



LocalTracks

A user-centered design project
to connect Local Producers
and Consumers

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Abstract

Italian

Sostenibilità, natura e prodotti biologici sono tematiche sempre più al centro dell'attenzione. L'aumento della consapevolezza sull'impatto ambientale e sociale delle proprie scelte di consumo ha portato a un crescente interesse per prodotti che rispettino l'ambiente e le persone che li producono. Nonostante questo trend positivo, tuttavia, i produttori locali che spesso offrono prodotti sostenibili e di alta qualità stanno faticando a mantenere la propria attività. Una delle maggiori cause di questa difficoltà è il fatto che questi produttori siano spesso costretti a vendere i loro prodotti a basso prezzo ai grandi rivenditori, limitando la loro capacità di competere con i grandi marchi e di raggiungere nuovi clienti.

Questo suscita la domanda: perché le persone non acquistano direttamente dai produttori locali? In un'era in cui la maggior parte delle persone utilizza strumenti digitali nella vita quotidiana, la scarsa conoscenza delle tecnologie digitali da parte dei produttori locali spesso li fa faticare a connettersi con nuovi clienti e ad ampliare la propria base di utenti. Il progetto LocalTracks, tuttavia, ha l'obiettivo di investigare i bisogni e le abitudini degli utenti per guidarli verso l'utilizzo di nuove piattaforme digitali attraverso un'esperienza utente su misura. Grazie al design, LocalTracks vuole dimostrare come il divario tra produttori locali e consumatori possa essere colmato, favorendo entrambe le parti.

L'approccio utilizzato si basa sull'analisi dei bisogni delle persone e sulla ricerca di elementi in comune che possano unire produttori e consumatori. In questo caso, il tassello mancante risiede nella scoperta e nella natura. In questo caso, l'elemento mancante è la scoperta e la natura. I produttori locali spesso si trovano in posti meravigliosi e poco conosciuti, questo è ciò che LocalTracks vuole utilizzare per unire produttori e consumatori. Ma non solo, il progetto ha come obiettivo anche quello di valorizzare territori locali poco conosciuti attraverso il design.

Abstract

English

Sustainability, nature and organic products are increasingly in the spotlight. Increasing awareness of the environmental and social impact of one's consumption choices has led to a growing interest in products that respect the environment and the people who produce them. Despite this positive trend, however, local producers who often offer high quality and sustainable products are struggling to maintain their business. A major cause of this difficulty is the fact that these producers are often forced to sell their products at low prices to large retailers, limiting their ability to compete with big brands and reach new customers.

This raises the question: why do people not buy directly from local producers? In an era when most people use digital tools in their daily lives, local producers' lack of knowledge of digital technologies often makes them struggle to connect with new customers and expand their user base. The LocalTracks project, however, aims to investigate users' needs and habits in order to guide them towards using new digital platforms through a tailor-made user experience. By design, LocalTracks wants to demonstrate how the gap between local producers and consumers can be bridged, benefiting both parties.

The approach used is based on analysing people's needs and finding common elements that can unite producers and consumers. In this case, the missing piece lies in discovery and nature. In this case,

the missing element is discovery and nature. Local producers are often found in wonderful and little-known places, this is what LocalTracks wants to use to unite producers and consumers. But not only that, the project also aims to enhance little-known local territories through design.

Introduction

The topic of sustainability has gained significant attention in recent years due to growing awareness of the negative effects of human activity on the environment. Climate change, deforestation, pollution, and loss of biodiversity are pressing issues that have prompted greater concern for sustainable practices. Covid-19 pandemic has further highlighted the importance of sustainability as people were forced to stay at home, many observed the positive impact on the environment, leading people to renewed interest in protecting the environment and making more sustainable choices.

This might lead one to think that this new 'trend' has brought growth in the sector of local and sustainable producers, but data on the socio-economic framework of this industry says something quite different: the number of agricultural businesses in Italy has decreased significantly in the past decade. In 2020, there were 1,133,023 active farms in Italy, which represents a decline of 487,000 farms or just over 30% compared to ten years earlier (ISTAT, 2020).

This decline can largely be attributed to a number of factors. One of the main reasons is the increasing difficulty for local producers to sell their products directly to consumers. Today, the majority of local producers need to sell their products to large-scale retailers, which can be a challenging task as they often have to fight against the low prices that the market is asking for.

This is where the idea of this project was born: during the past decades, design has played a fundamental role as a mediator between people, businesses and territories. Just think about AirBnB, this digital platform made it possible to connect people having a need (finding accommodation) with people who had something to offer (an accommodation). One of the big problems of local producers today is their difficulty in connecting directly with their consumers or with people who are increasingly interested in Km0 or organic products. The aim of this project is to use design as a mediator to promote and increase the direct sale of local agricultural products in Italy.

This strategy is driven by several reasons:

1. Despite the growing trend towards local and organic food, many consumers still purchase from big retailers, which negatively impacts the economy of local farmers. By using design as a mediator, it can bridge the gap and bring customers closer to local producers.
2. The Covid-19 pandemic has led to an increased reliance on technology for food search and purchase, however, data from the National Institute of Statistics (ISTAT) reveals that the agricultural sector is only marginally adopting digital technologies. Through a user-centric design approach, local producers can be supported in integrating digital technologies.

- As the economy is shifting towards an experience-based economy, the experience has become a crucial factor for consumers when making purchasing decisions. Design can provide new experiences for local producers to attract more customers.

The approach adopted for this project was the Double Diamond design process model. It is a visual model to apply the process of design popularised by the British Design Council in 2005. This model consists of four main stages: Discover, Define, Develop, and Deliver.

- The Discover stage played a crucial role in obtaining an in-depth understanding of the problem at hand. This stage involved conducting extensive research, such as literature review and benchmarking, as well as interacting with and observing those people who are affected by the issues.
- For this project, the literature review was a key aspect, as it helped to define the challenges and opportunities within the agricultural sector in Italy, analysing the socio-economic situation of this industry and uncovering potential opportunities such as the growing awareness of sustainability and the growing interest in ecotourism.
- Benchmarking was also an essential element of the research process. It helped identify successful and unsuccessful case studies and understand why they were so, through expert evaluation.
- Empathising with customers was another important factor in understanding their needs. I conducted interviews, surveys and diaries to understand the needs of local producers and consumers. The interviews and surveys helped to understand current pain points, while the diaries helped to understand their daily habits.

The information collected during the Discover stage was then utilised to Define the problem and develop a design brief.

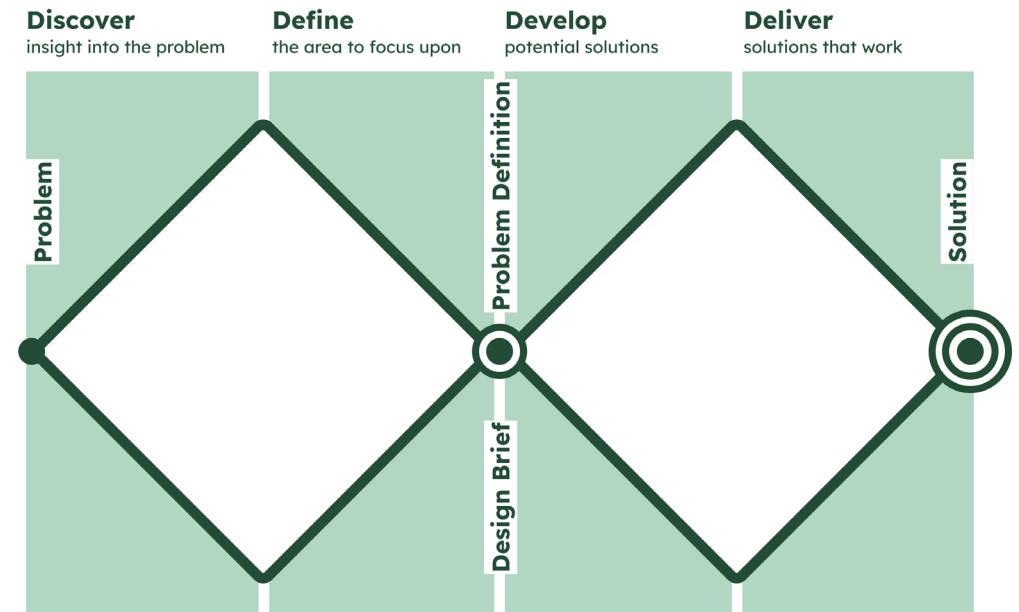
During the Discover stage a ‘divergent thinking’ approach was maintained. Instead, the Define stage is characterised by convergent thinking. In it, a combination of ideas or directions identified during the Discover stage is analysed and synthesised into a written brief that includes all new product or service development activities.

The Develop stage is the phase where the concepts and ideas identified during the Discover stage are further developed and refined. This stage is where the design process begins and takes the form of an iterative process.

The initial phase involves analysing and defining the user experience, which is essential to create a user-friendly product, especially for local manufacturers. Research shows that these users are not accustomed to digital technology, so it is crucial to design an experience that aligns with their mental models and expectations and does not require too much effort.

The following step is the development of a prototype. The prototype serves as a model of the final product and a visual representation of the solution. This step is crucial in validating the solution and understanding how it will function in practice. The prototype can vary in level of detail and complexity, depending on which stage of the design process we want to test. For this project, in order to effectively test with local producers who may not be familiar with digital technology, I have chosen to create a high-fidelity prototype, which closely resembles the final product.

The final step in the Develop stage is testing the prototype. This step is crucial to validate the solution and ensure that it meets the needs and mental models of the users. The testing was done through usability testing, which is a method of evaluating a product by testing it with representative users. This type of testing helps to identify any issues or problems with the solution and provides valuable insight on how users interact with the product. One important aspect of usability testing is the collection of a System Usability Score (SUS) which is a standardised metric that measures the overall perceived usability of a product.



Double Diamond design process

The SUS score is calculated based on user feedback and provides a single score that defines if the project is easy-to-use for the customers. Any feedback from the testing was then used to make improvements to the prototype.

The Deliver stage marks the final stage in the Double Diamond process, where all the final iterations of the product are made, taking into account the feedback received from the users during the testing phase. This includes making any necessary changes to the design, user interface, and functionality of the product to ensure that it meets the needs and expectations of the users. The goal is to ensure that the final product is as user-friendly, efficient and effective as possible.

For this project, I decided to focus on the small producers in Lombardy because - unlike other regions such as Tuscany or Sicily - its agricultural sector and countryside are not adequately valued. Living in the countryside in this region, I know the potential of this area and its products. Unfortunately, today the world of local producers is still very distant from the world of digital technologies, but in order to achieve the goal of this project, I needed to design a product that is not

only loved by customers, but also by local producers. For this reason, an important aspect to highlight is the human-centred approach that was used throughout the development of the project. The aim of this approach is to focus on people’s real problems and needs, not only the rational ones, such as the need to sell directly to consumers, but also the emotional ones, such as the need to be recognised as an important resource for society.

“The challenge is to use the principles of human-centred design to produce positive results, products that enhance lives and add to our pleasure and enjoyment. The goal is to produce a great product, one that is successful, and that customers love. It can be done.”

Don Norman, “Grand Old Man of User Experience”

Framing the problem

Challenges of local producers

1.1. Defining Local Producers

According to the EU Rural Magazine (Markuszczyńska, 2012), despite the common notion of local producers and short supply chains, there is no single definition accepted by all European states.

The concept of 'local' is often defined by the distance between the place of production and the place of sale, where, however, this distance can vary considerably depending on the local context. The evolution of such local and regional networks over the last decade has led to the need for the definition to also include new elements, from on-farm sales, farmers' markets and farm shops, to online shopping. In this context, the definition of local food networks and short supply chains is no longer based only on the distance between the place of production and the place where the products are sold, but also on the number of links in the food supply chain, with the aim of reducing this number as far as possible and where the shortest option is direct sales by the producer. In other words, a 'short supply chain' is a system that reduces the number of intermediaries required to deliver the final product to the consumer.

I chose to centre this project on local agricultural producers because of the numerous, yet often overlooked, benefits they provide for the environment and society.

“...[Local food systems] produce many

social benefits, such as more sustainable farming methods, fresh, high-quality food, community engagement, renewed rural-urban connections, and local economic development. Consumers become aware of these social benefits through increased proximity to producers, thus developing the knowledge and trust underlying the economic relationship. Such benefits often form an integral part of the practices of a local agri-food system local” Karner, s. e al. (2010)

The purpose of this chapter is not only to define the role of local producers in our society today and highlight the benefits they bring, but also to highlight the significant environmental, social and economic issues this sector is currently facing.

Ferguson and Thompson, in their article “Why Buy Local?” (2021), examine the advantages of purchasing locally-sourced food, with a focus on three key social areas: environment, economy, community.

1. Environment – The first social reason for buying locally produced food is environmental. Buying locally produced food reduces the transportation distance between production and consumption. Since transport and packaging generally involve the release of carbon into the atmosphere, and since carbon emissions are one of the most significant contributors to climate change, a reduction in food

miles mitigates environmental damage. As Pollan (2004) puts it, 'the average fruit or vegetable on an American plate has travelled 1500 miles from the farm, and a lot of diesel fuel has been burned to get it there. Local food has much lower energy costs.... Before you buy the Prius, start shopping at your farmer's market'. Buying locally, it appears, involves lower emissions and is therefore more environmentally friendly than buying globally.

2. **Economy** The second social reason for buying local is that it supports the local economy. The existence of a positive economic impact of local producers is a straightforward prediction of economic theory. When a portion of income received by local businesses is spent on other goods and services within the community, it leads to a multiplier effect in the local economy. These theoretical predictions have been empirically confirmed. Daniel Otto and Theresa Varner estimate that farmers' markets had a positive economic impact of \$31.5 million on the Iowa economy in 2004 (Otto, Varner, 2005). Similarly, a study of farmers' markets in West Virginia by David Hughes et al. finds that such markets contributed \$1.48 million to the state's GSP (Hughes, 2008).
3. **Community** The third social reason for buying local is that it provides support for the local community. While this contribution is more intangible and harder to quantify than the environmental or economic impacts of local producers, this does not mean it is illusory. In a survey of 30 members of a community-supported agriculture group, Steven Schnell found that many members cited the 'sense of community they get in shopping for local food, and the direct connection with the people on the farm who produce it' as a primary reason for their consumer habits. Respondents argued it is 'important for people to go to the farmer, to talk to the farmers, to get to know . . . how hard they work even on those miserable days'. Others explained that knowing the farmers allows them

to feel a deeper connection to the natural world and to interact with people who 'want to eat better, more local food'.

A related benefit, which fits somewhat between the economic and community categories concerns issues of food sovereignty (Santa Barbara, CAnPraeger, 2010), which ensures 'communities [have] meaningful control over the food systems that affect them'. Buying local food may both promote the self-determination necessary for food sovereignty and also protect cultural and personal identities that are tied to food. This article discussed the advantages of purchasing local goods, but what sets these products apart from the larger agricultural industry? Agri Regione Europa (Cicarese, 2019) provides an historical overview of agriculture, highlighting how the current differences between local food and the broader agricultural industry can be traced back to the origins of intensive and monoculture agriculture in European colonial plantations of the 16th and 19th centuries. This type of agriculture saw significant growth in the late 19th and early 20th centuries with the introduction of mechanisation and synthetic fertilisers and pesticides. However, in the 1960s, significant advancements in agricultural science and technology were made through the "green revolution", which was heavily promoted by governments, companies, and foundations and brought an integrated system of pesticides and high-yield chemical fertilisers.

It is evident that the transformation of agriculture has had a significant impact on sustainable farming practices and the environment. The shift towards large-scale, intensive, and specialised agriculture practices has led to various negative consequences, such as water pollution, soil erosion, acidification of soils and a rise in the greenhouse effect, which has severe implications for the planet. Additionally, these practices lead to the loss of habitat, genetic diversity, and species diversity. They also alter and simplify traditional landscapes, which can have a detrimental impact on local communities and cultures. Studies have shown that agriculture is responsible for 70% of global terrestrial

biodiversity loss, according to the latest Global Biodiversity Outlook report (Secretariat of the Convention on Biological Diversity, 2014).

In recent years, there has been a growing interest in alternative forms of agricultural production that prioritise environmental and social sustainability, as well as agro-ecological principles. These systems, such as "Diversified farming systems," aim to balance sufficient levels of food production with the protection of the environment and conservation of biodiversity. This approach involves diversifying crops and agricultural landscapes, gradually replacing chemical inputs with natural alternatives, optimising biodiversity, and enhancing interactions between different species, all as part of strategies to sustainably maintain soil fertility, preserve agricultural ecosystems, and ensure secure livelihoods.

Starting in the 1980s, several Italian local farms have adopted this diversification strategy, incorporating activities such as tourism alongside traditional agricultural production. This decision is driven by various factors, including economic considerations such as maintaining profitability despite market and weather unpredictability, as well as an increased awareness among society and consumers of the environmental and social aspects of agriculture. While some of these diversified activities, such as organic production or rural tourism, are compensated fairly by the market, others may not receive fair compensation despite providing valuable ecosystem services and socio-environmental public benefits.

In conclusion, purchasing from local producers not only decreases the carbon footprint associated with food transportation but also supports biodiversity in the local ecosystem. Moreover, it promotes community awareness and preservation of heritage; these farmers have a deep connection to the land and their local region, and are invested in preserving the natural beauty and health of the ecosystems they rely on. This not only helps to preserve traditional cultures, customs, and knowledge, but it also plays a vital role in the local economy and culture.

1.2. Socio-economic framework

The current era presents a number of challenges, including the Covid-19 pandemic in 2020, the outbreak of war in Ukraine in 2022, and the increasing frequency of drought due to global warming. All of these factors have had a significant impact on the global economy. This chapter aims to provide an in-depth examination of the current socio-economic landscape of the agricultural industry in light of these challenges.

One significant alteration observed is the decrease of agricultural industries in Italy according to recent data from the Italian National Institute of Statistics (ISTAT), the number of agricultural businesses in Italy has decreased significantly in the past decade. In 2020, there were 1,133,023 active farms in Italy, 487,000 fewer than ten years earlier. A decrease of just over 30%. Since 1982, the year of the third agricultural census and whose data are comparable with those of 2020, almost two out of three farms have disappeared (63.8%). The reduction has been more pronounced over the last 20 years; the number of farms has more than halved since 2000, when it stood at almost 2.4 million.

One of the main reasons for this decline is the increasing difficulty for local producers to access credit and other financial resources. Many small-scale farmers struggle to secure loans and other forms of financing, which can make it difficult for them to invest in their businesses and stay competitive. This is particularly true for younger farmers and those who are just starting out, as they often lack the assets or collateral that many lenders require.

An interesting factor to consider is that in Italy, in 2020, more than 98% of agricultural industries were family-run. However, the ISTAT survey in 2020 found that only 13.4% of business owners were under 44 years old. This is a decrease of 24% from 2010, where 17.6% of farm managers were under 44. Despite efforts to attract young people to the primary sector, the National Institute of Statistics suggests that this decline may be due to the fact that the role of farm manager often coincides with that of the tenant farmer, particularly in family farms

which are prevalent in Italian agriculture. Thus, the presence of young farm managers remains limited (Martarello, 2022).

The agricultural industry is facing numerous challenges in the current global climate, and the ongoing war in Syria is one of the most significant. The Syrian agricultural industry, once known for its rich heritage and abundance of crops, has been severely impacted by the war and the consequences are felt by not only the farmers and companies directly affected, but also by the entire population that relies on the agricultural sector for their livelihoods.

According to an article in *Il Sole 24 Ore* (Marzialetti, 2022), the war has resulted in a heavy debt burden for agricultural companies, making it difficult for them to continue their operations and making it even more challenging for them to recover. Without proper debt restructuring and support, many of these companies may be forced to shut down, further exacerbating the food shortages and higher prices for consumers.

In addition to financial challenges, local producers also face a number of other obstacles. One of the main obstacles is the competition with larger, more industrial agricultural operations. In traditional agri-food supply chains, a significant portion of the market value of agricultural products is captured by producers, processors, and retailers. As a result, farmers are often left with only a small fraction of the final price that consumers pay for their products. This is because the farmers sell their basic products, such as raw crops and livestock, at a low price to intermediaries. These intermediaries, such as processors and retailers, then add value to the products through processing, packaging, and distribution. They also set the final price for consumers, often at a much higher price than what the farmers received for the raw products.

This means that farmers are not able to reap the full benefits of their hard work and investment in producing the products. They are also at a disadvantage in terms of bargaining power and negotiation when dealing with intermediaries. By minimising

the number of intermediaries between producers and consumers, farmers have the opportunity to retain a greater percentage of the money spent by local consumers. This can help them to gain more control over their income and their businesses, and to make a sustainable living from their farming activities.

1.3. Importance of direct sales for local producers

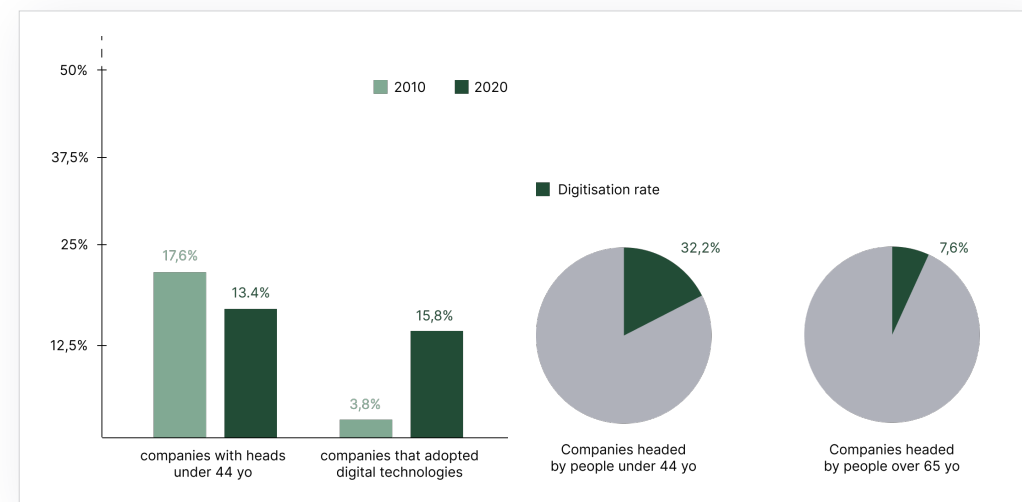
As previously mentioned, local producers face various challenges, one of which is competing with the low prices of large retail chains. To support local producers, one potential solution is direct selling. This is a method of agricultural product marketing that connects producers and consumers directly, bypassing intermediaries in the supply chain. This approach is often referred to as a “short supply chain.” This method allows farmers to have more control over the pricing and distribution of their products, leading to higher profits and a more direct relationship with consumers.

According to Van der Ploeg (2006), direct-selling can be a viable alternative to an agri-food system that relies on intensive techniques, production specialisation, and market orientation. This system often puts undue pressure on farms, which find themselves caught between rising production costs and low wholesale market prices, a phenomenon known as the “squeeze on agriculture.”¹²

Agri Regione Europa (Cicatiello, 2008) defines the short-supply chain from different perspectives—those of the farms and consumers.

Farms

The key feature of direct sales is the complete autonomy of the farmer in decision-making. This enables the farmer to become the primary player in the supply chain and freely make production and commercial choices. Regarding products offered by local producers, there are 3 key factors they have to consider—type, quality and diversification of the offer.



Agricultural sector data, ISTAT 2021

- Type of products—producers should offer products that are ready for consumption and do not require further processing. Therefore, products such as cereals, olives for oil, and wine grapes are typically not well-suited for direct sales. On the other hand, products such as wine, oil, cheese, fresh fruits, vegetables, and meat (if sold through a farm butcher shop) are well-suited for direct sales.
- Quality of products—In order to build trust with consumers, it is essential that the quality of the products is excellent. This is because customers who buy directly from the source are often looking for high-quality products that are free from additives and preservatives. Additionally, high-quality products are more likely to be sought after and therefore result in repeat customers.
- Diversification—The size of the company plays a significant role in the practice of direct selling, affecting the diversification and size of the offer. On the one hand, it is important to try to obtain a certain variety of products, so as to offer buyers a sufficient range of choices. This can help to attract a wider customer base and increase sales. On the other hand, it is necessary to calibrate the quantities produced to

the real demand of customers, which is rarely so high as to be able to absorb large quantities.

In addition to the product, local producers must also consider the location—farms that are easily accessible, located near populated areas and busy localities, and along important transportation routes are at an advantage as they are more visible and easily reached by customers. This can help increase customer footfall and boost sales. Additionally, the location of the farm can also impact the types of products that are suitable for direct sales, as certain products may be more in-demand in certain regions or climates. For example, a farm located in a tropical region may be more suitable for growing tropical fruits than a farm located in a colder climate.

However, there are different ways for producers to connect with consumers. One of the simplest ways is through direct sales on the farm, without an organised sales outlet. This can take place in the farm's structures such as the home, warehouses, cellar, or oil mill, and typically involves one or two products that the farm specialises in, which may also be sold through other channels. In this case, direct sales are an additional resource for companies whose production and organisational set-up is defined by other parameters.

Another way is through the creation of a

company shop, which requires a greater commitment, especially in terms of having a wider variety of products, packaging them, and presenting them appropriately. This option requires a solid customer base and a favourable location. Additionally, having a physical store also requires more resources in terms of staffing, inventory management, and marketing.

