

SMART RURAL KYTHERA



SMART VILLAGE STRATEGY OF KYTHERA (GREECE)



JUNE 2020

This strategy has been developed based on the template prepared by E4o (Project Coordinator) in the context of the 'Preparatory Action for Smart Rural Areas in the 21st Century' project funded by the European Commission. The opinions and views expressed in the strategy are those of the participant villages only and do not represent the European Commission's official position.

Table of Contents

Foreword: Smart Rural Kythera	2
I. INTRODUCTION	4
1.1 Local governance in Greece	4
1.2 What is a ‘village’ in Greece?	4
1.3 What is smart is for Kythera.....	4
II. CONTEXT	5
2.1 Context of the strategy development.....	5
2.2 Existing strategies & initiatives.....	5
2.3 Cooperation with other villages	9
III. KEY CHARACTERISTICS OF KYTHERA	10
3.1 Key characteristics of the village	10
3.2 Key challenges	12
3.3 Main assets & opportunities	15
3.4 Key characteristics of the local community	18
3.5 SWOT Analysis.....	19
IV. INTERVENTION LOGIC	23
4.1 Overall objective	23
4.2 Specific & operational objectives in response to SWOT	23
4.3 Smart solutions: actions, outputs and results	28
V. MANAGEMENT AND MONITORING.....	32
5.1 Management	32
5.2 Monitoring.....	32
VI. STAKEHOLDER ENGAGEMENT IN STRATEGY DEVELOPMENT	32
6.1 Stakeholder engagement in strategy development	32
6.2 Key channels of communication and awareness raising among citizens.....	33
6.3 Planned actions to mobilise stakeholders	33
Annex I: Stakeholder interviews	34

Foreword: Smart Rural Kythera

“The island of Kythera in Greece, also known as Tsirigo by the locals, lies at the crossroads of 3 seas and is known as the birthplace of the Goddess Aphrodite. Our island is one of the largest islands in Greece and is characterised by a large number of small settlements, with a total population of around 4000. Our greatest expectation is to keep our youth in the area, by creating the appropriate conditions for young and active people to live and work on the island.

Our local economy is based predominantly on tourism and agriculture but also other areas such as trades and services, including education and health. We would like to promote agricultural and environmental sustainability on the island by introducing new technologies. The goal is to enhance the production of local products, mainly olive-oil production, honey, as well as aromatic and medicinal plants, while promoting and preserving Kythera’s landscapes, ecosystems and biodiversity. We also want to increase quality tourism, by supporting alternative forms of tourism, through the promotion of cultural heritage, the natural beauty of the island as well as the local products.

Our local community is very strong with a well-preserved local identity consisting of various local associations and organisations. Through our participation in the Smart Rural 21 project we are hoping to gain new ideas and inspiration for developing a strategic plan for implementing smart village approaches.”

The Local Action Group of Attica Islands, the mayor of the island and the Agricultural University of Athens (AUA) are the main actors actively involved in the first stage of the process of the Smart Village Strategy development for the pre-selected village, the island of Kythera, in Greece in the context of the Preparatory Action on Smart Rural Areas of the 21st Century project.

The process was initiated by the LAG of Attica Islands, that supported the village Kythera during the submission phase to apply to become a pre-selected smart village. The LAG of Attica is a network for the cooperation of municipalities of the regional unit of Attica islands. It consists of eight (8) insular Municipalities of Attica Region and twelve (12) other local associations (representing fishing, agricultural, cultural, tourism sector). It has a strong interest in smart villages, being partner in the LEADER TNC project on ‘smart villages’ and active member of the Smart Village Network. Mr. Eustratios Charchalakis, the mayor of Kythera and chair of the Programme Management Committee LEADER/CLLD of Attica Islands, enthusiastically supported the process and he is actively engaged in setting off the smart village strategy development. Furthermore, support for local smart village strategy development and implementation is led and coordinated by members of the National Expert Team in Greece, the AUA that is also part of the Coordination Team. National experts nominated by Smart Rural project partner have direct family linkages in Kythera, and strong commitment to support smart village development. The AUA being the National Expert in Greece, contributes to the development of the smart village strategy by, firstly, supporting its preparation, guiding Kythera

through the stages of strategy development, identifying and mobilising specialist expertise as and when needed and identifying innovative tools and methods for strategy development as and when needed.

The main driver is the definition itself which says "Smart Villages rely on a participatory approach to develop and implement their strategy to improve their economic, social and/ or environmental conditions, in particular by mobilizing solutions offered by digital technologies. They benefit from cooperation and alliances with other communities and actors in rural and urban areas. The initiation and the implementation of Smart Villages strategies may build on existing initiatives and can be funded by a variety of public and private sources."

In order to avoid any duplication and make the planning process more effective, the guidance and technical assistance builds on existing work including local development plans and strategies, work of local stakeholder groups (councils, expert groups, etc.), existing governance and strategic planning processes, flagship projects and other initiatives etc. National experts will have a key role in creating linkages between local stakeholders (including local initiators, local enablers and the Local Support Group) and the Project Team.

Kythera has a plethora of unique characteristics and a world-known name due to the famous "Antikythera Mechanism" that was found in the area. However, making the island "smart" is the only way to offer its young people a better future and keep them on the island. The economy of the island is mostly based on agriculture, trade and tourism. Thus, in order to develop the aforementioned sectors a well-structured strategy is needed, with the active participation of the local community.

I. INTRODUCTION

1.1 Local governance in Greece

The Greek parliamentary elections are held every 4 years to nominate members of the Greek Parliament. However, elections are often called earlier depending on the political conditions. In order to establish self-government in a place like Kythera, municipal and regional elections are held, that are elections for mayors, city councillors, district governors and district councillors. These elections are held every 5 years. The municipality of Kythera consists of the mayor and the Municipality Board, which consists of 17 people, who were elected in May 2019 and will be in the municipality until 2023.

Practically, the Municipality of Kythera is responsible for the development of the island, the protection of the environment, the quality of life and the proper functioning of the settlements, the employment of the inhabitants, the Social Protection and Solidarity, the education and culture and the political protection of the inhabitants.

1.2 What is a 'village' in Greece?

A village is considered as an independent rural settlement with a traditional or modern concentration, a population of 50 to 2,000 inhabitants and whose financial independence is maintained by the primary sector of the economy, i.e. agriculture, livestock, and fishing and in addition, tourism. Villages in Greece list hamlets, villages or even villages with a growing population or towns of Greece.

Greece is a mountainous country with thousands of small settlements, many with their own unique character and culture. Greece also constitutes of 6.000 islands of which 277 are inhabited. Each island is broken down in smaller settlements, villages. For instance, the island of Kythera includes 62 settlements, which are scattered throughout the island, mostly inland. These villages mentioned above both in the mainland and the islands are usually clustered into municipalities, each with their own capital.

The last forty years have shown a slow and steady migration from smaller Greek villages towards larger cities, such as Athens, Thessaloniki and the other prefectural capitals. This is causing a reduction in the population in rural areas, where villages exist.

1.3 What is smart is for Kythera

Smart for Kythera, just like in the rest of Greece, starts a step prior to where it starts in more advanced places and countries around Europe. Smart strategies focus on policy support and investments on key regional priorities, challenges and needs for knowledge-based development, build on the region's strengths, competitive advantages and potential for excellence, ensure the full involvement of stakeholders, and encourage and support technological as well as practice-based innovation and experimentation.

II. CONTEXT

2.1 Context of the strategy development

The Local Action Group of Attica Islands, the mayor of the island and the Agricultural University of Athens (AUA) are the main actors actively involved in the first stage of the process of the Smart Village Strategy development for the island of Kythera in Greece.

The process was initiated by the LAG of Attica Islands, that supported the village Kythera during the submission phase to apply to become a pre-selected smart village. The LAG of Attica is a network for the cooperation of municipalities of the regional unit of Attica islands. It consists of eight (8) insular Municipalities of Attica Region and twelve (12) other local associations (representing fishing, agricultural, cultural, tourism sector). It has a strong interest in smart villages, being partner in the LEADER transnational cooperation (TNC) project on ‘smart villages’ and active member of the Smart Village Network.

Mr. Eustratios Charchalakis, the mayor of Kythera and chair of the Programme Management Committee of LEADER/CLLD of Attica Islands, enthusiastically supported the process and he is actively engaged in setting off the smart village strategy development. Furthermore, support for local smart village strategy development and implementation is led and coordinated by Smart Rural 21 project partner AUA. National experts nominated by AUA have direct family linkages in Kythera, and strong commitment to support smart village development. AUA experts have contributed to the development of the smart village strategy by supporting its preparation and guiding Kythera through the stages of strategy development.

The application of Kythera to become a smart village has been inspired by the definition itself which says "Smart Villages rely on a participatory approach to develop and implement their strategy to improve their economic, social and/ or environmental conditions, in particular by mobilising solutions offered by digital technologies. They benefit from cooperation and alliances with other communities and actors in rural and urban areas. The initiation and the implementation of Smart Villages strategies may build on existing initiatives and can be funded by a variety of public and private sources."

2.2 Existing strategies & initiatives

2.1.1 Links to existing local strategies

In general, the Municipality of Kythera is very active and tries to find smart solutions for sustainable plans and strategies that help the development of the Island. At this point, there are three main strategies that are about to take action on the Island or are under consideration. The “Sustainable Energy Action Plan”, the “Sustainable Urban Mobility Plan” and the “Water Resources Management Plan”, as described below.

Sustainable Energy Action Plan

The Sustainable Energy Action Plan (SEAP) describes the existing energy status of the Municipality of Kythera, the CO₂ emissions resulting from the actions of the Municipality and the citizens and the interventions envisaged by the Municipality to achieve the above goals by reducing carbon dioxide (CO₂) emissions by at least 20% by 2020 (with a reference year in 1990).

The sectors of the Municipality of Kythera for which consumption data (electricity and/or fuel) were derived from the calculation of total carbon dioxide emissions include the municipal buildings and facilities (school buildings, services etc.), the household and tertiary sector (houses, businesses, etc.), the municipal lighting, the municipal vehicle fleet, the pumping stations and drilling and the private and commercial transport. The sectors with the largest contribution to GHG emissions are the tertiary sector dwellings and buildings/facilities. Electricity consumption is also the main source of CO₂ emissions in the geographical boundaries of the Municipality of Kythera.

