

Jano rides  
E-SCOOTER RENTAL SHOP

Tooka Pourgive

2020

# Jano rides

## E-SCOOTER RENTAL SHOP

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A Project submitted to the School of Tourism and Maritime Technology of  
Polytechnic of Leiria in partial fulfilment of the requirements for the Master's Degree  
in Sustainable Tourism Management

Project conducted under the supervision of  
Professor João Paulo Conceição Silva Jorge

2020

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# **JANO RIDES; E-SCOOTER RENTAL SHOP**

Ferrel, Peniche, Portugal

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# EXECUTIVE SUMMARY

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The successive research paper is a business plan proposal for JANO RIDES, an e-Scooter rental shop situated in the coastal Village of Ferrel, in Peniche-Portugal. Inadequate public transportation between different villages and towns of Peniche municipality, and excessive usage of private cars by both locals and visitors, has culminated to perpetual noise and air pollution in the center of Ferrel, and all along the main coastal road to the town of Peniche. It is only for a very brief period that the busy commute to Baleal, the most touristic beach of Ferrel, was interrupted, and it was due to none other than the coronavirus pandemic. Peniche as a coastal destination, and as a world-renowned surfing destination, has a long way to ameliorate in its sustainable tourism development, and especially, in the area of transportation. The ever-changing scope of tourism, and the needs of travellers, propels destinations to adapt and evolve. Sustainable development is becoming the foundation on which businesses are built, and its pillars, the environment, economy, and society, are what they thrive off of. The theoretical positioning of the following paper is assigned through the reimagining of the sustainability model from the old, which the three pillars are represented as equals, to one which clearly differentiates between the environment as the sustaining source, and the interactive systems of society and economy. The business plan hereon is not only a framework to meet the tourist demand for individualized transportation, but it also is an effort to demonstrate to the community that there are alternatives for movement around the municipality, that, if adopted by even a small portion of the inhabitants, will drastically change the ambience of the entire municipality of Peniche for the better, and set the tone for future generations to follow suit.

Keywords: Sustainable development; Micro-mobility; Tourism; E-scooter; COVID-19, Pandemic

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# ACRONYMS

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AICEP: Agência para o Investimento e Comércio Externo de Portugal (Agency for Investment and Foreign Trade of Portugal)

AMT: Autoridade de Mobilidade e dos Transportes (Mobility and Transport Authority)

ANA: Aeroportos e Navegação Aérea (Airports and Aerial Navigation)

CCDRC: Comissão de Coordenação e Desenvolvimento Regional do Centro (Commission of Coordination and Regional Development of Centre).

CDC: Centers for Disease Control and Prevention

CIVITAS: City - Vitality - Sustainability

COVID-19: Corona Virus Disease 2019

EEA: European Environment Agency

EU: European Union

E-Scooter: Electric Scooter

E-Visa: Electronic Visa

GDP: Gross Domestic Product

GHG: Greenhouse gases

GVA: Gross Value Added

IATA: International Air Transport Association

IEC: International Electrotechnical Commission

INE: Instituto Nacional de Estatística (National Institute of Statistics)

IUCN: International Union for Conservation of Nature

OECD: Organisation for Economic Co-operation and Development

SARS: Severe acute respiratory syndrome

SDGs: Sustainable Development Goals

SME: Small and Medium-sized Enterprise

SUMPs: Sustainable Urban Mobility Plans

SWOT: Strengths, Weaknesses, Opportunities, and Threats

TBL: Triple Bottom Line

UK: United Kingdom

UN: United Nations

UNDP: United Nations Development Program

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNWTO: United Nations World Tourism Organization

USA: United States of America

VAT: Value Added Tax

WHO: World Health Organization

WTTC: World Travel & Tourism Council

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*“We stand now where two roads diverge ...The road we have long been traveling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road — the one less traveled by — offers our last, our only chance to reach a destination that assures the preservation of the earth.”*

*-Rachel Carson (Silent Spring, 1962)*

# I. INTRODUCTION

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The steadily growing global economy came to a sudden halt in 2020 as the COVID-19 (Corona Virus Disease 2019) pandemic swept across the world, shutting entire industries down, closing virtually all borders, and putting a temporary pause on all non-essential human activity. Yet, beneath the devastation, confusion, and ongoing uncertainty, humanity was given new grounds on which only innovation, and out-of-the-box thinking can thrive. The greatest occurrence amidst the chaos has been the small break which nature was given during the temporary lockdowns. The air became fresh, and the waters became clear. The world has changed forevermore, and although some await the return to normalcy after the flattening of the curve, or the discovery of a vaccine, what was once considered normal, is no longer. In fact, normality in the context of a faulty consumption and production pattern that has depleted the earth's natural resources should cease to be, and instead, our efforts should collectively stir towards the construction of a truly sustainable society.

Likewise, when we take breaks from our real lives, and travel abroad to feel refreshed, and to have our minds cleared, let us not disregard the impact we have on our surroundings. Little acts such as littering the streets or coughing without covering our mouths can cause irreparable damage. Similarly, although visitors come and go, the air pollution produced from the vehicles that carry them around, lingers behind. It is with the intention of not only meeting the needs, but also, raising the awareness of the tourists that the following business plan proposal is formulated.

JANO RIDES is a concept start-up electric kick-scooter (e-scooter) rental shop situated in the heart of Ferrel, a village of the municipality of Peniche, on the silver coast of Portugal. JANO RIDES aims at establishing the foundation for transition from the old means of transportation, that is, fuel-based vehicles, to one which is pollution-free and COVID-safe, for tourists visiting Peniche. Initiating positive change in the community towards sustainable living, as well as providing a hassle-free mode of transportation are what inspired this business plan.

## 1.1 Etymology

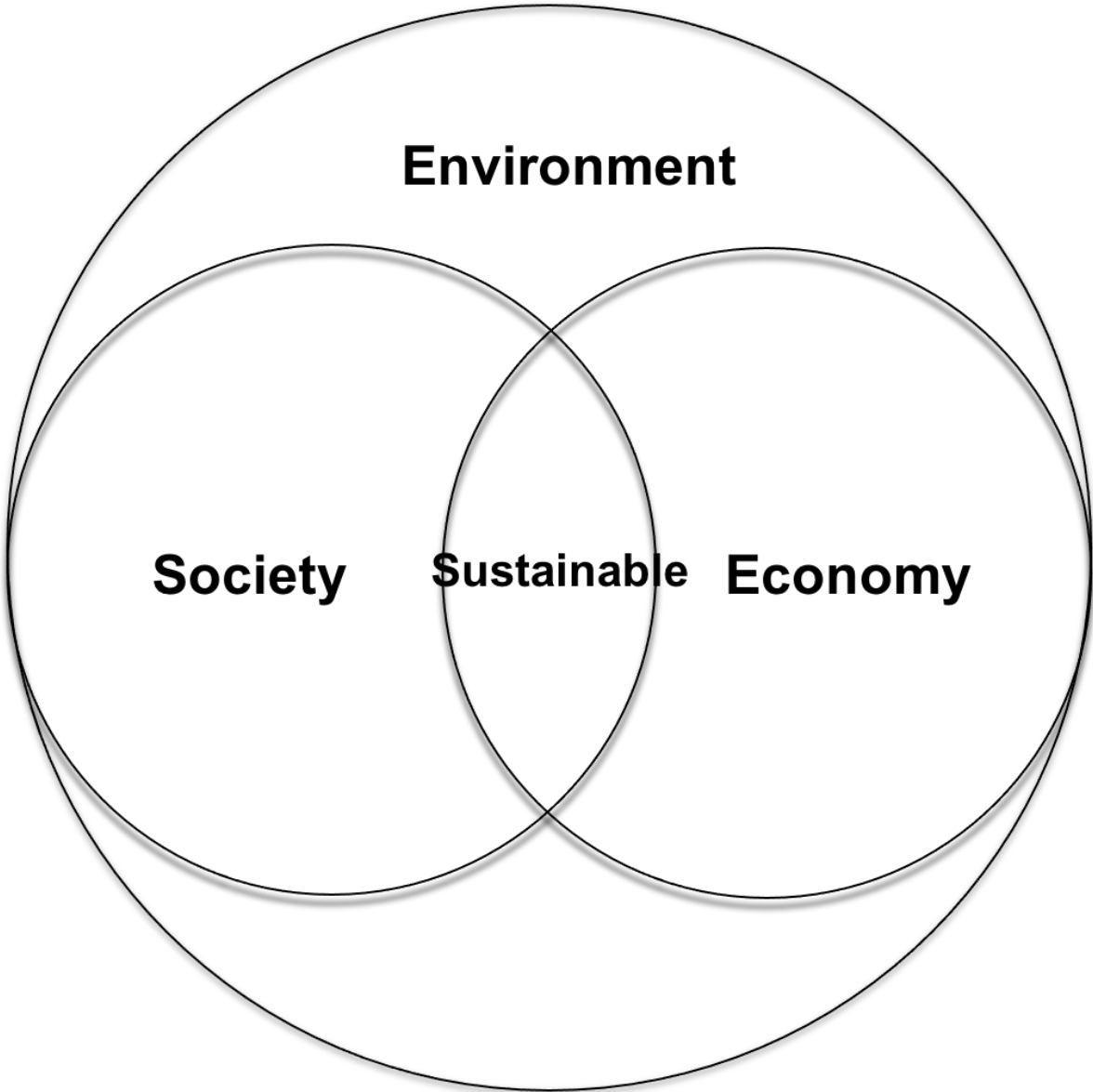
JANO is the Portuguese word for Janus, the double-faced Roman god of gates, and transitions. Janus was not only the keeper of doors, but he also oversaw periods of change from the old, to the new, and as the name suggests, the first month of the Gregorian calendar, January, is named after him. Oftentimes he's associated with motion and travel (Andersonlock 2020, Greek mythology, 2020).