Opening a sales outlet outside the company is a more challenging option, especially in terms of the financial investment required. This solution has undeniable advantages in terms of ease of contact with potential buyers, but the investments required are often beyond the reach of small companies. Only large companies may have the necessary capital to undertake such a strategy, while small entrepreneurs may consider setting up a joint outlet for several companies where they can offer a common range of products.

Another form of selling that has emerged in recent years is the use of e-commerce platforms, where customers can purchase products directly from local producers online. The convenience of online shopping and the ability to reach a wider customer base has made e-commerce an attractive option for many producers. However, despite its potential benefits, some producers are hesitant to adopt this method of selling due to the challenges and difficulties in utilising digital technologies.

Using e-commerce platforms requires a significant investment of time and resources, as producers need to learn how to navigate the platform and set up their online store. They also need to have a strong understanding of digital marketing and search engine optimization to ensure that their products are visible to potential customers. Additionally, producers need to invest in equipment and software to handle inventory management, shipping and order fulfilment, and customer service.

Furthermore, the trust of customers is important in online selling, and without being able to see and touch the products, this can be difficult. Producers need to find ways to build trust with customers and provide detailed information about their products and the production process.

Consumers

Shortening the supply chain has a significant impact on its final link consumers. The ability to purchase directly from the producer opens up a series of opportunities that change the perspective with which food shopping is approached. Direct sales provide an alternative to large-scale distribution and the values it embodies regarding the relationship with food, agriculture, and the environment. While supermarkets are based on the logic of concentration of supply, saving time, and complete depersonalization of the seller-buyer relationship, direct sales recover the social and cultural significance of food shopping. The reclaiming of natural time, dedicated to satisfying basic needs, is accompanied by a moment of encounter and comparison between producer and consumer, capable of bringing to the surface, through the personal relationship that is created, also the ethical and cultural aspects related to food. The short supply chain thus becomes, beyond the agricultural horizon, a practice that positively affects the sustainability of the social system.

From an economic perspective, despite the need to dedicate more time to food shopping, it is generally possible to benefit from significant savings. The prices on the direct sales market, in fact, remain lower than those of retail and large-scale distribution, precisely because of the elimination of intermediaries and logistics-related costs. Shortening the supply chain, in this sense, in addition to ensuring fair income for farmers, seems to be able to respond to the continuous and often unjustified increase in consumer prices of agricultural products.

It must also be considered that the products sold directly are undoubtedly fresher, as they arrive quickly “from the field to the table”, and generally of excellent quality, as producers closely link their name to the product and have every interest in maintaining a high level of quality to retain customers. And it is precisely the direct relationship and comparison with the producer that works, beyond any aseptic certification, as a guarantee of quality and origin of the products.

Another aspect concerns the consumer's choice of what to buy. Although a company that sells directly may strive to offer a wide variety of products, the choice will still be more limited compared to a large-scale retail store or a wholesale store. This element can have a dual significance: on the one hand, the lesser diversification of marketable products in a farm can discourage the buyer accustomed to a wide range of choices, but on the other hand, it is a way to educate consumption, restoring the anonymous consumer's role in the food chain and stimulating a more responsible and conscious approach to food choices.

In conclusion, it is important to note that direct sales can also serve as a powerful tool for promoting and educating customers about farming practices and methods used on the farm. When customers are able to purchase products directly from the farmer, they have more opportunities to learn about the farm, its products, and the people behind them. This can increase trust, appreciation for the product and often lead to repeat customers. Additionally, direct sales often provide farmers with an opportunity to share their own story, and the story of their farm, with customers, which can help to build a strong and loyal customer base. By fostering this connection and understanding with customers, farmers can help to deepen appreciation for the work they do and the products they produce.

This chapter highlighted the various challenges faced by local producers in today's market. Despite the many positive environmental and social impacts that buying from local producers can have on society, these producers often struggle to compete with larger, industrial producers. This is where my project comes in: the goal is to promote the direct selling of products from local producers, in order to provide them with a more stable source of income, and to create a greater sense of trust and connection between customers and the producers themselves.

Discovering opportunities

Ecotourism

2.1. Historical roots of environmental economics

The environment where we live is a precious place that we have to respect and protect. Unfortunately, the economic and technological development that we are seeing in our society, is improving living conditions in developing countries, but is increasingly ruining the planet. Just think of the exploitation of forests, the pollution of oceans and rivers, and the endangerment of animals. These are all examples of how our actions are having a negative impact on the environment.

According to Meadows D.H. in “The limits to Growth”, we can start from 1972 to start talking of the concept of unsustainability of growth based on industrialised models, high material and energy consumption and high pollutant emissions. The book highlights how our current growth model is unsustainable and will eventually lead to a collapse of our economic and ecological systems if we don't take action to change our ways. Since then, various efforts have been made to promote sustainability, such as the World Conference on Environment and Development in Rio de Janeiro in 1992 and the World Summit on Sustainable Development in Johannesburg in 2002 (Murano, 2004).

Although sustainability became a widely acknowledged issue by governments in the 1990s, economist Karl Marx had already

been warning about the overuse and depletion of resources in the 1860s. He believed that while technological progress could be achieved through utilising natural resources, capitalist systems could not be self-sustaining due to the damage caused by issues of economic power. Marx argued that while in the short term, profit rates and capital accumulation could be created, in the long term, technological progress would lead to significant harm to the environment through increased pollution and waste, resulting in illness and higher mortality rates (Pierce & Turner, 1989)

It became apparent that advancements in technology were having a significant impact on the environment, leading to significant damage. As a result, the topic of sustainability gained widespread attention. Furia D. and Mattosco N. have analysed the different definitions that have been developed to define the concept over the years, highlighting that there is still no universally accepted scientific definition of sustainable development.

According to the two experts, when discussing sustainability, three main dimensions are often referenced: environmental, economic, and social. Environmental sustainability refers to development that does not harm the ability to maintain the quality and reproducibility of natural resources, the integrity of ecosystems, and biodiversity over time. Economic sustainability refers to development that uses resources efficiently

and favours the use of renewable resources. Social sustainability refers to development that guarantees the well-being of all individuals, respects fundamental human rights, promotes social cohesion and equity, and includes the participation and shared responsibility of local actors in decision-making processes.

Given that the goal of this project is to support local producers and their respective territories, it is important to examine the relationship between sustainable development and local development to understand the potential of environmental capital as a strategic value for the development of a specific area. Sustainable development goes beyond addressing issues related to the constraints and protection of a territory, and instead focuses on understanding the connections between nature and culture, culture and history, territory and economy, technology and the environment. When considering the preservation of a territory's heritage, there are several approaches that can be taken (Frontiera, 2003)▫

- Dissipation is the act of using up non-renewable resources and carrying out destructive interventions, treating a given territory solely as a means for economic gain. This approach ignores the long-term consequences and the depletion of resources that future generations will face.
- Conservation is the practice of preserving environmental capital for future generations. This is achieved by preserving natural resources, as outlined in the Brundtland Report (1987). This approach can be referred to as eco-compatibility of economic development or eco capacity. It's about ensuring that the economic development is in harmony with the environment and doesn't harm it. It's about finding a balance between economic growth and environmental preservation.
- Valorization is the act of implementing actions to increase the value of local heritage by promoting and enhancing local resources, such as a neighbourhood or small town. This

approach aims to make the most of what is already available, rather than exploiting new resources. It is about promoting and enhancing local resources, culture, and traditions, to make them more attractive to tourists, investors, and residents. This approach not only benefits the economy but also preserves the cultural heritage and identity of the local community.

Another important factor to consider when discussing sustainability and local development is the impact of globalisation. It is a phenomenon that can have both positive and negative effects on the environment and local communities. On one hand, globalisation can lead to increased freedom and prosperity through the ability to engage in cross-border exchanges without excessive political or social regulations. This can lead to a more efficient use of resources, better access to technology and knowledge, and a higher standard of living for many people.

However, on the other hand, globalisation can also have negative effects. It can lead to cultural homogenization and the loss of diversity, which can result in the erosion of cultural particularities and identities, as well as the loss of local traditions. This can have a detrimental effect on the environment and local communities, as local cultures and traditions often play an important role in protecting and preserving the environment.

In order to achieve sustainable development at a local level, it is crucial to focus on both sustainable production systems and improving the overall quality of life. As we are seeing more and more instances of excessive urbanisation and environmental problems, it is important to also preserve and properly value the rich territorial heritage that exists in many areas. Finding the right balance between economic growth and the well-being of the population is crucial in order to ensure that local communities understand the importance of protecting and enhancing environmental resources as a fundamental aspect of sustainable development. This includes implementing sustainable production methods that are in harmony with the local environment and promoting policies and

initiatives that support the preservation of local heritage and biodiversity. One popular approach that has been gaining traction in recent years is ecotourism, which offers a sustainable way to promote and preserve local resources while also providing economic benefits.

2.2. Defining ecotourism

The previous chapter highlights the importance for local producers to establish direct relationships with customers in order to promote their products. Not only does buying locally sourced food provide access to fresh and high-quality options, but it also supports sustainable practices within the community. This concept aligns with the growing trend of sustainable tourism, as highlighted by Stefania Camplone in "Design e ambiente" (2004), sustainable tourism is a type of activity that, unlike more traditional tourism practices, requires integration with the natural, cultural and human environment of reference, ensuring a lasting dynamic on natural resources, biodiversity and the absorption capacity of the territory in terms of impact and waste produced. This new approach to tourism could also provide opportunities for the local producers to attract more customers. In the upcoming pages, I will delve further into the topic of sustainable tourism and its potential for this project.

According to the Cambridge Dictionary, tourism is defined as "the business of providing services such as transport, places to stay, or entertainment for people on holiday". With this definition in mind, let's delve into the concept of tourism. Traditionally tourism is considered as a social leisure activity, which develops from the movement of people to locations other than their normal places of residence and work, and their stay there. But in today's social dynamics, it is no longer just a 'journey', but a new socialised form of services, in which entertainment, play, sport, health, are intertwined with education and artistic and cultural learning.

From a socio-economic point of view, tourism is a complex sector, as it is a system made up of the integration of infrastructure,



42% of travel marketers predict that this aspect will be increasingly in demand.

Google Trends, 2021

production and service activities. Today, it is the main economic activity at a global level. It presents itself as a cross-sectional phenomenon in society and is one of the economic sectors that has benefited most from the new wave of globalisation, which now affects all sectors of social, economic and political life (Murano, 2004).

Sadly, a lot of tourism practices around the world are not sustainable. In many parts of the world, the conservation and protection of local natural and cultural resources are not prioritised, and the principles of solidarity, mutual respect, and participation of the local population in the tourism process are ignored. In contrast, to align with sustainable development, tourism should be based on the diversity of opportunities offered by local economies and be fully integrated with local economic development to contribute to its harmonious growth. This is the origin of sustainable tourism. According to an article of Forbes, in 2019 sustainability became a travel trend, travel tech company Amadeus has even listed it as one of their top ten trends for 2020, saying that "Sustainability has become a deciding factor for individuals purchasing travel and accommodation, and travel companies are adapting their offers to reflect this. From reducing plastic in hotels, to the creation of sustainably-focused package holidays, consumers are offered a wide choice when it comes to an eco-stay and are starting to hold companies accountable if they don't meet requirements. Holidaymakers are keen to ensure that their trips will have a

positive impact on the globe and there is an increased interest in understanding how tourism negatively impacts or benefits a local economy” (Villa-Clarke, 2019).

This shift towards sustainable tourism is not just limited to consumers, it’s also reflected in the travel industry. According to Google Trends data, 42% of marketing professionals working in the travel industry expect this trend to continue to grow in demand (Abdelkawi & Giorgini, 2021).

According to recent tourism trends, we can observe a shift towards a focus on local territorial distinctiveness and authenticity, in order to increase tourist competitiveness and attract more visitors. This approach, which emphasises tradition, cultural, artistic, landscape, and environmental resources, is becoming increasingly popular. In line with this renewed sustainable vision of tourism, new forms of tourism are emerging, which are characterised by their specialisation and often reject mass tourism dynamics. According to Stefania Camplone, sustainable tourism can be broken down into 6 main categories: naturalistic, rural, cultural, religious, industrial, and wine and food tourism. In this context, I will focus specifically on naturalistic, rural, and wine and food tourism as they relate to local producers.

- Naturalistic tourism: it is a form of tourism interested in the discovery and experience of natural places. This can include nature reserves, parks, and untouched coastal or mountainous areas. The emphasis on sustainability is vital for both tourists and operators, who recognize the significance of preserving the natural resources in their regions. Popular destinations for this type of tourism include places where natural phenomena are prominent, such as volcanic regions, geysers, glaciers, waterfalls, erosion zones, and mountain ranges, as well as marine reserves and large parks. Tourists can also participate in activities such as photographic safaris and ecological camps, where they can observe and study plants and animals in their natural habitats.
- Rural tourism: it is a form of tourism

that focuses on the cultural heritage, traditional crafts, and local food and wine of rural areas. It prioritises the search for authenticity, peace, and tranquillity, rather than mass tourism. There is a distinction between tourism in rural areas, rural tourism, and agritourism, where agritourism refers specifically to the direct reception and hospitality provided by agricultural entrepreneurs. This can include offering meals and beverages made on the farm, selling local products, and organising recreational, sporting, and cultural activities, such as museum tours focused on the rural world. Rural tourism, on the other hand, encompasses a wider range of activities such as green tourism, gastronomic, equestrian, nautical, hunting, historical-cultural, etc. depending on the specific main activity practised.

- Food and wine tourism: This form of tourism is focused on the discovery and experience of local cuisine and wine. It involves a search for authenticity and the unique flavours of the region, as well as an interest in the customs and practices surrounding the preparation and production of food and wine. This type of tourism often includes visits to wineries, farms, and festivals or events that celebrate local cuisine and wine. Additionally, many food and wine tourism itineraries also include the opportunity to purchase locally-sourced products directly from the producers.

It is evident from this analysis that the current trend in tourism centres on the connection with nature and the cultural aspects of a location, leading to the emergence of a new form of tourism called ecotourism. It is a type of tourism that is guided by ecological principles, and it involves visiting and exploring natural and historical sites while minimising any impact on the local culture and environment.

The main goal of ecotourism is to appreciate the natural beauty of a place, whether it be the landscape, the flora, or the fauna. These natural attractions are often unique and representative of specific environments, and they are known

for the presence of certain plant and animal species. In order to be considered ecotourism, the activity must meet the requirements of sustainable development, which means that the tourist should actively participate in the conservation and enhancement of these places.

Ecotourism is not just about observing nature, but also about experiencing the cultural events and history of the area. This may include attending local festivals and events, or discovering the stories and traditions of the people who live there. The goal is for the tourist to have a socially, culturally, and environmentally rich experience, and to come away with a deeper understanding and appreciation of the place they have visited.

The emergence of ecotourism as a distinct form of travel presents a valuable opportunity for understanding the desires and preferences of travellers, and can aid in the refinement of this project.

2.3. Case study: Wonder Grottole

Airbnb is a highly popular short-term rental platform that has revolutionised the way people travel and stay in new destinations. It allows property owners or renters to lease out their homes, apartments, or rooms to travellers seeking unique and affordable accommodation options. The company was founded in 2008 and is headquartered in San Francisco, California. Over the years, Airbnb has grown to become one of the largest platforms for booking short-term stays, attracting millions of travellers from around the world.

One of the main reasons why Airbnb has become so popular is because it offers travellers the opportunity to experience a destination like a local. Rather than just being a tourist, Airbnb allows travellers to immerse themselves in the local culture and community. This has been a major selling point for the platform and has made it possible for travellers to get a true sense of the place they are visiting. In line with its focus on local experiences, Airbnb has also invested in parallel ideas such as the social enterprise Wonder Grottole.

Wonder Grottole was founded in 2019 to help revitalise the small town of Grottole located in the province of Matera in southern Italy. The town has a population of 2,100 and is one of the oldest settlements in the region. However, over the past 60 years, the population has significantly declined as residents have emigrated to larger cities, both in Italy and abroad. As a result, the historic centre of the town now has only 300 residents, many of whom are over the age of 70. In addition, there are over 600 abandoned houses in the town. (Mengo, 2022)

Wonder Grottole’s mission is to help regenerate the ancient village and bring new life to the town. To do this, the social enterprise is focused on the rehabilitation of abandoned houses and the creation of a new community. The project is being carried out in partnership with Airbnb, which has supported the initiative by providing housing for visitors who come to the town to help revive the community.

“The name is Wonder Grottole and ‘wonder’ means creating new imagery. That is why within the project we like to explore places such as the ancient caves but also abandoned and disused places and then ask ourselves what we can do, but above all how to do it,”

Andrea Paoletti, Founder of Wonder Grottole

Airbnb has supported the Wonder Grottole project by organising a contest named “The Italian Sabbatical”. This contest provides a one-of-a-kind experience for four individuals to reside in the small town of Grottole for a duration of three months and immerse themselves in authentic rural living in Italy. The selected participants will become temporary residents of the village and will contribute to the efforts of Wonder Grottole. The aim of this contest is for people to take a break from their daily routine, including work and family, and



move to a semi-desolate village in Basilicata. The idea is not to retire but to bring new life, energy, and potentially new residents to the village and stimulate its economy. The contest received an overwhelming response, with 280,000 applications from all over the world.

Pablo Colangelo, a 35-year-old computer engineer from Buenos Aires, is one of the finalists in the contest. Despite his Italian heritage, Pablo has never lived in the countryside and was initially unsure about hoeing a vegetable garden. However, he was pleasantly surprised by the warm welcome he received from the villagers and has quickly become a local attraction. Throughout the three-month sabbatical, the five finalists will engage in a mutual exchange of skills and knowledge, with each of them learning and teaching something new. For example, Michela will be teaching Italian lessons, Rocco will be teaching beekeeping, Mario will be teaching vegetable gardening, and Enza will be teaching the art of handmade pasta. Already, after just 20 days, the finalists have made significant progress, harvesting their first courgettes and becoming skilled at making traditional Italian pastas like cavatelli, orecchiette, and fusilli. (Romaniello Quartullo, 2019)

Another participant is Remo Sciubba, 62, from Cardiff, Wales, where he was a project manager in a communications company. Ten years ago he gave it all up “I was no longer having fun. I started travelling and moved to Australia for six months. Back home I discovered that I liked teaching and took a degree in foreign languages (he also studied Italian, which in fact he speaks well, ed) and today I am a full-time teacher”.

Wonder Grottole aims to create a new model of tourism that will not only bring new visitors to the town but also help to preserve its history and cultural heritage. The idea behind the project is to offer travellers the opportunity to experience a destination like a local, which is one of the main reasons why Airbnb has become so popular. By participating in the revitalization of the town, travellers will have the opportunity to immerse themselves in the local culture and community, and to get a true sense of the

place they are visiting.

The project has been praised for its innovative approach to tourism and for the positive impact it is having on the local community. By offering travellers the chance to help revive the town, Wonder Grottole is not only creating new economic opportunities for the residents of Grottole but also helping to preserve the cultural heritage of the region. This unique project is a prime example of the impact that social enterprises can have in addressing the challenges facing small communities, and it serves as a model for other initiatives aimed at revitalising declining rural areas.

“The aim of our social enterprise is to bring to the area not just tourists but temporary citizens who can work in contact with the community and make it grow in all respects”

Silvio Donadio, Co-founder Wonder Grottole.

2.4. Case study: Slow Food

In this chapter, our focus is on exploring the latest travel trends and their impact on various sectors, including food and wine tourism. The food and wine industry has been growing rapidly in recent years, attracting millions of tourists from all over the world who are interested in experiencing different cuisines and cultural experiences. In this context, we will delve into a case study that exemplifies an innovative and specialised approach to promoting food and wine as cultural assets.

The case study that we have chosen to examine is the international non-profit association, Slow Food. Founded in Italy in 1986 by Carlo Petrini, this organisation has been at the forefront of promoting food culture in all its aspects. Slow Food’s mission is unique and can be defined in three key points: educating people on taste, nutrition, and gastronomy; safeguarding biodiversity and preserving traditional food cultures; and promoting a food model that is respectful of the environment and cultural identities, and brings consumers



Image above: Grottole town.

Image below: people living an experience with Wonder Grottole

closer to the world of production.

“Saying food pleasure means seeking slow production, rich in tradition and in harmony with ecosystems: it means defending slow knowledge, which disappears together with food cultures, it means working for the sustainability of food production and thus for the health of the Earth and the happiness of people”

The Slow Food Manifesto

The exciting feature of this case study is the initiatives that the association takes to connect people with the world of food and wine. One such initiative is the Salone Internazionale del Gusto, a biennial food and wine exhibition in Turin that showcases quality products from around the world. The event features experiences such as Taste Workshops, where participants can taste and compare various products like cheese, meat, beer, wine, and spirits, with the guidance of producers and Slow Food experts. Theatre of Taste (Teatro del Gusto), on the other hand, showcases great Italian and international chefs as they create live dishes that made them famous, while explaining the preparation process and the ingredients used, including seasonality, local production, and the region it's from.

The second important event is Terra Madre, an international gathering of food producers and industry professionals that promotes a new way of food production with an emphasis on environmental responsibility, preserving natural resources, and ensuring product quality. The focus of Terra Madre is

- **Networking** The aim is to strengthen and sustain existing relationships between food communities, as well as establish new connections between communities, chefs, and universities.
- **Agro-Ecology** The event delves into the topic of agriculture that respects the ecosystem, which forms the foundation of all sustainable and high-quality food production.

- **Market Access** This is a global concern for artisan producers who are facing intense competition from mass agri-food production and distribution.

The strategy employed by Slow Food to promote its various projects is rooted in the idea of situated and localised actions. This means that the organisation is designed to work within specific local contexts in order to help these contexts recognize and enhance their own identities. This is achieved through the creation of organising platforms that are both replicable and flexible, allowing for a great deal of adaptability. The events and communication activities organised by Slow Food are also designed to work in harmony with this overall systemic strategy. They are meant to directly engage with users, providing them with opportunities for tasting and learning experiences.

The potential competencies of the Slow Food community are also noteworthy. As a facilitating agent in the recognition, organisation, and dissemination of knowledge within the food system, design can play an important role in helping Slow Food to deploy its management and knowledge management competences. The Slow Food case represents a valuable example of how design can be used to create an enabling platform that can be applied to the enhancement of cultural heritage.

In this sense, the design skills implicit in the Slow Food case study are strategic. By creating platforms that are both replicable and adaptable, Slow Food is able to help local contexts recognize and enhance their own identities in an overall systemic strategy. This approach is in line with the organisation's overall goal of promoting and protecting biodiversity through its various projects such as Terra Madre. These initiatives help to identify and support local productions of gastronomic excellence that are at risk of disappearing, thereby preserving cultural heritage and promoting sustainability in the food system.

Discovering opportunities

Design and territory

3.1. Enhancement of cultural heritage through design

This project has a two-fold objective. Firstly, it seeks to promote the direct selling of locally sourced products, thereby providing a platform for small businesses and artisans to showcase their wares. Secondly, it aims to shed light on the cultural heritage of the Italian territory and the beauty of its natural surroundings. There are numerous examples of activities that have been carried out to preserve and celebrate the cultural legacy of the region. These range from preserving historical landmarks, promoting traditional crafts and skills, and showcasing local cuisine.

The purpose of this chapter is to demonstrate how design can play a significant role in enhancing the cultural heritage of the Italian territory and its natural beauty. Whether it's through product design, visual arts, or architecture, design has the power to bring attention to the unique qualities of a place and preserve its heritage for future generations to appreciate.

The concept of “cultural heritage” has evolved over time and its definition has been shaped by cultural, social, and historical factors. However, a formal definition of cultural heritage was first introduced by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the 1954

Convention for the Protection of Cultural Property in the Event of Armed Conflict. This convention defined cultural heritage as “property of great importance to the cultural heritage of every people, such as monuments of architecture, art or history, whether religious or secular, archaeological sites, works of art, manuscripts, books and documents of historical interest, scientific instruments, as well as Property determining the spirit of a period or an artistic style and important collections of books, archives and museums.”

Environmental goods, on the other hand, have not always been recognised as cultural heritage. We have to wait until 2003, with the Convention for the Safeguarding of the Intangible Heritage, which defines intangible cultural goods as ‘practices, representations, expressions, knowledge, skills - as well as the instruments, objects, artefacts and cultural spaces associated therewith—that communities, groups and, in some cases, individuals recognize as part of their cultural heritage’ (Article 2).

To summarise, archaeologist Vlad Borrelli provides a more inclusive definition of cultural heritage that can be adopted

“Cultural heritage is understood as the set of those tangible and intangible assets of individual and collective interest and enjoyment that are the expression and testimony of human creativity or of the evolution of the landscape in its interaction between the natural element and the work of

man.” (Vlad Borrelli, 2003)

As we saw, cultural heritage is a broad and multi-faceted field that encompasses a wide range of activities and disciplines. In her book “Il design per i beni culturali” (Design for Cultural Heritage), Eleonora Lupo sheds light on the complexity of cultural heritage and provides a comprehensive framework for categorising and mapping its various aspects. The author suggests that, in addition to the distinction between tangible and intangible assets defined by Vlad Borrelli, cultural heritage can also be classified based on their individual or widespread nature. This includes different types of cultural heritage, such as handicrafts, artistic objects, and environmental assets, as illustrated in the figure “Typological map of cultural assets, (Lupo E., 2009)”.