The objective of reducing CO₂ emissions by at least 20% by 2020 will be achieved through a series of actions and interventions aimed at the energy upgrading of municipal, residential and tertiary buildings, the energy saving and rational management in municipal lighting, the utilization of RES technologies, the adoption of 'Green Procurement' procedures and the informing and raising public awareness of energy saving issues.

The Sustainable Energy Action Plan has already been approved and its total estimated cost of the actions is about € 2,008,000, without the cost of private intervention.

Sustainable Urban Mobility Plan

Sustainable Urban Mobility Plans (SUMP) are emerging as a new integrated and long-term urban mobility planning approach specifically for Kythera, enabling local authorities to develop and implement urban mobility strategies on the basis of in-depth analyses of the existing situation. They allow a clear vision of the sustainable development of the urban areas where they are designed, which include the reduction of energy consumption, air pollution and noise pollution, the number of accidents, congestion, public safety and more.

This plan aims to create a sustainable urban transport and transportation system that ensures access to jobs and services for all, improves the protection and safety of migrants, reduces pollution, greenhouse gas emissions and energy consumption, increases the efficiency and cost-effectiveness of the transport of people and goods and enhances the attractiveness and quality of the urban environment.

The Municipality of Kythera, in the context of its responsibilities, promotes the implementation of a strategic plan for sustainable urban mobility with the aim of improving the accessibility of the urban area and providing high quality and sustainable mobility and transport.

Water Resources Management Plan

The island of Kythera faces a severe problem of adequate drinking water, especially in the summer months. This is due to the high demand and the ageing water network. Needs are covered almost exclusively by the underground aquifer (pumping stations) that have tended to shrink in recent years due to drought and high network requirements. The purpose of the study is to record rational, efficient and sustainable ways and methods for the management of the island's water supply system, with the aim of reliably, quantitatively, qualitatively and environmentally safe, and economically appropriate water supply coverage. The purpose of the study is to map the current situation and make proposals that will cover the water needs of the island in the short, medium and long term and the technical description of the proposed projects for upgrading the water supply system and finally the economic analysis. This includes the pricing of water services provided, based on general costing and pricing rules taking into consideration water supply cost and natural resources management.

2.1.2 Links to existing higher-level strategies

Municipality of Kythera strategies and projects are all aligned to National Strategies in order to be eligible for funding.

The main national strategies that are taken into consideration when a new strategy or project is being planned are:

- Partnership Agreement for the Development Framework) 2014-2020 constitutes the main strategic plan for growth in Greece with the contribution of significant resources originating from the European Structural and Investment Funds (ESIF) of the European Union. Some of its priorities are “Protection of the environment – Transition to a more environmentally friendly economy” and “Development – modernization – completion of infrastructures for economic and social growth”
- Rural Development Programme 2014 – 2020 (ΠΑΑ), whose main targets are “Development of a competitive and viable agri-food economy” and “Development of sustainable and multifunctional rural areas”
- Operational Programme Fisheries and Maritime 2014-2020, which has as one of its targets the “Protection of sea environments and sustainable use of its resources”
- Operational Programme of Attica Region and its Research and Innovation Strategies for Smart Specialisation (RIS3), whose main priorities are “Sustainable Economy”, “Blue Economy” and “Creative Economy”
- Prioritized action framework/ PAF of NATURA 2000 areas
- Leader/CLLD Strategy for Attica Islands

2.1.3 Review of past and ongoing (flagship) projects and initiatives

There were several flagship projects that have contributed to the development of the island. Equipment in the Water System infrastructure of Kythera was installed in order to remotely monitor the quality and quantity of the drinking water and to locate malfunctions and reduce losses through the most recent project “Remote Monitoring and Management of Kythera’s Water System”. All the data was transferred to municipality headquarters with the use of Information and Communication Technologies (ICT). The project’s duration was 3 years from January 2017 until December 2019 and the budget was about 1.8 million euros and was financed through Structural Fund of Region of Attica.

The largest project taking place in the area at the moment is on Waste Management, entitled “Waste Management in Municipality of Kythera”. The project implements a modern waste management infrastructure in Kythera and Antikythera and focuses on increasing recycling by creating a unit that handles bio-waste and creates compost out of them. The project’s duration is seven (7) years, from January 2014 until December 2020 and the budget is about 4.5 million euros and is financed through Structural Funds of Region of Attica. On top of that and in the near future it is planned that waste management on the island will include composting.

Kythera Trails association has already created 11 routes/ 100 kms of trails and are working in collaboration with Paths of Greece and the World Trade Network. The **Trekking Association program** was launched in October 2010 for the development of an integrated trail network by cleaning and signalling old paths, as an alternative to mass tourism. Kythera Trails is the official trails network of Kythera Island that contributes to sustainable tourism, while enhancing the island’s natural and cultural heritage as well as helping the local community thrive. The aim of the programme has been expanded to highlight and protect the natural and cultural heritage of the island, to extend the tourist season, to raise the awareness of the island's inhabitants and especially the young people of their wealth, to create networks with places where such actions are promoted, and to strengthen local businesses, e.g. signboards, guided tours, local products, etc. To achieve this, huge effort was put to enrich the existing old routes with new ones so that the network can be expanded to over 50 kilometres, a number necessary to designate a hiking destination. So, from almost zero trails in 2010, it raises to 6 trails in 2012 and 12 trails totalling 100 km today! The programme is supported and implemented by the Kytherian Foundation for Culture and Development (KIPA) in collaboration with the Municipality of Kythera and Antikythera, Kythera’s Domestic Estate Management Committee (Enchorios) and the Mediterranean Institute for Nature and Anthropos (MedINA).

Recently, the Kytherian Foundation for Culture and Development (KIPA) with the support of Mediterranean Institute for Nature and Anthropos (MedINA) has launched actions to promote Kytherian olive oil by creating a list of producers on the island. For this purpose, the foundation is constantly looking for and applying for funding. This project has already received funding from MedINA and the MAVA Foundation pour la Nature. For the same project KIPA is cooperating with

multiple universities and research organizations, in order to submit proposals that will also promote the producers on educational and training level, such as the program “New Agriculture for a New Generation” supported financially by Stavros Niarchos Foundation (SNF) and led by Rutgers University in collaboration with the Agricultural University of Athens and the American Farm School.

2.3 Cooperation with other villages

The municipality of Kythera is a strong supporter of cooperation in multiple ways. The main organizations are the following:

- **The LAG of Attica Islands** with 7 other islands municipalities of Attica Region. The LAG was founded in 2016 and Kythera was the main initiator of its founding.
- **Cultural associations** for scheduling and implementing cultural and educational events.
- **The Hellenic Ornithological Society and Private Organizations** for implementing projects on Antikythera Island, which is a Natural area and an important bird area.
- **The National Observatory of Athens** which creates a Centre for Atmospheric and Climate Physics Research in Antikythera, taking advantage of the isolation of the island.

Within the island local villages interact and cooperate with each other for the benefit of the island. The community of Kythera is really active and has the willingness to develop the area. There are many associations and organizations operating both in the wider area of the island and abroad.

The above-mentioned cooperation has helped the Municipality of Kythera to add different aspects in its strategy and new tools -especially financing ones- for implementing its projects. For example, the municipality of Kythera consists of two islands, Kythera and Antikythera. The latter has a rapidly decreasing population as young people are leaving the island in seek of better opportunities in capital cities and Antikythera does not have the same tourism as other islands have. Nevertheless, the cooperation on Antikythera island -have given a new perspective of transforming it to a "Green Island of Science" as many scientific projects are implemented there.

Taking under consideration all of the above, it is obvious that Kythera is an active area with active inhabitants that will follow new aspects of involvement, such as the creation of new platforms and groups that are about to take action.

III. KEY CHARACTERISTICS OF KYTHERA

3.1 Key characteristics of the village

The island of Kythera, or otherwise Tsirigo lies at the crossroads of 3 seas - the Ionian, Aegean and the Cretan Sea. It officially belongs to the Ionian islands, together with Corfu, Zakynthos, Ithaca, Kefalonia, Lefkas and Paxos. It is the southernmost of the Ionian Islands, located much further south between the southern tip of the Peloponnese and Crete, at the mouth of the Laconian Gulf. It is known as the birthplace of Heavenly Goddess Aphrodite, the goddess of love and beauty. Its surface area is approximately 280 square kilometres (km²) one of the larger of a total of approximately 1,400 Greek islands.

Characteristics of Kythera are the mild Mediterranean climate, with enough humidity and strong winds especially in winter, and the frequent alternation of landscapes, being a mountainous island with many valleys into the sea to form beautiful beaches. Although Kythera has no high mountains, it has a hilly landscape with many fertile valleys. The eastern side of the island mostly slopes down gradually to the sea ending at some beautiful beaches, in contrast to the western side, which often descends with a spectacularly steep drop into the Ionian Sea. The vegetation is rich, especially in northern and western parts of the island.

Kythera is characterised by the large number of its settlements. Already at the 1889 census, there were 87 settlements on the island. From the late 19th to the end of the 20th century the number of settlements fluctuated and finally today stabilised in the 56 inhabited settlements. Kythera has a population of four thousand (4000) inhabitants, the villages that remain are many and small, scattered throughout their geographic area. The island is administratively organised into a municipality with the community of Antikythera, the eponymous neighbouring island, under the Province of Kythera, which belongs to Region of Attica. The island's economy is based on rural life and tourism, while many locals are employed in services, trade and public organizations. The locals are mainly involved in the primary sector (agriculture, beekeeping, livestock, etc.), trade and, in the summer, tourism. Transport is still quite problematic even today, especially in winter, with limited ferry and air services. In general, the island has maintained its local identity to, and this is mainly due to the love of the locals for their place, their strong religious sentiment, the island's geographical location and limited tourist development.

The main agricultural products of Kythera are oil, honey and salt, coming from natural salt marshes on the island. The recent years, tourism on the island is expanding and attracts the attention of many visitors and touristic enterprises. The cultural heritage of Kythera is rich due to the various different occupants on the island throughout history. Evidence of this can be seen in the architecture of the island with influences by the Venetians, Cretans and Maniots.