## 1.2 Epistemology

The epistemological basis of the following business plan is sustainable development. The term 'sustainable development' was first defined in the United Nations Brundtland report as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (UN, 1987). All challenges and concerns regarding sustainable development is addressed, however, the time in which it was written sheds light on society's perception regarding the energy sector; the world was and is petrol-centric. The report states that "at the present, no sources which are dependable, safe and environmentally sound is at hand to meet our future energy needs" (Ibid.).

Sustainable development is often represented by three interdependent dimensions of economy, society and environment, otherwise known as the "Triple Bottom Line" (TBL), a term initially coined by John Elkington (1997) in his book '*Cannibal With Forks: The Triple Bottom Line of 21<sup>st</sup> Century Business*' (MacDonald et al., 2004, Stoddard et al., 2010, Coupet et al., 2014, Alhaddi, 2015, Ferraz de Campos Jr., 2017, Fischbach et al., 2017). Its representation by the three pillars, and its reflection across both intergenerational and intragenerational spectrums are two main identifiers of sustainable development. Nevertheless, sustainable development is a concept with multiple interpretations (Macdonald et al., p. 245, Sneddon, 2000, p.522, Barnard et al., 2015, p.183).

The three pillars of TBL "cannot be seen as equivalent" to one another; the economy and society are socially constructed spheres, which their existence and survival is dependent on its limited sustaining source, the environment. The global trend for the past century has been to give greater importance to the economic dimension, a short-term profit deeming mindset (IUCN, 2006, p.4, Diesendorf, 1999, p.4). In this regard, the traditional TBL often represented by three overlapping circles is replaced by 2 overlapping circles representative of the co-constructed spheres of society and economy, encompassed by the environment. As such the two pillars co-exist and interact as by-products of the environment, and not the other way around. Reimagining the TBL pillars is a modest but crucial step in alternating the underpinning ideals in sustainable development, and its derivative, sustainable tourism management.



*Figure 1 JANO Rides Pillars*

## 1.3 Overview

With a better understanding of this paper's position on sustainable development, a set of travel-related trends that have either amalgamated or are developing since the onset of the pandemic, are discussed in the second chapter. This is followed by the conceptualization of sustainable tourism development and the position of transportation in tourism. The third chapter provides a comprehensive analysis of the business location, in terms of its potential as a tourism destination on international, national, regional, and local levels. In the fourth chapter, potential competitors in the area are looked at, and two key interviews are presented. The micro-mobility industry is examined in the fifth chapter, and a comparison is made between potential products for the business. In the sixth chapter, the main needs and objectives of the business, as well as the details of the plan itself are disclosed. The study of the market in the seventh chapter is carried out by a SWOT<sup>1</sup> analysis, followed by the classification of the target market segment. In the eighth chapter, a four-year financial projection plan is proposed before concluding the paper in its last chapter.

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<sup>1</sup> SWOT stands for Strengths, Weaknesses, Opportunities, and Threats.

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## II. CONTEXT: TOURISM TRENDS

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### 2.1 Global Tourism

Tourism is one of the leading sectors in the global market which contributes to entrepreneurial activities and economic growth. In 2018, global tourist arrivals increased by 5%, reaching 1.4 billion in total, and the number was expected to rise. (UNWTO, 2019, p.2). Some of the driving forces behind this growth are increased salaries and the resulting improved economy as reflected by the world GDP (Gross Domestic Product) which grew by 3.6%, a higher demand for air travel as fares are reduced by 60% over the last 2 decades, and easier Visa processing systems, mainly, e-Visas and Visas on arrival (Ibid., p.4). The tourism sector contributed 10.4% to the global GDP, and also to 1 out of 5 jobs created in the last 5 years and, is responsible for 10% of total global employment (WTTC, 2019, p.1, 4).

In terms of earnings and arrivals, Asia and the Pacific led the world with a 75% increase, followed by Europe, with a 5% increase. The countries leading in arrivals are France, Spain, the United States of America, China, and Italy. The highest earner is the United States, followed by Spain and France (UNWTO, p.6, 9).

The numbers mentioned here were expected to rise, however, the recent Coronavirus outbreak has changed the fate of all countries, with travel bans and cancelations, quarantines of affected areas, and the shutdown of tourism attractions and activities in place. In fact, recent data predicts a fall of 20-30% of international arrivals in 2020, that is an equivalent of about 6 years of growth lost. Furthermore, nearly 120 million job losses are at risk, as well as a decline of about 1 trillion US Dollars in export revenues (UNWTO). Sudden global occurrences such as the coronavirus pandemic, which have an immediate effect on market volatility are oftentimes predicted. However, poor crisis management of the current tourism industry, which is in fact one of the main causes of the fast spread of the disease across the world, has led to the downfall of the sector. Its recovery and maintenance will depend on the formulation of a long-term plan of action which is built around the principles of sustainability.

## 2.2 Tourism trends

Paradigm shifts within the industry, namely technological advancements, access to information, and the expansion of the middle class, amongst others, have resulted in new tourism trends to develop within the last two decades. As a result, destinations are forever modifying and evolving, booking trends are varying, and the central character, the tourist, is also diversifying. The following section presents some of the biggest tourism trends for destinations, bookings, and travelers, leading up to 2020, followed by foreseen trends that will develop as part of the deconfinement.

### 2.2.1 Destination trends

As the tourist's preference evolves, so does the environment built for it, the destination. There are four main trends that have propelled changes within the destination:

#### **Experience tourism**

The biggest tourism trend in the last 2 decades has been a shift towards experience-based activities. Tourists seek adventures, sports, and learning experiences in cultural contexts and natural environments of the destinations. As such, tourists can either learn new hobbies, or travel to pursue their passions (World Tourism Organization, 2001, p.19) Moreover, tourists are willing to pay more for experiences than for physical items. The 2019 travel trends have unveiled the most popular sought-after experiences as those which are unique, ecological, local, and adventurous (Alona M. et Al., p.10).

#### **Health consciousness**

The next major tourism trend, which is a byproduct of easily accessible information is that tourists are concerned with their health and wellbeing. As a result, many accommodations have transformed from the traditional hotels, into spas, and resorts, and include gym facilities (World Tourism Organization, 2001, p.19)

#### **Infrastructure**

Tourism destinations have also enhanced their infrastructures to welcome all target groups that were previously disregarded, whether due to legislation, or for profit. For instance, more access and structures are built for handicapped tourists. There are also many tourism packages offered to the ageing baby boomers, who are mostly in retirement (Ibid., p.20).