To simplify this complex field, Lupo categorises cultural heritage activities into three main areas: conservation, management, and enhancement. Each of these areas encompasses a range of theoretical and practical disciplines, as well as operational and strategic activities, that are essential for the preservation and promotion of cultural heritage.

1. Conservation involves purely theoretical studies such as historical-critical studies, and practical disciplines such as selection, cataloguing, and restoration.
2. Management encompasses theoretical and operational-strategic disciplines such as cultural heritage policies, strategies, and administration, including governance, marketing, and the economy of culture.
3. Enhancement involves all strategic-operational disciplines aimed at promoting the dissemination of culture, maintaining resources, and improving their usability and visibility, including promotion, communication, services, and technologies. This area, with its strategic disciplines and design-oriented activities, is a potential field for design.

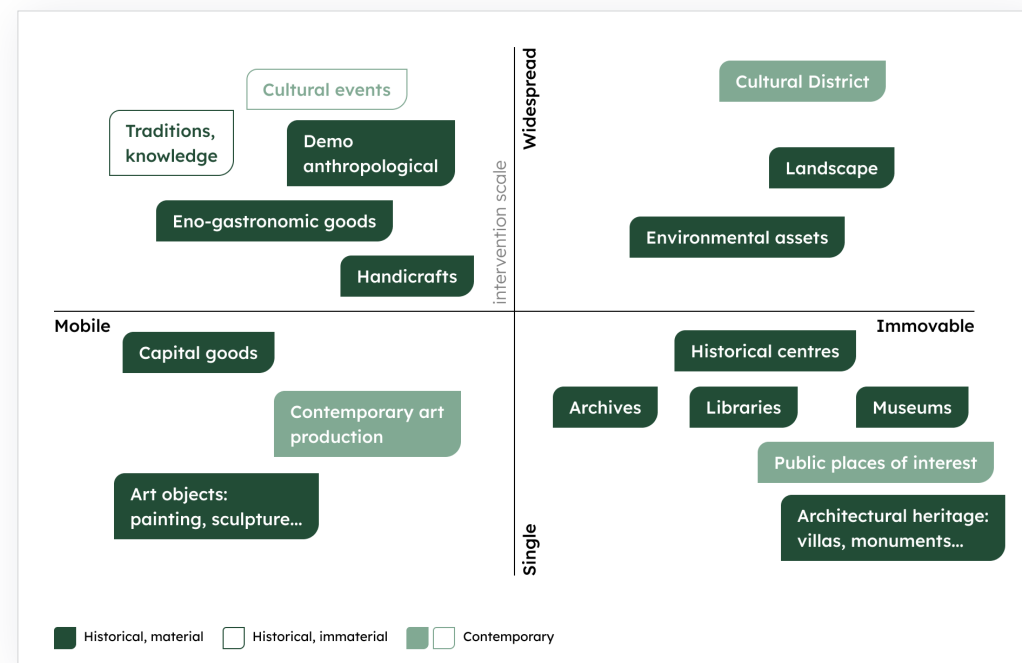
It is evident that design plays a significant role in the enhancement of cultural

heritage. Professor Ermanno Guida notes that the concept of design for cultural heritage can be traced back to “the observation of the most just, useful, and effective ‘display’ of local territorial resources. Not only of the privileged ones of collections and museums, but also of physical places and production potentials, in an attempt to search for motivations and ways to preserve and strengthen the values of authentic ‘memories’ [...], together with the invention of new strategies, stories, and traditions capable of arousing interest and emotional participation, as well as economic incentives” (Guida, 2006).

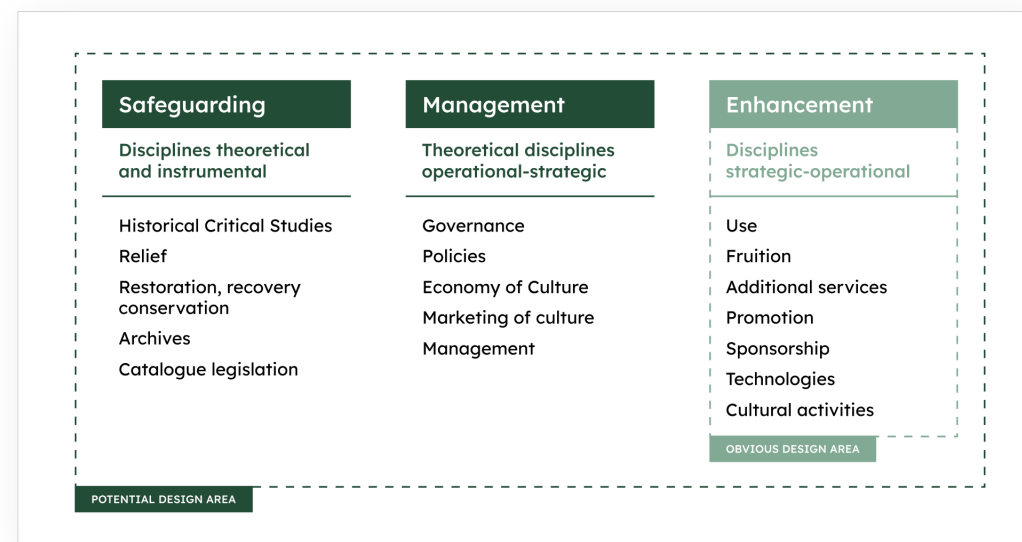
The approach to design interventions for cultural heritage has evolved to encompass more than just technical and momentary actions. It is now viewed as a complex process where the value of design itself must be communicated as a result with multiple objectives. This is achieved by defining a design-focused understanding of enhancement.

The idea of enhancement, rooted in Marxist philosophy, is viewed by management theories as the utilisation of the knowledge and outcomes of a project, including products, processes, methodologies, and materials, to optimise their value and influence in both current and new contexts. To be successful, the enhancement process must consider the needs of the end-users of the assets being utilised, promote the dissemination and diffusion of the achieved results, adapt to fulfil new needs, and apply, experiment, and integrate the results into the context.

The Italian Constitution offers a different definition of enhancement, describing it as “any activity aimed at improving the conditions of knowledge and conservation of cultural assets and increasing their enjoyment” (Art. 148 D. lg. 112/1998). This definition encompasses activities such as promotion, management, conservation, and use of cultural heritage and highlights the public nature of enhancement through principles such as freedom, pluralism, continuity, equality, cost-effectiveness, and transparency. The Constitution also recognizes the private nature of enhancement as a socially useful activity with a purpose of social solidarity.



Typological map of cultural assets, (Lupo E., 2009)



Cultural heritage activities and related subject areas, (Lupo E., 2009)

Instead, the definition of enhancing cultural heritage with a design-focused approach is “action aimed at facilitating the adoption of an innovative, systemic and diffuse vision of cultural heritage in all its forms and at making, through a participatory and shared process, socially sustainable and economically viable for the community (from the user, to the institution, to the cultural operator) its systemisation and activation, in a balance of meaning, form, function and value of the asset, for the purposes of both safeguarding and protection, and management, and promotion and fruition, through synergic design skills that can be specialised, strategic and communicative” (Lupo, 2009).

Design, in the context of cultural heritage valorization, sees the process as a way to transform and improve the heritage. The focus is on introducing innovation, which is understood as positive change in the relationship between the user, the cultural asset, and its environment (physical or symbolic). To achieve this, valorization processes are substantiated through the design of concrete forms and artefacts that are capable of generating rare and meaningful relationships.

This view of valorization broadens the scope of design’s role in cultural heritage enhancement. It shifts the focus to a strategic and regional approach that is tailored to the specific needs of cultural heritage, including preservation,

revitalization, and production and reproduction. The aim is to create an approach that is capable of responding contextually to the different needs of cultural heritage, and that can deliver positive results that are sustainable over time.

The proper valorization and enjoyment of cultural assets is a delicate balance that should not be taken lightly. The value of these assets often goes beyond just their intrinsic worth and extends to their cultural, historical, and social significance. As such, it’s important to ensure that their protection and preservation are not overlooked in the pursuit of commercialization or entertainment.

One of the most notable examples of the impact of over-tourism can be seen in the case of Iceland’s Fjaðrárgljúfur Canyon. The once relatively unknown canyon gained worldwide attention after being featured in a Justin Bieber music video. The sudden surge of tourists visiting the site put a strain on the local environment and resources, leading to concerns about the long-term impact of overtourism. Similarly, Maya Bay in Thailand’s Phi Phi Archipelago suffered significant damage to its coral reefs after being featured in the movie *The Beach* with Leonardo di Caprio. The influx of visitors to the once pristine bay resulted in overcrowding and degradation of the local ecosystem.



Justin Bieber at the Iceland’s Fjaðrárgljúfur Canyon.

Credits: The Independent (Coffey, 2015)

This is where the role of design becomes crucial. As a mediator, design can help foster a connection between cultural assets and their communities of users and stakeholders. In traditional consumer goods production, the functions of distribution and communication serve as intermediaries between the production system and the consumption system. This mediation system is crucial for innovation and value creation, as it connects the good itself from the producer to the end user.

Design has evolved over the years and now operates on many levels in the process of knowledge dissemination and conveyance of the good. While design has historically focused on the functional, performance, and productive components of goods, it now often takes an approach that prioritises the user’s ability to access and understand the goods. As a result, design plays a key role in facilitating integration processes between the different systems of human action such as technical, economic, social, and productive.

“The valorisation project is therefore both a means and an object of culture, both because of the relationship it enables to activate with respect to the cultural asset to which it refers, and because of its autonomous value system that it establishes with the user [...] Design adds and does not subtract value through its application to the enjoyment of cultural assets”

- Celaschi, 2004

3.2. The era of experience economy

Design is a crucial element in promoting a territory and its offerings. By acting as a mediator, design can create a more meaningful and emotional connection between the customers and the products or services being offered. This deeper connection is essential in today’s economy,

as customers are increasingly looking for more than just the product itself. They want an experience, an emotional connection, and memories that will last a lifetime. In the past, the primary consideration for customers was the quality and value of the product itself. If a product was of high quality, it would attract customers and drive sales. However, as the economy has evolved, this focus has shifted. People are now looking for more than just a high-quality product—they want a unique and memorable experience that they can relate to and cherish.

According to the economists Pine and Gilmore, the entire history of economic progress can be recapitulated in the four-stage evolution of the birthday cake. As a vestige of the agrarian economy, mothers made birthday cakes from scratch, mixing farm commodities (flour, sugar, butter, and eggs) that together cost mere dimes. As the goods-based industrial economy advanced, moms paid a dollar or two to Betty Crocker for premixed ingredients. Later, when the service economy took hold, busy parents ordered cakes from the bakery or grocery store, which, at \$10 or \$15, cost ten times as much as the packaged ingredients. Now, in the time-starved 1990s, parents neither make the birthday cake nor even throw the party. Instead, they spend \$100 or more to “outsource” the entire event to Chuck E. Cheese’s, the Discovery Zone, the Mining Company, or some other business that stages a memorable event for the kids—and often throws in the cake for free. Welcome to the emerging experience economy. (Pine & Gilmore, 1998).

The two economists proposed a progression of economic value that outlines the evolution of economic value from tangible goods to intangible experiences. This progression serves as a guide for businesses to comprehend how they can create added value for their customers and distinguish themselves from their rivals. It is divided into four distinct stages

1. Commodities—The first stage in the progression of economic value is commodities, which are raw materials or basic goods that have little differentiation between one another, such as coal, oil, or wheat can be

considered commodities.

2. Goods In the next stage, goods, businesses start to differentiate their products through branding and packaging to create a sense of value for customers. For example, a customer may choose to buy a Nike T-shirt over a generic brand because of the perceived quality and style associated with the Nike brand.
3. Services In the services stage, businesses start to offer intangible benefits to their customers, such as convenience and reliability. Examples of services include transportation (e.g. ride-sharing), healthcare (e.g. doctor visits), or financial services (e.g. banking). In these industries, businesses are focusing on providing a high-quality customer experience, beyond just the product or service being offered.
4. Experiences In the experience stage, businesses go beyond offering products and services and focus on creating unique, memorable experiences for customers. This involves creating a total sensory experience, including sights, sounds, and emotions, that is personal and meaningful to the customer. Examples include theme parks (e.g. Disney World), music festivals (e.g. Coachella), or culinary experiences (e.g. a multi-course dining experience at a Michelin-starred restaurant). These experiences are designed to be personal and meaningful to the customer and create a lasting impression.

Starbucks

Starbucks has become a shining example of a company that has achieved success through the exceptional experience it offers. The brand has worked hard to create an environment where customers feel comfortable and at home, not just a place to grab a quick cup of coffee. One of the key elements that sets Starbucks apart is the personal touch it provides its customers. For example, Starbucks was the first coffee shop to write customers' names on their cups, which might be misspelt, but it adds a touch of humour and familiarity to the experience. Starbucks' exceptional customer service is another factor contributing to its success. The company trains its employees to provide friendly, knowledgeable, and efficient customer service, which contributes to a positive overall experience for customers. Whether it's the barista remembering your usual order or offering a suggestion based on your previous purchases, Starbucks employees go above and beyond to make each customer feel special.

"Providing the world with a warm and welcoming third place may just be our most important role and responsibility, today and always." (Howard Schultz, CEO of Starbucks)

The Starbucks case highlights that delivering an exceptional experience goes beyond mere functionality and encompasses emotional connections as well. A Harvard Business Review article highlights the crucial role that emotions play in creating meaningful customer experiences. The authors, Scott Magids, Alan Zorfas, and Daniel Leemon (2015),

argue that emotions are at the centre of customer behaviour and play a vital role in creating customer loyalty. In order to better understand the emotional motivators behind customer behaviour, the authors created a lexicon of nearly 300 emotional motivators and used big data analytics to link them to specific profitable behaviours. One of the key findings of the research was that customers with a strong emotional connection to a brand, referred to as "fully connected customers," constituted only 22% of the customer base but accounted for 37% of revenue. Furthermore, these customers spent, on average, twice as much annually (\$400) compared to highly satisfied customers.

The authors state that companies can create emotional connections with their customers by understanding the specific emotional motivators that drive their behaviour. For example, some customers may be motivated by the feeling of freedom that a product or service provides, while others may be drawn to a brand that makes them feel a sense of belonging. By understanding these emotional motivators, companies can create experiences that resonate with customers on a deeper level and drive long-term loyalty.

Lush

Lush is a great example of a brand that excels in creating emotionally-engaging experiences for its customers. The company has mastered the art of multi-sensory experiences, from the powerful fragrances that greet customers upon entering the store, to the opportunity to touch the products and even watch them being made online. This focus on connecting with their customers' emotions is what sets Lush apart and provides a truly memorable customer experience. One of the ways Lush employees work to connect with customers is through the use of "mini facts of the day." For example, if it's a rainy day outside, employees might recognize that customers may be feeling a bit down, so they make a conscious effort to be extra cheerful and offer bright, colourful products that can lift their spirits. These small gestures help create a deeper emotional connection

between the brand and its customers, which ultimately leads to a more memorable shopping experience.

Creating an emotional connection with customers through a memorable user experience is a fundamental aspect of this project's success. By connecting with customers on an emotional level, the product not only encourages consistent usage but also fosters customer loyalty and satisfaction. However, ensuring a positive user experience can be a challenge, particularly for the main user group of local producers who may not have prior experience with digital technology. To deliver an outstanding user experience, it's essential to consider various aspects of how users interact with the product. According to Don Norman and Jakob Nielsen, "user experience" encompasses the entirety of a customer's interaction with a company, its products, and services.

The Nielsen Norman Group provides a more comprehensive definition, stating that "the first step towards an outstanding user experience is to fulfil the precise needs of the customer with ease and efficiency. This is followed by the implementation of simplicity and elegance that result in products that are both enjoyable to own and use. Genuine user experience goes beyond merely satisfying customers' stated preferences or offering basic features. Achieving high-quality user experience in a company's offerings requires the seamless integration of various disciplines such as engineering, marketing, graphical design, industrial design, and interface design.

It's important to distinguish the total user experience from the user interface (UI), even though the UI is obviously an extremely important part of the design. As an example, consider a website with movie reviews. Even if the UI for finding a film is perfect, the UX will be poor for a user who wants information about a small independent release if the underlying database only contains movies from the major studios.

We should also distinguish UX and usability. According to the definition of usability, it is a quality attribute of the UI, covering

If airlines truly sold experiences, more passengers would actually shop in the seat-pocket catalogues for mementos of their flight.

Pine and Gilmore, 1998



Image above: Lush store
Image below: A Starbucks employee writing a customer's name on the cup

whether the system is easy to learn, efficient to use, pleasant, and so forth. Again, this is very important, and again total user experience is an even broader concept.”

“No product is an island. A product is more than the product. It is a cohesive, integrated set of experiences. Think through all of the stages of a product or service – from initial intentions through final reflections, from the first usage to help, service, and maintenance. Make them all work together seamlessly.”

— Don Norman

In conclusion, a well-crafted user experience is crucial for the success of a product. By connecting emotionally with customers, the product can foster a deeper connection and establish a strong bond. Furthermore, with an effective user experience, the product can take advantage of new technologies available and explore new possibilities for growth and innovation. The right user experience can be the key to unlocking a successful product that meets the needs of customers, while staying ahead of the curve in terms of technology.

3.3. Tourism 4.0 - tech opportunities

According to Vogt and Fesenmaier (1998), Going for a trip is similar to participating in a concert or drama, there, though, people are spectators, while on a trip tourists co-create their experience. In fact, given the same artist and songs, the same plot and script, each person experiences a concert or a drama in a personal and unique way, but they cannot change (almost) anything in the performance. The role of the tourist on a trip, instead, is that of an agent who actively realises the trip, making several decisions at different levels, that is, core, secondary, and en route decisions, co-creating their experience.

Tourism stakeholders are increasingly more aware that the goal of designing tourism

products and services should be not only to increase the number of people visiting a destination or using these products and services, but also to enhance a visitor's experience. When it comes to heritage destinations, then, visitors expect not only to have an overview of the site and a technical explanation of its characteristics, but also to understand it, to recognize what sets it apart from other sites, and to get a feeling of the people and culture who created it (Garbani-Nerini, Korkut and De Ascaniis, 2022).

The advancement in technology has made it possible to have access to various tools aimed at enhancing the visitor's experience, with digital media being at the forefront. These tools play a crucial role in the tourism industry of today, not just in terms of enhancing experiences but also in addressing other important factors. The book “Handbook on Heritage, Sustainable Tourism and Digital Media” by Silvia De Ascaniis and Lorenzo Cantoni (2022) presents a framework for the use of digital media in the context of heritage tourism. This framework is portrayed as a wheel, with the circular shape symbolising the interdependence between heritage and tourism. The centre of the wheel represents the role of digital media, while the five spokes extending from the centre indicate the five main areas where digital media can have a positive impact on sustainable heritage tourism.

The five areas, represented by the first five letters of the Latin alphabet, are Access, Better, Connect, Disintermediate, and Educate. Each of these areas is critical in understanding how digital media can contribute to a better tourism experience at heritage sites.

“Access” refers to how digital media can expand access to heritage sites by providing multimedia information about them, supporting the planning phases of visitors, and offering multiple, varied affordances for exploring tourism and cultural information. For instance, the website of Switzerland Tourism is a localised digital tool that has 16 different versions, each customised for a different market, including language, images, narratives, products and services, content structure, and layout.

“Better” refers to the role of digital media in enhancing the visitor experience once they have reached a heritage site. This can be achieved through location-based services that provide information based on the user’s geographical location, as well as through new experiences that combine entertainment with learning and awareness goals. For example, gamification, which applies game-design principles to serious goals, can be used to educate people about sustainable behaviour, social problems, or the value of heritage.

“Connect” refers to the ability of digital media to improve relationships between heritage, residents, and visitors by enabling the exchange of vast amounts of digital content. This can support heritage interpretation and storytelling, heritage preservation, and destination marketing, and provide new opportunities to connect tourists, residents, and heritage. Social media, in particular, can play a critical role in breaking down barriers between different groups and enabling public discourse.

“Disintermediate” refers to the capacity of digital media to connect suppliers directly with consumers, reducing the role of intermediaries. This can be seen in platforms like Airbnb, which connect people looking for short-term accommodation with those who have accommodation to rent. Cultural and heritage tourism enterprises, which are often small or micro in nature, can benefit from smart digital media management to enhance capacities in areas such as operations, marketing, management, and communication with visitors. Social media is playing a leading role in the disintermediation process by democratising communication and enabling word-of-mouth, which is a critical source of information for reducing risk and uncertainty in travel decision-making.

“Educate” refers to the role of digital media in supporting tourism operator training and lifelong learning. Thanks to the flexibility offered by eLearning, digital media can have a positive impact on education at a global scale by allowing students and employees from different countries, faculties, and industries to interact with educational materials online and engage with tutors and peers. The growing trend of massive

open online courses (MOOCs), accessible to anyone without formal entry requirements, is a prime example of how digital media can be used for education in the context of heritage tourism.

The integration of digital media in the tourism industry has revolutionised the way that travellers interact with destinations. Thanks to advancements in technology, there are now several tools that are specifically designed to enhance the overall experience of visitors and provide a more personalised approach. Digital media has become an essential element of modern-day tourism, and its impact goes beyond just enhancing the experience of travellers.

Another significant advantage of digital media is that almost everyone is using at least one digital device in their day-to-day lives. With the prevalence of these devices, there is an increasing amount of data being generated about the activities and behaviours of travellers. These digital footprints, or “big data,” provide valuable insights into the trends, social habits, and collective behaviours of tourists. By analysing this data, it is possible to improve the quality of life in various domains, including tourism. In the field of tourism, big data can reveal tourism dynamics at specific locations and suggest ways to improve the management and offering of services.

This has led to the creation of the concept of “destinations,” where tourism suppliers, local administrators, and visitors come together to collect data from various sources, analyse it, and implement measures aimed at making the destination more efficient, sustainable, and appealing to tourists and locals. By leveraging big data, destinations can get a better understanding of the needs and preferences of travellers and personalise their offerings accordingly. For example, location-based data can be combined with users’ personal information to provide recommendations for restaurants, events, or attractions in the destination they are visiting.

This data is of immense importance not only for providing a more tailored experience to tourists, but also for public

authorities such as municipalities, regions, and countries. The economywide effects of tourism are significant and vary a lot from one territory to another (e.g. urban, rural, coastal or mountainous areas) in terms of number of visitors, type of tourism, seasonality patterns, revenues and added value per visitor or jobs generated.

A main challenge for countries is to develop at a sub-national level a system of information and statistics on tourism, producing robust and timely data with a good level of disaggregation, and comparable data among regions and with national data. Much has been done in the past 20 years to improve the economic measurement of tourism at national level (e.g. with the Tourism Satellite Account), but rather little at sub-national level. The sub-national level can be represented by a region, a city, or another type of “tourism destination”. The “tourism destination” level is very significant from a tourism perspective – the destination is the geographical area which is chosen by the visitor due to its mix of attractions, accommodation, catering and entertainment/activities – but often difficult to capture in terms of statistical measurement as it does not necessarily match with the administrative level for which the data are usually available. (OECD, 2016)

There are several reasons why public authorities are interested in tourism data

Destination planning and development
Tourist data can provide valuable insights into the behaviours and preferences of travellers, which can inform destination planning and development. For example, data on where tourists stay, what attractions they visit, and how much they spend can help municipalities understand the economic impact of tourism and make informed decisions about investment in infrastructure, tourism attractions, and services.

Revenue generation
Tourist data can also be used by municipalities to collect taxes and other revenue from the tourism industry. For example, data on short-term rental activity provided by platforms such as Airbnb can be used to enforce tax laws and

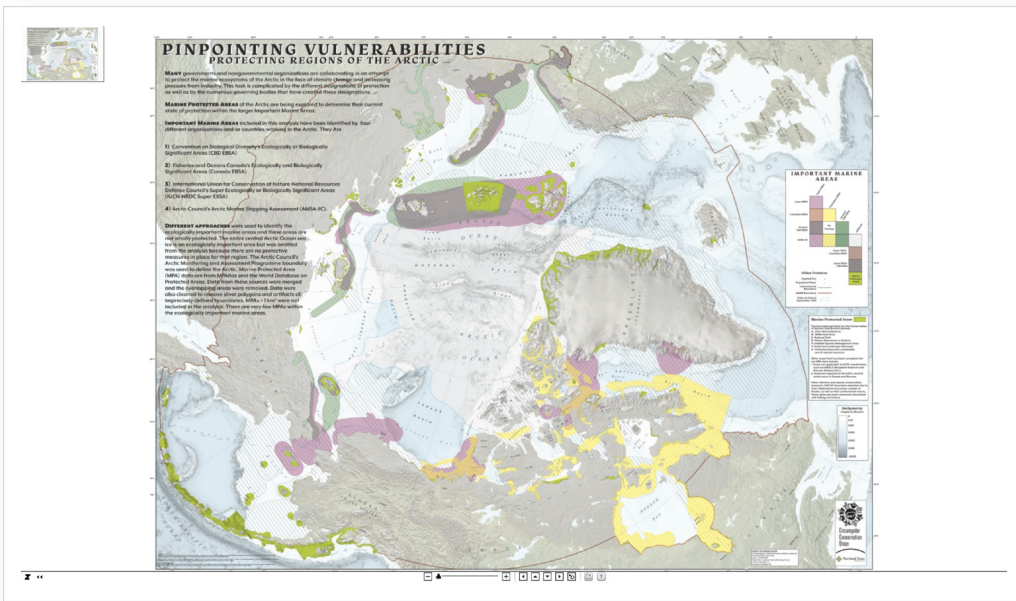
generate revenue for the local government.