The island society is strongly characterised by the element of communication. The local community is an active one and there are a lot of small formal and informal groups that work on specific areas of

interest. Kytherians continue their cultural activities not only on the island, but also in Athens and in cities abroad. New Kytherians are renowned for their active social participation and their characteristic tendency for collective and joint action that result in the operation of many clubs and organizations. Kytherians are of high educational level and the local population of Kythera has been strongly influenced by the people and civilizations that passed from the island. A large percentage of them get academic education, while many of them have distinguished in science and business. Finally, the migration of Kytherian people and the communication of the island metropolis with urban centres opened up new horizons and enriched their culture with new ideas, offering new potential to the global community of Kytherians. Nowadays, they head into the new era, to an open and global level of creativity. The Internet also serves this new development ideally. With proper guidance and motivation these groups participate in a lot of activities.

Table 1: Closest towns to Kythera

Name of closest town or city	Population of town or city	Distance between village and town/ city
Sparti	19,854	105km
Piraeus	163,688	208km

Table 2: Key statistical data (Kythera, 2011)

Indicator	Value	Value (nat. average)	Comments
Population			
Out of which migrants	4,041	10.72 million	2,055 men and 1,986 women
Out of which people with disabilities	858 [not available]	761,000 (7.1%) 657,000 (9 %)	
Aging Index	186.01		
Elderly dependency ratio %	24.75		The ratio between the elderly population (aged 65 and over) and the working age population (aged 15-64)
Unemployment rate %	9.63%	14.4%	Percentage of unemployed aged 15 and over, divided by the labour force (those aged 15 and over)
Employment rate %	90.37%	85.6%	Percentage of those employed who are aged 15 and over divided by the working age population (aged 15-64)
Participation rate %	48.43%		Percentage of the labour force aged 15 and over divided by the population of those aged 15 and over
Age structure:			
Share of population aged 0-14	532	14.1%	
Share of population aged 15-65	2,119	64.3%	
Share of population aged 65+	990	21.7%	

Educational attainment:			
Share of workers with tertiary education	12.8%		
Share of workers with primary education	19.6%		

Source: www.statistics.gr

3.2 Key challenges

The Municipality of Kythera needs support to develop a strategy that is based on the unique characteristics of the island and proposes feasible solutions to its problems. The local community is characterized by social conscience and willingness to upgrade the island in all areas, so it will be actively involved in all the actions that the development strategy will take. Research has been undertaken from time to time in order to identify the social and economic problems of the island, as well as efforts to address them through funded and non-funded programs. Projects have been made to upgrade the island mainly to the standard of living, which relate to waste management and the irrigation system and which received significant funding and donations and boosted the island's standard of living and economy. Projects to enhance the natural environment have been completed mostly voluntarily by residents and various groups working on the island, through the creation of a botanical garden with Kythera flora plants, the enhancing and protection of forests and through tree planting that takes place almost every year.

One of the most important goals for the island is to maintain and also attract new people to establishing there. This will lead to better living conditions in the winter months on the area due to population growth and the extension of the tourist season during the summer. Therefore, appropriate conditions must be created for young and active people in order to live and work on the island. For this reason, the strategy to be followed should cover areas such as tourism and agriculture - which are the basis of the local economy - but also areas such as education and health which are necessary for the residents.

Nevertheless, there is an urgent need for development of contractiveness on the island. Kythera, because of its location, is considered a barren line. In winter the island suffers from climatic conditions, as there are strong winds that affect the transition to and from the island. The ferry lines that serve the island are not sufficient and are characterized by high costs. During the winter months the island eliminates the lines, as it stops off the three out of the four ports it communicates, due to lack of resources. This creates even more difficulty for the locals as it is more difficult for them to move to a town if needed. The main challenges that Kythera faces are described below.

3.2.1 Ageing and outmigration of young people

The aging and migration of young people is a really important challenge for the island. Year after year, the number of older people - 65 years and over - is increasing while the number of children (up to 15 years old) and young people (up to 35 years old) is decreasing. This is due to the fact that on the one hand, there are insufficient professional opportunities and development on the island and on the other hand, the standard of living on the island is low. There are insufficient training facilities, transport facilities and limited recreational opportunities. Youth entrepreneurship on the island is limited and there are no incentives to evolve and upgrade. There is disinterest amongst the young people in the primary sector (farming and agriculture), which is due to the lack of interest and education in this sector. In the tourism sector, the short tourism season (2-3 months in the summertime) is not sufficient to attract the younger generation to stay for longer on the island. Finally, there are no satisfactory labour opportunities in various local unions that attract young people, as there is no integrated and proper organization in the majority of them. All this results in young people leaving the island for educational and work opportunities and the elderly returning after retirement. This is also affecting the island's economy, as it becomes more difficult to open businesses, strengthen existing ones, import and export products and boost tourism. As a result, there is a fairly large age gap on the island, with the elderly and children occupying the bulk of the population and the young not being motivated to live there.

3.2.2 Lack of good transport links & high cost of transport

Kythera is connected by boat on four coasts. The nearest coast is Neapoli in the Peloponnese and is an hour away, the next one is Gythio, just over two hours away, Kissamos in Crete, which is about five hours away and the most important, the port of Piraeus almost seven hours away. There is also an airport on the island for domestic flights during the winter months, mainly to and from Athens, and during the summer months some charter flights and as well as for some other areas of the interior, all with restrictions as the runways cannot serve large aircraft. The main problem is that all connections decline from October to May and are dependent on the weather. The island is characterized by high winds, which makes it difficult to get to and from the island, especially during the winter months. This makes it very difficult for residents to move to a nearby town if needed. For those who do not have a means of transport, there are organized bus services to Athens approximately once a week, depending on the schedules of the ferries. Another problem that will be added here is that the existing routes (ferry and air) have not changed for years and as a result they do not facilitate the locals and tourists. Although the island for two months has two daily flights to and from Athens with two airline companies, these itineraries take place at the same time (in the afternoon) which result in tourists being required to spend a night in Athens before they arrive in Kythera. So while these problems make it difficult for locals to navigate the transition, there is also a major blow to tourism, which is the main source of revenue and movement for the local economy.

In addition to the transportation to and from the island, there are issues with the transportation within the island. The island is served mostly by taxis, which are of high cost, and by a bus service that operates only during the summer months. Overall, the roads and the road network are in good condition, however there is not the necessary organization for the large villages and tourist resorts to be connected to the port and the airport. Means of transport are necessary especially for the permanent residents of Kythera, as the island is large in size and consists of many and sparsely populated settlements.

3.2.3 Lack of access to markets

Due to its geographical location, Kythera has no access to markets as its nearest coast is two hours away by boat. This is a problem for the island's economy, as it relies solely in the primary sector, tourism and internal trade. There are some agricultural producers, fishermen and traders on the island who export products but there is limited opportunity to market and promote them, as competitiveness is high due to the high cost of production and shipping which is a result of the island's remote location. The island mainly imports products to move the local economy and faces difficulties when transport links are restricted and underfunded.

In the primary sector, and particularly in the fields of agriculture and livestock production, the problems that exist on the island are significant. The most important is that there is no specialized staff and the education and training of those involved is limited. Veterinarian and agronomists are two important specialties for a place whose economy is mainly based on the primary sector, however these specialties are completely missing from the island. It is difficult for farmers to attain needed information for agricultural practices as well as to standardise, certify and label the products they produce.

Apart from the small tourist season, two months in the summertime, the promotion of the island is also insufficient. The lack of knowledge and training of those involved in tourism and catering is an equally important problem. Issues related to market rules are addressed, such as the categorization of rooms and the pricing policy followed, as well as the modernization of businesses, facilities and equipment. All this significantly affects the economy of the island and leads to a declining increase in tourism over the years.

3.2.4 Limited educational facilities

On the island there is currently one kindergarten in the centre of the island, two nursery schools, one in the north of the island and one in the south, and 3 elementary schools scattered one in the north, one in the centre and one in the south of the island, and a single high school and high school in Chora, located south of the island. Students from 60-70 different villages across the island commute to school via bus and taxi at no cost. Virtually all basic facilities on the island are available until high school, but there are limited opportunities for additional education such as music lessons, STEM, foreign language

lessons, dance, sports etc. The island lacks facilities that could expand students' interests and hobbies beyond a gym, basketball, football and tennis courts. This concerns many young families who want to settle in or are already on the island. There is a decline in education with problems in the general curriculum, books, lessons, and even teachers who take turns every school year without stability. These problems alienate young people even more from the general concept of education, making them more indifferent, with the result that they no longer participate in activities such as tree planting and scouting, something that used to happen.

3.2.5 Decreasing quality of water supplies

The last and very important challenge for the island is the depletion and decreasing quality of water supplies (water, irrigation, drainage). The island's water supply network is quite outdated and causes frequent disasters and problems. During the summer months there is a significant lack of water supply on the island and some settlements may be left without water for days. This leads to a drought and a decline in agricultural production. Thus, there is a risk of degradation of the ecological areas and the condition of the ecosystems of the area. During the summer months there is an increase in wildfires on the island, which further depletes water reserves and worsens the water supply situation. The disasters caused by summer fires lead to floods in the winter months, landslides and damage to the already congested road network.

3.3 Main assets & opportunities

Kythera faces challenges, however it presents various advantages and opportunities to build on in order to develop a smart village strategy. Its unique natural environment is its most important asset, along with the social consciousness and involvement of the locals in order to improve the island as much as possible at the cultural, economic and social level. Kythera is highlighted by its cultural heritage, its connection to nature and its investment in nature and religion. The strategy of the Smart Villages program can be based on existing programs and actions taking place on the island, as well as on the very active and dynamic groups and associations in operation. Quality of life, the beauty of nature, the sensitized society, fertile land, local and recognized products and the island's history are some of its main advantages. It is worth mentioning that the island of Antikythera also belongs to the municipality of Kythera. This is where the well-known Antikythera Mechanism was discovered, one of the oldest known complex mechanisms in existence – an ancient hand-powered Greek analogue computer, which was used to predict astronomical positions and eclipses for calendar and astrological purposes. It is the oldest known complex, planetary mechanism, and is called the first known analogue computer, dated between 150 BC. and 100 BC. This mechanism gave, in the prevailing modern view, the position of the sun and the moon and its phases. It was able to display solar and moon eclipses based on the Babylonian cycle of Saros. Its engraved plaques also depicted at least two diaries, one Greek based on the Metonic Circle and one Egyptian, which was the common "scientific" diary of the

Hellenistic, Ptolemaic era. To date, this finding has led to funded and non-funded research at the bottom of the sea off the coast of the island.

