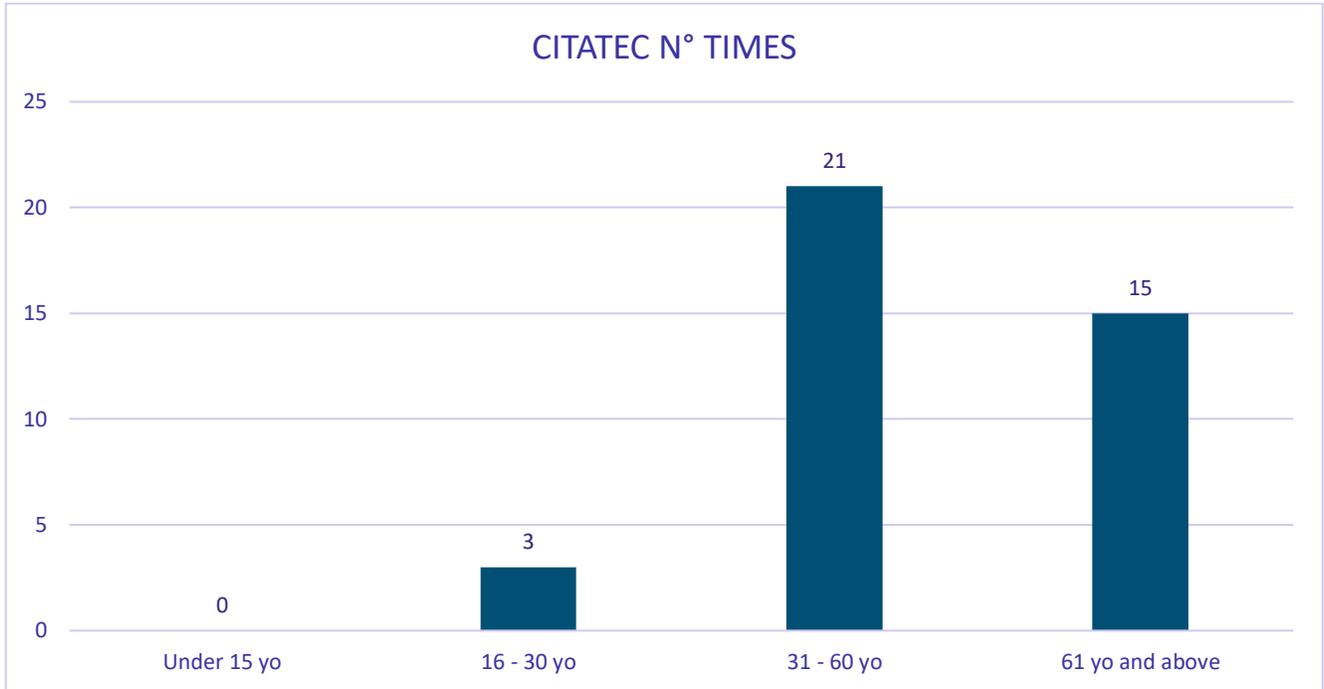


Figure 11 How many times the frequency of each group was cited

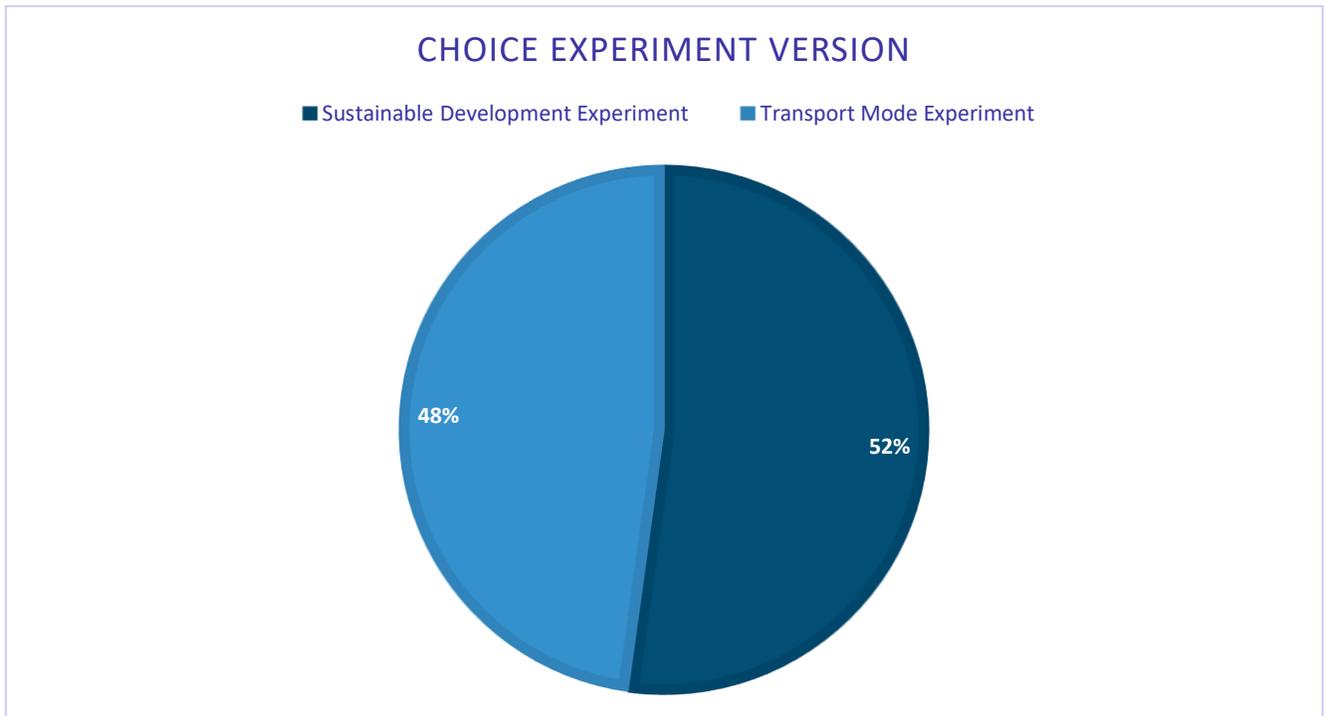


Figure 12 The choice experiment version

Appendix 4: Students Design Thinking Proposals

DESIGN THINKING PROPOSAL: The POG Project

Prepared by: Barsocchi Silvia, Battino Fiammetta, Bosco Carolina and Pop Carina

The foundation of the “Public Organic Garden” (POG) Project is the realization of a public garden with innovative eco-friendly technologies following ecological techniques. All the products are organic and compatible with the local environment in order not to damage the Po Valley eco-system.