Transportation planning
Tourist data can also be used by municipalities to inform transportation planning. For example, data on travel patterns and transportation demand provided by ride-hailing platforms such as Uber can be used to optimise transportation systems, reduce congestion, and improve mobility.

Public safety and emergency management
Tourist data can also help municipalities with public safety and emergency management. For example, data on tourist movements can be used to inform emergency response planning and allocate resources more effectively in case of natural disasters or other emergencies.

An example of a company offering visual representation of information to government organisations is “Esri.” Esri is a leading company that provides Geographic Information System (GIS) software and technology solutions. The company is dedicated to creating innovative and cutting-edge GIS software and services that help individuals, organisations and communities better understand and manage the world around them. With its state-of-the-art mapping and spatial analysis tools, Esri helps organisations visualise, analyse and understand data in new and meaningful ways.

Esri’s GIS technology is utilised by a diverse range of organisations including governments, businesses, non-profit organisations and more. This technology is used for a multitude of applications such as environmental planning and management, public safety, urban and regional planning and much more. National governments are one of the key users of GIS technology. This technology helps governments manage programs and evaluate policy outcomes by incorporating location intelligence into high-level decision-making. With GIS, government agency staff and leaders can integrate diverse types of data to derive understanding, operationalize solutions, communicate insights, and engage stakeholders and the public. This results in powerful insights on critical issues the nation faces and supports science- and analysis-based policy making.



"Protecting the Arctic". Map developed by Esri (Rosseau G. and Lempinen K.)

For example, in the agricultural sector, GIS technology is used to integrate Earth observations, imagery, field data and real-time data streams to improve efficiency, profitability and sustainability. Esri's GIS maps provide a comprehensive view of the agricultural landscape, enabling farmers and agricultural organisations to make better decisions and improve the overall health and sustainability of the industry. Another key aspect of Esri's GIS technology is its ability to improve public safety. GIS maps and analysis tools can help emergency responders and first responders quickly identify the location and severity of an emergency and respond accordingly. This technology also provides valuable insights into the areas most vulnerable to natural disasters, allowing authorities to prepare and respond more effectively to these events.

The increasing use of digital media in the tourism industry has opened up new possibilities for the industry to empower itself and provide better experiences for travellers. By harnessing the power of digital tools, the industry can continue to grow and become more competitive, while also creating new opportunities for other stakeholders to participate in its success.

Empathising with customers and producers

4.1. Holiday needs after Covid19 pandemic

In the preceding chapters, we explored the local production industry in depth, examining the various changes that have taken place in the social and economic conditions of the industry and the opportunities that have arisen as a result of the integration of ecotourism, design, and advanced technologies. These analyses provided valuable insights into the ways in which local producers have been able to capitalise on these opportunities to improve their circumstances and achieve long-term success.

However, as the world continues to evolve and the impact of the Covid-19 pandemic becomes increasingly apparent, it is important to understand how these changes have affected consumer behaviour and needs. In this chapter, we are shifting our focus to the consumers, exploring their changing perspectives and needs in the post-Covid-19 world. To gain a more nuanced understanding of these changes, I conducted generative research. This approach involves directly engaging with customers and gathering qualitative data through various methods such as interviews, diaries, and online surveys. This research provides a more in-depth understanding of consumer attitudes and motivations, beyond what can be gleaned from quantitative data alone. Through this research, I was able to define the

archetypes and personas of the project, providing a foundation for the development of a product that meets the needs and expectations of the target audience.

Let's begin by analysing the changes in travel habits following the Covid-19 pandemic. It is evident that the pandemic caused a major crisis for the tourist industry, with overnight stays of foreign tourists in Italy falling by 54.6% and those of residents within the country dropping by 32.2%, according to ISTAT data (2021). Although we are still feeling the impact of the pandemic, there are signs of a resurgence in the tourist industry. According to the journal "Il Sole 24 Ore", 2023 is expected to be the year when the industry returns to pre-pandemic levels. This is confirmed by the Bit presentation and the annual assembly of the Federation of Organized Tourism (Fto). Luca Palermo of Fiera Milano states, "If 2022 was the year of restart, in 2023, forecasts predict a +30% increase in international tourism." Meanwhile, Minister of Tourism Daniela Santanchè adds, "We must be prepared to do better in 2023 and take advantage of all the tourist opportunities. Although we have seen an increase in US tourism, we have lost Russian tourists and high-end tourism, which has resulted in significant revenue losses. I have the great ambition that tourism will become the leading industry in Italy, not just in words."

Although the tourism industry is gradually recovering from the effects of the Covid-19

pandemic, travellers' tastes and priorities have undergone a transformation. Based on various articles from "Forbes," "Condé Nast Traveller," and "La Repubblica," the following are three key travel trends that are emerging in 2023:

1. **Silence** The idea that silence is a precious commodity has been around for centuries, and this has now become the basis of a growing trend in travel that focuses on personal growth. The recent return of human activity and noise pollution after the COVID-19 lockdown has prompted many people to seek out peaceful, quiet environments. The period of quiet during the lockdown allowed people to hear the sounds of nature, birds singing, and the wind in the trees, instead of the constant drone of traffic and aeroplanes. This experience has made a lasting impression on many, leading to a growing interest in silent retreats. A survey by Booking.com found that 40% of respondents are considering a silent retreat in 2023. In response to this demand, the American Prairie Reserve in Montana, Haleakala National Park in Hawaii, and Namibrand Nature Reserve in Namibia, among others, have been designated Quiet Parks. In addition, quiet trails are being established in the Kvarken Archipelago in Finland, and Urban Quiet Parks will be tested in cities like Paris, Thessaloniki, Toronto, and Brisbane. For many of us, 2023 will be a year of muting more than just our Zoom calls.
2. **Localism** In keeping with the desire to experience a destination as locals do, travellers are placing more emphasis on responsible travel. By reducing the gap between tourist and resident and fostering human connections, travellers' impact becomes more noticeable. A Virtuoso survey found that clients want to benefit local communities and economies, and are willing to pay more accordingly. Environmentally sustainable travel, which has steadily gained more attention over the past few years, is also important to some travellers. In the same Virtuoso survey, 70% of

respondents said that sustainable travel enhances their experience. Meanwhile, the YouGov Travel and Tourism Practice believes that we are at an important tipping point. They found that 44% of consumers try to make purchases (including travel) from socially and environmentally conscious companies. These goals are becoming increasingly accessible, as more and more companies are offering eco-friendly, ethical travel experiences and sharing how they are making a difference, so travellers can choose companies that align with their values.

3. **Experience** The trend of just relaxing on a trip is evolving. A survey by GetYourGuide showed that nearly all travellers want to spend some part of their trip experiencing new or unique activities. In fact, 90% of respondents aim to experience a destination as the locals do and two-thirds of millennial respondents are particularly concerned about the authenticity of the experience. Although it may seem like everyone is aiming for the same goal, there are numerous ways to learn about a culture or try something new. According to SkyScanner data, exploring historical and natural sites tops the list of desired activities for the next holiday, with visiting cities with rich historical heritage, going on nature hikes, and swimming in uncharted waters in the top 3. This indicates a willingness among people to return to and discover new places, immerse themselves in local traditions, and explore the countryside. It's a refreshing departure from the typical all-inclusive beach vacation.

This data sheds light on the current travel landscape and the changing preferences of travellers. No longer are people content with simply visiting popular cities or lounging at the beach. There's a growing interest in nature, sustainability, and localism, which presents a great opportunity for local producers to increase their visibility and gain more recognition. The trend towards nature and sustainability is not just limited to travellers, but it's a wider movement that's being embraced

by people around the world. People are becoming more aware of the impact of their actions and are looking for ways to minimise their carbon footprint. In the travel industry, this is manifested as a desire to explore and appreciate natural wonders, such as forests, mountains, and oceans.

Similarly, localism is gaining traction as travellers seek to immerse themselves in local cultures and traditions. They're interested in getting a more authentic experience and making human connections, and they're willing to pay more to benefit local communities. This trend is a win-win for both travellers and local producers as it creates a more sustainable travel ecosystem and helps preserve local cultures.

4.2. Empathise with customers

In order to gain a more comprehensive understanding of why travellers make their destination choices, to empathise with them and to deeply understand their needs, I conducted a research study. Research done properly prevents us from designing for ourselves and instead for the needs and wants of our users.

'We tend to project our own rationalisations and beliefs onto the actions and beliefs of others.' (Don Norman)

There are various approaches to conducting research, each having a unique objective. The key distinction between the methods lies in the type of needs they aim to uncover. The needs can be broadly categorised into four categories, ranging from surface-level needs to deep-level needs - explicit, observable, tacit, and latent. Explicit needs are the most straightforward to discover as they are the needs that people express and are aware of. To identify these needs, direct research methods can be employed, which provide qualitative and quantitative data. Examples of such methods include interviews and diaries for qualitative data, and surveys for quantitative data.

In contrast, discovering observable, tacit, and latent needs requires more in-depth investigation. These needs are often less explicit and can be better understood by

observing the user and understanding their experiences, emotions, and aspirations. To uncover these needs, indirect research methods are used, which provide qualitative data. Examples of such methods include observation (ethnography), shadowing, and camera studies.

For the current project, I planned to start with a survey and then move on to conducting interviews, diaries, and digital ethnography, to gather comprehensive insights into the needs and motivations of the target audience.

Surveys

According to the Nielsen Norman group, a survey is "a quantitative measure of attitudes through a series of questions, typically more closed-ended than open-ended. A survey that is triggered during the use of a site or application is an intercept survey, often triggered by user behaviour. More typically, participants are recruited from an email message or reached through some other channel such as social media" (Rohrer, 2022).

The reason I chose this method is because it offers a convenient and systematic way of collecting data from a large number of participants without the need for any personal connection or interaction between the interviewer and the interviewee. This results in consistent and comparable data that can be easily analysed and compared among a wide range of respondents. Additionally, this method allows for the collection of quantitative data, which is essential in determining patterns and trends in research. By using surveys as the primary method of data collection, I was able to gather valuable insights and information that guided the direction of my research.

The findings from previous literature studies indicate that individuals are drawn to nature and local experiences, but this project aims to focus specifically on short trips of 2-4 days. This is because the exploration of new destinations with local producers is not typically the primary focus of longer vacations, as previously analysed. The objective of this research is to gain an

understanding of whether individuals are still drawn to nature and localism, and to examine the factors that influence their destination choices.

The survey was made available to the public and a diverse range of participants responded, with a majority of female respondents ranging in age from 19 to 70 years old. The survey consisted of three sections which aimed to gather information on

- Changes in travel habits post-Covid19 pandemic
- Factors that influence destination selection
- Participants' level of interest in and reasons for choosing a specific rural destination.

An intriguing finding from the research is that 54% of survey participants expressed a preference or strong preference for destinations with a focus on nature or the arts, while only 9.8% favoured big cities. This preference is closely tied to the fact that 84.8% of participants said it was crucial or very important for them to take a break and disconnect after the Covid-19 pandemic, compared to only 69.6% who held the same view prior to the pandemic.

"In the last two years, also because/thanks to the pandemic, I rediscovered Italy and the desire to have a different type of vacation than before, that is by immersing myself more in the places I visit. I learned to appreciate the culture and local traditions, but above all to live the whole vacation, the "journey" itself, as an expression of freedom and carefreeness." (Participant from the survey)

In response to the question about which experiences they were most drawn to, the majority of participants (79.5%) chose visiting cultural and artistic sites as their top choice. Discovering new places ranked second (66.1%) and experiencing nature third, with 59.8% of participants. The findings of the survey align with the literature, except for the relatively low level of interest in meeting locals, as only 22.3% of the participants indicated such interest.

In relation to the second section of the study, which focuses on the factors that affect the choice of travel destination, there are some noteworthy findings. Specifically, a significant proportion of the participants (63.4%) based their decision on recommendations from friends, while other commonly used sources of information included Google (52.7%), travel websites (35.7%), and social media (33.9%).

When selecting a travel destination, the majority of participants (75.7%) found it helpful to view pictures of the location, followed by reviews by other travellers (54.1%) and place descriptions (51.4%). Notably, a smaller proportion of participants found watching videos of the destination (36%) or reading numerical reviews (24.3%) to be useful in their decision-making process.

Furthermore, the participants expressed a positive attitude towards the process of selecting a travel destination. Specifically, when asked to rate how much they enjoyed this process on a scale of 1 to 6, the majority of participants (60.7%) responded with either a 5 or 6. Despite the positive attitude towards the process of selecting a travel destination, the participants also provided some noteworthy feedback on what they did not enjoy during this process

"[I don't like] to decide without an emotional approach or the company of others who choose similar experiences to me."

"Normally I can only create itineraries on routes that are already beaten, so I often end up in places that are more 'touristy' than 'authentic'. It is then the locals who recommend other places for me to visit. It would be nice if locals could make the same suggestions before embarking on the trip, so that different itineraries could be drawn up!"

"Finding the right combination of dates for travel/means of transport and place to stay, I find it a bit cumbersome personally."

"I hate making comparisons, the most suitable destination, the cheapest accommodation, etc."

In the third and last section of the survey, I presented two rural destinations, Sotto il Monte Giovanni XXII and Ispra, both offering similar activities such as trekking paths, natural beauty, cultural experiences, and eno-gastronomic offerings. The purpose of this section was to assess participants' interest in these lesser-known destinations and to determine which activities would appeal to them.

Interestingly, when asked to rate their interest in visiting each location on a scale of 1 to 6, a larger proportion of participants (84.7%) expressed interest in visiting Ispra, whereas only 56.2% expressed a similar level of interest in Sotto il Monte Giovanni XXIII. Notably, none of the participants rated their interest in visiting Sotto il Monte Giovanni XXIII as a 6.

When asked about their preferred activities in these destinations, the participants' responses were quite similar for both locations. The top two activities of interest were trekking paths and natural beauty (77.9% and 75.6% for Ispra, 69.2% and 76.9% for Sotto il Monte G. XXIII), followed by eno-gastronomic experiences (52.3% and 57.7%). While participants expressed a lower interest in cultural activities (43% and 19.2%).

The participants also shared their reasons for their interest in visiting these destinations

"Because they are located very close to my home and it's a shame that I haven't visited them yet. I also want to appreciate and explore all that the local area has to offer, which is often overlooked."

"I find these places relaxing and in close contact with nature."

"I think they are interesting destinations that are likely to be less crowded than more popular places."

On the other hand, some participants explained why they are not interested in visiting these destinations

"As someone who has the physical and financial means to travel further, I aspire to more distant destinations. When I'm

older, I may be more interested in visiting nearby places."

"Since these places are in close proximity to where I live, they don't immediately grab my attention. Also, they don't offer experiences that are significantly different from my everyday life."

"I have many other destinations in mind that I'd like to visit, so these places will have to wait."

Interviews

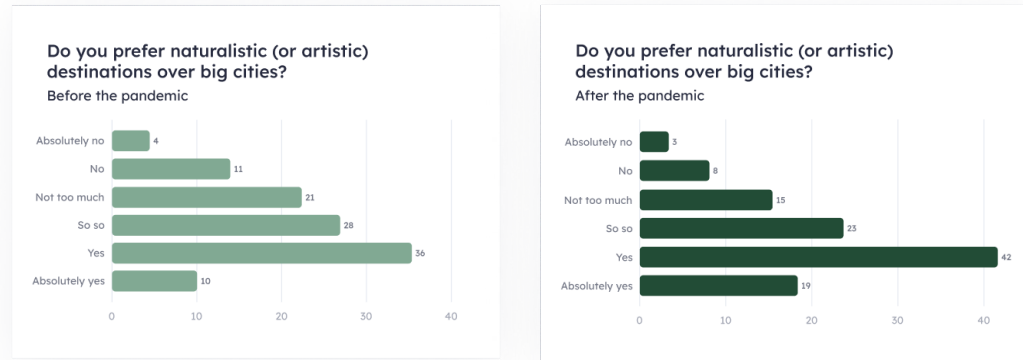
After gaining initial insights from the survey, I decided to conduct in-depth interviews and diary studies to further understand people's decision-making processes when choosing a travel destination. According to the Nielsen Norman Group, a user interview is a UX research method during which a researcher asks one user questions about a topic of interest (e.g., use of a system, behaviours and habits) with the goal of learning about that topic. Interviews give insights into what users think about a site, an application, a product, or a process. They can point out what site content is memorable, what people feel is important on the site, and what ideas for improvement they may have. (Pernice, 2018)

For this research I conducted semi-structured interviews with a total of 5 individuals as well as 4 experts in the field of local tourism. The experts included a social media influencer, a blogger, a professor and a marketing manager of a platform that promotes local activities.

The interviews were conducted via video call and lasted approximately 30 minutes each. While the survey provided insights into what people are interested in, the goal of the interviews was to gain a deeper understanding of people's usual behaviours when it comes to choosing travel destinations, such as where they typically go and what resources they use to gather information.

The findings from these interviews align with the survey results, as most participants reported relying on trusted advices, such as friends' recommendations or firsts results on Google when selecting a destination for

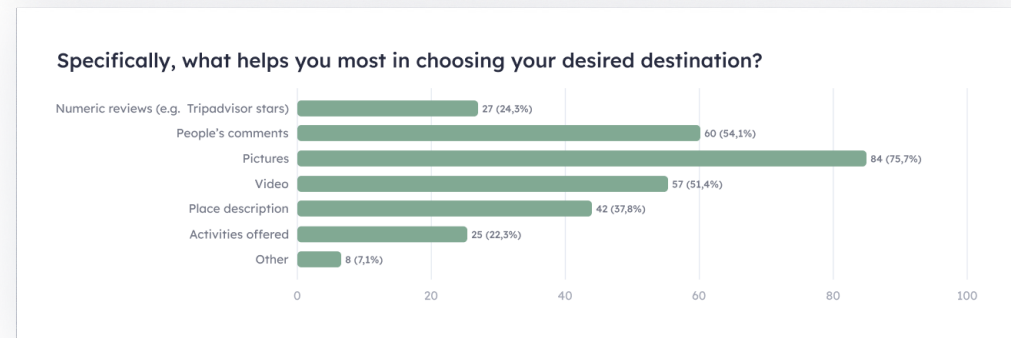
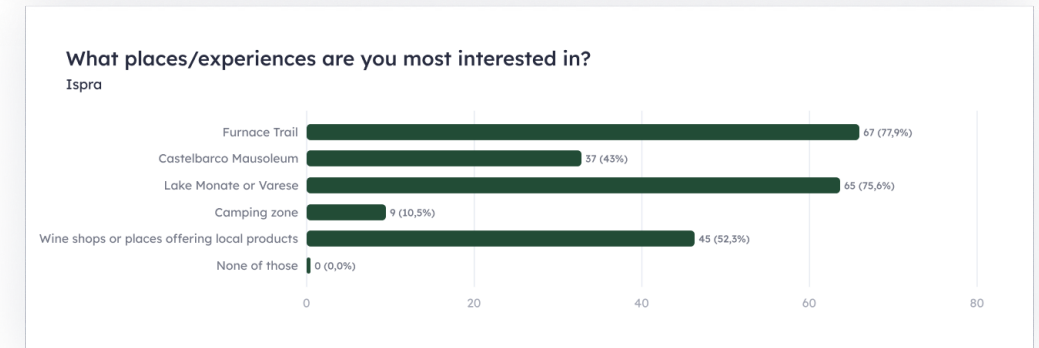
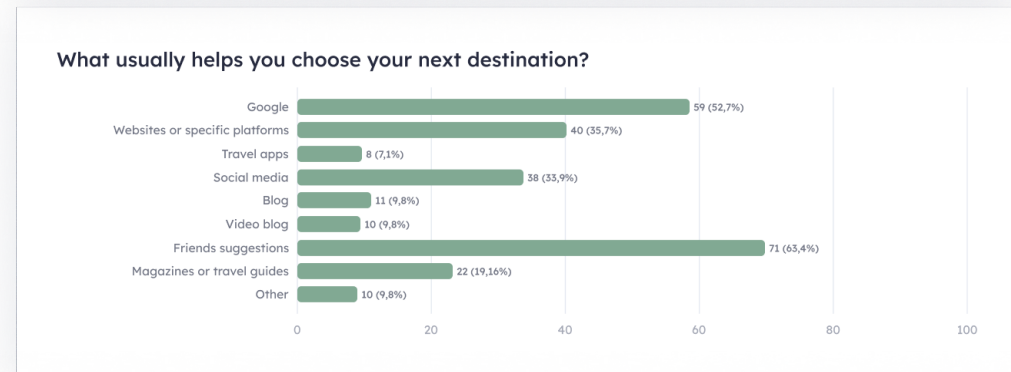
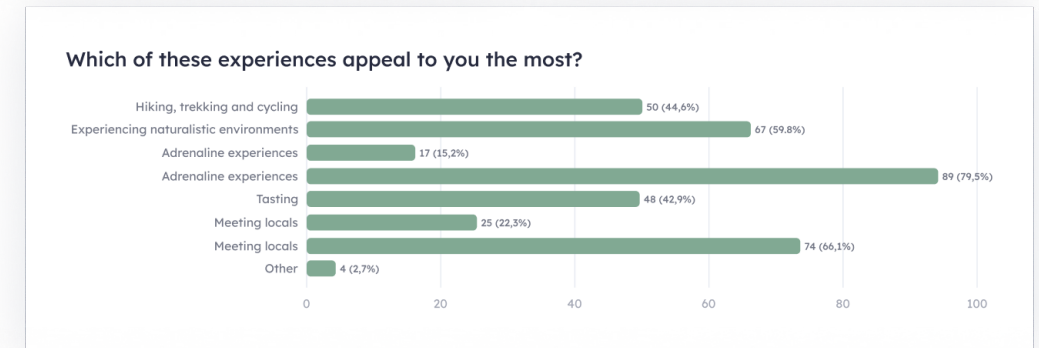
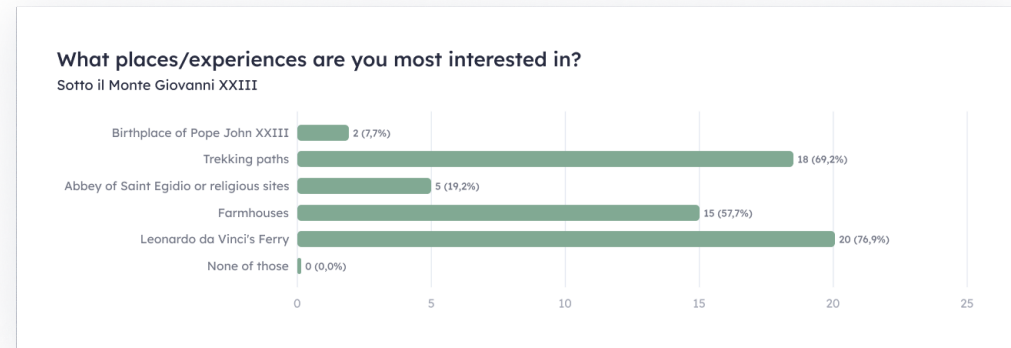
Section 1 survey: Changes in travel habits post-Covid19 pandemic



Section 3 survey: Participants' level of interest in and reasons for choosing a specific rural destination.



Section 2 survey: Factors that influence destination selection



short trips

"If I have to plan a weekend trip, I feel the need for trusted advice, such as friends or relatives" (Interview 3)

"For trips close to home I often rely on advice from locals." (Interview 2)

"When I travel on weekends I don't inform myself too much, I choose based on the first results of Google" (Interview 1)

"I usually use LonelyPlanet because I got along well the first time, so now I trust it" (Interview 5)

One intriguing outcome of the research pertains to the factors that drive people's destination choices. When I asked participants to explain why they opted for a particular destination, they found it challenging to provide a clear-cut response. Many participants indicated that they typically rely on their intuition when deciding on a travel destination.

"There is no real reason why I choose a destination, I usually follow my instincts." (Interview 3)

"I often see a photo or video on Instagram that strikes me, so I decide to go there as soon as possible." (Interview 2)

"It's mainly a gut choice." (Interview 4)

The interviews with local tourism experts provided valuable insights into how they see the response of people towards local tourism, and how their work influences it. I spoke with a social media influencer, a blogger, a professor, and a marketing manager of a platform to promote local activities. Each of them had a unique perspective on the topic, based on their experience and professional background.

The social media influencer and the blogger, who interact with users on a daily basis, both noted an increased interest in outdoor activities that are closer to nature during the recent years. They explained that people are more aware of the benefits of spending time in nature, and are looking for opportunities to disconnect from their busy lives. However, they also noted that

a lot of tourist platforms are not providing the right information that people need. As a result, many people are turning to social media influencers or bloggers to ask for information or trusted advice.