3.3.1 Natural environment and air quality

The most important advantage of the area is its natural beauty, fresh air and healthy environment. The island is located at the crossroad of three seas making it unique as it combines landscapes of the Aegean, the Ionian as well as mountainous and forested areas. Kythera is an island with spectacular landscapes, from mountains to valleys and beautiful beaches. The vegetation is rich, especially in the northern and western parts of the island. The climate is Mediterranean, with plenty of humidity and strong winds especially in winter and with long periods of sunshine. In many parts of the island there are springs that flow throughout the year as well as remarkable and accessible caves and canyons. The area is characterized by a variety of landscapes and a significant number of natural harbours, beaches with clear waters, which is a factor in attracting natural, coastal-marine, diving and fishing tourism. Kythera is home of a unique plant species the immortal plant, called *Sempreviva* which in Latin means eternal living. This is the most popular souvenir that anyone who visits the island for the first time will buy. The beautiful waterfalls and watermills of the island are among the first tourist attractions, as well as, a lush natural pool hidden in the rocks on the south-eastern side of the island. It is also worth noting that, due to its religious history, the island attracts religious tourism, with many monasteries, churches and many chapels both seaside and hidden in the mountains. Therefore, it is obvious that the island has a great deal of nature-based capabilities on which evolutionary strategies can be successfully based.

3.3.2 Soil quality

The soil on the island is very fertile and the lack of chemicals in the primary sector is the biggest advantage for the local products, as the island territorially provides everything needed to enhance quality and taste naturally. Apart from this, there are many natural salt marshes on the island, resulting in natural salt production, which is immediately marketable. Another organic product of the area is the olive oil produced on the island, which is of excellent quality and a key factor in influencing the local economy. In fact, Kythirian olive oil has been awarded nationwide and the olive production of the island is approximately 300-400 tons per year. Another important natural product on the island is the organic thyme honey of Kythera, which is considered one of the best in Greece due to the excellent quality of thyme that grows on the island. Oregano, thyme and sage are the most important herbs produced in the area. Therefore, it is an opportunity to enhance and promote production by focusing on certified, quality and safe organic products with a combination of promotion, processing and marketing methods to create an integrated agricultural product delivery system.

3.3.3 An active local community

The community of Kythera is really active and has the willingness to develop the area. There are many associations and organizations operating both in the wider area of the island and abroad. The main associations operating on the island are the Beekeepers and Farmers Association, the Young Entrepreneurs Association, the Association of Professional Producers called "Myrtidiotissa", the Kythera Youth Association called "Porphyris", the Hiking Club and some smaller groups. Some of these clubs have a history over time and have been passed down from generation to generation, greatly assisting the development of the island. Outside the clubs, however, the local community has very active local government, as well as, help from the Church. In particular, the Mayor of the island and the Municipality Board are very actively involved in the development of the site, seeking funding and positions in development programs. The Church also helps very actively through donations to the local community. Equally important for the island is the existence of Inland Property as it plays a decisive role in maintaining the good condition of the island, contributing to its gradual development without any alterations in its physical structure and identity. It is clear that the development strategies that will be implemented in Kythera are on solid ground with the local community.

3.3.4 High-potential tourism sector

Tourism is the main source of growth of the island's economy. Kythera has attracted various types of tourism due to its diversity. The island, in addition to its natural beauty, possesses a great variety of cultural richness from all historical periods until today with tremendous local knowledge and history, including myths that excite and invite curiosity. As a result, many castles, archaeological sites, museums, traditional settlements and folklore collections are popular amongst history and arts enthusiasts. Apart from its cultural history, the island also has a great religious history, attracting religious tourism all year round. The island also includes organized camping facilities, which attracts visitors from all around Europe. During the summer months and due to the increase of tourism, a variety of cultural events and local traditional festivals take place in the area which are known as "panigiria". The island provides activities that favour an alternative experience, such as hiking and scuba-diving. It is worth mentioning that the Kythera Trails association has already created 11 routes/ 100 kms of trails and are working in collaboration with Paths of Greece and the World Trade Network.

3.3.5 Improved health & other services and internet connectivity

A new hospital was recently built on the island with new treatment units, sophisticated medical equipment and doctors of several specialties. The islanders are no longer required to go to other cities or towns for emergencies and operations. The nursing home and the airport are also two important facilities on the island. Also, the island, despite its remote geographical location, has very good internet connectivity, as optical fibres were installed in all residential areas and along the entire island. The island's road network is in a relatively good condition and improvements are constantly being made.

3.4 Key characteristics of the local community

The Municipality of Kythera and the Domestic Property Committee of Kythera and Antikythera are the main institutions that are managing the development of the island. The island is characterised by an active, ecologically conscious population, that set up various associations including ‘Kytherian Foundation for Culture and Development’, ‘Kythera Agriculture and Beekeeping Cooperative’, the ‘Hunting Club’, the ‘Young Entrepreneurs Association’, the ‘Kythera Youth Association Porphyris’, the ‘Hiking Association’, the ‘Association of Professional Fisherman of Kythera “MYRTIDIOTISSA”’, the ‘Professional Association “Hotel and Tourist Association of Agia Pelagia Kythera”’ and more. In general, locals are actively involved in several programmes aimed to develop the island in every field.

3.5 SWOT Analysis

The main strengths, weaknesses, opportunities and threats (SWOT) set out above in details are summarised in the SWOT table below.

STRENGTH	WEAKNESSES
<p>Nature:</p> <ul style="list-style-type: none"> • Significant biogeographical and ecological interest with remarkable flora and good quality of sea water. • Landscape with natural harbours, significant number of beaches, watermills and running waters. • Existence of statutory protected areas such as wildlife sanctuaries. • Existence of remarkable and accessible caves and canyons. • Existence of forests and unique flower and herb species. <p>Culture:</p> <ul style="list-style-type: none"> • Wide variety of cultural wealth from all historical periods until now. • Significant number of traditional settlements, churches and castles. • Plenty of cultural associations, cultural events and local traditional festivals. <p>Services:</p> <ul style="list-style-type: none"> • Organised port with ferry connection to 4 ports. • Organised structure of waste management. • Existence of an organised local hospital for primary health services <p>Economy:</p>	<p>Nature:</p> <ul style="list-style-type: none"> • Incomplete transport system for transportation inside the island. • Large proportion of forests vulnerable to fires. • Severe flooding events due to unpredictable stream flows and forest fires. <p>Culture:</p> <ul style="list-style-type: none"> • Limited use of the cultural reserve to enhance the identity of the area and enrich the tourist product. <p>Services:</p> <ul style="list-style-type: none"> • Problems in the adequacy and autonomy of water resources. • Old water supply network. • Transportation problems due to the insular nature of the area (especially during the winter months). • High costs of transporting products, thus limiting their competitiveness. <p>Human capital:</p> <ul style="list-style-type: none"> • Problematic demographic composition due to high aging rate and low youth rate. • Incomplete vocational training system, based on traditional methods of knowledge transfer, without efficiency in the particularities of the agricultural sector. • Low level of staff training. <p>Economy:</p>

<ul style="list-style-type: none"> • Existence of local products famous for their quality, such as honey, olive oil salt. • Significant contribution of trade and tourism to the local economy. 	<ul style="list-style-type: none"> • Low interconnection of tourism activity with sectors of the local economy. • Low competitiveness of agricultural (vegetable and animal) production due to increased production costs. • Absence of cooperative actions between agricultural businesses with domestic and international academic and research areas.
OPPORTUNITIES	THREATS
<p>Nature:</p> <ul style="list-style-type: none"> • Promoting and preserving landscapes, species ecosystems and biodiversity. • Creation of paths of scientific and ecological interest (hiking, birdwatching) for their emergence and exploitation. <p>Culture:</p> <ul style="list-style-type: none"> • Exploiting development programs as funding tools for cultural heritage protection and promotion projects. • Development of cultural programmes to promote the culture and history of the area. • Strengthening of the tourist identity according to the particular characteristics of the island. • Promoting cultural heritage, linking culture with nature, investing in naturalistic and religious sentiment by joining monasteries, caves, places of special beauty. <p>Services:</p> <ul style="list-style-type: none"> • Strengthening and modernising the service sector. • Creating a plan to strengthen health services. • Development of forestry and hiking nature tourism in order to be an attraction for visitors. 	<p>Nature:</p> <ul style="list-style-type: none"> • Catastrophic forest fires, frequent landslides, floods and depletion of water supplies. • Increase in forest fires due to worsening climate change and increased gas emissions. • Catastrophic forest fires and severe and unpredictable weather conditions. • Risk of deterioration of the ecological areas and the condition of the ecosystems of the region, due to the inappropriate implementation of the institutional environmental framework and the tourist 'pressure' in the area. <p>Culture:</p> <ul style="list-style-type: none"> • Decrease in the number of cultural events due to lack of financial resources. <p>Services:</p> <ul style="list-style-type: none"> • Table water degradation. • Significant increase in water loss due to insufficient upgrading of land improvement infrastructure (water supply, irrigation, drainage) <p>Human capital:</p>

<ul style="list-style-type: none"> Supporting alternative forms of tourism (ecotourism-agritourism, coastal-marine tourism, diving tourism, pilgrimage-religious, fishing-gastronomic tourism). <p>Economy:</p> <ul style="list-style-type: none"> Funds to support employment, entrepreneurship and training. Development of the primary sector and manufacturing. Increase productivity based mainly on acquiring and replacing new technology, but also on product innovation and competitiveness. Development of fisheries and related activities. Promoting production with focus on certified, quality safe and branded products. Strengthen existing export units and create new ones. Enhancing the production of products mainly in the beekeeping and sheep and goat sectors. Strengthening primary economic and tourism economic relations by making products directly available at their place of origin to avoid high production and transport costs. Exploiting the potential in aromatic and medicinal plants of the area. Development of transnational partnerships to stimulate tourism activity. Utilizing incentives to create innovation partnerships between research centres, universities, farmers, producer groups, food processing enterprises. <p>Infrastructure:</p>	<ul style="list-style-type: none"> Ageing of the population combined with the absence of young population. <p>Economy:</p> <ul style="list-style-type: none"> Low attractiveness of primary careers (agriculture & fisheries) Limited use of large-scale machining with loss of economies of scale resulting in higher labour costs and consequently higher production costs. Prolonged recession and unfavourable environment for developing and financing business initiatives. Decrease in the economically active population. Increasing the level of economic dependence of tourism in the area. <p>Infrastructure:</p> <ul style="list-style-type: none"> The water that is available for irrigation is limited and of poor quality, thus affecting the quantity and in some cases the quality of agricultural production.
---	--