At the basis of the biodynamic agriculture, we find the conservation of the fertility of the terrain over time, the delivery of healthy and local products available to the members of the community.

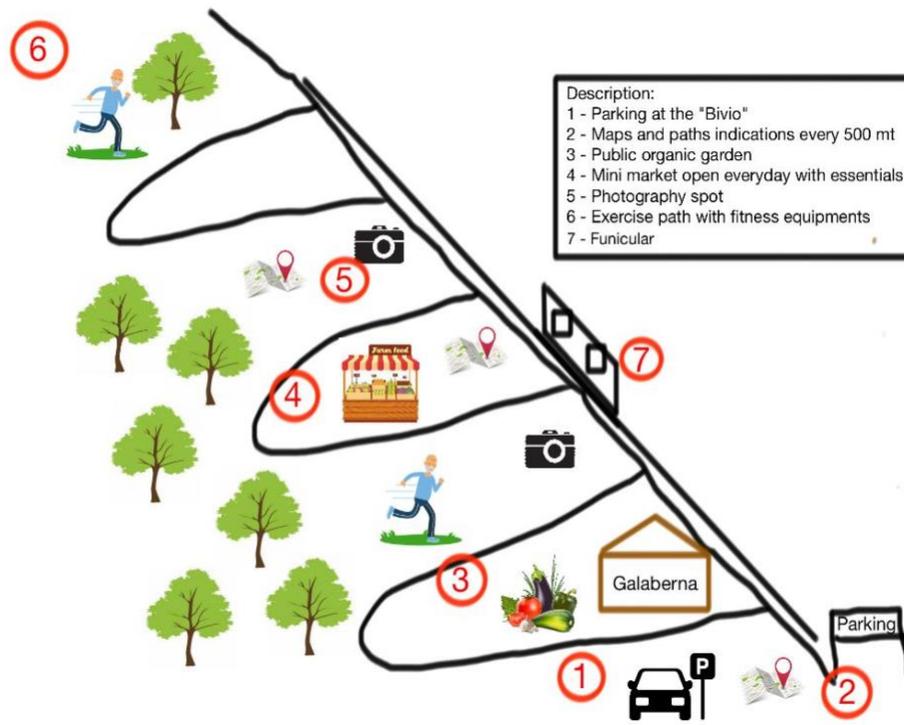
The core of this initiative is based on the principle of community: all the actors will be involved in the selection of the plants. A road map and a time table, in order to follow the process and divide equally the tasks between the actors, will be set up.

The products derived from the vegetable garden will be shared freely among the participants. In order to make these organic products available also for any visitors, an agreement with the supermarket is drawn up: the market is designed in order to deliver only local and organic food from the POG.

This project goes accordingly with the whole revival of the village of Ostana in the context of the general plan to increase the awareness of the destination in agreement with sustainable techniques.

Five steps towards the achievement of this proposal include:

1. Study of the terrain, the environment and the climate conditions in order to understand and select what is actually suitable to be plant.
2. Organize with the local community a roadmap and a crowdfunding in order to prepare the terrain and to buy all the tools and seeds requested.
3. Organize with the local community a day of festivity for the opening ceremony, where everyone would how the terrain and plant the seeds.
4. Set up the organizational chart with all the tasks between the actors.
5. Picking of the plants and distribution between the members of the community.



Description:
 1 - Parking at the "Bivio"
 2 - Maps and paths indications every 500 mt
 3 - Public organic garden
 4 - Mini market open everyday with essentials
 5 - Photography spot
 6 - Exercise path with fitness equipments
 7 - Funicular

DESIGN THINKING PROPOSAL: Meditation Center in Ostana

Prepared by: Florin Hinterberger

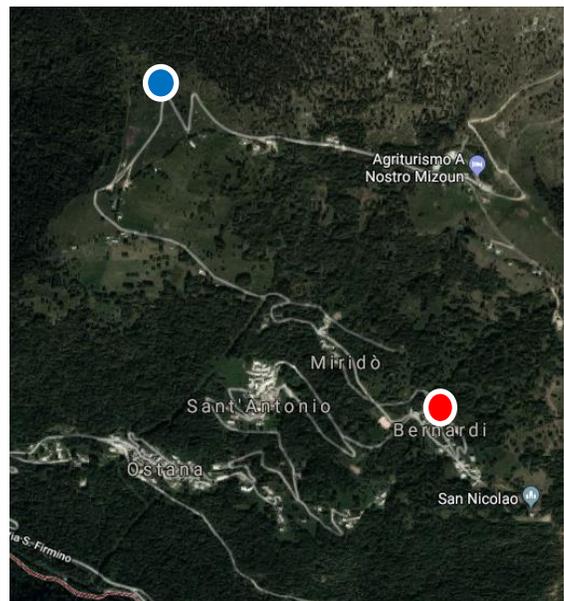


The idea of this proposal is to make use of some of the natural strengths that Ostana has to offer. When people are being asked what they really appreciate about Ostana, the calmness and nature are oftentimes mentioned. These two characteristics make an ideal environment for a meditation center.

The way this mediation center functions is as a place for people who desire to make a retreat that lasts for several days. These retreats can range from just 2-3 days up until 3 weeks.

Participants will spend the entirety of the retreat in or near around the meditation center. As a consequence, there will be very little and compact traffic congestion only when a retreat starts, and when it ends. It will also be easy to organize shared transportation since everybody starts and finishes at the same time.

As a potential location, two different spots will be presented within this proposal. If the resources are substantial, an entirely new center can be built within the blue area. There, the center is away from most houses and this neither will disturb the locals nor will it be disturbed by the locals. If resources are scarcer, a second possibility would be to use some of the houses in Bernardi (red area) that are abandoned and just renovate them appropriately. There, the mediation center would be more included within the community of Ostana, however, the chances of conflicts are also greater.