"Today, social media is creating a lot of fashions, people tend to see a nice picture and swoop in. You see in Val Vertova, everyone goes there now and the peace that used to be there has been totally lost." (Local tourism expert 4)

"So many Facebook groups are springing up concerning the mountains. It's amazing how we have increased our followers so much in just one year, people are following us and are very interested in our stories." (Local tourism expert 3)

"We believe that it is not only the landscape or the trekking path to create an amazing experience, but also the local places that we decided to stop to eat. This is why we decided to share this." (Local tourism expert 3)

These conversations proved also valuable in understanding the experiences and opinions of local producers, but I will discuss this in more detail in a later chapter.

Diaries

With the same goal of interviews but using a different method, I decided to conduct a diary study. According to the Nielsen Norman Group a diary study is a research method used to collect qualitative data about user behaviours, activities, and experiences over time. In a diary study, data is self-reported by participants longitudinally – that is, over an extended period of time that can range from a few days to even a month or longer. During the defined reporting period, study participants are asked to keep a diary and log specific information about activities being studied. To help participants remember to fill in their diary, sometimes they are periodically prompted (for example, through a notification received daily or at select times during the day) (Salazar, 2016).

The objective of the diaries was to gain insights into the decision-making process of individuals when choosing a weekend destination. Participants were requested to

esempio:

Elemento che mi ha ispirato:

- sito web: PER TROVARE LE COSE DA NON PERDERE ASSOLUTAMENTE
- blog:
- pagina social:
- consiglio di persona:
- altro: GOOGLE MAPS, SELEZIONANDO IL POSTO UGO POLO E RECENSIONI

Perchè: NON CONOSCENTO ROMA CO CHIEDO CONSIGLI AI MIEI COLLEGHI

Come mi sento:

😊 😄 😊 😐 😞 😡 😢 😭 😠 😡 😢 😭 😠 😡

Elemento che mi ha ispirato:

- sito web: MÜNCHEN.DE
- blog:
- pagina social:
- consiglio di persona:
- altro:

Perchè: HA UN SACCO DI SEZIONI DIVISE PER TEMI PER MILANO YES MILANO.IT

→ CHE TANTISSIMA SCELTA E NON SI SA DA DOVE PARTIRE

Come mi sento:

😊 😄 😊 😐 😞 😡 😢 😭 😠 😡 😢 😭 😠 😡

← ISPIRAZIONI X IL FINE SETTIMANA PIU' PARTICOLARI - CON LINK INSTAGRAM

A page from a participant's diary

maintain a diary documenting their thought process during the various stages of their journey prior to the research, during the research, and after the research. The diary template provided to them aimed to gather their emotions throughout the process and record the resources they used to obtain the necessary information.

I received a total of 5 diaries from individuals ranging in age from 23 to 63 years old. These diaries provided further insights that align with the findings from the previous research. People continue to seek out trusted advice when selecting a destination for a weekend trip, whether it's from friends, Facebook groups, or websites that are recommended by Google.

For example, Elena was inspired by her boyfriend's father's suggestion to *“Go for a ride to Montecatini. Every time I go there, there is always something different to do and the view never gets tired. Take it from me, it's worth it”* (Diary 1). After looking at pictures on Google and reading the interesting description on Wikipedia, she was convinced to go there.

Similarly, Patrizia shared that she and her husband usually *“surf the net on different sites or take inspiration from various Facebook groups, I find proposals, file them and then we consult them to decide on the week's outing”* (Diary 3). They tend to choose walks that “allow us to be in contact with nature, while at the same time doing some exercise in peace” (Diary 3).

Digital ethnography

Through direct research methods in my previous study, I gained insights into people's thoughts and perspectives. However, to understand their implicit and unspoken needs, I employed an indirect research method known as observation or ethnography. This method involves observing human behaviour in its natural context to gain a deeper understanding of their motivations, drivers, and needs, with the goal of creating innovative solutions. By using this approach, I was able to investigate users' behaviour, problems, practical needs, and motivations.

Given that my previous research revealed people's heavy reliance on Facebook groups when choosing weekend destinations, I decided to conduct a digital ethnography to observe their interactions in these groups. Through this approach, I was able to gain a better understanding of people's true interests and the specific information they seek, which helped inform my analysis.

In order to gain deeper insights into people's needs and preferences for local tourism destinations, I decided to conduct a digital ethnography study of three main Facebook groups where people regularly discuss local tourism in Lombardy, Italy. These groups were “Lombardia segreta” (Secret Lombardy - 6543 members), “Gite fuori porta Lombardia con bambini” (Out-of-town trips Lombardy with children - 21949 members), and “Gite fuori porta Lombardia” (Out-of-town trips Lombardy - 241577 members).

During my analysis of these groups, I found that there was a significant interest in outdoor activities and nature-based tourism. In fact, the most commonly used hashtags in these groups were “trekking,” “hiking,” and “nature.” This aligns with the results of my previous research and suggests that nature destinations are highly sought after among local tourists in Lombardy.

However, what was particularly interesting from the digital ethnography was the range of emotions expressed by people in their comments and posts. I identified three main emotional themes that emerged from the data: insecurity, patriotism, and nostalgia.

- Insecurity: it was related to people's need for more information about the destinations they were considering. Many people on Facebook asked for details about trekking paths, such as whether it was suitable for a pram, how the paths were during a particular season, or where to park their car. This suggests that people need to feel secure and well-informed when making decisions about where to go, particularly if they are travelling with children. People tended to trust the advice and recommendations of others in the Facebook groups, as they

believed this was a reliable source of information.

“Hi, how long does it take to do the whole route? Is it feasible for children and grandparents (not too trained?).” (Member of “Lombardia Segreta”)

“Hello, where can you park to start the walk with the pram? I have three small children. Thank you” (Member of “Gite fuori porta Lombardia con bambini”)

- Patriotism: it was expressed by many people who shared posts commenting on the beauty of their local territory and how important it was to get to know it better. This suggests that there is a strong sense of regional identity and pride among local residents, who value the natural and cultural heritage of their region.

“DON'T FORGET Italy's first UNESCO heritage site!!!! Our ‘pitoti camuni’, from which the ‘rosa camuna’, symbol of Lombardy, also originates.” (Member of “Gite fuori porta Lombardia”)

- Nostalgia: it was evident in the many comments from people who expressed their love for a particular place because it held special memories for them. This suggests that people are not just looking for new experiences, but also seeking to revisit places that hold personal significance for them.

“Around Lake Palù I spent my happiest days as a child/teenager. Thank you for this photo!” (Member of “Gite fuori porta Lombardia”)

“Crespi d'Adda. The place of my memories. First childhood, then adolescence and now the present. I feel so much affection for this corner of Lombardy” (Member of “Gite fuori porta Lombardia con bambini”)

Through my various research methods, including surveys, interviews, diaries, and digital ethnography, I was able to gain a deep understanding of people's needs and preferences for local tourism in Lombardy.

I used this information to create detailed customer personas, which I will explore in more detail in the next chapter.

4.3. Empathise with local producers

In order to gain a deeper understanding of the needs of local producers, I conducted a series of semi-structured interviews. The main objective of this research was to gain insights into the challenges faced by local producers, with a specific focus on how they have been impacted by the COVID-19 pandemic. The interviews were divided into three main sections, with the first section focusing on the changes that have occurred in the industry since the outbreak of the pandemic. The second section of the interview aimed to identify the types of customers that local producers are attracting today, and the final section focused on the channels that they use to promote themselves and their products, as well as their level of satisfaction with these channels.

In total, I conducted 6 interviews, each lasting approximately 30 minutes. By mixing the results of these interviews with those of local tourism experts, I was able to identify 4 main needs that local producers require to improve their businesses and meet the expectations of their customers.

Respect: as the world faced the unprecedented Covid-19 pandemic, people's priorities and preferences changed, and they began to seek out different experiences to cope with the isolation and uncertainty of the times. A growing number of people started to explore and appreciate the natural surroundings, including rural areas. In this context, many trattorias and farmhouses became popular destinations for those looking for an alternative to the urban lifestyle. However, it was found that many visitors arrived at these locations with unrealistic expectations, believing that they would receive the same level of service as they would in a city environment. Local producers, on the other hand, felt that customers often failed to recognize the true value of their products and services, which were based on the principles of using fresh,



Interview with a local producer

locally sourced ingredients, and highlighting the unique tastes and traditions of the region. Through this research, it was discovered that local producers need more respect from their customers, and to attract customers who understand and appreciate the real value of their work. They desire customers who are willing to embrace the authentic experience, appreciate the cultural heritage, and understand the importance of supporting local businesses.

“After the pandemic, people seemed more rude to me, they simply complained about the service they received without understanding that we are a family business.” (Local producer 2)

“I would like to have customers who are really interested in my products, not just people who come because they saw a nice picture on social media” (Local producer 5)

Balance During the interviews with local producers, it became clear that their top priority was not necessarily to attract more customers, but to maintain a balance that would allow them to continue their business sustainably. Many of these local producers are family-run businesses, relying on traditional methods and working with what nature provides. As such, they are wary of becoming too big and disrupting the balance that they have carefully cultivated over the years. Their concerns are not unwarranted, as expanding their customer base would require them to increase their production and potentially alter their methods, which could be a strain on both their resources and the environment. Moreover, many of these producers take pride in the quality of their products and are committed to maintaining their standards. An increase in demand could force them to compromise on their values, which they are unwilling to do.

“Honestly, I would not like to increase the amount of work I have now, now I can sustain myself comfortably.” (Local producer 3)

“Now trekking is a trend, the most famous huts are full of people, owners can’t keep up.” (Local tourism expert 4)

Partnership Many local producers offer a specialised service, such as a restaurant,

on-site purchase or learning experiences. However, to attract customers who live far away from their business, they used to suggest other activities in the surrounding areas, such as visiting other local producers. This approach allowed them to create a network and increase the number of visitors. In addition, to attract more people, they often organise partnerships with local producers that offer complementary services. For example, a company that offers tulip cultivation has organised a small refreshment stand in association with another producer in the vicinity, which not only provides more options to visitors but also helps to promote the partner business. Despite the benefits of partnerships, many local producers stated that they often face difficulties in finding the right partner. The process of finding a suitable partner can be complex, and many local producers do not have the time or resources to devote to it. To address this challenge, they expressed a need for more simplicity in finding partnerships.

“Yes, we usually organise activities with other producers in the area, such as those offering food, as we do not offer it, although many do not accept.” (Local producer 1)

“Many customers come from afar and before they pass by my property they ask me what can be done in the surrounding area. In addition to suggesting walks, I always suggest other restaurants in the area, perhaps using our oil.” (Local producer 2)

Digital promotion During the research, it was found that while many local producers are using popular promoting services like “Booking.com” or “Wanderbox”, they are not satisfied with the results. These services attract people who may not be genuinely interested in the products offered, and the cost of the service is often not proportional to the revenue generated. Moreover, local tourism experts pointed out that many local producers, especially older ones, struggle to use technology to promote themselves effectively. They require assistance in reaching out to their target audience through digital channels. On the other hand, social media influencers found that local producers are thrilled when they post about the food they ate

or the experience they had at the local producer's establishment. Often, the local producers offer the influencers some goods as a token of appreciation. To sum up, local producers need help in promoting themselves digitally to attract the right customer base. They need assistance in identifying the appropriate platforms to advertise their products and services and reaching out to potential customers who are genuinely interested in what they have to offer. Additionally, they require guidance in effectively using technology to promote themselves without compromising on the quality of their products and services.

"Right now I am using Wanderbox to promote myself, but I think I will deactivate it soon because the cost is too high and it attracts customers I will never see again because they are not really interested."
(Local producer 5)

"Every time we post what we eat on Instagram, the owner thanks us and offers us some snacks" (Local tourism expert 3)

The insights gained from this research have proved invaluable in shedding light on the challenges that local producers are currently grappling with. These findings have enabled me to craft personas that will be pivotal in shaping the upcoming project, as they will serve as a guide for designing solutions that address the specific needs and pain points of local producers.

Defining the challenge

Promote direct sales of local products

5.1. Defining the scenario

In the previous chapters, I followed the double diamond design process to analyse the challenges faced by local producers and explore potential opportunities to address their issues. The double diamond process is a problem-solving approach that involves four stages: Discover, Define, Develop and Deliver. The Discover stage involves exploring and understanding the problem space, gathering insights and data from a variety of sources, and identifying potential opportunities for solutions. This is followed by the Define stage, where the focus is on synthesising the information gathered during the Discover phase to clearly articulate the problem or challenge to be addressed.

In this chapter, I will focus on the Define stage of the double diamond process. Defining the challenge is an essential step in the process of problem-solving and design. By clearly articulating the problem or challenge to be addressed, we create a clear understanding of the situation and establish a starting point for developing a solution.

Through the research conducted, it has become apparent that people are increasingly conscious of the impact their actions have on the environment, leading to a growing interest in sustainability and nature. This trend is evident in various areas, such as

Increased purchase of organic food - more

and more people are opting for organic food, which is produced without harmful pesticides and fertilisers, and is considered more environmentally friendly.

The recent development of ecotourism - many people are looking for sustainable travel options, such as eco-lodges and tours that allow them to experience nature without harming it.

Increased interest in natural destinations - many people are seeking out destinations that allow them to connect with nature and experience its beauty and tranquillity.

Despite this growing interest in sustainability, the number of local producers - who could provide a more sustainable option for consumers - is decreasing. One of the main reasons for this is the increasing difficulty for local producers to sell their products directly to consumers. Today, the majority of local producers need to sell their products to large retailers, such as supermarkets, which can be a challenging task as they often have to compete against low prices that the market demands.

In order to succeed in selling directly to consumers, local producers need to focus on meeting customers' needs. However, from the research, it emerged that local producers are facing difficulties in attracting customers for direct sales because they are not meeting users' needs. These challenges include

People are used to using digital platforms, a technology that the majority of local producers have difficulties using. Many local producers lack the knowledge and resources to create an online presence that can reach potential customers.

People today are looking for new experiences, not just products. While local producers have a lot to offer in terms of unique and high-quality products, not many offer experiences that can help customers engage with the product and understand the story behind it.

People decide on their next destination mainly based on their instincts or trusted advice. It's difficult to find a trusted platform for local producers that stimulates people's emotions and helps them form a connection with the product and the producer.

Through the research, it has been found that the direct selling of local products faces a significant challenge due to a mismatch between the needs of local producers and customers. While local producers offer a sustainable and nature-based option, the majority of them struggle to connect with customers due to a lack of focus on customers' needs.

To bridge this gap, it is crucial to take a user-centric approach. By analysing users and creating personas, we can gain a deeper understanding of their needs, preferences, and behaviours. This information can be used to define a starting point for creating a tailored experience that addresses the specific pain points of local producers and customers, ultimately leading to a more successful direct selling model. By prioritising the needs and desires of both parties, we can build a trusted and sustainable platform that brings people closer to nature, supports local communities, and offers unforgettable experiences.

"People ignore design that ignores people."

— Frank Chimero, Designer

5.2. Defining users

According to an article of the "Interaction Design Foundation", personas are distilled essences of real users. In user experience (UX) design, you use personas to build empathy with target users and focus on their world. You should always create personas from observations about real users, personas should never be invented out of your assumptions about your users. Because you must map your users' needs to your design's functionality, you must first clearly define both the needs and the users.

As opposed to designing products, services, and solutions based upon the preferences of the design team, it has become standard practice within many human-centred design disciplines to collate research and personify specific trends and patterns in the data as personas. Hence, personas do not describe real people, but you compose your personas based on actual data collected from multiple individuals. Personas add the human touch to what would largely remain cold facts in your research. Creating personas profiles of typical or atypical (extreme) users will help you understand patterns in your research, which synthesises the types of people you seek to design for. Personas are also known as model characters or composite characters.

"Personas are the single most powerful design tool that we use. They are the foundation for all subsequent goal-directed design. Personas allow us to see the scope and nature of the design problem... [They] are the bright light under which we do surgery."

— Alan Cooper, Software designer, programmer and the "Father of Visual Basic"

In order to create personas, I conducted a thorough analysis of the data collected through various research methods, including surveys, diaries, ethnography, and interviews. These insights were then organised into distinct groups, each of which was represented by a typical embodiment or persona. By distilling

the data into these personas, I was able to better understand the needs, desires, and behaviours of the target audience, allowing to tailor the approach and create experiences that resonate with them on a deeper level.

When developing personas, creating empathy maps for each one proved to be an extremely useful tool. An empathy map provides a way to distil the insights and learning from engaging with people in the field of design research. It offers a way to capture a person's experience and focus on four major areas, providing an overview of the user's experience. Empathy maps are particularly valuable as they serve as a foundation for the creation of personas that you may want to develop later, it consists of four quadrants, which reflect four key traits demonstrated or possessed by the user during the observation or research stage. These quadrants represent what the user said, did, thought, and felt. Determining what the user said and did is often a straightforward process, however, understanding what they thought and felt requires careful observation and analysis of how they behaved and responded to various activities, suggestions, and conversations.

Starting from the analysis of local producers, two distinct personas were identified: Stefano - the Innovative Entrepreneur and Rossella - the Heritage Keeper. Both of them are owners of local businesses selling local products, but they differ in the way they promote their business. Stefano mainly uses digital platforms such as Instagram, Facebook, and a website to expand his business, while Rossella does not use social media but she has a website and promotes herself on Wonderbox: a gift box that offers a variety of activities for people to enjoy, including options like a tasting experience at Rossella's local business.

From the empathy maps, it is evident that Stefano is very focused on expanding his business and reaching a wider audience. He is innovative and open to using digital platforms to promote his business. On the other hand, Rossella is content with the amount of work she already has, but would like to attract a different audience, one that values her traditional products and

the authenticity of her business. Despite stating that she doesn't want to promote herself on social media and doesn't like using digital technologies, she has found a smart way to attract new young customers through Wonderbox. It is important to note that while Rossella seems satisfied with her business as it is, she is still frustrated by her inability to attract the right audience. This frustration stems from her desire to share her love for tradition, nature, and high-quality products with others who share her values.

By understanding her values and what motivates her, it becomes clear that she is passionate about sharing her heritage and products with people who appreciate and value them. This could be the challenge that must be addressed to help Rossella reach her target audience and grow her business in a way that aligns with her values.

When examining Stefano's empathy map, it is evident that he is extremely enthusiastic about discovering innovative methods to grow his business. This includes organising events and establishing new partnerships with other local producers. However, he has encountered significant difficulty in locating partners who are similarly invested in implementing unconventional solutions. Many local producers are deeply connected to their region's history and traditions, making it challenging to find individuals who are open to exploring new opportunities. Given this challenge, the project could play an essential role in assisting Stefano in discovering and connecting with like-minded local producers, by facilitating communication and collaboration between local producers who share Stefano's passion for innovation.

These people also have an age and a family composition, but the real difference between them is how they choose their next destination, their interests and above all their needs. Let's have a look at the family man, he is a dad who loves spending time with his child and living new experiences with him. From the empathy map stands out the fact that Giuliano usually follows trusted advice, such as from friends or books that he used to read, like LonelyPlanet. He seems confident in his choices, but it's interesting to note that he used to ask more advice on



Giuliano

The family man

Age: 42 yo

Favourite trip: Legoland and Black Forest, Germany

Hobbies: Sunday grilling and tennis

Where to find the next destination



Needs

- Find the information to understand if the place is right for his child

"As a father, there's nothing I enjoy more than spending time with my child and watching him discover the natural world around us."

Love for nature



Love for food



Interested in new adventures



Rossella

The Heritage Keeper

Age: 67 yo

Products offered: fruits and vegetables

Services offered: in-store shop

Methods of promotion



Needs

- Receiving more interested customers

"I want people to visit my business because they crave the authentic essence of it. This is why I choose not to rely on social media, which prioritizes appearance over substance."

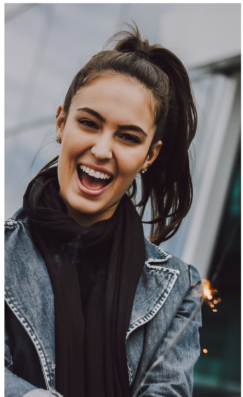
Innovation



Tradition



Digitalisation



Stefania

The unconventional

Age: 27 yo

Favourite trip: Road trip to Cape Town, South Africa

Hobbies: Photography and vegan cooking

Where to find the next destination



Needs

- Find unconventional experiences

"I crave experiences that are unique and unconventional, where I can truly connect with the environment around me."

Love for nature



Love for food



Interested in new adventures



Stefano

The Innovative Entrepreneur

Age: 34 yo

Products offered: wines and jams

Services offered: tastings and educational activities

Methods of promotion



Needs

- Expanding his activities and involving young people.
- Find new partnerships with like-minded locals.

"I love experimenting with new solutions to improve my business and seeing the satisfaction in my customers' faces"

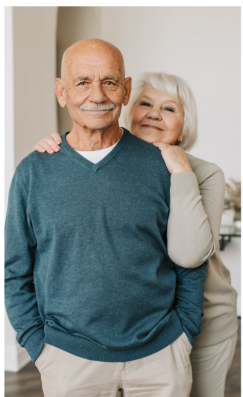
Innovation



Tradition



Digitalisation



Angela e Riccardo

The gourmets

Age: 75 and 78 yo

Favourite trip: Wine tasting in Tuscany

Hobbies: Hiking and gardening

Where to find the next destination



Needs

- Find quality products and experiences

"What we love most when we go hiking is to stop at the hut, eat good food and drink good wine."

Love for nature



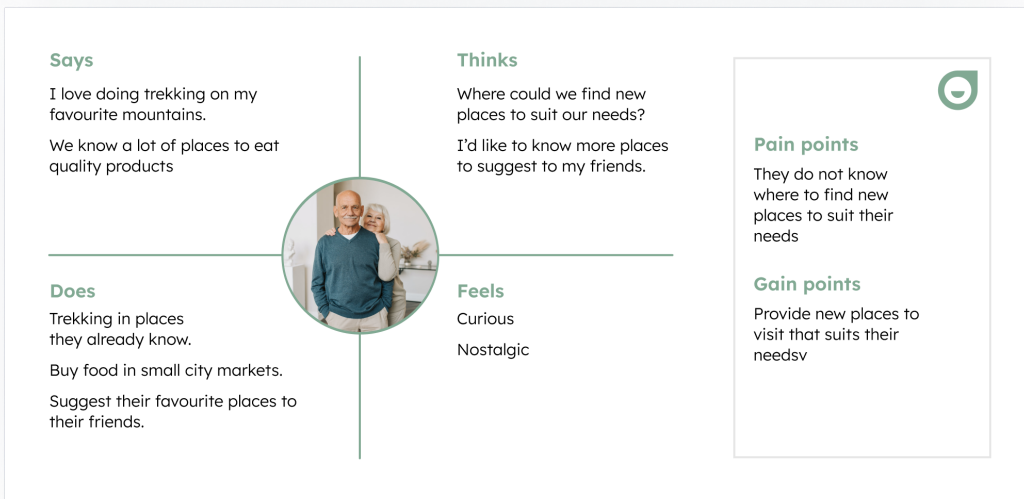
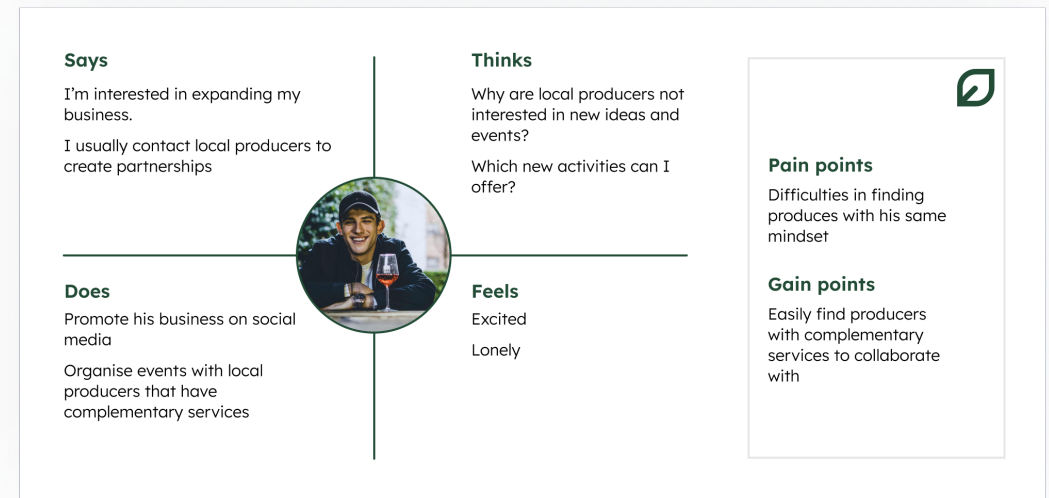
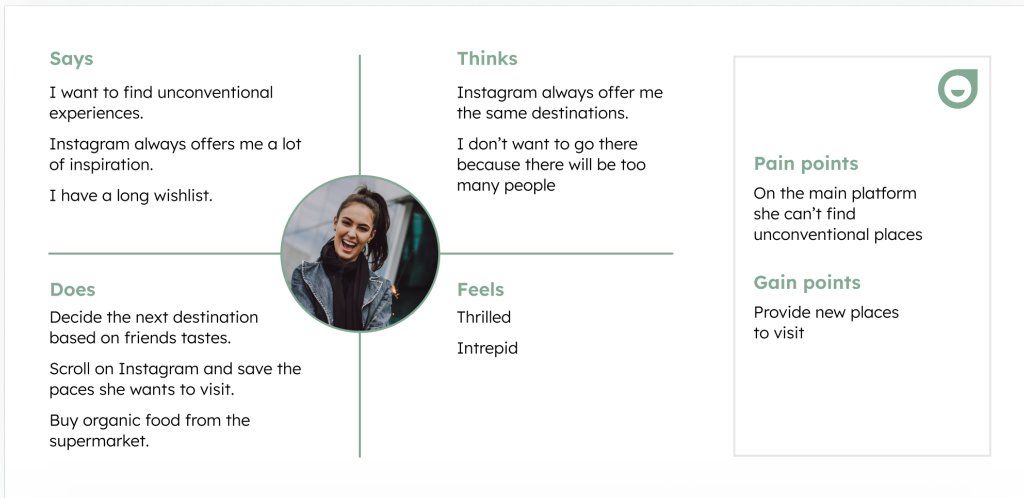
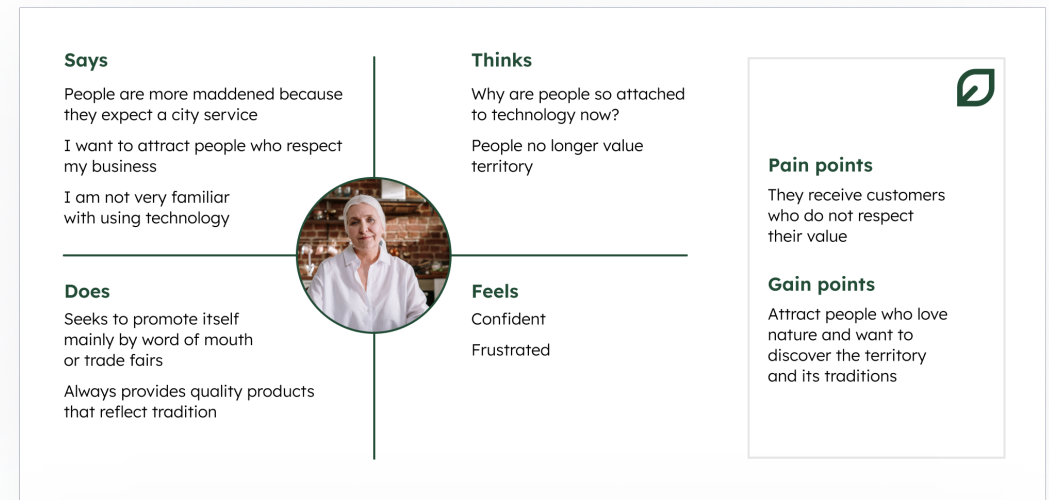
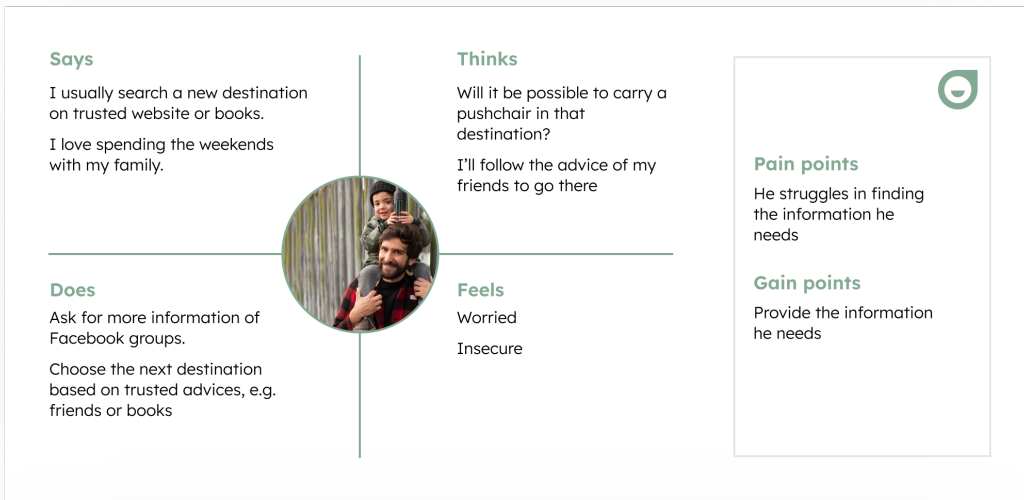
Love for food