## **Environmental consciousness**

With increased knowledge, tourists have become more ecologically and socially conscious, and choose destinations that are clean, safe, and embrace the principles of corporate social responsibility. For instance, visitors are likely to avoid destinations in which child trafficking, air pollution, and armed conflict is prevalent (Ibid).

### **2.2.2 Booking trends**

The process of booking has also evolved greatly, as it has become impersonal, and digital. There are two booking trends which are prominent:

#### **Free agents**

Tourists no longer rely on tourism agencies to advise and carry out bookings. They in turn have become their own agents. The booking process is made online, and in most cases instantly on the host websites. Intermediary channels continue to be a popular means for booking as they offer facilitated online platforms on which customers are able to compare different accommodations and filter through preferences. Some of the leading online travel booking companies in 2018 are Viator which is hosted by Trip Advisor, Expedia, Civitatis, and Get Your Guide (Alona M. et Al., p.13).

#### **Instant messaging**

E-mails and phone calls have for the most part been replaced with direct communication through instant messaging applications. Applications such as WhatsApp, or its Chinese counterpart, Wechat, are go-to modes of direct communication with clients (Ibid., p25).

### **2.2.3 Traveller trends**

The rise in individualism has changed the family dynamics and traveling in groups. Moreover, the post pandemic social distancing regulations will further emphasize individual travel:

#### **Bleisure (Business + Leisure)**

More and more business travelers are including leisure into their schedules. As such, business travelers are extending their trips to include downtime (Expedia, 2020).

#### **Solo females**

The brave and bold solo male traveler is no longer trendy. Solitary female travelers have increased amongst both the younger generations and the baby boomers. In fact, 67% of solo travelers are females (Alona M. et Al., p.35).

## 2.2.4 Developing trends

Given the outbreak of the COVID-19 and the repercussions of the pandemic on the global market, and most gravely, on the tourism industry, it is necessary to incorporate trends that will develop as part of the deconfinement process. As such, four trends have been identified:

### **Restrictions**

The post-corona era will likely see tourists easing back into traveling; however, it will involve heavy restrictions and excessive control of each person depending on their nationality, and their departure and destination locations, and how badly the referred places have been hit by the virus. Moreover, new regulations will be imposed on travelers such as mandatory use of masks in public areas, hand disinfection, measuring of temperatures before entering the airplane, and quarantining of anyone showing illness-related symptoms such as coughing. Tourism businesses will have the autonomy to refuse entry to sites, hotels, restaurants and other locations to travelers they consider to be of high risk (ANA Aeroportos de Portugal).

### **Sanitization**

The entire tourism industry, from the airports, all the way to the monuments of destinations have already undertaken full sanitization and will continue to be disinfected regularly. This means that all relevant businesses have additional investments in cleaning and sterilization products.

### **Social distancing**

New guidelines will be introduced for all tourism businesses and for tourists. Group activities will be downsized or canceled altogether. Public spaces will impose a limitation on the number of visitors. The hospitality industry will also limit their guests, especially in hostels where rooms are shared. Indoor activities will also be greatly reduced, as such, cinemas, theaters, concerts, and night clubs will be altered to open-air events with imposed distancing between people.

### **Micro-mobility**

As a result of the pandemic outbreak, tourists will seek individual transportation as much as possible to avoid contact with crowds. Cars and scooter rentals, as well as purchase and rentals of bicycle and kick-scooters which are both electric and regular, will increase. Micro-mobility will no longer be a trend, but it will become the norm.

## 2.3 Sustainable Tourism Development

“The study of the tourist presupposes a system of social activities and signs which locate the particular tourist practices” that contradict non-touristic ones (Urry & Larsen, 2011:3, cited in McCabe, Challenges in Tourism Research, 2015, p.19).

The tourist is perhaps the emblem of the postmodern individual, one who through the use of technological advancements has gained independence from the tourism agencies that popularized the phenomena of tourism in the first place, thus obscuring the “differences between tourists and travelers” (McCabe, p.20).

Anti-tourist sentiments have been observed at different times in history, but the 1974 oil crisis was the initiator for further criticism of the tourist as a wasteful polluter. The Post Tourist has blurred the cultural and social discrepancies through changed consumption behaviors (Ibid., p.22). A resulting paradigm shift has been made towards sustainable tourism, by which the creation of small local business reduces the environmental impacts of tourism, whilst wages and life quality are raised (Ibid., McCool, 2015, p.224).

Consequently, TBL has become a mainstream tool used by industries to present their environmental, economic, and social impact to stakeholders, which in turn has become a “business performance framework measure” (Wight, Critical issues in ecotourism, p.216). Under TBL, the success of an industry is measured beyond its financial gains, as products and services are generated in such a way that “all stakeholders’ interests have been addressed” (Lee, 2007).

The notion of ‘progress’ is often seen in a positive light, and progression of any kind is deemed profitable, beneficial and required. For the past 200 years, humanity’s progression has been the amelioration of machines, to further comfort, with focus only on machinery at hand, and produced from the industrial revolution onwards. The paradigm finds itself in a ‘progress trap’ as it has neglected the development of the ecosystem as a whole. (Wright, 2013)

Similarly, when sustainability in tourism is characterized only by “community level intervention”, reaching a progress trap is likely because other areas of sustainable development will be impacted (Mccool, p.228). This is inevitable as short-term interests outweigh long-term consequences, and in doing so, other sectors that contribute to tourism development are neglected. The traditional tourist-centric development plan that assumes the world system to be “predictable, linear, ultimately understandable, and basically stable” is therefore not sustainable in the long run (Ibid., p.229).

Correspondingly, one of the key concerns for sustainable tourism is financial stability, yet the underlying economic dimension relies on short-term markets. At the same time, long-term conservation of the environment and social satisfaction is at stake. The interconnected nature of the three dimensions of sustainability, and all the operating sectors that define them creates a domino effect on a global level. A perpetual cycle of cause and effect plays out in the system whereby the actions of one actor produces reactions elsewhere. This is especially prevalent in 2020, a time during which we have witnessed the shutdown of the global social system due to the outbreak of coronavirus, from the town of Wuhan, China.

Tourism is the sole economic sector that gives “trading opportunities for all nations regardless of their level of development” which makes it a driving force for global development (Wood, *Critical Issues in ecotourism*, p.159).

Sustainable Tourism Development, derived from the concept of sustainable development, is defined as meeting the needs of the present-day tourists and destinations, whilst maintain and improving future prospects economically, socially, and environmentally (UNWTO, 2001). Sustainable tourism development should encompass the three dimensions of sustainable development, be responsive to changes in the environment, both the natural and man-made, and contribute to community building (Simpson cited in Björk, *Critical Issues in Ecotourism*, p.36).

The benefits of tourism include, but are not limited to, new employment opportunities through the establishment of new enterprises, improved infrastructure, market expansion, and enhanced environmental awareness. The downside of tourism consists of increased noise, air and water pollution (UNWTO, 2001, p.30). At this time, we may also add the spread of disease.

The United Nations Conference on Sustainable Development held in 2012 in Rio de Janeiro gave birth to the Sustainable Development Goals (SDGs) which have replaced the previous Millennium Development Goals. Currently there are 17 key goals to overcome global issues such as poverty, inequality, and environmental degradation (UNDP). Goal 11 aims at the creation of “sustainable cities and communities” as half of humanity resides in cities. In addition, although cities cover only 3% of the earth’s land, they consume nearly 80% of energy and are responsible for 75% of carbon emissions. In fact, since 2016, 90% of those living in urban areas breath polluted air, which has caused 4.2 million deaths (UN, Goal 11, Make cities inclusive, safe, resilient, and sustainable).

## 2.4 Transportation in tourism

Conventional tourism is often divided into the sectors of “transport, travel trade, accommodation and catering, and tourist attractions” (Lickorish et Al., p.102). These sectors are interconnected as the tourist must purchase through travel trade the mode of transport, which takes them to the accommodation, so that they may visit the tourist attraction. The following section will focus on transportation within the tourism sector.

Given that all forms of tourism, be it local or international, requires for the tourist to travel to the destination, transportation is a necessity to sustain tourism destinations, whilst being detrimental to environmental sustainability. Transport is administered by modes of 1) road, through buses, coaches, cars, and cycles; by 2) rail, through trains, metros, and trams, by 3) air, through commercial and private airplanes, and finally, by 4) sea, through cruise ships, and ferries (Ibid., p. 103).