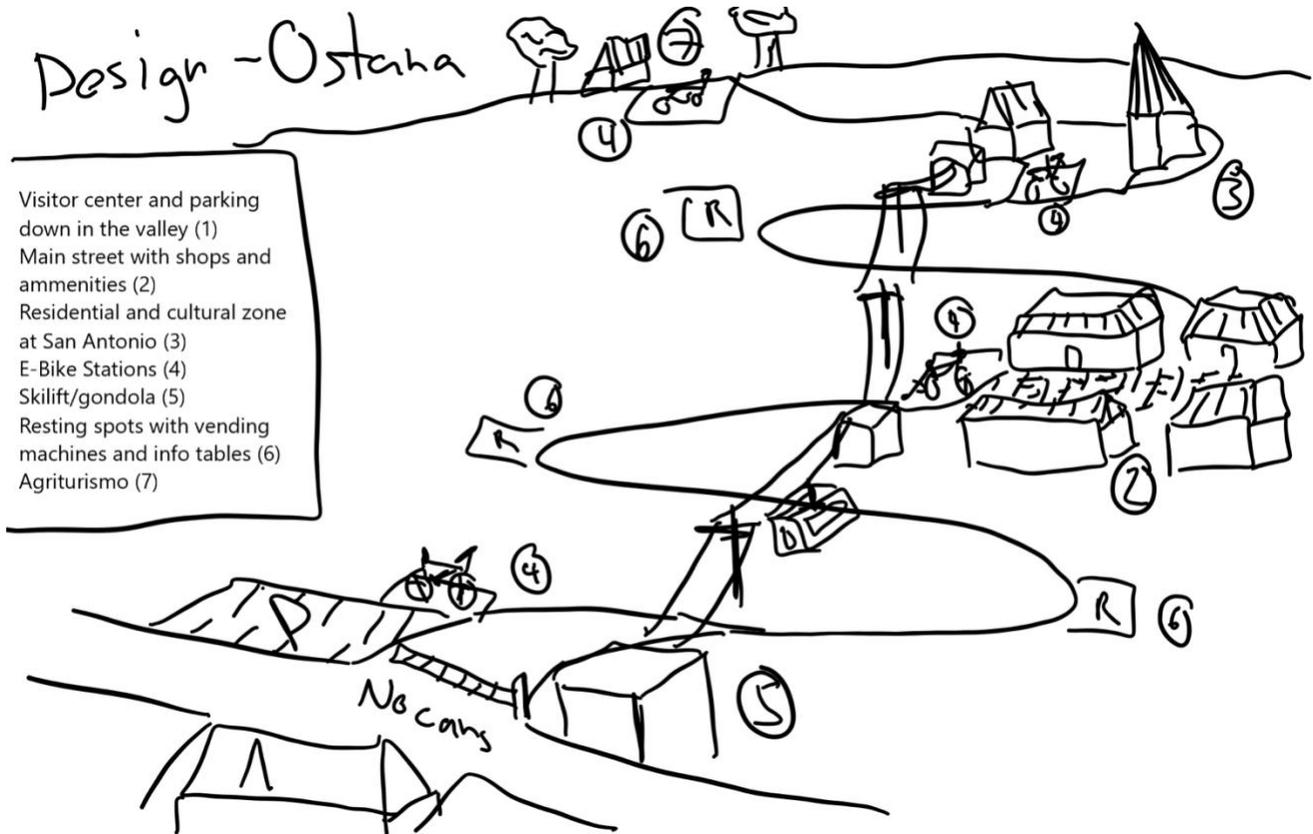
As a way of getting clients and financial support, the meditations would work together with OSHO Torino Piemonte, which is a meditation center located in Torino. They could advertise retreats up in Ostana, provide meditation teachers and be involved in the organization and ownership of the meditation center.

Five steps towards the achievement of this proposal include:

1. Inform the community of Ostana about the project during a community meeting and inviting them to help with the location decision
2. Contacting OSHO Torino Piemonte (via info@oshotorinopiemonte.it) and ask them for their support
3. Once the location is decided upon, the construction or renovation process can start with local construction companies
4. When the construction is finished, organization of an opening event where the whole community is invited in order to explain the purpose and increase the acceptance.
5. Finding one person to work full-time at the meditation center (either from the community or through the help of OSHO Torino Piemonte).

DESIGN THINKING PROPOSAL: Mobility development in Ostana

Prepared by: Olivier Schorro



DESIGN THINKING PROPOSAL: The Future of Ostana village

Prepared by: Flavia Affolter, Giulia Coluccia, Vania Doninelli, Gisela Etter, Matilde Miliazza, Miriam Ragusa, Fouzie Razavi, Agam Wandowo

The project and our main ideas, prepared by Vania Doninelli

Ostana needs to develop a sustainable tourism economy. To make this system work better, we propose several ideas to permit the development of the village and create resilience and a more sustainable economy. We thought about solutions which are in line with the three pillars proposed by the Major Giacomo: knowledge, tradition, nature. It is important to backcast to understand which are the necessary steps to reach the desired goals. Our vision for the scenario of Ostana in ten years (2028) with 100 people living here and an economy based on the 3 pillars, in a sustainability framework, is the following:

We would like to increase basic services, promote knowledge and innovation, render even stronger the sense of community and make Ostana a touristic place in which more and more people would like to come and visit it in a sustainable way or can decide to move there. We do not want to attract masses, but a reasonable number of people to make the community grow and to permit to the economy of the village to flourish. Tradition and innovation need to be balanced to maintain and increase the livability of the place. Also, a sustainable mobility system in Ostana is fundamental to preserve the Nature and increase people's well-being (residents and tourists).

Services and ideas we propose to develop in Ostana:

- Provide a pharmacy and doctor service or a clinic in the village
- SPA center: a service and attraction which is already planned to be built
- Osteria in St. Antonio, in a middle position between the Galaberna and the Agriturismo
- E-shuttle service "E-Mario"
- E-Car sharing service connecting the Monviso Valley (four municipalities)
- Language school (also Occitan Language)
- European exchange programs

-
- Orphanage
 - Local Shop, selling local products
 - Sunday Market, selling locally grown and locally produced products

MonViso institute: an encounter point to permit the development of the community, increase hospitality, bring international groups, and render the buildings self-sufficient to offer a really sustainable experience (completed project of the institute as explained by Prof. Luthe, so a complex of self-sufficient buildings hosting groups of people or international students which can enrich the community and bring knowledge and innovation. In addition they have services and the possibility of doing activities in the complex)

Design thinking proposal: Development of an Osteria in St. Antonio

Prepared by: Vania Doninelli

A traditional building transformed in an encounter point for the community and a point of discovery for tourists. The Osteria will be furnished with traditional objects and the cuisine will be exclusively focused on the local tradition and using only locally grown and locally hunted products. In the Osteria there will always be traditional music bounded to the Occitan culture and occasionally, some shows and traditional group dances can be arranged.