Interested in new adventures



*On the left: Customers' personas.
On the right: Local producers' personas.*



On the left: Customers' empathy maps.
On the right: Local producers' empathy maps.

Facebook groups, such as if the place he chose is good for children or if it offers any particular activity. From these observations, it's notable that Giuliano is not confident, he needs safety and tailored information for his needs. This is a great insight because the project could provide him a trusted service with all the information he needs.

The unconventional, instead, is very interested in nature and craves for new experiences. The interesting factor of this persona is that she stated that she finds inspiration for her next destination on social media, even though she would like to live more unpopular destinations, to explore hidden gems and live like a local. From here it is evident that she needs an engaging platform to find unconventional experiences. The project, thanks to the collaboration with locals, can provide different places and experiences unpopular, which are not very known.

Last but not least, there are Angela and Riccardo, the gourmets. The name came from their interest in quality products and food. This couple really loves their territory and they used to spend their weekends trekking in their favourite places. They also enjoy suggest to their friends these places, but, since the world is changing, they would like to find new places that valorise the traditions of the territory, but to find these places, they can rely only on their friends suggestions. Since they are not very familiar with technology and today the majority of promotions is made through digital platforms, they struggle in finding new experiences.

From this analysis it is notable that they need a friendly website where they can find places that valorise traditions of the territory and offer quality products and food.

Let's examine the customers by identifying three personas based on my research: Giuliano, the family man; Stefania, the unconventional explorer; and Angela and Riccardo, the gourmets. Although age and family composition may seem to be the primary differences between these personas, their distinct choices in travel destinations, interests, and needs set them apart.

Let us take a closer look at Giuliano, the family man. He is a loving father who enjoys spending quality time with his child and exploring new experiences together. Through the empathy map analysis, it has become evident that Giuliano often seeks trusted advice before making any travel plans. He relies on recommendations from friends or travel guides like LonelyPlanet, which he has used in the past. While he appears confident in his decision-making, it is intriguing to note that he frequently consults Facebook groups for advice on child-friendly activities or suitable destinations. This observation highlights that Giuliano values safety and desires tailored information that caters to his specific needs. He may not be entirely confident in his choices and seeks reassurance from trusted sources to ensure a successful trip. This is a valuable insight for the project, as it presents an opportunity to provide him with a reliable and trustworthy service that delivers all the information he requires. By offering customised travel plans and carefully curated itineraries, the project can cater to Giuliano's specific needs and alleviate any concerns he may have about his family's safety and well-being during their travels.

On the other hand, let's consider Stefania, the unconventional persona. She has a keen interest in nature and seeks out unique and novel experiences. What sets Stefania apart is her preference for off-the-beaten-path destinations, where she can explore hidden gems and immerse herself in local culture. In fact, she mentioned that she often discovers new travel ideas and inspiration through social media.

This highlights the need for an engaging platform that caters to her interests and helps her find unconventional experiences. The project has a significant advantage in this regard, thanks to its collaboration with locals who can provide insider knowledge of lesser-known destinations and activities. By leveraging this partnership, the project can offer Stefania access to a diverse range of unique and undiscovered places, which are not very well-known. This will enable her to explore new horizons and satisfy her desire for unconventional experiences that align with her interests.

Let's turn our attention to Angela and Riccardo, the gourmets. As the name suggests, their passion lies in exploring and savouring quality products and food. They are deeply connected to their region and often spend their weekends trekking in their favourite places, discovering new culinary delights along the way. They take great pleasure in sharing their discoveries with friends and family.

However, with the world rapidly changing and technology increasingly shaping the way we discover new experiences, they struggle to find new places that honour the traditions of their territory. Although they rely on their friends' suggestions, they are not very tech-savvy and find it challenging to navigate the digital landscape where most promotions take place.

From this analysis, it's clear that they need a user-friendly website that caters to their specific interests. The project has an opportunity to fill this gap by providing a platform that showcases local businesses that offer quality products and food while honouring the traditions of the region. By doing so, Angela and Riccardo can discover new culinary gems and support small businesses in their community. This will not only cater to their needs but also provide a valuable service to the community by promoting local businesses and preserving the region's cultural heritage.

After developing the personas for the project, it was clear that each person had a unique set of needs. The innovative entrepreneur needed community, the heritage keeper required respect, the family man sought safety, the unconventional craved creativity, and the gourmets yearned for social acceptance. In order to determine the focus of the project, it was helpful to align these needs with Maslow's hierarchy of needs.

Maslow's hierarchy of needs is a psychological model that describes the fundamental motivators driving human behaviour. The model is represented as a pyramid with each level representing a different human need, including physiological needs, safety, love and belonging, esteem, and self-actualization. These needs are not independent, but

instead form a hierarchical structure, with the lower needs forming the foundation for the higher needs.

According to Maslow, humans cannot focus on higher needs until lower needs are met, meaning that individuals cannot prioritise their esteem or self-actualization needs if they do not feel safe and secure, for example. Maslow believed that human beings have an innate drive to fulfil these needs, and that fulfilment in life results from being able to meet the needs at each level of the hierarchy.

Maslow's theory has practical applications in fields such as psychology, education, and business, as understanding the hierarchy of needs can help individuals and organisations design interventions that address the most pressing needs of their target audience. However, the theory has also received criticism for oversimplifying the complexities of human behaviour and for not accounting for cultural and individual differences in the prioritisation of needs.

According to the image below, the project can target a wide range of needs, from safety needs for the family man to self-actualization for the unconventional. By using Maslow's hierarchy of needs as a guide, the project can prioritise the needs of the personas to ensure that their requirements are met, ultimately leading to fulfilment and satisfaction.

Placing the needs of each persona on Maslow's pyramid provides a useful framework for understanding how to design a project that meets their needs and helps them achieve well-being. Overall, this analysis serves as a foundation for answering the question:

How to bridge the gap between local producers and customers?

Ideating the product

LocalTracks

6.1. The idea

Following the double diamond design process, the definition stage represents the end of the first diamond, which is focused on understanding the problem and the users. The next stage is called the “Develop” stage, where designers begin to generate and explore different ideas that could potentially solve the problem identified in the previous stage. Using the insights gained from the definition stage as a starting point, brainstorming can now begin and a series of possible solutions can be developed to bridge the gap between local producers and customers. This stage is where creativity and ideation come into play, and designers can explore a wide range of ideas, both practical and innovative, that could address the challenges identified in the definition stage.

Therefore, the previous analysis served as a foundation to identify the starting point for the “Develop” stage, which is to answer the key question of how to bridge the gap between local producers and customers. By examining the research, it became clear that the focus of the project needed to be on meeting the needs of both customers and local producers. To summarise, it was evident that local producers mainly need to attract interested people and find other producers to offer a complete service. On the other hand, customers need engaging experiences and trusted information. With this in mind, the idea for the project

emerged to associate local producers with trekking, hiking, or cycling routes.

This is where the concept of LocalTracks was born.

The main point of connection between customers and local producers is nature. From the analysis, it became clear that people are interested in sustainable choices, but when it comes to leisure activities, they also need engaging experiences. Simply having local producers selling quality and fresh food is not enough. Often, local producers are situated in beautiful, naturalistic places that not many people know about. By showcasing the lesser-known natural paths around these producers, LocalTracks could satisfy the needs of both customers and local producers.

Firstly, LocalTracks can offer exclusive and unique experiences to people who are seeking new and exciting experiences. By connecting local producers with nature trails, customers can not only enjoy the local produce but also explore the surrounding environment. This can lead to a sense of adventure and discovery, which can be a strong motivator for people to participate in such activities.

Secondly, the project can provide trusted information about the surroundings from local producers. These producers are often experts on the local flora, fauna, and history of the area. Thanks to this information, the project can help customers connect

with the local environment and appreciate its value. It can also add to the overall experience of the customer and create a deeper sense of connection with the local community.

Thirdly, LocalTracks can attract people who are interested in nature and who also respect the producers and their products. Customers who are concerned about sustainable living and supporting local businesses are often the target market for small-scale producers. By offering an opportunity to engage with nature and connect with local producers, the project can address this clientele and satisfy the need for respect of local producers.

Finally, connecting different producers through these paths can offer a more complete service to customers. Instead of visiting only one producer, customers can explore a range of producers who offer different products and services along the trail. This not only creates a more diverse experience for the customers but also offers a potential for collaboration between producers. They can work together to offer a complete package, which can attract more customers and create a sense of community among producers.

6.2. The experience

Designing a successful project requires more than just a good idea. It is essential to take the design of the experience into consideration, as this will ultimately determine whether people will enjoy using the product. In the case of this project, the design of the experience is particularly important. This is because the success of the project depends on both customers and local producers having a positive experience.

To create an engaging experience for customers, the product should be designed with their needs and preferences in mind. As discussed in the previous chapter, customers are seeking engaging experiences and trustworthy information when exploring local producers. It is crucial to ensure that the product offers unique and exciting experiences that cater to their interests. By providing this, customers

will be more likely to use the product and recommend it to others.

On the other hand, the experience of local producers is not just as important, but actually crucial to the success of this project. Without the involvement of local producers, the platform cannot exist. The previous research revealed that many local producers do not have the necessary knowledge or skills to utilise digital technologies, let alone promote themselves on online platforms. The challenge lies in making local producers adopt a new instrument that they may not be familiar with. It is important to take into consideration the mental models of local producers, understanding their habits, and developing a product that fits into their workflow. If local producers can easily understand and navigate the platform, they will be more likely to engage with it and promote themselves to a wider audience.

Furthermore, by designing a user-friendly platform for local producers, it will also be easier to involve other producers in the platform, providing customers with a wider range of products and services.

“Photo rewards” feature

To attract a large number of local producers to the platform, it is essential to enable them to easily register their business in a short time, this is why a guided and quick registration process consisting of 6 steps was developed. These steps included

- Defining the business sector
- Defining the services offered
- Adding the business’s location
- Inserting the business name and a brief description
- Adding some pictures
- Final recap of the information inserted.

While this registration process is user-friendly, uploading high-quality pictures can be a challenge for local producers. Not all local producers have access to high-quality smartphones, which can lead to low-quality pictures being uploaded on the platform. This can be a problem, as research

has shown that good pictures play a crucial role in customers’ decision-making process.

To address this issue, LocalTracks developed an AI that analyses the quality of pictures uploaded by local producers. If the quality of the picture is not satisfactory, producers have the chance to choose from three options. They can either keep the pictures as is, upload new pictures that meet the quality standards following the guidelines provided by LocalTracks, or ask for help from the LocalTracks community using the “photo rewards” feature.

The “photo rewards” feature allows local producers to ask customers to take pictures of their business. The AI provided by LocalTracks will then assess whether the photos meet the quality standards and upload them to the platform. In return, producers can offer something to the photographer, such as a taste of their products.

This feature serves a dual purpose. First, it ensures that high-quality pictures are uploaded on the platform, which will attract more customers to the local producers. Second, it promotes local producers by creating an intriguing challenge that engages customers in the process of promoting their business.

“Unexplored path” feature

LocalTracks offers a unique feature that sets it apart from other similar platforms—the ability to associate natural paths with local producers. This is why, after registering their business, local producers are invited to add new paths to their business profiles. To do so, they have three options to choose from—they can either select from some of the suggested paths provided by LocalTracks, create a new path by walking it live (using their phone’s GPS), or create a new path by drawing it on the map.

The third option offers a guided process for local producers to draw their desired path on the map by easily selecting some points on the map. The system will automatically connect the dots, creating a route. The producer can then provide more information about the path such as

its description and difficulty. The strength of this option is that producers can easily create a path without having to physically walk it, unlike the second option. However, the downside to this option is that when uploading the path, nobody has actually walked it yet, raising questions about its reliability.

To address this issue, I created the “unexplored path” feature. When a path is drawn and uploaded, it is categorised as an “unexplored path”, which means that this path was designed by the local producer and nobody has tried it yet. Users are then invited to try out the path and leave a review to share their experience with other users. From my research, I found that people are often attracted to unexplored and local places, so this feature should attract people who are interested in these kinds of adventures.

Also in this case, the “unexplored path” feature offers two main benefits. Firstly, it allows producers to create paths in an easy way without the need to physically walk them first. Secondly, it will attract more people to try out the unexplored paths, while also ensuring that the information provided about the paths is trustworthy. This not only benefits the local producers by attracting more users to their profiles, but also benefits the users by providing them with reliable information about the paths they are interested in exploring.

6.3. The technology

From the research conducted, it is clear that good quality images play a vital role when choosing the next travel destination. This is because images help guide people’s instincts and influence their decision-making. Therefore, LocalTracks highly recommends producers to upload high-quality pictures to their platform. It is crucial for the system to recognize if the uploaded pictures are visually appealing or not, as this greatly impacts user engagement and satisfaction.

As technology advances, there are differing opinions on how AI can identify whether a picture is beautiful or not. According to Bodini (2019), there are now various

technologies trained to recognize and rate the beauty of a picture. These technologies rely on our history and past studies in beauty and aesthetics. The first attempts to propose a mathematical measure of beauty were made by the mathematician Charles Henry. Over time, this concept has been enriched by the successful contributions of the gestalt, the theory of information, mathematical morphology, and the theory of complexity to arrive at algorithmic and algebraic expressions. These studies resulted in interesting outcomes but did not produce a widely accepted agreement within the community.

In recent years, modern studies on neuroscience have allowed us to understand and study which parts of the brain are involved in aesthetic judgement. Another important source of information on aesthetics comes from the literature on photography, and in particular from the recommendations of photographers and art photography books. By utilising these studies, different technologies have been developed that can rank if an image is beautiful or not. One such technology is “NIMA” Neural Image Assessment,” as stated by Talebi (2017). NIMA is a deep Convolutional Neural Network (CNN) that is trained to predict

which images a typical user would rate as looking good or attractive aesthetically. NIMA relies on the success of state-of-the-art deep object recognition networks, building on their ability to understand general categories of objects despite many variations.

The proposed network can be used not only to score images reliably and with high correlation to human perception but also for a variety of labour-intensive and subjective tasks such as intelligent photo editing, optimising visual quality for increased user engagement, or minimising perceived visual errors in an imaging pipeline. Unlike typical aesthetic prediction methods that categorise images as low or high quality, the NIMA model produces a distribution of ratings for any given image. Rather than assigning a single binary score, the model assigns likelihoods to each of the possible scores on a scale of 1 to 10. This approach is more in line with how training data is typically captured, and it turns out to be a better predictor of human preferences when measured against other approaches.

Another example is the “Everypixel Aesthetics” AI, which uses a dataset to analyse any photo provided and generate

a percentage indicating the likelihood that the photo is aesthetically pleasing. Additionally, the site generates a list of tags that may be relevant to what’s seen in the photo (Zhang, 2017).

While these technologies are still under development and may not be 100% reliable, they hold immense promise for platforms like LocalTracks. With the ability to accurately rate the aesthetic quality of images, LocalTracks could provide producers with detailed insights into what kinds of photos are likely to attract users and encourage them to explore new destinations.

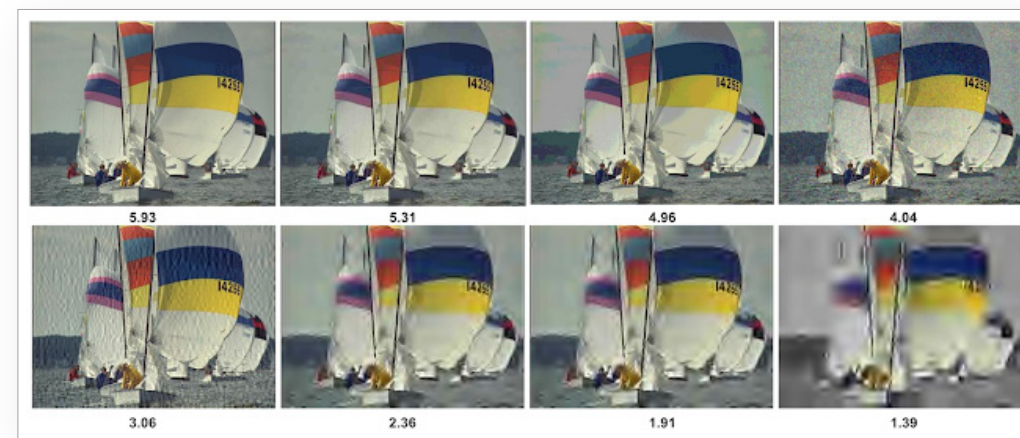
However, until these advanced technologies are fully developed, LocalTracks can still use a basic system to rate the quality of the images uploaded by producers. By analysing factors such as sharpness, illumination, and resolution, LocalTracks can provide a rough guideline for producers to follow when uploading their photos. For example, sharpness is important because blurry or shaky photos are unlikely to be visually pleasing to users. Similarly, illumination is important because users want to be able to clearly see the contents of a photo. And finally, resolution is important because low-resolution images can appear grainy

or pixelated, which can detract from their overall quality.

By keeping these basic concepts in mind, producers can upload high-quality photos that are more likely to attract users and encourage them to explore new destinations. And as the field of image recognition technology continues to advance, platforms like LocalTracks will be able to provide even more detailed insights into what kinds of photos are most likely to engage users and encourage them to plan their next trip.



Ranking some examples labelled with the “landscape” tag from AVA dataset using NIMA. Predicted NIMA (and ground truth) scores are shown below each image.



Ranking some examples from TID2013 dataset using NIMA. Predicted NIMA scores are shown below each image. (Talebi H., 2017)

Testing and implementation

7.1. Developing the prototype

After finalising the project idea, the next crucial step was to create a prototype that could be tested for its usability. To begin, I worked on defining the flow for users, considering both customers and local producers. Once all this was in place, I developed an information architecture that gave me the opportunity to create the wireframe and the prototype media fidelity. Testing both designs allowed me to implement improvements, leading to the development of the final high-fidelity prototype.

Defining the user flow was useful in understanding the key stages of the journey, particularly for local producers who are the backbone of the platform. The registration process for a new property and the creation of a new path were identified as two of the most crucial stages in the user journey.

Defining the registration flow was a fundamental aspect of the project's development process. It was essential to identify the most relevant information to add to a local producer's profile and create a smooth user experience. To achieve this, I conducted a thorough analysis of similar businesses, including "L'Alveare che dice sì," "Fondazione Slow Food," and "AirBnB."