Transportation is not only the means by which the tourist arrives at the destination, but it can also be part of or the essential tourism experience; cruise ships and safaris are such examples. Transportation is a very complex and expensive industry; building roads and rails, manufacturing vehicles, ships, and planes, and their maintenance and delivery are all time consuming and require large amounts of human and natural resources. Technological advancements such as the introduction of high-speed trains, faster planes, and automatic gear shift cars made transportation much easier, trips shorter, and travel more accessible to the wider community of middle and lower-income social classes, thus introducing mass tourism to the global market. When deciding on a transportation mode, tourists often consider the duration, cost, and quality of the services offered. In response, transportation companies offer a range of services to suit different consumer needs; business and economy class divisions of airlines is one such example (Ibid., p.4, 5).

Moving forward, the biggest challenge for transportation companies will be compliance with social distancing rules and the prevention of disease outbreaks amongst passengers. Lack of mitigation efforts by transportation companies at the onset of the spread of the virus, highly contributed to the outbreak evolving into a global pandemic. An example would be the case of “the Diamond Princess cruise ship, which was quarantined in the port of Yokohama, Japan, on February 3<sup>rd</sup>, 2020” (CDC, March 2020). 3,711 passengers and crew were aboard, of which, 712 tested positive for the coronavirus, and 9 died (Ibid.).

Currently in Portugal, the law mandates for all forms of public transportation, a maximum occupancy rate of 2/3, and all passengers are obliged to wear a face mask (AMT,

May 2020). In this light, it is likely that when tourism businesses are reopened, and tourism-related travels are permitted, many tourists will avoid public modes of transportation and will rely on individual modes of transport such as car and bicycle rentals.

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## III. SITE ANALYSIS

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### 3.1 A surfer's paradise

#### 3.1.1 International - Portugal as part of the EU

Officially known as the Republic of Portugal, its mainland is uniquely situated in “Europe’s West Coast, on the Iberian Peninsula”, with Spain as its neighbour to the North and East, and the Atlantic Ocean to its West and South (AICEP, 2017, p.3).

Portugal has 7 main regional divisions; the North, the Centre, the Lisbon Metropolitan Area, Alentejo, Algarve, and the Autonomous Regions of Açores, and Madeira (AICEP, 2020).

Technologically, Portugal has an advanced connectivity network, ranked 5<sup>th</sup> in the European Union (EU). In terms of infrastructure, it has well developed road networks covering 14,310km, it includes 15 airports reaching 149 destinations globally by air, and it has 9 main maritime ports (AICEP, 2017, p. 4).

As part of the EU, Portugal’s resident population is nearly 10.3 million, and its unemployment rate has increased to 6.7% (INE, 2020). Due to the effects of the COVID-19 pandemic, Portugal’s exports and imports have reduced by 30% and 40.2% respectively (Ibid.)

#### 3.1.2 National- Portugal

Portugal is one of the leading tourism destinations in Europe with a variety of offers due to its unique geo-cultural context; in fact, for the last 6 consecutive years, ‘Turismo de Portugal’ has won the award as Europe’s Leading Tourist Board (World Travel Awards, 2020). In 2019, overnight stays in the country had steadily risen to just over 21 million, increasing the total revenue to 4 billion Euros (travelBI, 2019). However, similar to all other major tourism destinations, Portugal’s tourism sector has been heavily affected by the pandemic, with overnight stays reducing by 65.9% between January and June of 2020, and total revenues dropping by 70% for the same period (Ibid., 2020).

### 3.1.3 Regional- Centre

The Centre region, or otherwise called Central Portugal, contains some of the biggest industrial activities in the country. In fact, it comprises nearly half of the country's Gross Value Added (GVA) in the forestry sector, and 49% of national GVA in the paper industry. Moreover, it holds 43% of the country's GVA in household and construction materials production. Finally, around 8% of the Centre region's GVA consists of agriculture, animal husbandry, fishing, and food production (CCDRC, *Especialização produtiva da Região Centro*, 2020, p.4).

Tourism development projects are also growing in Central Portugal. With a budget of just over 700,000€, the project 'AccessTUR Centro de Portugal' was launched in 2019, which involves the 8 municipalities of Aveiro, Beira Baixa, Beira e Serra da Estrela, Coimbra, Leiria, Oeste, Médio Tejo, and Videu Dão Lafões. The project aims at granting eligibility to tourism offers and demands, developing the overall tourism potential of the region, as well as supporting and raising awareness about people with special needs and disabilities (accessible Portugal, 2017).

In terms of innovation, the region was given the high score of 91,6%, making it a strong representative on the Regional Innovation Scoreboard of the European Union (CCDRC, *Barómetro Centro de Portugal*, 2020, p.18).

In 2016 alone, 73.6% of the electricity in the Centre region was provided by renewable energy sources, of which 69% was wind energy, and 30.8% hydropower (Ibid., p.63). Nonetheless, in 2018, the region consumed 27.4% of the nation's primary energy sources, equivalent to 6.2 million tons of petroleum (Ibid., p.66).

### 3.1.4 Local- Peniche

Located on the Atlantic Ocean, the municipality of Peniche is part of the district of Leiria and is in the middle of Portugal's silver coast. The peninsula is surrounded by rocky lime cliffs dating back to 20 million years ago (Turismo Centro Portugal, 2020). The region has several ideal surfing beaches; these are "Supertubos, Consolação, Molhe Leste, Lagide, Almagreira, Belgas, Porto Batel, and Praia Norte" (Center of Portugal).

Peniche is primarily a nature tourism destination. It has traditionally been one of the central fishing ports of Portugal, with its main economic activity being fishing, and agriculture (EU commission, 2009). It is only in the last decade, since the introduction of the MEO Rip Curl Pro Portugal international surfing competitions, founded in 2009 that the region became a surf destination (visitportugal).

The most captivating and important natural attraction in the region are the uninhabited Berlengas Islands, situated about 12.2km away from Peniche. In 2011, the Islands, alongside other smaller islands and rocks, as well as the city of Peniche were classified as the Berlengas Biosphere Reserve (UNESCO, 2017).

Some of the most well-known heritage sites are the Fort of Peniche, the Cabo Carveiro Lighthouse, Fort of Consolation Beach, and the Fort of São João Baptista (Câmara Municipal de Peniche, pp. 67-72).

All parishes within the municipality are interlinked by a network of roads. A primary road is the EM 578 which starts at the entrance of the city of Peniche and stretches along the northern littoral line of sand dunes until Casais do baleal, called Avenida da Praia, and turns towards Ferrel along Avenida do Mar, and continues south towards Atouguia da Baleia on Rua Nossa Senhora da Guia, and ends at EN 247, in Alto da Sexeira (Ibid., p.32).

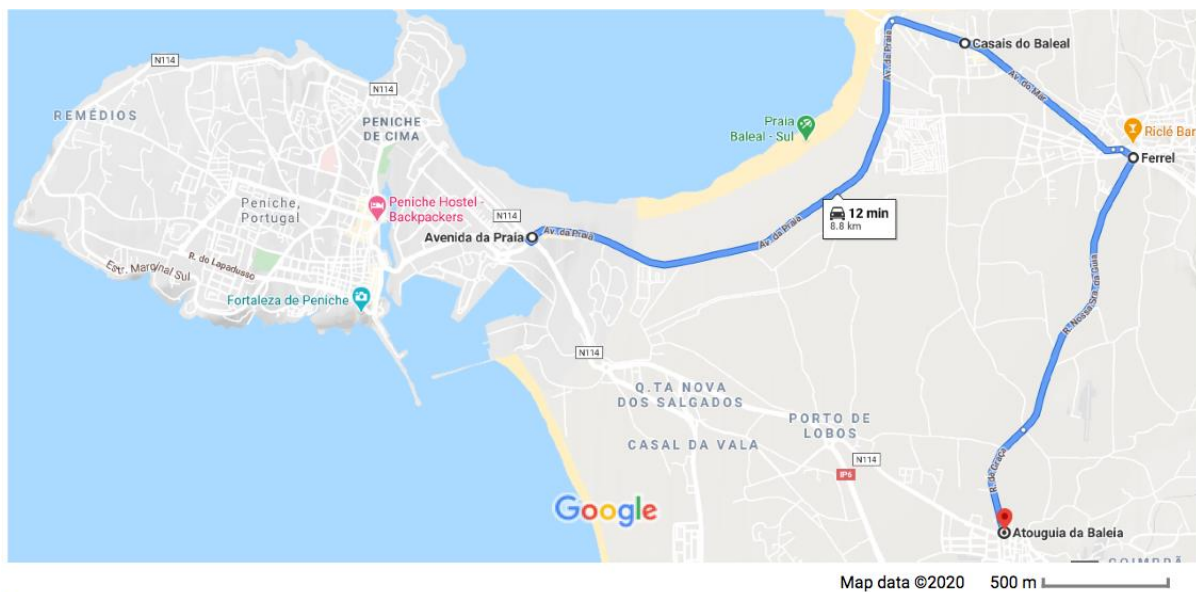


Figure 2 Map of Av. da Praia 2520-206 Peniche to Atouguia da Baleia (Google Maps)