Five steps towards the achievement of this proposal include:

1. Find a person interested in developing this project, who will invest and take care of this project seriously being focused on the importance of local traditions and products.
2. Get the permissions to operate (State and municipality) and also the support of the community (acceptance)
3. Find an appropriate building to buy, which needs to be built in a traditional way and especially needs to be made with the local stone, also inside (same style of the Multifunctional building, to give to it a traditional and genuine atmosphere. It also need to possess (or permit to install) the necessary technical facilities to develop a restaurant (kitchen, water system,...).

-
4. Find local suppliers for the food (Ostana or near villages)
 5. Find local employees, to develop the local economy and have staff which knows the local culture and traditions.

Design thinking proposal: Language school

Prepared by: Miriam Ragusa

The three pillars on which Ostana is building its future are culture, knowledge and nature. These three pillars, together, can be seen as the basis for the future development of the small village in the Po Valley. The beautiful landscape in front of the stunning Monviso, the peculiar architecture and the unique culture of Ostana should be put at the centre of attention in the discussion for the improvement of the economy of the village as well as taught to the younger generations in order to make them well aware of the potential of Ostana.

In 10 years' time, Ostana will have a school in which students can learn languages such as Italian (the first official language), French, English but also the local dialect (Occitan). In order to make the Occitan language alive, seminars or workshops of creative writing could be organized inside the school. It is common practice in many places to organize reading sessions in order to rediscover the literature written in the local dialect. Following this line, the school in Ostana is to be seen as the centre of learning and production of culture in the Po Valley.

The programs in the school are created with the intent to incentivize the local people to make use of their own traditions. In fact, the school offers the possibility to learn about the techniques applied in the construction of houses with the stone.

The school works also in connection with the park, in which students follow courses in botany or heal medicine and learn directly from practice how to distinguish the different types of plants and how to use them to make medicines or other products.

The steps towards the achievement of this proposal include:

1. Feasibility studies

-
2. Decisions on the structure of the school (for instance, private vs. public school, number of teachers, number of students per class, fee)
 3. Decision on the location of the school
 4. Courses structure and content
 5. Possibility of connection from/to the neighboring villages
 6. Consideration of differences in ages in the different classes

Design thinking proposal: e-Car sharing service

Prepared by: Matilde Miliazza

An e-Car sharing service could be put in place around the Monviso Valley in the Municipalities of Paesana, Oncino, Ostana and Crissolo. This conjoint service could allow a better mobility around the valley reducing both pollution and congestion, while optimizing the use of available parking spaces. The visitors coming with their own mode of transportation will have the opportunity to leave their cars in a parking space in Paesana and reach Ostana or any of the other towns in the valley using the e-Cars. This service could also help to reduce the need for the locals to own a car. In fact, they will be able to move easily between the towns in a more respectful way towards the environment using an electric mode of transportation, which would also be less costly for them. These e-Cars will operate on a rental based system of 0,20 €/km. There will be several parking and charging hubs spread along the towns. A car taken at a hub can be left at another one and vice versa. The entire rental process is progressing with one single device – the smartphone and it takes place exclusively via the e-Car sharing App. Through the App the customers will be able to:

- Find a car in the nearest location and reserve it
- Open the car and start the rent
- Localize parking and charging spots
- Close the car and end the rent
- Contact customer service
- Evaluate the service.

On the e-Car sharing App the customer can find vehicles on the streets of any of the operating towns. To be able to rent them the customer will just have to:

-
- Download the app
 - Register him/herself, providing a payment method and valid driving license.

The steps towards the achievement of this proposal include:

1. Keep raising awareness about the need of implementing a more respectful transport mobility towards the environment and the local residents in the MonViso valley.
2. Start to cooperate with the other Municipalities in the valley, creating a collaboration, which is essential to develop the project conjointly.
3. Get the approval of the local population.
4. Improve the phone coverage and increase the availability of WiFi (public and private).
5. Find funding, investors and sponsors.
6. Select the best and most strategic spots for parking and charging hubs.
7. Develop the app.
8. Find an app developer.
9. Raise awareness about how to efficiently use the e-Car sharing App.
10. Marketing and Promotion.

Design thinking proposal: Destination spa (riverside)

Prepared by: Fouzie Razavi

In Ostana there are plenty of strong and absolutely pristine rivers which have a substantial effect on the physical image of the place and spontaneously delivers a recreation area which offers close contact with water in one hand and provides spiritually and physically relaxation by hearing the voice of current river on the other hand. The resort centered on water and spa and is all-inclusive. It includes facilitated fitness classes, healthy cuisine, hydrotherapy, educational classes and enables tourists to participate in mentioned programs instead of just visiting. The resort considers to be polyfunctional, restaurants for local foods, riverside cafeteria, exhibition for local art-crafts and a center for herbal products. It is going to be run by local managers and close collaboration with the local administrative.

The steps towards the achievement of this proposal include:

1. Feasibility studies for reconnaissance of the appropriate and exotic place including adequate recreational resources.
2. Providing the beneficial accessibility and connectivity in terms of car, e-bike, shuttle bus, an innovative way by horse-riding or hiking.
3. Assigning the site management to local managers and share the benefits of the resort with them.
4. Determining the exact requirement of the tourists.
5. Optimizing the usability of site natural resources and easily accessibility of other attraction from the resort.
6. Providing different age group needs. (young, children, old)
7. Taking in to consideration the seasonality in terms of determining the cost-effectiveness of the resort.
8. Planning strategies for preventing the overexploitation of the sights.
9. Providing adequate infrastructure such as overnights accommodation, children outdoor water park, drinking water, parking lot, local markets, local restaurants and offering sportive games, fishing, hydrotherapy, swimming.