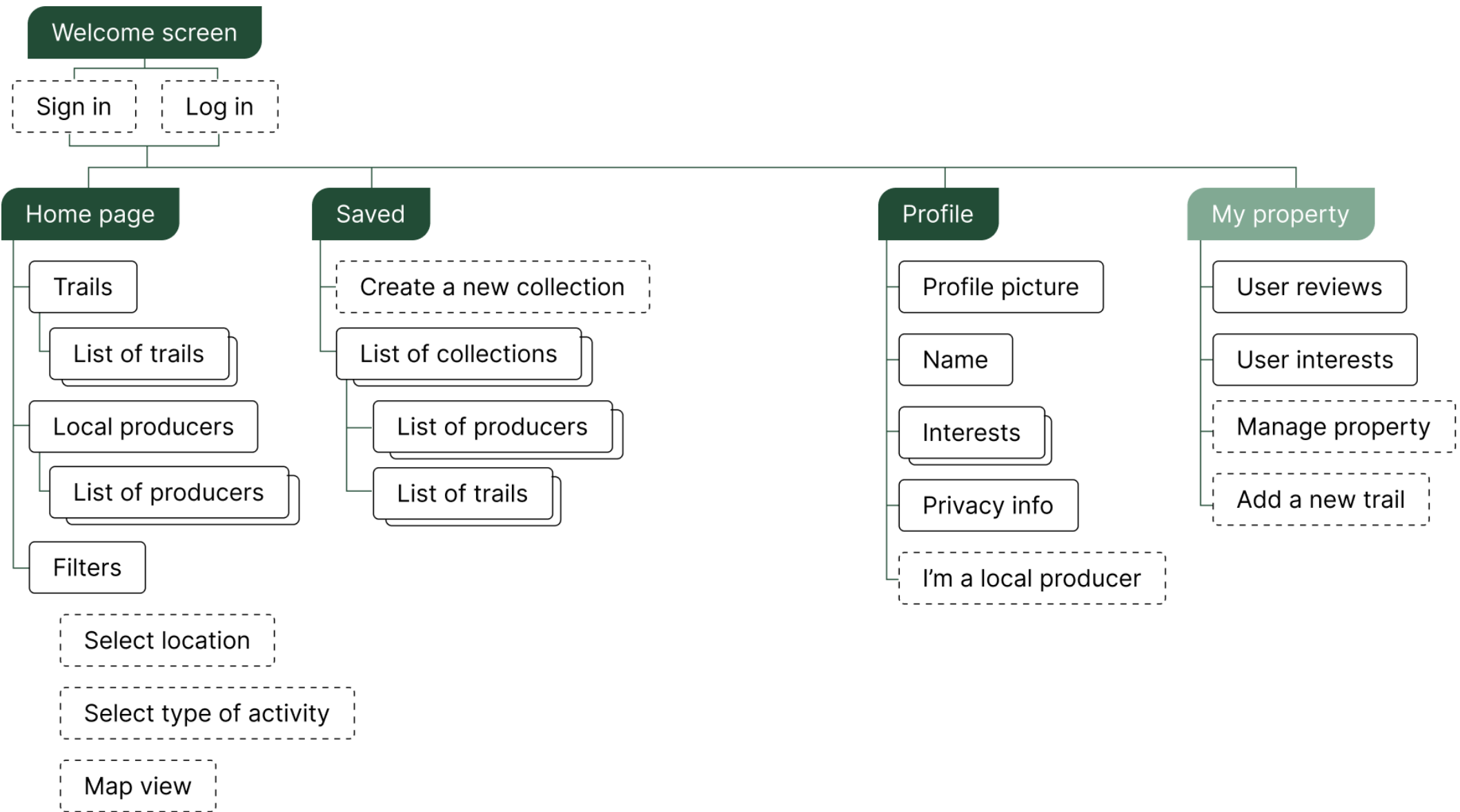
Based on this research, I decided to divide the registration process into six steps: Sector, Services, Position, Name, Pictures, and Resume. The Sector step was

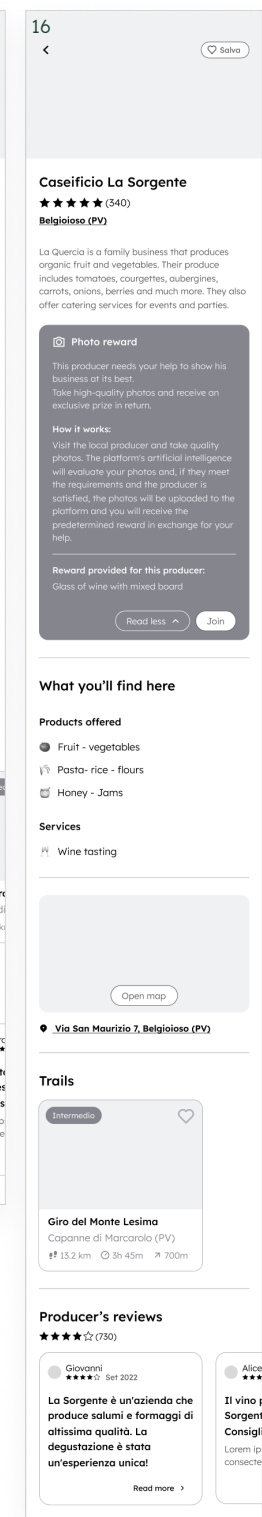
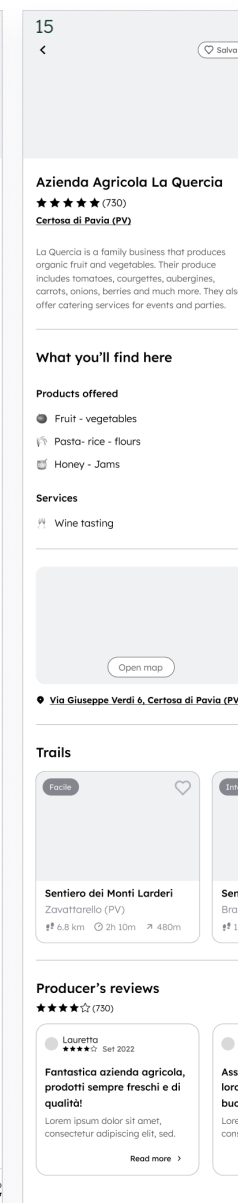
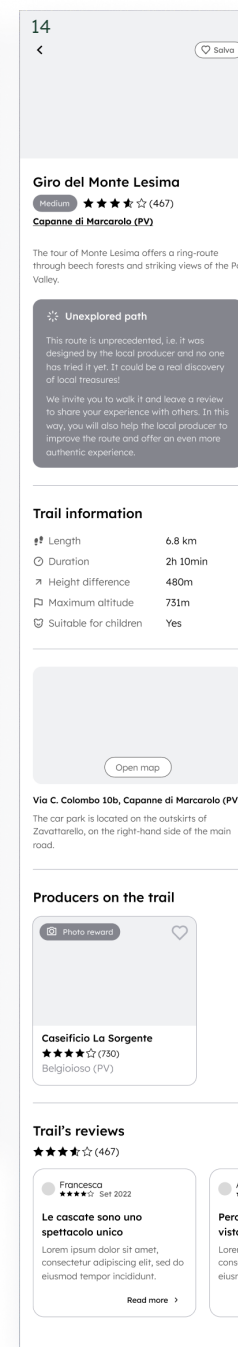
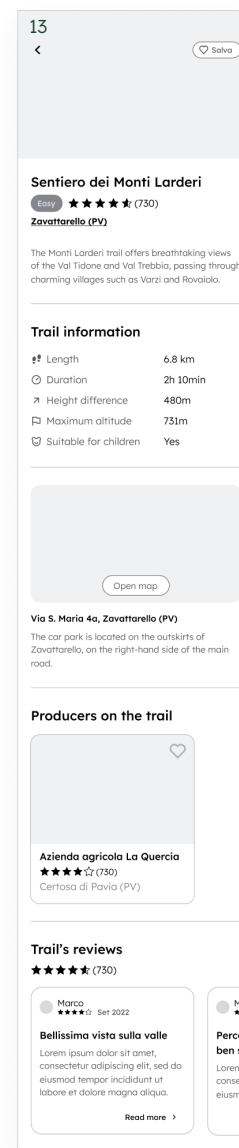
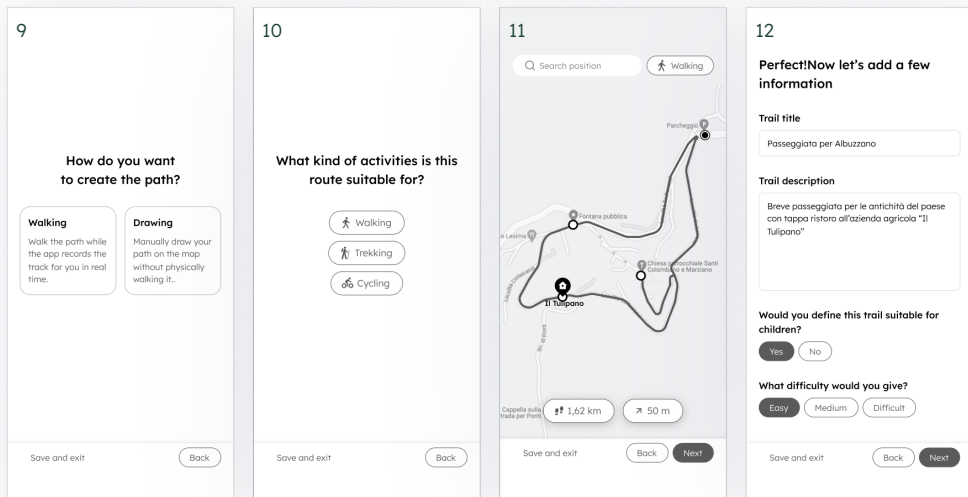
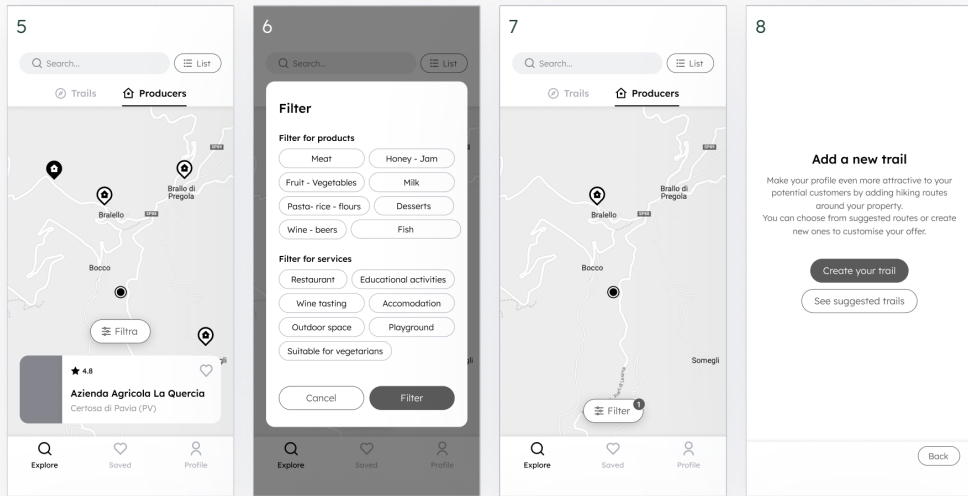
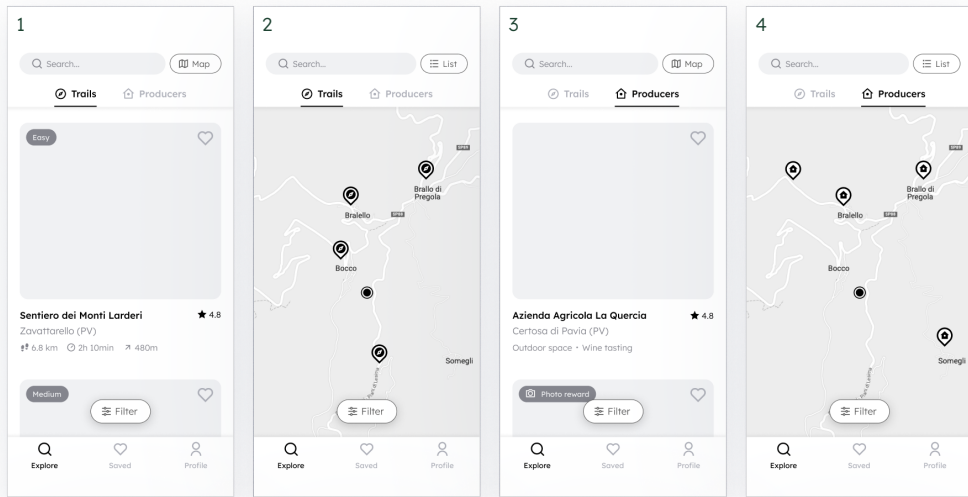
designed to identify which business area the producers would associate themselves with. By analysing the "Caratteristiche tipologiche delle aziende agricole" (Typological characteristics of farms) document provided by ISTAT in 2013, I identified seven primary sectors.

The next step was the Services section, where producers could select the products and services they offer. This information is critical in helping customers find the right products and services for their needs. The following steps were dedicated to providing the name of the business, its location, and a brief description.

Lastly, there was the Picture step. This stage is particularly challenging, as it requires extra attention to help producers upload high-quality pictures. Uploading high-quality pictures was identified as a critical issue that could impact the user experience, particularly for those new to the platform. As such, it was crucial to design a user-friendly flow that would help users overcome this issue and ensure a seamless experience throughout the registration process.

Another interesting step that I addressed during the design process was the use of GPS-enabled devices. When local producers decide to create a new path by walking it, they must use a mobile phone with GPS capabilities. However, some producers may prefer to use a computer instead, making it necessary to analyse the process



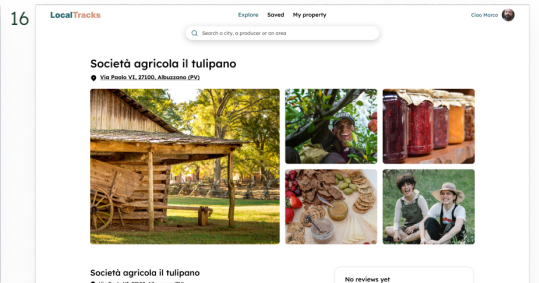
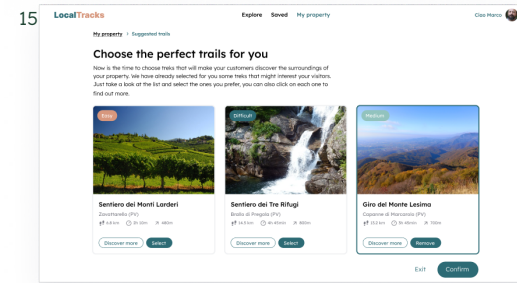
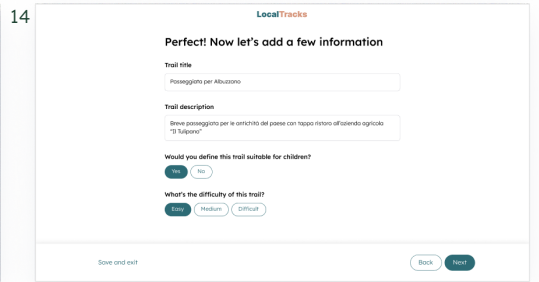
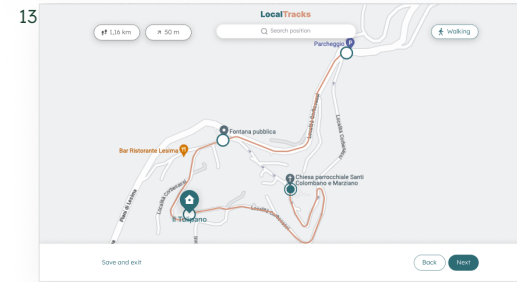
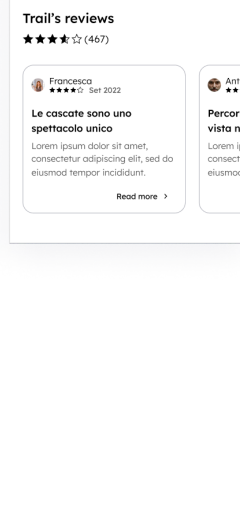
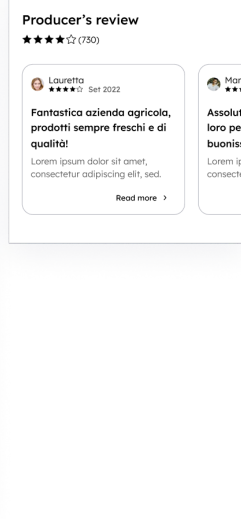
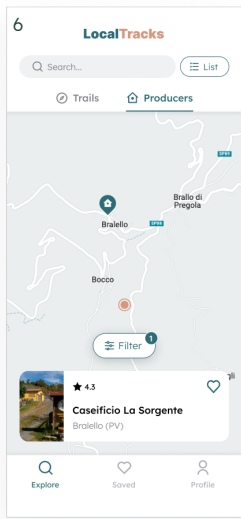
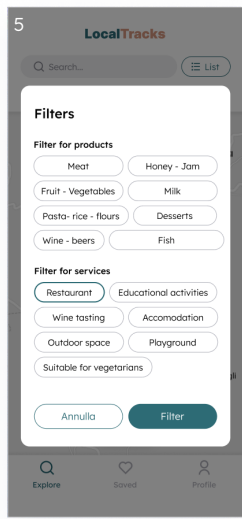
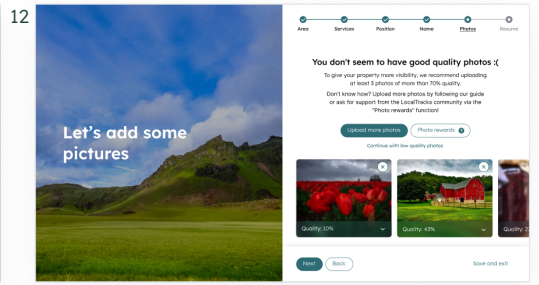
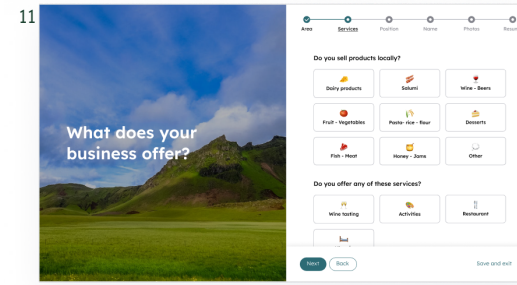
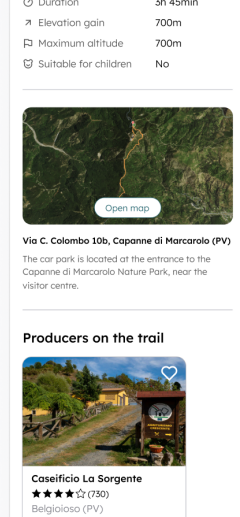
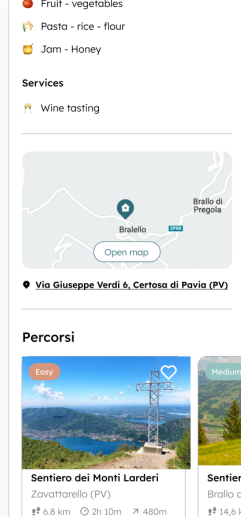
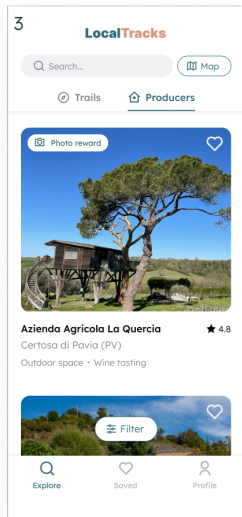
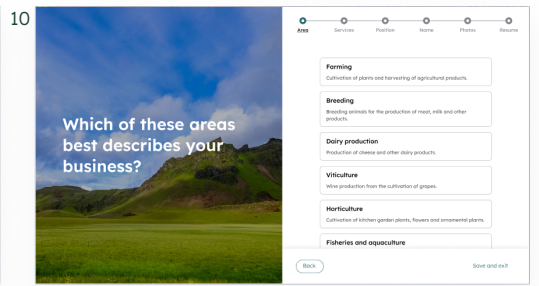
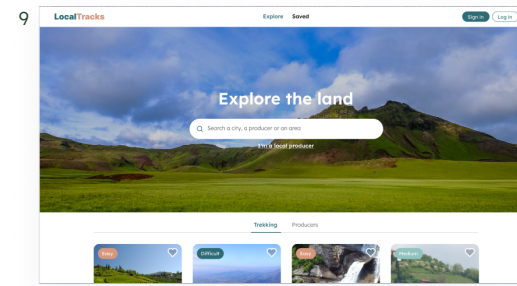
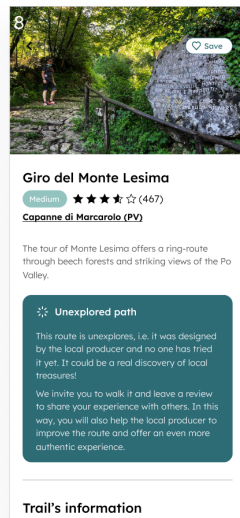
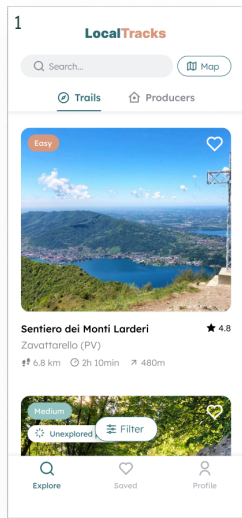


Wireframe of Localtracks

List of screen:

1. Home - Trails list - list view
2. Home - Trails list - map view
3. Home - Producers list - list view
4. Home - Producers list - map view
5. Home - Producers list - map view
6. Home - Filter
7. Home - Producers list - map view
8. Add a new trail

9. Add a new trail - type selection
10. Add a new trail - type selection
11. Add a new trail - draw trail
12. Add a new trail - adding information
13. Trail detail
14. Trail detail - Unexplored path
15. Producer detail
16. Producer detail - Photo reward



Mid-fidelity prototype

List of screen:

1. Home - Trails list - list view
2. Home - Trails list - map view
3. Home - Producers list - list view
4. Home - Producers list - map view
5. Home - Filter
6. Home - Producers list - map view
7. Producer detail - Photo reward
8. Trail detail - Unexplored path

9. Home
10. Register a new property - Area
11. Register a new property - Services
12. Register a new property - Photos
13. Draw a new trail
14. Draw a new trail - trail detail
15. Add a new trail - trail suggested
16. Property detail

of switching devices mid-flow. This was a crucial consideration in the design of the flow, ensuring that it was easy and intuitive for users to switch from one device to another without any friction.

The following step was defining the information architecture. This process involved determining the main sections of the platform and how they would be structured to provide a seamless user experience. With the user flow already defined, designing the information architecture was a natural next step.

LocalTracks is divided into four main sections: the Home Page, Saved, Profile, and My Property. The Home Page is where users can browse local producers and paths. This page also allows users to filter the listings based on specific criteria such as location, services offered, and difficulty level. Users can also view the listings on a map, making it easy to find paths and producers in their desired location.

The Saved section is where users can access all of the items they have saved while using the platform, while the Profile section is where users can manage their account information and interests in order to have a personalised feed.

Finally, the My Property section is reserved for local producers. This is where producers can view and edit their property information, such as the services they offer and their location. This section also provides producers with access to some basic statistics related to their listings, such as the number of views and saved items.

In addition to defining the main sections of the platform, I also had to determine what information would be displayed on the producers and paths details pages. For local producers, the details page displays the same information that was collected during the registration process, including the producer's location and the services they offer. This information is crucial for potential customers who are interested in purchasing products from the producer.

For paths, I analysed other similar apps like "AllTrails" and "Komoot" to determine

what information was necessary to provide a great user experience. Through user research, I also identified the information that potential customers want to see when looking for paths. As a result, each path on the LocalTracks platform displays information such as its difficulty level (Easy, Intermediate, or Challenging), length, estimated duration, height difference, maximum altitude reached, and whether or not the path is suitable for children. The detail page also provides a brief description of the path and suggestions on where to park to begin the route.

Following the definition of the user flow and information architecture, the wireframe and prototype design phase commenced. The main aim of this phase was to create a visual representation of the design concept that could be tested and refined based on user feedback.

7.2. Testing the experience

Usability testing is a critical step in the design process to ensure that the final product meets the needs and expectations of its users. By observing real users as they interact with the design, designers can gain valuable insights into how the design is perceived, how easy it is to use, and what improvements can be made.

In a usability-testing session, a researcher (called a "facilitator" or a "moderator") asks a participant to perform tasks, usually using one or more specific user interfaces. While the participant completes each task, the researcher observes the participant's behaviour and listens for feedback (Moran, 2019).

"It's about catching customers in the act, and providing highly relevant and highly contextual information."

— Paul Maritz, CEO at Pivotal

Testing the customers' experience

To ensure the testing process is effective, it's important to create a research plan that outlines the goals of the research, the number and type of participants needed, what to test, and how the test will be structured. By having a clear plan in place, it's possible to ensure an organised and focused testing process, gaining the most valuable insights possible.

Regarding the usability testing of LocalTracks, two main experiences were analysed: one geared towards local producers and another for customers. Beginning with the latter, the objective was to gauge the user-friendliness of the LocalTracks interface, identify any obstacles users may face during their interaction with the platform, and ensure that the concept was conveyed clearly. To accomplish this, a low-fidelity prototype of the mobile experience was created and tested with a small group of design experts. This allowed for high-level feedback to be gathered before moving on to a mid-fidelity prototype, which would be tested with a wider range of users.

The low-fidelity prototype was tested with 8 designers who were asked to complete 3 tasks and answer 3 open-ended questions, followed by rating the usability of the experience on a scale of 1 to 7. The feedback collected during these sessions was valuable in identifying pain points and areas for improvement. For example, some participants suggested the inclusion of a list of products offered by local producers,

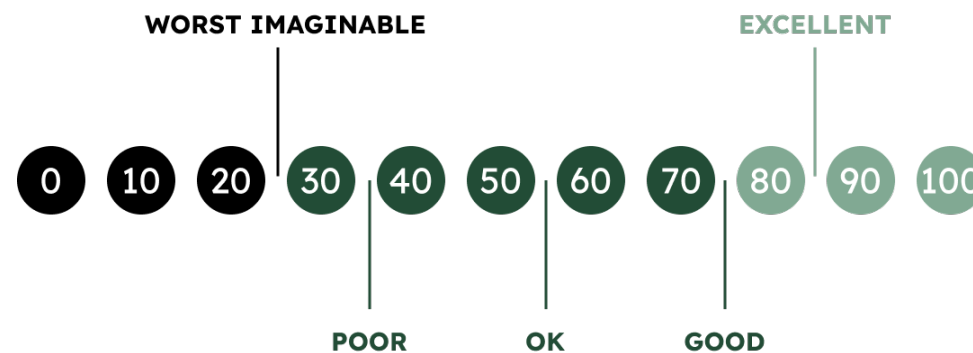
while others found the ability to take pictures for producers to be an interesting feature. Participants also suggested that sharing these pictures on social media could be a helpful way to promote the platform. Lastly the average usability score of 6.4 out of 7, this indicates that the design was effective in achieving its goals.

"Very user-friendly and intuitive application" (Participant 5)

"I like it a lot because in a very gentle way it invites you to discover the area along the (more or less famous) routes" (Participant 3)

Following the positive feedback received from the low-fidelity prototype testing, the mid-fidelity prototype was developed and prepared for further testing with a wider range of users. The objective remained the same as the previous test, but this time, I enlisted 12 participants with varying backgrounds, ages, and genders to get a more diverse range of feedback.

An essential aspect of this test was the inclusion of a System Usability Scale (SUS) section. John Brooke (1995) defines this method as a "quick and dirty", reliable tool for measuring the usability. It consists of a 10 item questionnaire with five response options for respondents, from Strongly agree to Strongly disagree. Originally created by John Brooke in 1986, the SU scale has gained significant recognition in the industry as an effective and reliable tool for measuring usability. With references in over 1300 articles and publications, this method allows the evaluation of a wide variety of



SUS scale (Brooke J., 1995)

products and services, including hardware, software, mobile devices, websites and applications. The benefits of using SUS are numerous, including its ease of administration to participants and its ability to yield reliable results even with small sample sizes. To summarise, it has been shown to be a valid tool that can effectively distinguish between usable and unusable systems, making it an invaluable asset to any user experience testing process.