- | | |
|---|--|
| <ul style="list-style-type: none">• Creation of a plan for the exploitation and disposal of water reservoirs with appropriate infrastructure projects (dams, network optimization, remote control of infrastructure etc.).• Expansion and replacement of water supply networks due to age and breakage.• Exploiting alternative-renewable energy sources and applying of energy saving methods.• Upgrading existing road networks to improve access• Creation of soft and sustainable installations for exploitation of protected areas such as ecotourism, recreation and environmental education• Upgrading, modernising and integrating port infrastructure.• Creation of a port for pleasure boats to boost tourism. | |
|---|--|

IV. INTERVENTION LOGIC

4.1 Overall objective

The smart village strategy to be developed for Kythera includes a realistic set of goals and objectives, based on the initial planning of work and analysis and responds nimbly and flexibly to the challenges and opportunities identified. The aim is to **start from a small-scale action planning**, feasible within the limited timeframe of the project, and built-upon existing, higher level strategies. The general idea for this strategy is to offer an **integrated and holistic approach to local development** focusing on grassroot empowerment and on the main areas of interest for the islanders, including agriculture and environmental sustainability, tourism and all kind of services on the island (education, health and transportation). All these areas of interest are interconnected, one affecting the other, with the ultimate goal being to keep the youth on the island.

The overall objective, and at the same time the greatest expectation for Kythera, **is to keep its youth on the island, by creating the appropriate conditions for young and active people to live and work on the island**. The local economy is based predominantly on tourism and agriculture but also other areas such as trades and services, including education and health. The goal is to promote **agricultural and environmental sustainability** on the island by introducing **new technologies**, enhance the production of local products, mainly olive-oil production, honey, as well as aromatic and medicinal plants, while promoting and preserving Kythera's landscapes, ecosystems and biodiversity. Additionally, a key to a successful strategy is also to **increase quality tourism**, by supporting alternative forms of tourism, through the promotion of cultural heritage, the natural beauty of the island as well as the local products. Kythera's local community is very strong with a well-preserved local identity consisting of various local associations and organizations. Through the participation in the Smart Rural 21 project Kythera is hoping to gain new ideas and inspiration for developing a strategic plan for implementing smart village approaches.

4.2 Specific & operational objectives in response to SWOT

Specific objective 1: Keeping young people on the island

Youth outmigration affects Kythera in the same way it affects all rural communities. The first objective is the same as the overall objective for Kythera, to keep its youth on the island. Kythera's future relies heavily on rural economies. Having skilled future employees for these industries with local and cultural understanding requires planning for education and training pathways. Educational seminars and training on agriculture and tourism in order for young people to make the island more competitive. Organisation of trips for educational and training purposes according to each profession will bring new ideas to the island. Finally, sustainable tourism that connects with young entrepreneurship has the potential to create new jobs and encouraging young people.

In order for Kythera to keep its youth on the island, the appropriate conditions for young and active people to live and work on the island have to be created, taking into account all of the following objectives.

Specific Objective 2: Improve agriculture and promote local production

In the past, 65 to 75% of the island's surface was cultivated. The land nowadays is not cultivated and pine forests have taken the place of agricultural land, which is the reason for frequent fires on the island.

Operational objective 2.1: Introduce new technologies in agriculture and smart farming solutions

This objective is to promote agricultural and environmental sustainability by introducing new technologies in agriculture and smart farming solutions on the island. This is expected to attract young people to the island, as modern agriculture has the potential to help producers with critical decision-making with the aim of maximizing productivity and sustainability.

The goal is to enhance the production of local products, mainly in olive-oil production, honey, as well as aromatic and medicinal plants, while promoting and preserving Kythera's landscapes, species, ecosystems and biodiversity.

Operational objective 2.2: Improve collaboration between producers under the umbrella of the existing agricultural associations

This objective aims at empowering producers to create collaborations with one another. Various types of collective actions at the producers level can significantly support producers in sharing resources, information and best practices to enable food loss reduction. Agricultural cooperatives in the form of producer organisations can be further developed as tools for producers to improve competitiveness and strengthen their bargaining position towards retailers.

Operational objective 2.3: Introducing standards, certificates and labelling on local products (olive-oil and honey)

Local products are currently sold at low prices even though they are of premium quality. This is the case especially for olive-oil and honey. As consumers demand more information about the products they use and in order to make the Kytherian products more attractive to the markets and at the same time achieve competitive prices, Standardization, Certification, and Labeling is required for the local products.

Local products that are of premium quality and of high value, such as the olive-oil and honey (but also salt, herbs, local wine variety and/or livestock) should be produced following a standardised procedure and been collected by the responsible association (Kythera Agricultural Bee Keeping Association, Agricultural Association of oil producers) go through a quality control and should be certified

according to its quality and the standards set. Then these products, coming from different producers, will be labelled with a unique label for the “Kytherian product”.

This could also lead to looking at certifying some of the local produce with a Protected Designation of Origin (PDO) label. The products’ quality or properties will be significantly or exclusively determined by the geographical environment of Kythera, including natural and human factors, whose production, processing and preparation takes place within the determined geographical area. These products will be promoted in the market at competitive prices.

Through this objective the younger generation of farmers on the island will cope with the regulations of the Common Agricultural Policy, whilst new jobs will be created and economic growth will be promoted.

Specific objective 3: Improve environmental sustainability

Promoting an island model different from other islands in Greece, which is based on alternative forms of development. The goal is to have sustainable development, based on and respecting the environment.

Any advancement to the primary sector will follow the sustainability agenda, protecting the environment and local biodiversity, utilizing local products while using new smart technologies in agriculture. Improvement in production facilities and equipment. This will also lead to the restoration of the green that has been destroyed due to recent fires.

Specific objective 4: Support entrepreneurial activities

This objective focuses on entrepreneurship in the small island of Kythera. Starting up and running an enterprise should be facilitated by being in a small island environment. Kythera’s culture context and enterprise environment need to affect entrepreneurship and start-up success in the best way. Finally, creativity and innovation are considered to be overlapping constructs between two stages of the creative process, both are necessary for successful enterprise and they should be reflected in Kytherian start-ups.

Specific Objective 5: Increase quality tourism

Operational objective 5.1: Supporting alternative forms of tourism & promotion of the area as tourist destination

The objective is to increase quality tourism through the promotion of cultural heritage, the natural beauty of the island as well as the local products. There is a dynamic to extend the touristic season for the island with new alternative ways of tourism. For example, this can be done by supporting alternative forms of tourism, such as eco- and agrotourism, coastal-marine or diving tourism, pilgrimage-religious and gastronomic tourism. The development of forestry and hiking trails will promote the existence of alternative and sustainable tourism as well as showcasing the beauty of the

island, highlighting monuments and nature. The idea is to offer a holistic touristic experience through exploring beaches, caves, attending festivals, meeting the architecture and the history of the island, and trying the local products. The visitor should be able to live an experience that will be supported and will support the primary sector. Wedding tourism is another form of tourism that brings the potential to extend the touristic period outside the summer season (June- August) and attract more young people to work and live on the island. In order to promote tourism on the island its symbolism should be used, as it was defined since the Age of Enlightenment by the French, as the "Journey to Kythera".

Operational objective 5.2: Promoting it as a safe destination due to the existing hospital

The island is a safe destination and should be promoted as one, as there is a brand new and well-equipped hospital that can overtake the most cases and the majority of emergencies. Finally, transnational partnerships will encourage stimulation of tourism activity on the island.

Specific objective 6: Improve services (Transportation, Education and Health)

This objective has to do with the improvement of the services in Kythera.

Operational objective 6.1: Improve the education and health services

This can be achieved by strengthening and modernizing the service sectors, as the island lacks modern technologies and services which are necessary for economic viability and social vibrancy. This will also aid in increasing productivity, which is based mainly on acquiring and replacing new technology, and also product innovation and competitiveness.

Operational objective 6.2: Improving transport linkages

Transportation to the island can be supported by including Kythera to more lines and connecting the island to more destinations and other islands. The island-hopping concept could be introduced.

Improve the existing transportation to and on the island. Connect the island with more destinations – introduce Island-hopping in order to get connected to other islands. Improving the existing airport infrastructure so that larger aircrafts coming directly from foreign countries can land.

Table 3: Objectives in response to SWOT

Objective	Challenges & threats	Strengths & Opportunities
1. Keeping young people on the island	Young people leave the island for multiple reasons Limited job opportunities Difficult weather conditions in the winter time	Promote the cultivation of the island that will give young people the opportunity to work Funds to support employment, entrepreneurship and training
2. Improve agriculture and promote local production	Limited natural resources (water availability) Lack of education Collaboration amongst producers and cooperatives needs to be extended.	Build-upon initiatives and actions undertaken by local organizations Local products of premium quality (Olive-oil, honey, salt, herbs, local wine variety) Development of a municipal slaughterhouse has begun
3. Improve environmental sustainability	Prone to natural disasters (bushfires in the summertime and frequent landslide)	Using new smart technologies in agriculture will also lead to the restoration of the green that has been destroyed due to recent fires.
4. Support entrepreneurial activities	Isolated island High production costs Local produce is sold at low prices No standardization, certification and labelling Lack of competitiveness in the market	High-value and quality local products Build-upon initiatives and actions undertaken by local organizations
5. Increase quality tourism	Lack of good and frequent transportation No connection to other destinations (except Pireas, Gytheio, Neapoli)	Supporting alternative forms of tourism: eco- and agrotourism, coastal-marine or diving tourism, pilgrimage-religious, gastronomic tourism, wedding tourism Natural beauty, cultural heritage Safe destination due to its hospital
6. Improve services (Transportation, Education and Health)	Isolated island Lack of transportation links Extreme weather events	Active community on marine services Improve the existing transport network

4.3 Smart solutions: actions, outputs and results

In the following section a list with actions, that were proposed by the stakeholders involved in the Smart Village Strategy Development, is given. The order is evolving, to meet the ultimate goal, which is to keep the youth on the island, starting from the primary sector, environmental sustainability, moving to educational and training activities for the young people. A full list of comments from the stakeholders participated in the Smart Village Strategy Development are included in the Annex.