Design thinking proposal: Ostana Orphanage (OO)

Prepared by: Agam Wandowo

One of the Mayor's goal is to achieve more than 100 people living in the community of Ostana, thus the proposal is to create an orphanage that is based in Ostana. This orphanage will be working together with an orphanage that is centered in Turin as it's the closest bigger city from Ostana. The main idea behind it is to have more people living in Ostana starting at a young age that will contribute to Ostana's community as well as improve its socio-economic development for now and the future. The orphanage will not accommodate more than 20 young-adults, the reason is to keep small number of people for a better productivity and will create the strong relationship between each other, especially to the community. Once they arrive in Ostana, they receive certain specific training based on what their preferences in order to contribute to the community. This kind of actions would help to reach its community's goal and invest human resources which have different skills as a starting point to be developed. So, with

greater stability between their performance and Ostana's needs, it leads to greater social impacts on both locals and visitors. Together with MonViso institute, all the orphans can study a lot of useful things, especially the one that related to the sustainable development.

The steps towards the achievement of this proposal include:

1. Set an agreement between Mayor of Ostana and the locals before Mayor propose an agreement with Turin's main orphanage. First steps of all is everyone should be agreed on creating an orphanage home and what will be the impact on the society and Ostana itself for now more importantly the future.
2. Set financial expenditure based on the availability budget to construct the orphanage, invite all possible investor that would like to investing in Ostana Orphanage.
3. Construct the orphanage home that is consist up to 20 people living inside the house, with 3 levels and 6 different bathrooms (2 at each level), 3 kitchens (1 at each level), 3 common room (1 at each level).
4. Select all orphans who are willing to residing in a mountain area (preferably for those who are interested in nature), including make a list of what they're good at (skills and experiences).
5. Welcoming them with the locals' participation to create the relationship between them and let them settle for a while before contribute to the community.
6. Train them in the area from easy to medium contribution level that very useful to the community, together with MonViso Institute and all possible areas (eg. Galaberna and Bosco Incantato).

Design Thinking Proposal: Cultural Exchange to promote and support local culture
Prepared by: Flavia Affolter

The idea is an extension of what the class of International Tourism did during those five days they spent in Ostana. As the community is concerned with keeping their culture

intact and also showing it to the world in order for people to become interested in it and carry on the traditions, an exchange program with different schools in Europe is a good idea to reach this goal. The question might be: why students? Because they are the next generation, they bring their own new ideas and visions with them that could be implemented and included into the project of Ostana. Also, some of them might be interested in having a more active part and move to Ostana at one point in order to start their own business. There are many advantages that exchange programs of any kind bring with them.

People in Ostana have a lot of different skills that are becoming rare and should be preserved, like the way they build the houses, the Occitan language but also some little cultural features. The Monviso institute is a good starting point and they already have a steady flow of students coming to Ostana. Therefore, the basic framework is already established and it would only need to be applied individually to the different classes / workshops being taught. Also, once they have finished their institute, there will be more space to house students as well. The classes do not have to last for a whole semester, but are to last for one to two weeks and should be a field project trip for the students during their semestral classes

Five steps towards the achievement of this proposal include:

1. Have the approval of the community, otherwise the project will not work. This might take some time as not all of the members will be convinced that the project will be effective. Therefore, it is important that they are presented with a full plan on what will be done and what impact it will have on the community for individuals as well as a whole. If they are not willing to.
2. Once the community is on board, it is necessary to find locals that are willing to teach a specific course as the whole project works only if the community is not only on board but also willing to take part in the project share their knowledge.
3. Find relevant / connected study programs for example in Architecture, roman languages, sustainability studies, etc. It is important to really find programs that specialize in these areas as the students as well as the teachers will be more interested in learning as well as taking part and experiencing. It should be an exchange where both sides can profit in the end.

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4. Compile a list of the relevant professors / head of departments of the relevant programs and contact them. Their support is needed in order for the exchange to take place. Although they will have to check with their University if a study trip would be possible in the overall study plans, they still have some saying in the creation of the curricular.
 5. The EU has funds for exchange programs. Therefore, once a program has been established with all the information about the different Universities, study programs as well as the responsible professors, Ostana can apply for a grant. This money can then be invested into the infrastructure of Ostana and help the local economy grow.

Design thinking proposal: e-Shuttle 'e-Mario'

Prepared by: Gisela Etter

In 10 years in Ostana it can be developed a free e-Shuttle service for both locals and visitors in Ostana and the Valley. An electric public transport could potentially solve the problems of congestion that Ostana faces, contribute to reduce emissions and environmental impact without pollution and help on achieve more sustainability. The idea of “e-Mario” as a public transport service illustrates the efforts of the Ostana community in involving local people in their projects, in fact in order to build resilience it is very important to focus not just on environmental sustainability, but also on the social one. Mario is a local from Ostana, a very friendly, interesting and positive person, willing to help people and talk with them about the beauty of the region. In 10 years in Ostana, Mario will provide an e-Shuttle service for locals and tourists, twice in the morning and twice in the afternoon, both to let people move but also to provide them with advice, information and insights to enhance tourists’ experience.

The steps towards the achievement of this proposal include:

1. The Major, with the help of experts in the field, sensitizes the local community about the importance of safeguarding the environment and adopt sustainability approaches in everyday life.

-
2. More and deeper studies on mobility and related issues (congestion, service provision, costs, environmental impact...) to introduce to the inhabitants the concept of an e-Shuttle.
 3. After consensus, find funds from public authorities and locals to buy the shuttle and implement the service.
 4. Make studies about which areas the shuttle should cover and how many times per day offer the service.
 5. Tourism related promotional efforts in order to raise awareness about Ostana concerns for sustainability and about the provision of this free service.
 6. Sensitize locals to use the service as well, showing them the benefits both in terms of environment and community-building.

Design thinking proposal: clinic, pharmacy and mini-market

Prepared by: Giulia Coluccia

The center of Ostana is the core of the life of the city and the meeting point for both tourists and local community. Here is possible to buy fresh and local vegetable, bread and other items at the mini-market, medicine at the pharmacy and to consult a doctor.