## 3.2 Site Planning

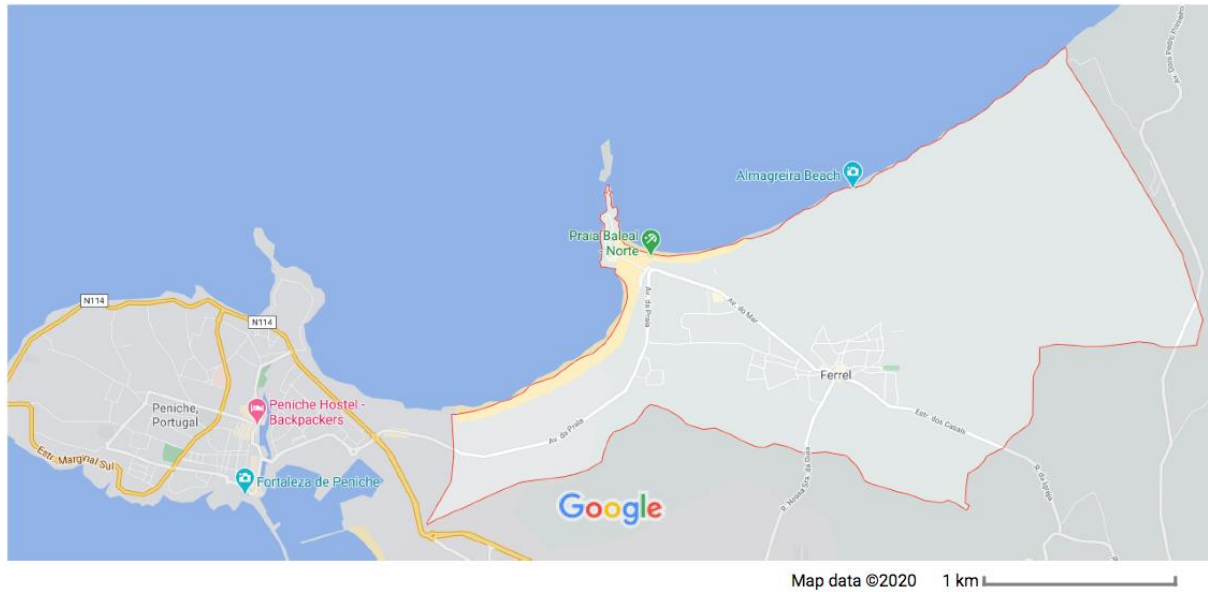
### 3.2.1 Location

One of the main parishes of Peniche, with an area of 13.79km<sup>2</sup>, is the village of Ferrel, which consists of mainland Ferrel, Baleal, Casais do Baleal, and Baleal Sol Village I & II (Freguesia de Ferrel, Caracterização). With a mere population of 2,649, Ferrel has quickly transformed from an agriculture-based economy, to a tourism destination, having some of the best accommodations, restaurants, and surf schools in the municipality (ibid.).

### 3.2.2 Maps



Figure 3 Map of Ferrel satellite image (Google Maps)



*Figure 4 Map of Ferrel borders (Google Maps)*

Historically, Ferrel has not only had a very important role for the entire western region of Portugal, but it has also influenced the national environmental movement of Portugal. Between 1976 and 1982, the citizens of Ferrel initiated a series of manifestations, movements, debates, and festivities to fight against ongoing projects for the installation of a nuclear plant in the area; which subsequently ended in the nuclear project to be abandoned altogether, and for the targeted area to be used for agricultural purposes (Ibid., Resenha Histórico).



*Figure 5 Ferrel Agricultural fields 1 & 2*

Ferrel's centre is a strategic location as it is situated in the middle of the path going to both Baleal and Atouguia da Baleia. Nearly all businesses that cater to tourists and locals such as supermarkets, restaurants, cafes, beauty salons, ATMs, small shops, the post office, the church, and pharmacies, are all located in the center, in very close proximity. As the majority of traffic is concentrated here, it is only logical for any new business to remain in the vicinity. Given the seasonal nature of tourism destinations, not all businesses endure, especially after the pandemic, and as a result, there are a few shop spaces that have been emptied and are up for rentals.

The chosen shop is situated at Rua das Escolas n° 12, 2520-131, a relatively spacious area, which previously operated as a Barbershop.



Figure 6 Map of R. das Escolas, 12, 12520-131 Ferrel

As seen in Figure 6, the chosen business location is accessible by road, and is in close proximity to other amenities, which increases exposure to visitors. The location of the shop is ideal as it directly opens onto the road which attaches to the main road going directly to Baleal beach, pointed with an arrow.



*Figure 7 Baleal Island view 1 & 2*

An old mode of transportation, the donkey, is the symbol of Ferrel, and as part of the annual week-long summer festivities called 'Festa de Ferrel', Donkey races are held in the center of the village. The festival is very well-known and attracts thousands of visitors as the entire center is set up with a big stage for various famous singers and bands to perform on, all night long. Other spectacles take place throughout the week as well, such as, folklore, and theatrical performances, and stunt riding shows. The 2020 Festa de Ferrel was cancelled due to the pandemic.

The land expanding around and alongside the littoral coast of 'Avenida da Praia' are used for agricultural purposes, and the space in between the parishes are free of construction sites. There is however immense pressure from private entities to occupy these territories (Câmara Municipal De Peniche, p. 59).

Disputes have been taken place over the municipal plan that aims at redirecting the traffic that goes through the center of Ferrel, to the outskirts of the village, and through the agricultural areas. The most controversial part of the proposal is the plan to build a largescale hotel at the entrance of Baleal beach (Câmara Municipal de Peniche, Planta Ordenamento Ferrel, 2019). In response, on 25<sup>th</sup> of September 2020, the farmers took over the center of Ferrel in their tractors, alongside many residents in their cars and marched to Peniche and back in protest (Freguesia de Ferrel).



*Figure 8 Festa de Ferrel 2019 Stunt riding show*



*Figure 9 Festa de Ferrel 2019 Donkey race*

Although small in size, Ferrel is a village that has gained a lot of popularity amongst visitors and foreigners who like to settle near the scenic beaches, without dealing with the hustle and bustle of the city. One main concern about staying in Ferrel however, is inadequate transportation, which will be further discussed in the following chapters.

All in all, Ferrel has all basic necessities, and is a safe alternative location to the city of Peniche for surfers and beach goers.

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# IV. COMPETITION ANALYSIS

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## 4.1 Transportation in Peniche

Currently the peninsula of Peniche has limited public transportation available, with only a single bus line that connects its major parishes of Atouguia da Baleia, Ferrel, and Peniche, but not Serra d'El-Rei, for which a different bus line is available. Moreover, the bus hours are irregular with wide gaps in between, the last of it being around 6pm (Rodoviária do Oeste).

### **Taxi**

There are taxi services available in the area, with a central taxi station located in Peniche. However, Taxis are costly. For instance, a ride from Ferrel center to Peniche center, covering around 8.4 km, costs an average of 10 Euros.

### **Car rental**

Car rental services are available in Peniche and Baleal, but, a valid driver's license is required, and also, the payment of a caution fee is necessary in the event of damages caused to the vehicle.