According to the specific objectives that have been included in this Smart Village Strategy for Kythera and the planned activities listed above, as communicated by the different stakeholders from the island, the most mature plans to be implemented are the following:

This program aims to create the conditions necessary for Kythera to emerge as the only Greek "green island", which produces and distributes reliably its products that already have a general recognition of their quality, in the food markets. It will provide all types of producers (farmers, cooperatives, olive mills, primary production processing companies, etc.) those services required for the production and distribution of quality products, with the sole purpose of quality development of the island. The implementation of the program began the first months of 2020, by informing local stakeholders, including producers, about its purposes and how to implement them.

Standardization, Certification, and Labelling is required for the local products. Local products that are of premium quality and of high value, such as the olive-oil and honey should be produced following a standardised procedure and been collected by the responsible association (Kythera Agricultural Bee Keeping Association, Agricultural Association of oil producers) go through a quality control and certified according to its quality and the standards set. Then these products, coming from different producers, will be labelled with a unique label for the "Kytherian product". This could also lead to looking at certifying some of the local produce with a Protected Designation of Origin (PDO) identity. The products' quality or properties will be significantly or exclusively determined by the geographical environment of Kythera, including natural and human factors, whose production, processing and preparation takes place within the determined geographical area. These products will be promoted in the market at competitive prices. The goal is to produce good Quality Products, and support their Recognizability and Promotion.

The Kytherian Foundation for Culture and Development (KIPA) (<https://kipa.org.gr/>) with the support of Mediterranean Institute for Nature and Anthropos (MedINA) (<http://www.med-ina.org/>) has launched actions to promote Kytherian olive oil by creating a list of producers on the island. For this purpose, the foundation is constantly looking and applying for funding. This project has already received funding from the MAVA Foundation pour la Nature (<http://mava-foundation.org/>) as well as it is self-funded by KIPA.

For the same project KIPA is cooperating with multiple universities and research organizations, in order to submit proposals that will also promote producers' education

and training, such as the program “New Agriculture for a New Generation” supported financially by the Stavros Niarchos Foundation (SNF) and led by Rutgers University in collaboration with the Agricultural University of Athens and the American Farm School. This proposal aims in a) training producers on precision farming systems and b) implementing and monitoring specific agricultural practices that benefit both production and biodiversity on the island. The "New Agriculture for a New Generation" program is an initiative that aims to create career opportunities and entrepreneurship for youth in the Agrifood sector in Greece. Rutgers University is leading this innovative multiyear program, in partnership with the Agricultural University of Athens and the American Farm School. The program is implemented through an exclusive grant from the Stavros Niarchos foundation (www.generationag.org).

Specific/ operational objectives	Actions planned or taken	Expected outputs	Expected results and impact
1. Keeping young people on the island	1.1 Appropriate conditions for young and active people to live and work on the island by improving employment and social activities	Mitigate outmigration Keep the connection with young people who left the island	Chance young people's perception on leaving the island
2. Improve agriculture and promote local production	2.1 Introduce new technologies in agriculture and smart farming solutions 2.2 Improve collaboration between producers under the umbrella of the existing agricultural associations 2.3 Introducing standards, certificates and labelling on local products (olive-oil and honey)	PDO products Site-specific crop management	Local products to reach more markets and becoming more complete Improved quality and increased yield Preservation of natural resources Environmental protection
3. Improve environmental sustainability	3.1 Using new smart technologies in agriculture will also lead to the restoration of the greenery that has been destroyed due to recent fires.	Sustainable development, based on and respecting the environment	Decrease the environmental impact Protect the wild life on the island
4. Support entrepreneurial activities	4.1 High-value and quality local products 4.2 Build-upon initiatives and actions undertaken by local organizations	Increased awareness of Kytherian products Increased income in the local community	Creativity and Innovation in Kytherian products
5. Increase quality tourism	5.1 Supporting alternative tourism: eco- and agrotourism, coastal-marine or diving tourism, pilgrimage-religious, gastronomic tourism, wedding tourism 5.2 Promoting it as a safe destination due to the existing hospital	Tourism all year-round Increased income Extend the touristic season beyond the summer months	Local economy development Cooperation between businesses
6. Improve services (Transportation, Education and Health)	6.1 Improve the education and health services Strengthening and modernizing both service sectors, Building upon the existing health system on the island 6.2 Improving transport linkages Improving the existing transportation options to or on the island, Connecting with more destinations – Island-hopping	Introduction of e-services Informational workshops More frequent ferry and plane services	Distance learning Better information and prevention More options Faster transportation Improve the quality of life

Actions planned or taken	Timeline	Necessary human capacity	Necessary technical capacity
Introduce new technologies in agriculture and smart farming solutions	09/2020 – 09/2021	<ul style="list-style-type: none"> • Kytherian Foundation for Culture and Development (KIPA) • Mediterranean Institute for Nature and Anthropos (MedINA) • Agricultural University of Athens (AUA) 	<ul style="list-style-type: none"> • Broadband • Smart farming equipment • Hardware and software
Improve collaboration between producers under the umbrella of the existing agricultural associations	06/2020 – 12/2020	<ul style="list-style-type: none"> • Municipality of Kythera • Kytherian Foundation for Culture and Development (KIPA) • Mediterranean Institute for Nature and Anthropos (MedINA) • Agricultural Associations and cooperatives on the island 	<ul style="list-style-type: none"> • Broadband
Introducing standards, certificates and labelling on local products (olive-oil and honey)	12/2020 – 12/2021	<ul style="list-style-type: none"> • Municipality of Kythera • Kytherian Foundation for Culture and Development (KIPA) • Mediterranean Institute for Nature and Anthropos (MedINA) 	<ul style="list-style-type: none"> • Broadband • Infrastructure • Equipment
Create a marketing strategy	12/2020 – 12/2021	<ul style="list-style-type: none"> • Municipality of Kythera • Kytherian Foundation for Culture and Development (KIPA) • Mediterranean Institute for Nature and Anthropos (MedINA) • A project partners or external expert 	<ul style="list-style-type: none"> • Broadband • Hardware and software

V. MANAGEMENT AND MONITORING

5.1 Management

The action proposed is an initiative by the Kytherian Foundation for Culture and Development -KIPA- with the support of Mediterranean Institute for Nature and Anthropos -MedINA will be leading the management of this project.

5.2 Monitoring

This task will be monitored by the Kytherian Foundation for Culture and Development -KIPA- and the Municipality of Kythera. This idea is supported and will involve a long list of producers and the Agricultural Associations and cooperatives on the island, that are also participating in the LEADER program.

VI. STAKEHOLDER ENGAGEMENT IN STRATEGY DEVELOPMENT

6.1 Stakeholder engagement in strategy development

The main advantage of Kythera in terms of strategy development is its citizens. There are many active associations and organizations on the island.

For example the **‘Kythera Studies Society’** is a non-profit scientific association, founded in 1982 and based in Athens and it mainly aims to scientific research all subjects concerning Kythera and Antikythera, and the contribution to the preservation of art, history and literature monuments. The Association has provided a really important financial support on archaeological researches, archaeological excavations, restoration of chapels, Support and enrichment of the Kythera Historical Archive and Publications of books related to Kythera and Antikythera.

After creating a tentative list of contacts/representatives, the following stakeholders were contacted:

- Local Authorities (Mayor)
- Health (Nursing Director, Kythera hospital)
- Education (Head of The Kythera High School)
- Cultural (President of Kythera Foundation for Culture & Development)
- Tourism (Responsible for the Tourist Committee of the Municipality of Kythera, Hotel Owner, Travel Agent, Former Airport Manager, Cinematographer)
- Retail Industry/Commerce (Business owner)
- Local Communities (Kythera Trails, Kythera Youth Union Porfyris)

- Agriculture (Kythera Agricultural Bee Keeping Association, Agricultural Association of oil producers)

Local stakeholders, people involved in the local government but also in various unions and associations operating on the island responded to the call and were willing to collaborate. They provided information about the main problems that everyone faces in their industry, the important advantages that the island has as well as they provided ideas for development. The interviewed stakeholders also provided material from past and existing actions (documents and publications) along with some future plans.

They were provided an introductory document describing the project and the Smart Village Strategy Development task, on which they were informed to provide information.

Stakeholders advised the main problems and challenges of their industry, the strength and opportunities of the island and offered ideas on where and how the creation of a smart strategy can be based. Many of them came in contact multiple times, expressing their interest on the project and the concept of Smart Villages, but also providing material for strategies that have previously taken place as well as those that are currently in use on the island.

6.2 Key channels of communication and awareness raising among citizens

The local citizens as well as the various unions and associations operating on the island are regularly informed through our Facebook and LinkedIn page with various posts regarding the program and the actions taken. Very good communication bridges have also been built with everyone and they are also updated on a personal level either by phone or via online meetings.

Information on the project is also shared through the Greek NRN's official channels.

6.3 Planned actions to mobilise stakeholders

The local community of Kythera is quite understanding and is willing to help the in development of the stagy framework for the island. Citizens are already informed through social media and through the project's website. Several unions have been contacted and active citizens on the island were informed on the program and they were very positive and willing to help with information and material. Also, following the communications made with public organizations dealing with the development of rural areas, regions and islands, announcements concerning the program are posted on their websites and collaboration with the Ministry of Rural Development and Food and the NRN has been established.

Annex I: Stakeholder interviews

In the ANNEX we have included all the individual communications with stakeholders that took place in order to develop the Smart Village Strategy concerning Kythera. This should be used as supplementary material, in the form of notes, and it is not suggested to be used as part of publicly available documentation.