To understand how to read the score received during a SUS, we can mention the research conducted by Jeff Sauro in 2011, which analysed 500 studies. This research revealed that a SUS score above 68 is considered above average, while anything below 68 is considered below average. Moreover a SUS score above 80.3 is considered excellent because it indicates that users are more likely to recommend the product to a friend.

During the usability testing phase of the mid-fidelity prototype of the mobile experience of LocalTracks, the experience received an impressive SUS score of 83.95. In addition, when asking people to rate the usability of the experience on a scale of 1 to 7, the average score was a solid 6. These positive results indicated a high level of usability and satisfaction among participants.

However, the insights gathered from this test didn't stop there. Participants provided a wealth of qualitative feedback, revealing even more interesting findings about their experience with LocalTracks. One significant insight was the high interest in the "photo reward" feature, which offered rewards to users who took high-quality pictures for local producers. Almost every participant expressed their enthusiasm for this feature, seeing it as a unique and exciting way to engage with LocalTracks. For example, one participant said, "Yes. Of course! [I would participate in 'Photo reward']. Free is cool, free is nice. And food as a reward is brilliant, instead of getting points that entitle you to discounts, you go straight to the 'discount', it's immediate, no waiting."

Additionally, many participants expressed interest in sharing on social networks

the pictures taken during the "Photo reward", a suggestion that had already emerged in the previous round of testing. Other useful advice from participants was about reducing the amount of text in the experience to make it less overwhelming and more user-friendly.

The testing phase of the customer experience proved to be fruitful, yielding positive results and providing valuable feedback that could be incorporated to refine the product design.

Testing the local producers' experience

The second crucial aspect to test was the LocalTracks experience for local producers, which presented more significant challenges than testing the customer experience. There were three primary factors to consider when testing this aspect of the product.

Firstly, local producers were less likely to be familiar with technology, which could result in navigation issues when interacting with the LocalTracks experience.

Secondly, as local producers were not familiar with testing and prototypes, the testing method employed could influence their responses. To address this issue, it was important to provide clear instructions and context for the testing process to ensure that local producers were comfortable and understood what was expected of them.

Finally, the experience for local producers was more complex than the customer experience, as it included additional functions such as the ability to upload high-quality images and register a new path.

Given these considerations, it was clear that local producers, who may not be as familiar with technology or testing and prototype methods, might find it difficult to navigate the experience using a low-fidelity prototype. Therefore, I made the decision to avoid testing this kind of prototype and directly test a mid-fidelity prototype, which would provide a more realistic and accurate representation of the user experience.

To further enhance the accuracy of the testing process, a desktop experience was

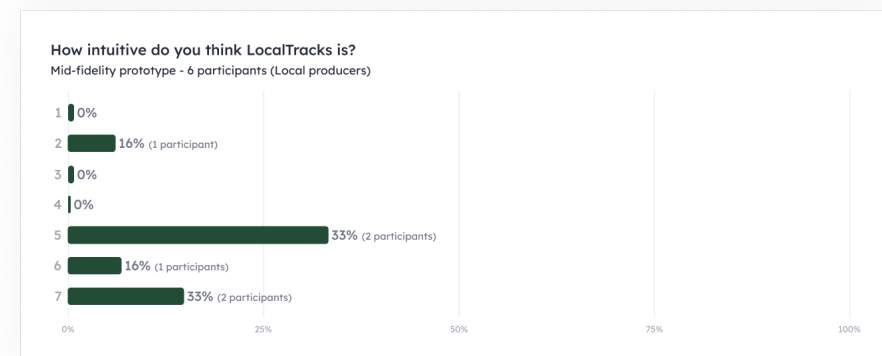
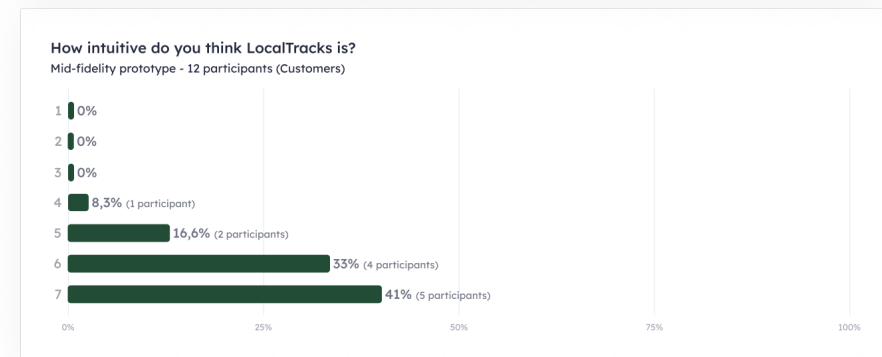
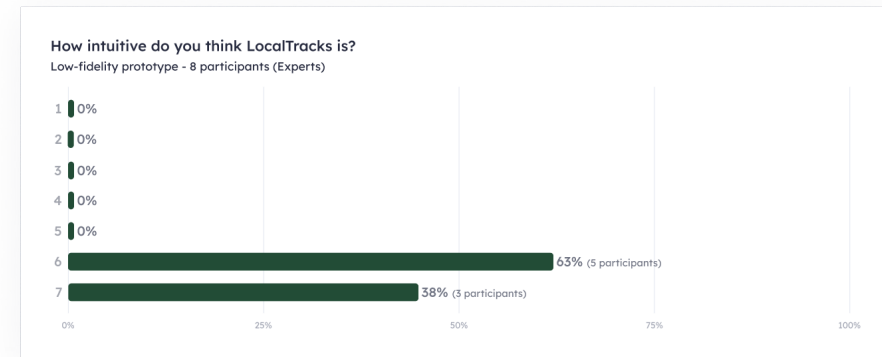
SUS SCORE USABILITY TESTING



86.6
LOCALS
MID-FI PROTOTYPE

83.9
CUSTOMERS
MID-FI PROTOTYPE

Usability testing results



chosen for this phase. It was assumed that most local producers use a computer to manage their businesses, and this would ensure that the testing environment was as close to their everyday experience as possible.

The testing sessions were designed to include four distinct sections: registration, new path creation, usability scoring with the System Usability Scale (SUS), and final feedback. With only six participants, it was a small group, but the testing still provided valuable insights into the user experience. Unfortunately, a larger number of participants were not able to test the prototype as they preferred to use their mobile phones instead of computers. This turned out to be an oversight, but it provided valuable feedback on the importance of a mobile layout for this experience.

The results of the usability testing for the local producers' experience were positive overall. The System Usability Scale (SUS) score of 86.6 was excellent and indicated a high level of usability for the experience. However, the usability rating provided by participants was slightly lower at 5.3 out of 7. This data suggests that while the experience was generally easy to use, there may be areas for improvement to make it even more user-friendly, indeed, during the testing sessions, some participants expressed difficulty in understanding why their uploaded pictures appeared low-quality and how they could improve them.

Another interesting insight from this test was related to the "Photo reward" feature. Some participants expressed confusion about what types of pictures were expected, they thought they should expect images focused on their products, instead of their business in general. One participant even "considered it extremely important that the photos all have the same white background rather than the quality of the photo itself (which is difficult to perceive from a mobile phone). When scrolling through a sequence of products on the screen, uniformity is essential to give a professional appearance".

Additionally, some participants stated that they already organise activities close to their businesses that involve trekking, this

indicates an existing appreciation for the importance of outdoor activities.

Similar to the previous testing phase, the results obtained from this usability test were highly valuable and provided significant insights to further refine the design of the product. The next step is to incorporate these insights into the development of a high-fidelity prototype.

Implementing results

To create a high-fidelity prototype with an engaging and effective user experience, it is essential to incorporate the feedback and insights gathered during usability testing while concurrently designing a distinctive and user-friendly UI. The results of the usability testing revealed four key insights:

1. Local producers have a preference for using their mobile phones instead of computers.
2. Many local producers are already involved in organising trekking activities.
3. Customers exhibit a keen interest in pursuing a catalogue of products offered by the producers.
4. Customers are willing to share the pictures they take on social media.

Based on these insights, it became evident what improvements and adjustments could be made to the current design through iterations.

Realising the importance of the first insight, I decided to prioritise and focus on improving the mobile experience for local producers. In order to achieve this, a mobile version of the journey was designed with careful attention to user interface and user experience. While the desktop experience already had a simple and minimalist design, the mobile design was tailored to optimise the smaller screen size and make it easier for local producers to navigate and access the necessary information without feeling overwhelmed with too much content. While the overall design did not undergo significant changes, the emphasis was placed on enhancing the mobile experience to cater to the preferences of local producers.

The second and the third insight revealed an opportunity to enhance the details page of local producers by including two additional sections for "Activities" and "Products." To implement these changes, I restructured the layout of the local producers' detail page by introducing a tab system that presented four options: "Overview," "Trails and Activities," "Products," and "Reviews." By doing so, users could easily navigate through all the available information in a seamless manner. Additionally, I recognized a need for users to browse and search for activities that are closer to their location, not just the producers or trails. To address this, I added an "Activities" section to the homepage, providing a more comprehensive and user-friendly experience for customers.

Regarding the last insight, I decided not to alter the design much, but I did include a feature that would allow users to share the pictures they took during the "Photo reward" activity. This addition could prove to be very beneficial for the local producers, as it would enable them to promote their products and services through user-generated content on social media platforms.

7.3. Defining the UI

The importance of creating a distinctive UI (User Interface) cannot be overstated in today's crowded digital landscape. With so many products and services in the running for the attention of potential users, it's essential to stand out from the competition and establish a unique brand identity that resonates with your target audience. A well-designed UI can not only help achieving this goal, but it can also create a memorable and engaging user experience that keeps users coming back.

The creation of a unique brand identity starts from the naming of the product. The inspiration behind the name "LocalTracks" stemmed from the fusion of two key elements of the service - "local producers" and "trails". The name was chosen as it immediately evokes images of local paths and routes that users can discover and explore. However, the name also carries

a deeper connotation, as it can also be interpreted as the trails or tracks left by local producers. In essence, the name represents both the physical paths and the goods produced by local producers. This concept is further reinforced by the slogan, "Local tracks, local goods", which emphasises that the service is not just about exploring new routes, but also about discovering local producers and their products. By choosing a name and slogan that embody the core values of the service, it helps to create a strong and memorable brand identity that resonates with users and sets the service apart from its competitors.

After finalising the name for the service, the next crucial step was to create a logotype that accurately represents LocalTracks. The concept behind the logo was to merge two significant symbols that embody the core concepts of the service. The first symbol was a map pointer, which represents the local routes that users can explore. The second symbol was a general fruit represented by a circular shape with a leaf on top, symbolising fresh and high-quality food sold by local producers. By combining the shape of these two images, an abstract and geometric logo was created that is both distinctive and easily recognizable. Because of the logo's uniqueness, I decided to build a recognizable pattern around its icon that would run across the entire product. The icon stroke was repeated to produce this pattern, which produced a visually appealing and harmonious design element. The brand identity is made more recognizable and relatable by its likeness to the terrain levels seen on maps, stressing the notion of paths and local geography.

To ensure that the typography used throughout the product complemented the logo and maintained consistency in the visual language, I made the deliberate decision to choose a font that had a similar style. I chose the Lexend Deca font because it not only echoes the rounded, geometric design of the logo, but also has the advantage of increasing readability. In fact, this font was specifically designed to optimise readability and increase reading speed.

Colour is another powerful tool in creating a brand identity that stands out and remains memorable. Consider the red

Ferrari, for instance, it's a prime example of how a specific colour can become iconic and instantly recognizable. In the case of LocalTracks, I carefully considered which colour to use to represent the brand. After much research and exploration, I chose "Brunswick green" as the primary colour. This shade of green is a dark, muted, glowing emerald with a jungle green undertone, evoking the lushness of a forest or natural space. Similar to how the leaves of a tree bring out the brightness of the natural elements around them like animals, flowers, and fruit, the Brunswick green provides the perfect backdrop to highlight secondary colours. This is why I decided to use fresh and vibrant colours to support the main one - turquoise, light green, and sunshine yellow.

The design of icons plays a crucial role in defining a brand identity, particularly in the context of mobile experiences where icons are extensively utilised. To create an icon set for LocalTracks I utilised the shapes and motifs from the logo. The tree icons that represent the three sections of the home page - Trails, Producers, and Activities - are the most characteristic. Each icon was based on a round shape with a 90-degree angle, and incorporated elements that were relevant to the section it represented. The Trails icon, for instance, was designed to resemble a map pointer, while the Producers icon took the form of a leaf. Lastly, the Activities icon was created as a smiling face.

As a result of these enhancements, the high-fidelity prototype was refined, leading to an improved overall user experience.

Logo development



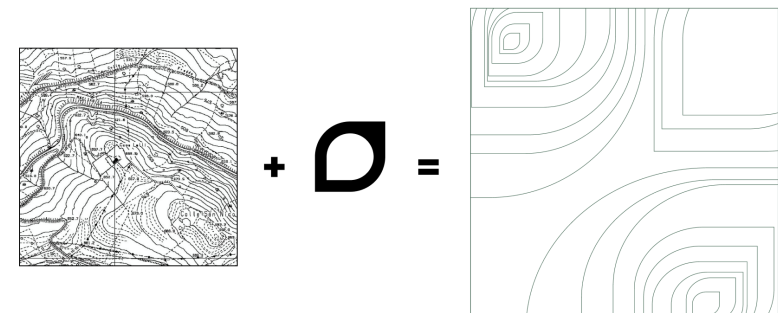
Colors



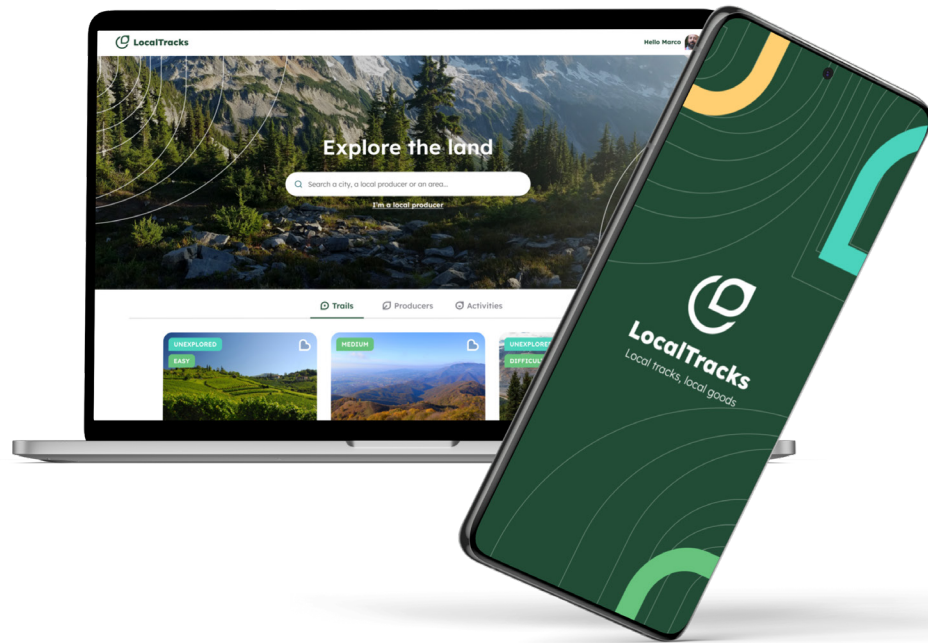
Icons



Pattern

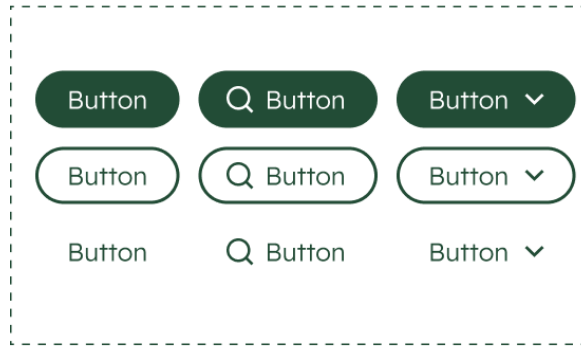


Hi-fidelity prototype

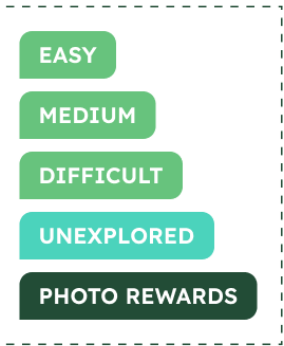


Design system

BUTTONS



LABELS



TYPOGRAPHY

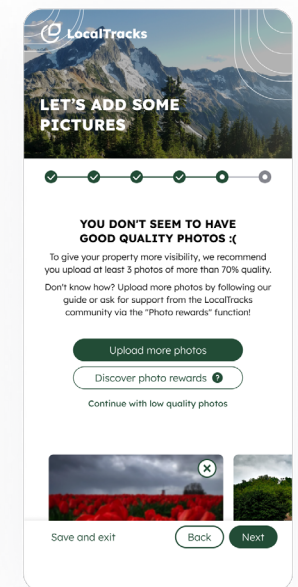
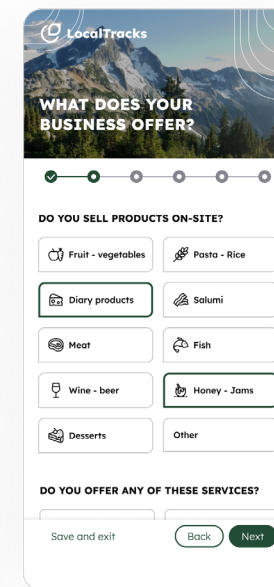
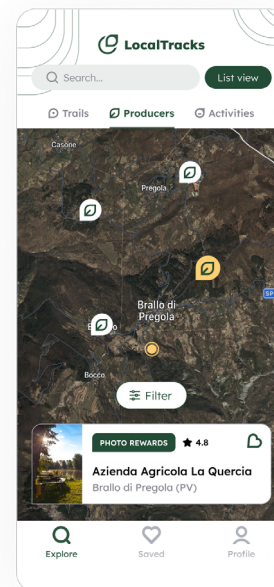
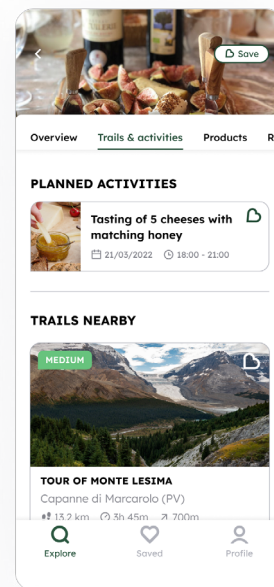
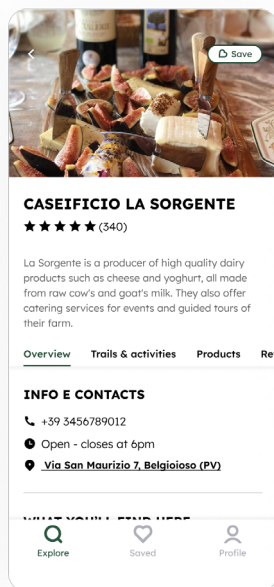
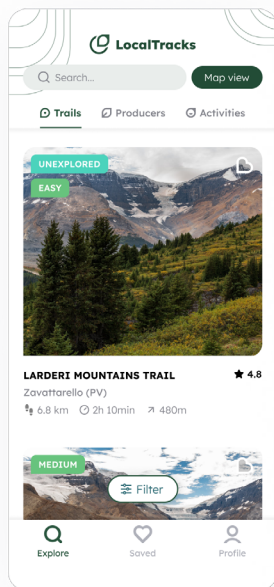
H1 - LEXEND DECA BOLD 24PX

H2 - LEXEND DECA BOLD 20PX

H3 - Lexend Deca Bold 16px

Body - Lexend Deca Light 16px

Small text - Lexend Deca Light 14px



Conclusions

8.1. Future developments

Thanks to the latest improvements, LocalTracks now provides an engaging user experience that has the potential to help local producers increase their direct sales. Moreover, by providing an easy-to-use platform that connects customers with local producers, LocalTracks is helping to promote the sale of locally sourced products and build stronger relationships between producers and their customers.

To ensure that the platform is economically sustainable, a freemium model, that allows customers and local producers to use the service for free, has been implemented. Instead, access to certain features requires a subscription fee.

For customers, the premium version of LocalTracks offers several features, including the ability to download maps of trails for offline use. This feature is particularly interesting because user research has revealed that people are often anxious to have access to all the information about a trail. Thanks to this feature users can use the maps without worrying about losing their way. Additionally, customers can register their activities, track their progress and follow the maps in real-time using the premium version. The use of these features is a widely used tactic by some trekking platforms such as “AllTrails” or “WikiLoc.”

On the other hand, local producers who

subscribe to the platform, gain access to a dashboard that provides valuable insights into their customers’ interests and behaviours. By analysing this data, producers can better understand their customers and tailor their products to meet their needs. The dashboard provides information on how many people have viewed their property, which similar producers are getting the most views, and how they can improve their visibility on the platform.

While “Premium LocalTracks” is a valuable solution, it alone cannot ensure the long-term sustainability of the platform. As we have seen in previous chapters, many companies today generate revenue by selling data to public authorities who are interested in understanding where people go and what they do. Public authorities use this data to make informed decisions about investment in infrastructure, tourism attractions, and services, among other things. LocalTracks collects a significant amount of customer data, such as their interests and intended destinations, which could be valuable for public authorities.

A future development for LocalTracks could be to create a dashboard that aggregates the most relevant data for public authorities and sells it as an additional revenue stream. By doing so, the platform could create a sustainable business model that benefits both its customers and local producers.

LocalTracks offers a unique feature of

exploring new paths that sets it apart from other trekking platforms. Through the user-friendly interface, local producers can effortlessly create and share new paths with their customers. To further expand the platform's offerings and provide more options for customers, a potential future development is to establish partnerships with other trekking platforms like Komoot or AllTrails. Alternatively, LocalTracks can collaborate with local associations identified during previous research to strengthen its network and reach new customers. By forging these partnerships, LocalTracks can increase its market presence and provide a more comprehensive and diverse experience for its users.

The LocalTracks platform was designed with a specific focus on local producers in Lombardy. This region is often overlooked when it comes to the beauty of its countryside, natural places, and quality food, which is why there was a desire to enhance this area through the platform. While the initial focus was on Lombardy, LocalTracks has the potential to be used throughout Italy and even internationally. As the platform expands its reach, there may be opportunities to analyse other regions and territories to see if there are different needs and preferences that could be addressed through new features.

One potential avenue for future development of LocalTracks is to conduct a territorial analysis in order to identify potential areas where the platform could be improved. By analysing user data in different regions, LocalTracks could gain insights into the unique needs and preferences of users in those areas. This could lead to the development of new features that are tailored to specific regions, allowing LocalTracks to better meet the needs of its users and expand its reach.

Although the mentioned features show the potential for further development of LocalTracks, a direct approach to improving the service involves gathering further feedback and understanding user preferences. This method remains an effective means of improving the platform, as it allows for continuous refinement based on user feedback, just like any other product.

8.2. Final considerations

Creating LocalTracks was a challenging undertaking, particularly because one of the primary goals was to showcase the unique beauty of lesser-known places in Lombardy. As a resident of the region, I am familiar with the abundance of stunning natural landscapes that are often overshadowed by more well-known regions like Tuscany or Sicily. During the early stages of the project, I conducted surveys and research to gather feedback from potential users. The responses were mixed, with some people excited about the prospect of discovering new and unusual places, while others were concerned about the potential for over-tourism and losing the peacefulness of these hidden gems. This presented a significant challenge in creating a product that would strike the right balance between promoting these lesser-known destinations and ensuring that they do not become overrun with tourists.

As I moved forward with the development of LocalTracks, I encountered my second challenge: local producers. I was enthusiastic about providing them with a new opportunity to expand their businesses, especially since the data showed that many local producers were in economic difficulty. However, during my interviews, I discovered that many of these producers were concerned about having too much business. They sell what they produce, so they can't oversell their products. Finding the right balance between supply and demand became my second major challenge.

Soon the central concept that guided the development of this project became "balance." It was a challenging task to create something that deviated from the norm while maintaining a sense of equilibrium. However, with the aid of extensive research and usability testing, the resulting product achieved an effective balance between well-known and unusual places. Furthermore, the platform was not designed as an e-commerce website, which allayed the concerns of many producers who were wary of expanding their businesses too aggressively. Instead, the platform provides a promotional avenue for producers

to showcase their offerings without overwhelming their production capacities. Overall, striking a balance was crucial in creating a product that fulfilled its intended purpose while not creating unintended consequences.

Designing a user-friendly product for local producers who are not familiar with technology was another significant challenge. However, through the usability testing process, the project demonstrated an easy-to-use platform that provided promising results. This experience highlighted the potential for technology to help local producers promote themselves and enhance the user experience. It showcased how technology can be leveraged to bridge the gap between traditional business practices and modern solutions, ultimately creating new opportunities for small businesses to thrive. This project serves as a shining example of how technology can benefit local communities by offering them the tools they need to succeed in today's increasingly digital world.

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