### **Motor Scooter rental**

There is one shop in Ferrel which rents out automatic motor scooters, as well as motor homes, and caravans. However, there are few conditions such as the requirement of a valid driver's license, being above 18 years old, and paying a caution fee of 500 Euros (wildsidecampers).

### **Bicycle and Skate rental**

There are bicycle and skate rentals available throughout the Peninsula, namely by surf camps, and hostels.

### **E-bicycle rental**

So far, Bukubaki Eco Surf resort, situated in Atouguia da Baleia, is the only place which offers electric bicycle rental services to tourists in the region. The bicycles have fat tires as the name suggests, the "Fantic Fat E-bikes" are built for off-roading and nature paths, ideal for exploring the coastal zone (Bukubaki).

The table below was assembled based on the information provided by businesses offering two-wheeled vehicles in the Peniche region.

Table 1 Peniche micro-mobility pricing

Place & Location	Bukubaki Eco Surf Resort Atouguia da Baleia		Peniche Surfcamp Baleal	Wildsidecampers Ferrel		G3storesurfcenter Peniche
	Off road E-bikes	Skate	Bicycle	Bicycle	Motor Scooter	Bicycle
2 hours	-	10€	5€	8€	15€	-
4 hours	40€	-	-	-	-	6€
8 hours	-	-	-	-	25€	-
Half day	-	15€	10€	10€	-	-
1 day	50€	20€	15€	15€	30€	10€
3 days	-	-	29€	35€	75€	25€
5 days	-	-	-	55€	110€	-
1 week	-	50€	59€	70€	150€	50€

As shown in Table 1, options for two-wheeled vehicles are available to tourists for transportation around the region. There however is a scarcity in vehicles which are both environmentally sustainable, and effortless to use. The E-bikes offered by Bukubaki are one such example of vehicles which take both the ecological and the practical side into consideration. Even so, there are a few issues with their rental service; accessibility, affordability, and physicality. The resort is in a nature area located 3km away from Ferrel and heading towards Serra D'El Rei. As mentioned previously, public transportation is infrequent, and traveling to the resort by bus is nearly impossible. The rentals are therefore available to guests staying at the resort, or for those who already have a means of transportation to the resort, by car or taxi. Secondly, as noted in the table, there are limited time and price options for the rental, starting at 40 Euros for four hours, and 50 Euros for the entire day, which are even more costly than Motor Scooter rentals running on fuel. Finally, whether electric or not,

off-road biking is an activity which requires a somewhat robust physic. A minimum of four hour cycling through nature paths and coastal sandy areas needs physical endurance, which is something that not every tourist is cut-out for.

Skateboards and bicycles are the next best option for tourists who wish to discover the area, both of which are ecologically sound choices. Nevertheless, the tourists opting for either will likely be seeking some type of physical exertion in addition to having a means for transportation. Both activities depend on previous skills, and physical equilibrium, but in general, skateboarding is more dangerous.

In conclusion, there are several modes of transportation available in Peniche for tourists, however, all require for tourists to have either good physical or financial conditions, or both.

## 4.2 Interviews

Two separate interviews were held to further discuss the impact of the pandemic on the socio-cultural spheres, and its implications for the tourism industry in coastal areas; in order to shed some light on the viability of SMEs operating in the micro mobility sector.

Interviewer: Tooka Pourgive

Methodology: Semi structured, in person

Tools: audio recording and note taking

### 4.2.1 Interview 1

Saturday, 13/06/2020, 12:00pm-13:00pm, Ferrel-Portugal

Interviewee: Kyle Diorio

Nationality: United States of America

Degree: Master's degree in Sustainable Tourism Management (2018)

Thesis: Business Plan titled "LIGAO: a multidisciplinary accommodation space"

#### **Topic of discussion: Sustainable tourism management in the post pandemic era**

*1) Under which industry would you categorize your business plan?*

-The business plan would fall under the hospitality industry; however, a big part of my thesis was mixed with design, encompassing both architecture and theoretical concepts of design such as minimalism. In fact, my foundation is in visual communication and media design.

*2) Given the current circumstances (the pandemic outbreak), would you consider changing the architectural design of the space to make it more Covid-19-friendly?*

-Actually, the design constituted of several isolated private spaces, in close proximity, but structured in a way which clients would not come into contact with one another. As such, the design would still be applicable today. However, it is obvious that measures would have to be taken to retrofit the space according to the relevant laws currently implemented. For example; a glass division would have to be installed at the customer service point, and new health code measures would be introduced, especially in the common areas such as the bar. All of these changes will naturally have added costs.

I recall when smoking became prohibited in restaurants and bars in Spain in 2006, and a lot of money was spent by related businesses to retrofit their spaces to the new regulations.

3) *In terms of financial projections, your graphs showed an upward trend, whereas today, the tourism industry has come to a halt. How would you go about changing the projections?*

-We would have to be way more conservative and realistic with inbound tourism numbers. We may look at the countries which allow travel to Portugal in the short-term and make the projections accordingly.

4) *You have recently travelled from abroad to Portugal. How was your experience?*

-To my surprise, there were no temperature measurements, although we had to wear masks on the flights. TAP currently has 2 flights per week from the United States to Portugal, and they are at full capacity. They have not taken measures to create distance between passengers by blocking the middle seats.

5) *Given the situation, how viable is your degree in sustainable tourism?*

-It is certainly more viable than ever. Life moves in cycles of upturns and downturns, all throughout history. We're likely to face a few years of hardship, but tourism will come back as the urge to travel and to visit new places and to have new experiences will never be taken away from humans. If anything, people would want to be more connected with nature, and spend more time outside.

This will change real estate as well, people will want to move away from cities, and into the countryside. We mustn't follow the tourism trends directly, but we should pay attention to the industries surrounding tourism.

The earth is a sensitive place, and people with experience and knowledge in sustainability are essential across all industries. It is now more than ever that sustainable practices are gaining importance.

6) *Given that Peniche is a surf destination, how do you see the evolution of surf tourism? Will it become more, or less significant as an outdoor sport?*

-Indeed, Peniche is an exclusively surfing destination, and it is to their advantage for surfers to continue to visit. The issue will be which surfers will be visiting, and from where. There are many classifications of surf tourists. Perhaps this year it will be solely domestic tourists that visit Peniche, and maybe some from the Iberian Peninsula, and only as of next year, inbound tourism will expand across the EU, and with time, further outward to other continents.

The only argument I have heard against surfing during a pandemic is the idea of traveling to the beach location, and all that which one comes into contact with on the way, such as stopping at a petrol station, or risking a potential car accident.

Furthermore, there are, for instance, people going from New York City, where infection rates are really high, to Long Island to surf, which is worrisome for small isolated beach communities. A similar situation is happening in Peniche whereby surfers travel from the bigger cities to there. Nonetheless, frequenting beaches is one of the last remaining activities in coastal zones.

7) *What about the Van dwellers?*

-It has become trendy in the United States for people to buy RVs (Recreational Vehicle) and travel by road. Portugal and especially, Peniche should recognize that welcoming these types of tourists is an asset which they have. This type of tourism should be fine in Peniche as they have spaces to accommodate camper vans.

8) *What about other types of mobility such as micro-mobility (bicycles and scooters) which are exposed to the open air?*

-Absolutely all types of mobility should be allowed. We need exposure to the elements; people need fresh air, and to go outside, and to engage in activities.

9) *Do you think that once the surf championships resume in Peniche, that they will continue to attract the same numbers as previous years?*

-Outdoor competitions and activities should attract more attention, and social distancing measures can be taken to ensure safety.

Besides travel bans imposed by governments, fear is the leading cause for people to not want to travel, which will reduce the number of visitors to the tournaments for a year or so.

10) *The Mediterranean countries economically depend on tourism. How badly do you think it will affect Portugal?*

-Although Portugal's economy relies partly on tourism, it is a developed country, and they have intellectual people. They will have creative solutions to overcome an economic crisis

11) *In terms of the business image, would you rebrand to meet the current sanitation needs?*

-I would definitely adopt the Clean and Safe seal in addition to other certifications. But in terms of cleanliness, the accommodation would have a high level of sanitation even prior to the pandemic. Health safety measures will have to be included not just for the public, but also legally.