Representatives and Local Agencies of Kythera

Local Authorities

- Mayor - Efstratios Charchalakis

Health

- Former Managing Director/CEO Kythera Hospital - Dimitris Mirasgentis
- Director of Nursing at Kythera Hospital - Maria Kalligerou

Education

- Head of Kythera High School until 2008-Professor - Eleni Harou

Cultural

- President of KIPA - George Kasimatis
- Environmental Consultant at MedINA – Nikos Georgiadis

Tourism

- Head of Tourist Promotion of Kythera / Tourist Committee of the Municipality of Kythera - Panagiotis Gianniotis
- Hotel Owner - Mariana Xintarakou
- Tourist Office / Car Rental - Panagiotis Drakakis
- Airport Director - Ioannis Kasimatis
- Cinematographer - George Kalligeros

Retail Industry/Commerce

- Store Owner - Marie Koronaïou

Local Organizations

- Kythera Trails - Rigas
- Youth Union of Kythera Porphyris - Alexandra Laurantou, Maria

Agriculture

- Agricultural Apicultural Cooperative of Kythera - Protosaltis / Anestis
- Agricultural Cooperative - Nikos Kasimatis (Potamos & Livadi Oil Producers)

Local Government Organization: Mayor - Efstratios Charchalakis



Challenges / needs:

1. Kythera suffers from the depopulation of young people - lack of jobs. Strategies to persuade the young person to return and stay on the island.
2. The land is not cultivated: previously 65-75% was cultivated and there was no pine forest. Now it has a forest, I am a squirrel due to the gradual abandonment of crops. The result is many and frequent fires.
3. Transportation within the island.
4. Focus on improvements

Strengths/Opportunities:

1. The procedures for the creation of a municipal slaughterhouse have begun.
2. Very good quality olive oil and local variety of wine (Arikaras).
3. There are four oil mills and two cooperatives are participating in the LEADER program from which they receive funding.
4. In Kythera there is a hospital! and has a very good system. Although in Anti-Kythera is telemedicine is applied.
5. There is an airport.
6. External transport to the island is satisfactory now.
7. Public infrastructure (access to beaches, water supply, lighting) is very good.
8. Cleanliness is one of the positives on the island with local waste management in both Kythera and Antikythera.
9. New and many recently renovated accommodations.
10. Services in Kythera are of a high standard.
11. The Museum of Kythera Migration will soon be built with the funding of immigrants from the island.

Possible solutions:

1. To attract young people with new solutions to agriculture.
2. Combination of the carcass with certification / standardization. Promotion of products in the market at competitive prices.

3. Promotion of olive oil and wine in the market at competitive prices.
4. Waste management will soon include composting.
5. Alternative tourism: strong points are the paths and the existing hospital where it makes the island a safe destination (health tourism).

Health: Director of Nursing at Kythera Hospital - Maria Kalligerou



Challenges/needs:

1. Aging of the population and dealing with people.
2. Transportation in emergencies is sometimes difficult due to the connection and in case of cancellation of routes.

Strengths/Opportunities:

1. There is a hospital on the island it is not just a health centre. There are all the specialties and its even organized for difficult cases and surgeries. There is a CT scanner.
2. And in Antikythera there is a doctor all year round and equipment is being send from Kythera. In case of emergencies, it is transferred to Kythera or another city (Sparta, Athens).
3. Daily ferry connection with Naples, connection with Piraeus, connection with Gythio once a week.

Possible solutions: -

Health: Former Managing Director /CEO of Kythera Hospital - Dimitris Mirasgentis



Challenges / needs:

1. Difficulty to attract and keep young doctors in Kythera Hospital
2. Staffing the small clinic in Antikythera needs a lot of effort

3. Establishing and enhancing Hospital's role in the local economy
4. Change of local mentality

Strengths/Opportunities:

1. The existence of a well organized hospital is of great importance
2. Hospital is one of the bigger employers (>50 employees) on the island
3. Remote health services in missing specialties (eg psychologist)
4. Existence of airport, port and hospital and, generally, infrastructure

Possible solutions:

1. Make the Hospital and health services part of the "Kythera tourist product" instead just supporting it
2. Develop "Health Tourism" based ,eg, on Hemodialysis Equipment, round the year and not only in summer

Education: Head of Kythera High School until 2008-Professor - Eleni Harou

Challenges / needs:

1. Aging of the island's population.
2. The island has not been shown as much as it should be with its symbolism as defined by the French, people of spirit and arts, "Journey to Kythera".
3. There is a slump in education. The problem is general in the curriculum, the lessons, the books.
4. Students go to school from 60-70 different settlements. They are no longer easily involved in activities, tree planting, scouting.
5. There used to be a cheese dairy.

Strengths/Opportunities:

1. Pure island, rich in history and archaeology.
2. Kythera as a destination of higher spiritual enjoyment.
3. Internationally renowned works of art from the island: "L'Embarquement pour Cythère" and "Pilgrimage to Cythera" are paintings by Pélerinage à l'île de Cythère by the French painter Jean-Antoine Watteau.
4. The conservatory, the philharmonic orchestra are still active and participating

Possible solutions:

1. To show, to use the catch-phrase of Kythera "Journey to Kythera".

Culturally: President of KIPA - George Kasimatis



Challenges / needs:

1. Local products such as oil are sold at low prices (for example oil € 2 per kilo)
2. There is no link for honey. They bring members from other areas and sell it as a Kythera.
3. Kythera oil paste cannot be called a PDO product because raw materials are used for their production, which are not only from Kythera.

Strengths/Opportunities:

1. Paths are a beautiful alternative for tourism with the natural environment in the centre. It aims to highlight the natural environment, culture (through old ways of communication) and historical elements.
2. Recognized Kythera products.
3. Existing action funded for the next two years by MAVA foundation and KIPA (40,000 - 50,000 euros).
4. Alternative activities beyond the trails and mountain biking.

Possible solutions:

1. Promoting an island model different from others based on alternative forms of development. The goal is sustainable development, based on the environment.
2. Agrotourism centered on agricultural products (oil, honey, herbs). Produce organic products and then promote the product. The goal is a Quality Product, Recognizability and Promotion. Recognizable products to attract people. KIPA has launched actions to promote Kythera olive oil by creating a list of producers on the island.
3. Quality control of the product and creation of PDO identity.
4. Creation of Kythera cuisine.

Tourism: Head of Tourist Promotion of Kythera / Tourist Committee of the Municipality of Kythera - Panagiotis Gianniotis

Challenges / needs:

1. Reduced number of permanent residents, especially during the winter months.
2. On the island you cannot grow large quantities of products but make high quality products.
3. Tourism has changed and is over in the form it has been so far. The island cannot rely on him alone.

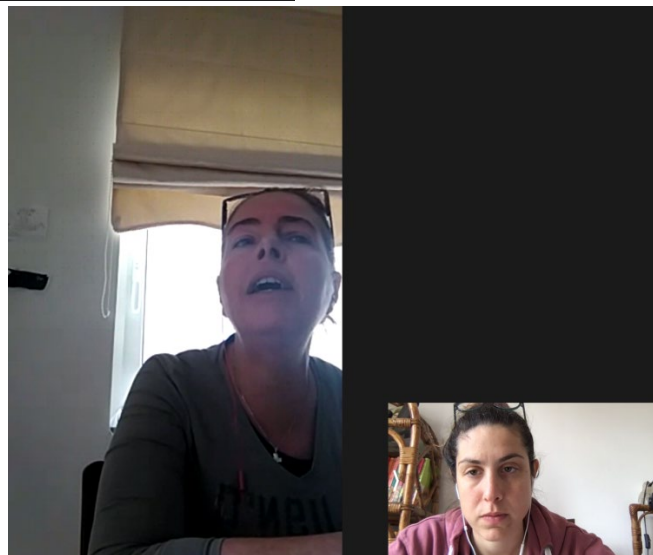
Strengths/Opportunities:

1. High quality products (nuts, honey, oil, salt).
2. Cultivation with herbs can be the solution due to the microclimate.
3. Utilization of tourism - walking tourism with the paths that highlight monuments and nature.
4. Very beautiful island.

Possible solutions:

1. Increase of the permanent population on the island beyond three months in the summer.
2. Organized primary sector in order to attract permanent residents and increase the population.
3. High quality products to be sold at high prices.
4. Establish some kind of school on the island to attract new residents throughout the year.
5. In tourism to offer the "experience": beach, festival, cave, flavours. The visitor can live an experience that will be supported and will support the primary sector.

Tourism: Hotel Owner - Mariana Xintarakou



Challenges / needs:

1. Transportation to the island. The connection is only with Crete, Peloponnese and Piraeus. Old and slow ships.
2. Production is low for local products.

3. The island is not known to the general public. The tourist season is limited from June to September. Restaurants and cafes close after September.

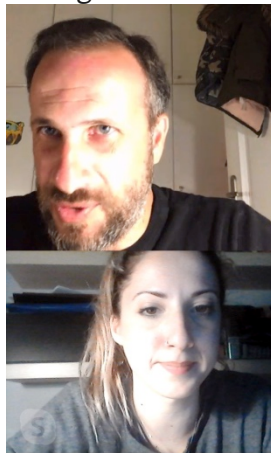
Strengths/Opportunities:

1. Products such as honey and olives. Organic soap
2. Alternative forms of tourism, activities such as tasting, cooking workshops, from harvest to table.

Possible solutions:

1. Alternative tourism, promotion of local products in new smart ways.
2. Promotion and advertising of the island to a larger audience.

Tourism: Tourist Office / Car Rental - Panagiotis Drakakis



Challenges / needs:

1. Transportation problem to and from the island. The itineraries of ships and planes have been the same for years, at the same times that do not make it easier for tourists (they are forced to spend the night in Athens, as a result of which they lose vacation days and increase the cost of the holiday package). Small airport to accept charter.
2. Transport problem within the island. The resorts and large villages are not connected to the airport and the port.
3. Short tourist season.
4. Inadequate training of professionals involved in tourism and catering. There is a problem with market rules (room categorization, price policy development and local cuisine). There is stagnation, they do not invest in quality and modernization.
5. They invest money for tourist advertising which does not take up space.
6. No sidewalks, no biological treatment, no proper water exploitation.
7. Population aging and youth flight.
8. Product production cannot meet high demand.

Strengths/Opportunities:

1. Variety of landscapes in a relatively small area. Eg Avlemonas-Cyclades, Gerakari and Karavas-Ionian Islands, Potamos-Oreino village.