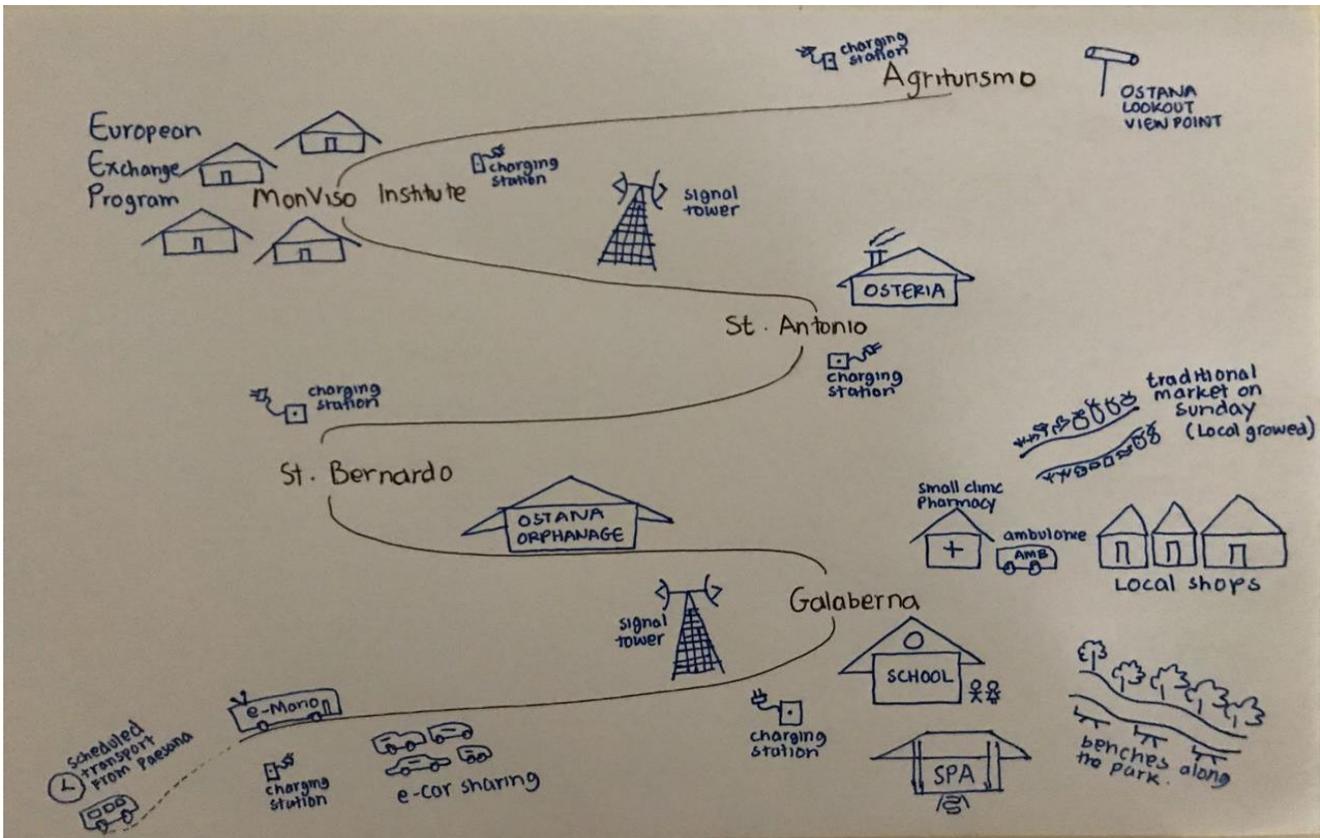
These basic services are useful for tourists but particularly important for the local community since the possibility to fulfill the basic needs in Ostana motivates them in moving/staying there. Furthermore, this services are perceived as a “safety” especially by young families and elderly people because they know that if something happen they can easily consult a doctor or a pharmacy and that they can find food and other basic items at the mini-market.

Five steps to develop these basic services in Ostana:

1. Study the demand for such services and determine where to develop them, opening days and hours.
2. Find investors willing to invest in the future of the village.
3. Find suitable locations and employees, possibly living in Ostana, for:
 - a. mini-market
 - b. pharmacy

c. clinic

4. Involve local suppliers in order to sell fresh products at the super market (fruit and vegetable, meat, bread, flour...).
5. Promote the new services through different channels to the local community and in the Region.



DESIGN THINKING PROPOSAL: Better connection and interesting living in Ostana

Prepared by: Andela Sormaz

Currently, one of the issues that Ostana faces is connectivity within the community. Therefore, the idea is to increase connectivity in terms of transport as well as to connect people inside and outside the community. Also, the idea is to make the place interesting for both locals and visitors.

The Design Thinking Proposal is made for the period of 10 years and the text below will be written in the present time.

Starting from the parking with marked places located between Crissolo and Ostana, people have an opportunity to choose between two transportation means to drive them to Ostana – e-Bus or e-Bike. It means - Ostana as a car-free destination.

Small billboards with an explanation on why the community supports this system and in which way we can improve sustainable living can set around the parking area in order to raise the awareness among people about sustainable living.

There are four locations perfect for e-Buses and e-Bikes charging stations: next to the parking and also, in San Bernardo, Sant'Antonio, MonViso Institute and Agriturismo.

Two e-Bike Stations are located on the parking and nearby the MonViso Institute and six e-Bus Stations (that can be seen on the map).

Next to the parking, there is a Tourist Office which provides information, bookings and tips for any trip to Ostana: advice, help, brochures, tickets and souvenirs made in Ostana. Ostana Tourist Office provides brochures in Occitan, Italian, English, French and German.

A transportation mean which is found very interesting and useful by both locals and visitors is a mountain coaster. People of all ages have fun on waves, curves and bridges and enjoy spectacular views of the surrounding nature. Very often, they use e-Bikes to go uphill, then leave bikes at MonViso Station from where they take a thrilling downhill decent to Galaberna.

In order to connect people from inside as well as outside the community, one more idea is implemented – Ostana Music and Wine Festival. The festival is held in June, under the marquee in Galaberna. This is seen as an opportunity for locals to promote wines of domestic production as well as other products made in Ostana or in neighborhood communities. Furthermore, local musicians play during the festival. People are entertained and the three-day Ostana Music and Wine Festival is a great opportunity for their relations improvement.