12) *The Venn diagram created by you which represents the overall 'business pillars, principles and space breakdowns' projects that 30% of the business is focused on commercial businesses and 70% on accommodation. Would you modify such an offer considering the changes that have occurred due to the pandemic?*

-The customer base of Peniche and the isolated nature of the location of the accommodation would make it challenging to change the offers. Perhaps more services can be offered such as adventure tourism, and micro-mobility, as well as collaboration with secondary businesses which can then adjust the ratio.

*13) Would you consider Peniche as place that has a bright future as a tourism destination?*

-Peniche's strategic location as a peninsula, and its geographic position in close proximity to Lisbon will by default allow for an inflow of tourism. Moreover, Peniche is a unique destination with certain assets that are gifted which attracts a specific type of tourism.

*14) What are some the challenges of establishing a tourism business in Peniche?*

-Portugal has definitely many opportunities for new businesses to open, and the municipalities operate differently. The traditional tourism business model is relatively easy to follow, which is the rental or purchase of a preconstructed space and retrofitting it to suit the tourism demands. However, establishing a business from scratch, that is, the construction of an entirely new building block, and creating a new concept within the current structures of tourism, and going through the bureaucratic system is an entirely different challenge.

*15) What do you consider to be progressive?*

-Quality and visual communication are very important. Peniche should take on offering more quality products and services. In terms of design, they have a lot of room for improvement. Their online presence can also be enhanced if more professional companies are hired to create their overall destination presentation.

Peniche is blessed with an international audience and they would highly benefit from nurturing their relationship with certain foreign institutions and people who would like to enhance their current tourism management system.

## 4.2.2 Interview 2

Thursday 23/07/2020, 10:30am-11:30am, Ferrel-Portugal

Interviewee: Helder José de Conceção Ramos

Nationality: Portugal

Title: Founder and Director of Board

Business: Associação Cultural Rabeca (Rabeca Cultural Association), founded in April 2019

Location: Ferrel- Portugal

Business Type: Not- for-profit privately-run association, as of November 2019

### **Topic of discussion: Cultural business sustenance in the post pandemic era**

*1) Tell me about your association please.*

-After 6 months of opening and 6 exhibitions, I, along with the group of people who formed around the project decided that we were providing much more of a public service than any product, like a private business does, because the *raison d'être* is, in part, to unite the different populations that live in Ferrel, such as the immigrants, and the locals, through culture, as well as using culture as a way to provide educational, interactive and intergenerational opportunities and activities.

*2) Would you consider the cultural element to be the main inspiration behind the creation of the association?*

-Primarily, yes. We also want to create cultural opportunities and activities for tourism. To showcase what there is here, but also to expand outside of this restricted space, that would showcase some of the hidden gems, such as places, events, and also people; but in a sense that would respect boundaries and privacy of all involved. We are obviously a gentrifying force that nonetheless wants to ensure that it doesn't kill what is here, for the sake of entertainment.

*3) Can you please elaborate more on the concept; what type of events, products, and services are offered?*

-The space in which we're currently sitting in is a small gallery space, the themes of the exhibitions shown here provide the curatorial anchor for much of the rest of the activities. For example, every month we have a film as part of our Cineclube, and the film is generally based on the theme of the current exhibition. We also have children's activities, public debates and lectures. Aside from the theme-based activities, there are ongoing activities, some are for members only, others are open to the public; such as drawing classes, and partnerships with

other associations. One example of a partnership is 'Ferrel Através dos Tempos' which is a local history class led in Portuguese by the author prof. Joaquim da Silva Jorge, co-run with Universidade Sénior de Peniche (seniors University in Peniche). The class essentially serves people above the age of 60.

4) *Would you say that part of your target group is the elderly?*

-We have different activities that have different targets. For example, we have been working on creating a local branch of the Peniche public library. Promoting literacy is one of our aims, ensuring access to books. Children, and the elderly in Ferrel cannot just drive to Peniche to go to the library. The only library that exists is the school library, but it isn't open to the public, so we have decided to step in and fill that void, by providing a library here. Our aim is to fulfil many functions at the same time.

5) *Before the onset of the pandemic, was the association turning out as you had envisioned?*

-Yes. Before the pandemic we were at our limit with regards to the number of people we could accommodate for the cineclub events, for example, since it is a small space and we weren't expecting crowds, given the nature of our programming, which is not mainstream. All of our groups were starting with a sizeable amount of people. The exhibitions were attended by a respectably-sized audience, with many regulars. With the pandemic, we, as everyone else, had to close down. We were closed for almost 4 months, but we have recently re-opened.

6) *What are some of the challenges of having a cultural business in a surf destination?*

-We are essentially filling a void, because to receive a similar type of content offered here, the nearest city is at least Caldas da Rainha, because even Peniche is lacking in much of what we're offering. Moreover, not all surfers are interested only in surf; for some it is a lifestyle, for others it is an occasional activity. We have attempted to bring a little bit of the surf culture into our gallery, and also reflected back some of the ideas that may not be addressed by what is currently offered locally. An example is our October 2019 exhibit 'Na Prancha do Zorba', where we essentially focused on the history of surf in this town, the people who developed it starting in the 60s and the 70s. Many of the surfers were people that came from outside of the country, but in the 80s there was an explosion of local surfers, before Baleal became a surf destination. We also focused on women in surf, who were the women, and what it was like. We had a public discussion with Teresa Ayala who was one of the pioneer female surfers in the area. She was very candid about how even though she was a fellow surfer, she was expected to bring in the lunches for everyone to have on the dunes afterwards, which at the time she saw as part of the experience, but now, it would not be acceptable.

We will have future exhibits related to the surf lifestyle, coming at it from different angles, such as how surf influenced contemporary design, and another about Cova da Alfarroba, and the

link between Baleal and Peniche, essentially, the gulf that has historically existed between them, literally and figuratively.

*7) You've mentioned future exhibitions, yet we're living in uncertain times. How have you changed your projections? How do you see the association evolving moving forward?*

-Making it as a commercial gallery was never the point. The commission we receive on the artwork sold is not sufficient to keep us afloat. We have to create content that is vital and that speaks to people. A very important part of our strategy is to have a sustained membership drive to create the understanding and need for this type of cultural hub in this area and how important it is to be part of the solutions that keep the doors open. We will also have to definitely move towards reliance on public funds to keep creating this type of programming. We're not in an urban centre where there are collectors and art auctions. It should therefore serve as a gateway of a meeting place of cultures that are already merging within Ferrel; the surfer community, the locals, and the national tourists.

*8) Do you think that the integration of visitors with locals would improve the image of this place as a destination? What other activities could do the same?*

-I think so. The membership reflects this. At least a quarter of the members are not from here, but they are from other cities farther out. We are actually creating a reason for people to come to Ferrel, that wasn't there before, and it is apart from the surf destination.

Activities can be introduced such as themed walks through the area, which are historical, ecological and gastronomic. There are many resources here and they are already activating themselves, and all we would be doing is creating another audience for those existing resources and finding new niches.

*9) Places like Peniche and Ferrel have as part of their charm an absence of big corporations such as McDonalds. Do you think that this needs improvement? Should they let in foreign investment and new infrastructures to make it a more appealing destination?*

-In the pre-pandemic we would have to be very careful about keeping the real-world charm of the area, but in the post-pandemic era, this destination might need some help, though it must be done in a way that the people remain in charge. It is uncertain as to whether the people's interest will be protected, not just here but in the entire country. The recent, promised injection from the EU<sup>2</sup> is fine, but what are the conditions? It would not be the first time that the country

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<sup>2</sup> EU Commission approved two Portuguese schemes totalling €13 billion, to support the economy in relation to the Covid-19 Pandemic (EU Commission, April 2020). They had also approved a €1.2 Billion rescue loan to TAP-Transportes Aéreos Portugueses (EU Commission June 2020).

is given away to foreign investment. It is also a question of size. Portugal is a relatively small nation compared to Brazil or the United States, so its bargaining power is weakened.

For whatever reasons the local government levels have been adept at keeping foreign investment out. There were rumours of a plan of a Burger King joint opening near Baleal but it was disapproved. Fast food is seen as another option that should be offered regardless of the ethical implications. I don't personally think we need fast foods, but at one point we may have to loosen up and allow them.