2. The island is not monotonous. It has beautiful and clean beaches, gorges, waterfalls, plains and mountains.
3. Good climate as it has a long period of sunshine.
4. Modern and equipped hospital.
5. Airport with daily connection to Athens for 6 months.

Possible solutions:

1. Alternate flights so that there is one morning and one afternoon and the ship of Naples has a longer stay on the island so that day trips are possible.
2. To subsidize itineraries in the internal transport of the island, which are also connected with the itineraries of ships and planes.
3. To organize organized trainings of entrepreneurs in the field of tourism and catering (seminars, workshops)
4. To study the way in which young people will be kept on the island. Job creation.
5. Coordinated and careful cooperation movements by the locals to increase the season.

Tourism: Former Airport Director - Ioannis Kasimatis

Challenges / needs:

1. There needs to be a permanent and stable ferry and air connection all year round.
2. Young people not staying on the island - Population aging is the lack of job opportunities
3. Bad weather plays a role in isolating the island
4. There is no local transport, a local network between the villages
5. There is not enough water, let alone its use in agricultural activities
6. Drilling has also created a problem on the aquifer

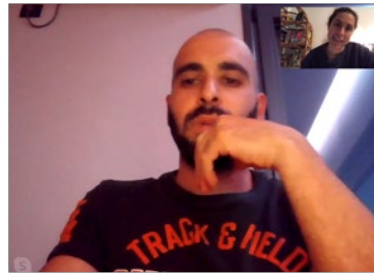
Strengths/Opportunities:

1. Improving the natural environment and maintaining and utilizing local products:
"Because there is a local culture in terms of food and local products, we can become better at using the way of daily nutrition. There are some things you can't find elsewhere and it is very worthwhile. To show in a way this kind of peculiarity, there are some foods that make them there. "
2. Nice natural environment yesterday and beaches
3. Hospitable population
4. Existing port and airport
5. Relatively well-organized road network (roads)
6. Local agricultural products and delicacies
7. Utilization of monasteries
8. There is permanent tourism by Greek immigrants from Australia mainly but also from other countries in America and Europe. A better treatment for them so that they have the opportunity to spend more and stay longer on the island. Conditions so that the island is attractive for the people who come to sit and see the places of their ancestors.

Possible solutions:

1. Care of the state and the local authority to ensure unimpeded transport and connection to and from the island
2. Improving the existing airport infrastructure so that larger aircraft coming directly from foreign countries can land.
3. Private service for transportation within the island
4. e-services: Vocational training with vocational training
5. Protection of the environment and utilization of local products
6. Improvement of the green that has been destroyed by fires with the help of agricultural engineering
7. Guidelines for Improving Agricultural Production
8. Water supply is not available in the summer water - Creation of tanks / reservoirs

Tourism: Cinematographer, Wedding Cinematographer - George Kalligeros



Challenges / needs:

1. In the primary sector, olives are sold at a low price, while in foreign markets there are products of lower quality at a corresponding price.
2. Honey has not been advertised as it should be. Its production is small and its value is low.
3. Even the optimization of the primary sector is not able to keep the youth on the island.
4. Offering services on the island, such as its own film industry, is limited.

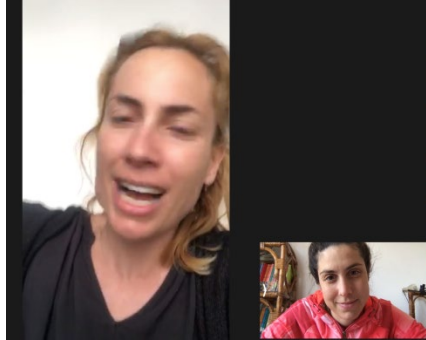
Strengths/Opportunities:

1. The nut is one of the products that goes well in sales and has conquered the markets.
2. The island has beautiful landscapes, remarkable entrepreneurs and with a common vision and the contribution of many professionals wedding tourism can be used as a form of tourism that will bring people to the island.

Possible solutions:

1. There is a dynamic to grow season for the island with alternative ways of tourism. Wedding tourism is also recommended, where people work before and after the event.
2. This will motivate young people to work in these businesses.
3. The "winter" will be shorter, and the months of June and September will be added to the summer season.

Retail Industry / Commerce: Shop Owner - Marie Koronaiou



Challenges/Needs:

1. Transportation has a negative impact in stores. There is no connection with other islands except Crete and Antikythera.
2. Young people are missing, and in general, from taking positions and responsibilities.

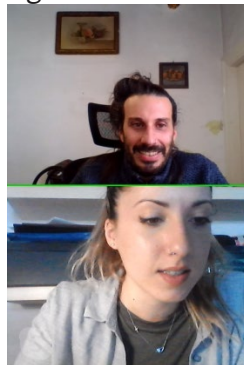
Strengths/Opportunities:

1. The island is rich in history and landscapes and every time one visits it one can discover new things. - The throne of Aphrodite.

Possible solutions:

1. The so-called island-hopping and connection to other islands such as Milos.
2. A trip to Kythera can be a place for a visitor to cruise.
3. Develop Antikythera to become a nearby destination where visitors can combine with Kythera.
4. Introduction of a fare for visiting local attractions.
5. To create advertising spots for tourism that will highlight the beauty of the island.

Local organizations: Kythera Trails – Rigas



Challenges/needs:

1. It is not possible for young people to build a future on the island.
2. Transportation problem inside and outside the island.
3. Water management problem.
4. Short tourist season.
5. There is no price competition in products compared to other areas.
6. The island depends mainly on tourism.

Strengths/Opportunities:

1. Local knowledge. The island has a long tradition, ethnographic potential and local knowledge and history.
2. Landscape diversity. Many different areas.
3. The island has a romantic identity.
4. Versatile identity and surplus position as it is located between 3 seas.
5. There is Domestic property, which keeps the island in good condition as no dramatic changes have taken place on the island but it is gradually developing.
6. There are several active people dedicated to the development of the island.

Possible solutions:

1. Creating jobs and encouraging young people in combination with infrastructure that will be made and young entrepreneurship will be the key.
2. Development of gastronomic tourism.
3. Capitalization of the natural environment. Sustainable tourism that connects with young entrepreneurship.
4. Ensuring the local community by increasing the revenue of the productive sectors.
5. Shielding of the island against climate change.
6. New smart management of agriculture and strengthening and protection of biodiversity, as the agricultural sector is the backbone of the local community.
7. Water management through small-scale interventions such as roadblock restoration.
8. Smart tourism development in months other than the May-October period and sustainable business operation during these months. Kythera Trails has 11 routes of 100 km and in collaboration with Paths of Greece and the World trade network they are working to develop the tourist season.

Local organizations: Kythera Porphyris Youth Association - Alexandra Lourandou, Maria-Konstantina Lourandou



Challenges/needs:

1. Lack of activities and interests for young people.
2. Population aging and lack of young people. The majority of young people leave the island after graduating and looking for work.
3. There is no local transport between the settlements.
4. Transportation to and from the island is not satisfactory.

5. The island is not shown, there is no proper advertising.

Strengths/Opportunities:

1. The local community is very active and active.
2. Unique natural beauty, with clear waters, beaches, forests, caves and landscapes.
3. There are many churches on the island besides the monasteries, as a result of which religious tourism is developing.
4. Ideal place for those looking for peace and quality of life.
5. Attracts alternative forms of tourism due to the tranquility, landscapes and activities it provides.

Possible solutions:

1. Turning interest and development of the primary sector.
2. Development and development of local cooperatives, which will lead to new jobs and youth employment.
3. Standardization of local products.
4. Cooperation between producers to improve the local market, ie to buy the products needed by the local community mainly in order to strengthen the locals.
5. Creating activities to attract tourism, such as water sports and racing.
6. Targeting professional tourism.

Agriculture: Agricultural Cooperative of Livadi, Kythera: Nikolaos Kasimatis

Challenges/needs:

1. No one has been seriously involved with livestock on the island. There is no veterinarian, no slaughterhouse, no production control and no animals. Production is at 20% -25%.
2. Soil cultivation is not done properly so it lags behind in agriculture. There is no agronomist to analyse the soils. The seeds are lost because there is no proper information.
3. Inadequate education and learning in the primary sector.
4. There is a constant change of teachers in the field of education, which makes it difficult for young people to be stable.
5. Population aging.

Strengths/Opportunities:

1. Variety of soil, good vegetation and moisture. Green island.
2. Fertile land with many rocks such as fruit stone and potassium (which explains why there are so many sweet products).
3. Quality of local products such as thyme, oregano, sage.
4. Oil. He has been awarded 2nd place nationwide as a pharmacist and the olive production is at 300-400 tons per year. Excellent taste due to the absence of chemicals and fertilizers.
5. Very good Hospital.
6. Very good nursing home.
7. There is a quality of life on the island.

8. Safe port.
9. In Kythera there are 8 species of plants that do not exist anywhere in the world.

Possible solutions:

1. Livestock subsidies. The state must lay the groundwork for the development of the primary sector through studies and seminars.
2. Create small barriers to properly manage water resources.
3. Cooperation of local associations to create jobs for young people.
4. Organic farming through financial support.

Agriculture: Agricultural Apiculture Cooperative of Kythera: Ioannis Protosaltis (founder)

Challenges/needs:

1. Depreciation of the farmer's profession. There is a lack of training in the agricultural sector and processing.
2. Transportation problem inside and outside the island.
3. Short tourist season. 2 months
4. There is no infrastructure for livestock and renowned farmers. The agronomists and veterinarians of Athens come only for the bureaucratic work as there are no locals.
5. There is no large production and modern activity. Everyone comes to see what is already there, things are not happening on the island anymore.
6. Money is spent on improving the island which does not take up space. There is no overall design, layout to know where everything can be done
7. There is no organized and proper promotion of products

Strengths/Opportunities:

1. There are many quality products due to the soil of the island. But that is where the human factor comes in
2. Natural beauty, history and myths.
3. Quality tourism.

Possible solutions:

1. Creation of educational seminars in order for young people to love the field.
2. Training in the field of tourism.
3. Evolution in product standardization and marketing teaching.
4. Organizing educational and training trips according to each profession. Steal ideas
5. Development in production, facilities and equipment.

Psychological analysis of students' psychosynthesis in order to find their appropriate