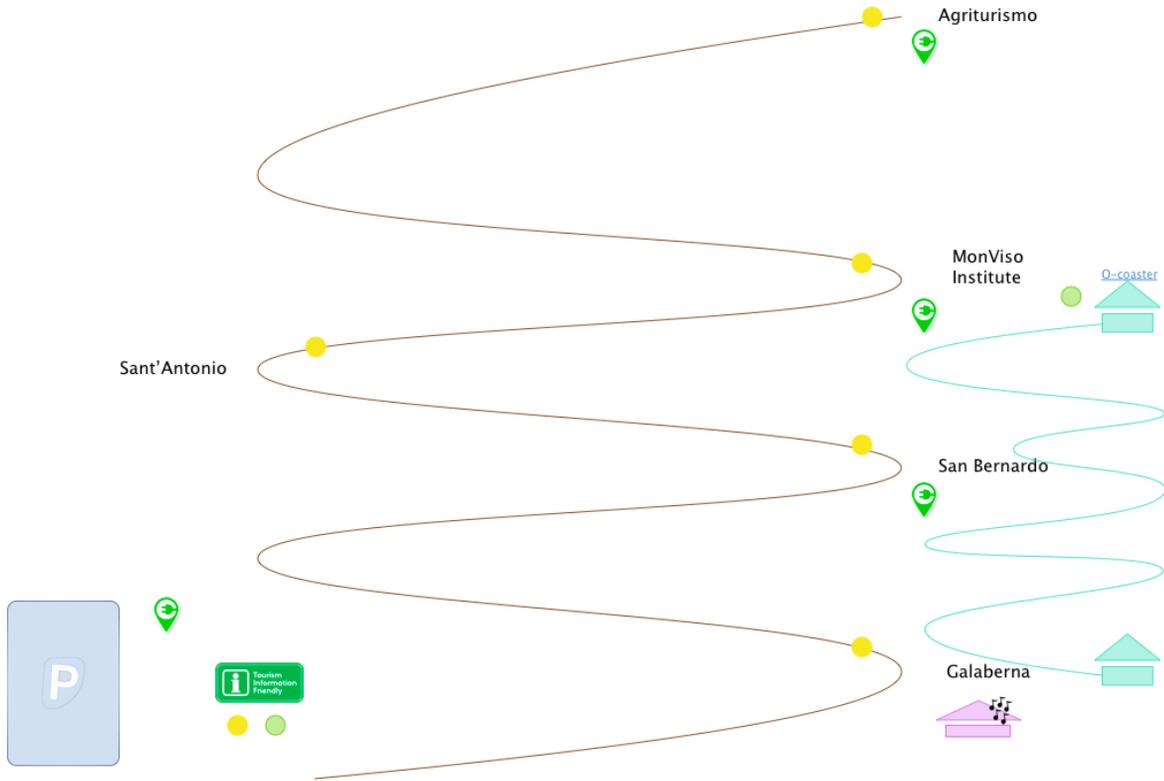
As Ostana has an elevation of 1.250 m and the hills around the place are even higher, the place would be perfect for some sport activities such as paragliding and the community is now thinking about the implementation of this idea.

All the ideas have helped in creating new working places which then led to the population growth in Ostana.

Steps for the implementation of the proposal:

1. Make sure the community is familiar with the idea about the car-free Ostana and in which way they could benefit from it;
2. Ask for community approval;
3. Get the information about e-bikes, e-buses and charging stations payment options;
4. Get financial support from the government and a European funding;
5. Ask local businesses for financial help giving them in return an advertising on the parking billboards and in printed brochures;
6. Hire engineers for the parking building;
7. Hire a company to examine the terrain, to design and manufacture a coaster;
8. Invite wine producers and other local products' producers to participate in the festival; invite musicians and others who could bring people into the world of music and dance to participate in the festival;
9. Examine which place would be the best as paragliding starting point;
10. Suggest the chosen place to a paragliding team from the surrounding area.

Design Thinking Plan

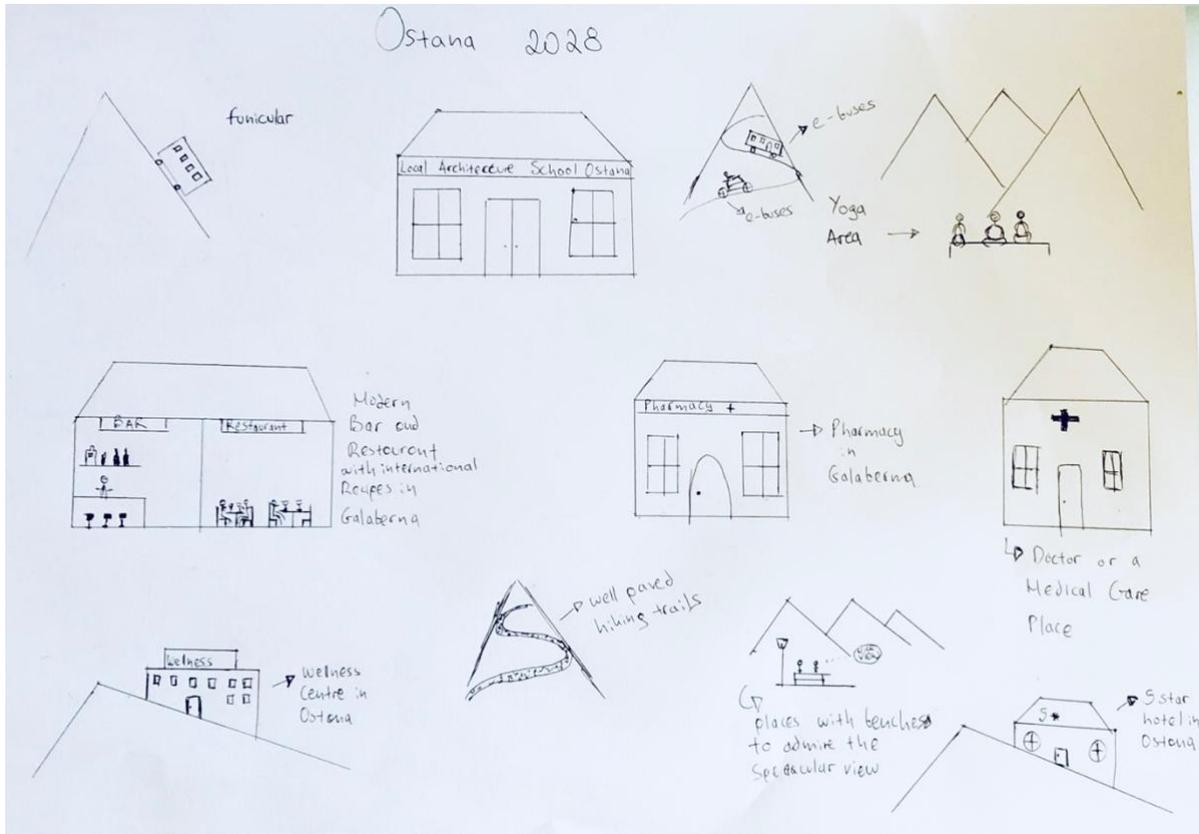


Agenda

-  Parking
-  Tourist Office
-  EV Charging Station
-  e-Bus Station
-  e-Bike Station
-  O-coaster
-  Marquee in Galaberna

DESIGN THINKING PROPOSAL: Ostana 2028

Prepared by: Ioannis Psallidas



My vision for Ostana has one specific goal. The whole place will be transformed into a modern, relevant and sustainable resort area that will attract the right high-quality tourists.

All the actors and the stakeholders will gather, discuss and then cooperate to develop a tourism plan in order to achieve a sustainable development of this sector. This plan will be the guideline and respect the local community and the environment.

Investments will be done in the development of mobility infrastructure. In order to deal with the problem of the air pollution, the local authorities will implement e-buses that will transfer the locals and the visitors from the parking areas to their destinations.

Additionally, the use of e-cars and e-bikes should be promoted. This way the locals will change their everyday behavior and the nature-environment will be benefited too.

International bars and restaurants will open. More entertainment choices and bigger variety will be available for the locals and the visitors of the area. These places will use the local products creating linkages.

Moreover, a wellness center (Spa) and a five-star hotel will be there for all the people looking for relaxation and recreation in the nature. This hotel could also deal with the cold/warm bed problem of the area renting properties, when they are vacant. Finally, since the place is so peaceful, specific areas could be used for meditation.

In the area, by 2028 a medical care facility and a pharmacy will be built making the locals' life easier and safer.

It is really necessary for the touristic development of the place the creation of the right map that will include all the hiking trails in detail. Furthermore, the existing hiking trails will be well paved and new trails will appear. Probably, there will be guided hiking tours giving the chance to the visitors to get to know the place better.

Since the Po valley has an outstanding breathtaking natural beauty, benches will be put in various spots giving the chance to the people to admire and be taken by this magnificent view.

Finally, the most intriguing idea and part of my vision is the creation of a "Local Architecture School". Stone is a recurring element in Ostana. It is in abundance and it is a key element of the landscape. For that reason, it is used for architectural purposes (e.g. walls, houses, buildings). In the area, there is a highly specialized architectural technique that requires a level of expertise. Unfortunately, nowadays less people tend to learn this technique. As a result, it needs to be preserved. My suggestion for the conservation of this technique and its future is the creation of a school, where experts will teach their younger students all their secrets and methods.

Five steps in order to make this dream happen are:

1. All the local relevant stakeholders should gather, discuss, collaborate and conceptualize.
2. The right people that are experts and could teach should be chosen and then approached.
3. The funding issue should be solved. The Italian government and the European Union should be also approached in order to support and subsidize this project.
4. The right building should be chosen. It must be an example of the local architectural technique.
5. People should be aware of this place. The school should be promoted in order to attract the people's attention and students.

DESIGN THINKING PROPOSAL: Treetop path for Ostana

Prepared by: Luana Borner

Creating an attraction for visitors as well as locals out of ecological and naturally sustainable quality of construction with local wood. Creating jobs and associated jobs through the paths and its construction.

Visitors can discover the beautiful landscape in the trees.

This guarantees an incomparable experience of the local forest. The paths are environmentally friendly and in a way of natural construction.

This attraction conserves the cultural and natural value of the forest and the typical landscape of Ostana.

Fosters the belongingness of locals to their region as well as tourism awareness and protection of the nature.

Moreover, it fosters increase regional creation of value. This offer can be understood as valorisation of the landscape by nature-based tourism offers.

Finally, this offer helps developing and fostering cooperation and innovation in the community as well as with stakeholders from outside.

Significance of the treetop path for the community Ostana

Deliberate focus on knowledge transfer. Species conservation. Centre of attraction. Visitors and locals can enjoy the natural landscape that stands out by its variety with special alpine trees of the southern alps.

Beautiful panoramic views with pick-nick areas with local food. Playgrounds and discovery areas. Strengthen the touristic positioning of the area. Guests and locals gain necessary insights in the local fauna and flora.

Fosters local business and cooperation.

Potential of value creation is composed of the daily expenditures of the guests. If needed expenditures of overnight stays. As well as from indirect value creation from of local businesses – selling local products.



Figure 13 Source Photo: www.baumwipelfad.ch

6. Group Work Breakdown

Student	Worked on what	Time
Affolter Flavia	<ul style="list-style-type: none"> • Chapter 4.4 • Design Thinking 	1 and a half hours
Battino Fiammetta	<ul style="list-style-type: none"> • Translation • Design Thinking 	3 hours
Barsocchi Silvia	<ul style="list-style-type: none"> • Appendixes • Design Thinking 	1 hour
Bosco Carolina	<ul style="list-style-type: none"> • Organization • Communication with the class • Design Thinking 	8 hours
Borner Luana	<ul style="list-style-type: none"> • Chapter 4.5 • Design Thinking 	1 hour
Coluccia Giulia	<ul style="list-style-type: none"> • Translation • Design Thinking 	2 and a half hours
Doninelli Vania	<ul style="list-style-type: none"> • Appendixes • Design Thinking 	4 and a half hours
Etter Gisela	<ul style="list-style-type: none"> • Organization • Design Thinking 	5 hours
Hinterbeger Florin	<ul style="list-style-type: none"> • Conclusions • Design Thinking 	2 hours
Miliazza Matilde	<ul style="list-style-type: none"> • Translation • Design Thinking 	2 and a half hours
Pop Carina	<ul style="list-style-type: none"> • Chapter 4.6 • Design Thinking 	1 and a half hours
Ragusa Miriam	<ul style="list-style-type: none"> • Translation • Design Thinking 	2 and a half hours
Razavi Fouzie	<ul style="list-style-type: none"> • Chapter 5 • Design Thinking 	1 and a half hours
Rifidikan Agam	<ul style="list-style-type: none"> • Chapter 4.6 • Design Thinking 	2 and a half hours
Schorro Olivier	<ul style="list-style-type: none"> • Conclusions • Design Thinking 	1 and a half hours
Sormaz Andela	<ul style="list-style-type: none"> • Chapter 4.7 	2 hours

Psallidas Ioannis

- Design Thinking
 - Chapter 4.8
 - Design Thinking
- 4 hours
-

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