As small as we (*Associação Cultural Rabeca*) are, I'm concerned with whether we're a force for good or not, in terms of authenticity. Many of our events reinforce local culture and tradition, but in a way that is unlike anything that has been done here before. It does worry me if that going to be another gentrifying force. We try to be sensitive and unify groups by creating bridges.

*10) Has this brought in traffic?*

-It has brought some. We're not yet receiving any public funds, or support from the associations and cultural branches of the local municipal government. We have received recognition from the Junta de Freguesia de Ferrel, but they also seem to not be receiving much support from higher levels of governments. They support us in other ways such as providing free photocopies of our material and its distribution.

From the view of putting the name of Ferrel out there, we're part of that. Many of the people that come to our exhibits are not interested in the Festa de Ferrel and they are not interested in the waves. The immigrants from Ferrel that live all over the world and come back in the summer have heard of this place and find it fascinating that someone has opened such a space in *their* small village. In my youth, all of these roads were dirt and mud, and there were only a few Tavernas and the church. The cafes only started in the 80s.

*11) What about your grandfather's bike shop which was located right next to this space?*

-He was one of the only people who had a business here outside of the tavernas between mid-70s and mid 90s. His bike shop ended up being a cultural hub as he was also a bit of a storyteller. That is something that we would like to replicate. Ferrel used to be the town that produced immigrants and is now receiving immigrants. Most of my immediate family moved abroad, and I'm one of the only ones that returned.

*12) Bicycles are now a scarcity because of Covid-19. Do you think that a bike shop business would do well now?*

-Many of the local accommodations have bought bicycles in order to provide to their clients. Having a bike rental shops is not a bad idea, but the infrastructure is needed for it; a public place to lock the bike to, and an exclusive bike lane. The bicycle path between Baleal and Peniche is for both pedestrians and cyclists and overcrowding can cause problems. I'm coming from Toronto where cycling is the main mode of transportation, and I would cycle everywhere. Bike shops can be opened but a movement needs be created at the same time amongst the cycling community to pressure local governments to create infrastructures.

*13) What do you think about electric kick-scooters as an alternative mode for transportation between Peniche, Baleal, and Ferrel?*

-I find that electric vehicles are no more environmentally friendly than other modes of transport. The batteries are not disposable and damaging to the environment, and energy is needed to fuel the electricity. Portugal is doing ok in terms of renewables, but if everyone starts going electrical, then we would have to burn coal.

A way forward is to make the generation and exploration of energy public and having the government to install renewable energy sources such as solar panels and hydro-electric power outlets on a grand scale, so as to make renewable energy options more affordable. Otherwise having an alternative option of transport is great. Rentable Tuck-Tucks and golf carts are another option which can transport groups.

*14) How do you see tourism developing in the region, considering the pandemic?*

-We would have to wait a year and half to two years to be clear on the implications of the pandemic in the long-term and to be able to make economic projections. Until September things will be more or less the same. Once the government stops handing out the layoff payments, private sector employers will say goodbye to their employees since they won't be able to afford to have them. There will be a rough financial period ahead. What will help us in this area, and in coastal areas, is that people from Lisbon will begin buying property here and moving away from their urban lives. There will be an increase in opportunities for certain sectors. The surfing will continue to be there, but there won't be as much money in the local accommodations and surf schools as monopolies in those sectors are sure to emerge.

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# V. INDUSTRY ANALYSIS

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## 5.1 Micro-mobility

It is estimated that 70% of EU citizens live in urban areas and are directly affected by noise and air pollution that results from vehicles. The concept of “Sustainable Urban Mobility (SUMP)” has thus been introduced by the Europeans Union’s CIVITAS 2020 initiative to target this issue by creating a healthier and cleaner urban environment. The project has been launched in seven cities across the EU to set an example for the rest; Birmingham-UK, Budapest-Hungary, Malmö-Sweden, San Sebastian-Spain, Sofia-Bulgaria, Thessaloniki-Greece, and Turin-Italy (European Platform on Sustainable Urban Mobility Plans, 2020). The intent of the project is to push for “the electrification of road transport, understood as the use of battery electric vehicles and hybrid vehicles” or otherwise known as ‘e-mobility’ (Polis, and Rupprecht Consult - Forschung & Beratung GmbH (eds) 2019, p.6). Currently, 80% of buses in Europe run on diesel, however, battery-electric buses are anticipated to grow by 35% by 2025 (Ibid., p.11).

One of the main aims of sustainable urban mobility is to diminish the dependency on private vehicles, so that in turn, cities become more suitable for pedestrians and cyclists. Some solutions that were presented until now are carpooling, car sharing, and bike sharing, all of which have the idea of short-term rides in common (CIVITAS, 2020). However, these concepts were largely popular before the pandemic. The current urban mobility and inter-city transportation has become increasingly individualized since the implementation of the social distancing rules in all EU countries.

The European Commission conference on “Micro-mobility: the next big thing?” held on October 14<sup>th</sup>, 2019 addressed the popularized alternative mode of transport which includes electric scooters, bikes, mopeds, and drones. Participants agreed on integrating micro-mobility into public transport, and “adjusting urban areas accordingly” (EU Commission, 2019).

There are two factors that highlight the need for sustainable urban mobility; firstly, short distances covered by cars cause unnecessary traffic and overloaded parking spaces and should be replaced by micro-mobility alternatives such as bicycles, kick scooters or walking. Secondly, public transportation goes as far as the designated stops and the first and last leg of the trip of each passenger is not accounted for (POLIS, 2019, p.5).

Thus “Shared Micro-mobility” was introduced in several developed cities in three waves, the first began by governments which placed docked bikes in specific locations, which later evolved into electric bikes as well. The second wave took off in 2016 by private companies which included phone applications that searched for nearby bikes and was completely dockless, meaning that they could be picked up and left off anywhere. However, lack of management caused problems such as the bikes being wrecked or robbed. The third wave introduced dockless e-scooters (kick scooters) into the mix, which has had its fair share of issues, such as filling up pedestrian paths (Ibid., pp.6-8).

Aside from the integration dilemma of e-scooters into the urban setting, there is now the issue of sharing the devices. In fact, the pandemic has brought the prosperous mobility sharing companies to a halt. The two biggest e-scooter sharing companies in Portugal are Lime and Hive, both of which have suspended their operations during the first wave of the pandemic.

## 5.2 Product components

There are several electric scooter brands around the world. Some of the most well-known ones are Razor, Segway, Zeeclo, EcoReco, UNAGI, and iWATMotion, amongst others. The business proposed is located within the borders of the European Union, and accordingly, the costs of Value Added Tax (VAT) and shipment will be taken into consideration when deciding on the initial capital investment of purchasing the electric scooters. In addition, the quality of the product will be studied, and comparisons will be made to make the best choice according to the needs of the services. Some of the main features of the electric scooters is further discussed below.

### 4.4.1 Protection Rating

Firstly, the product durability should be taken into consideration. Peniche is a coastal city with lots of winds, and high humidity, both of which greatly contribute to quick deterioration of all types of machinery.

To know the durability of a product, one must look at its ‘Ingress Protection Rating’ or IP rating, which is defined by codes provided by the International Electrotechnical Commission (IEC). Such a code is usually written as IP68. The first number represents the degree of protection against solid matter such as dust, and in our case, sand, with the protection ranging from 0 to 6. The second number represents the degree of moisture resistance, with protection ranging from 0 to 8. Ideally, the product should have an IP rating of IP55 (Graziano, 2019).

#### **4.4.2 Weight**

Most electric scooters are made from lightweight metals such as aluminum, however, unlike bicycles, scooters are generally not left outside, and are instead folded and carried with the person. It is thereby a requirement to provide electric scooters that are lightweight.

#### **4.4.3 Battery and charging**

The charging duration of the scooter battery can vary between 2-12 hours depending on the brand. As a service-based business, time management is essential and choosing an electric scooter with a short charging period is ideal. Furthermore, the quality of the battery and its duration is important. The energy capacity of the battery is often defined as mAH or milliamp Hour. Normally, the higher the mAH, the longer the battery life is (Nguyen, 2018).

#### **4.4.4 Motor**

Electric scooters have two types of motors; chain drive system and belt drive systems. Both of which have their advantages and disadvantages; however, the chain drive is overall more reliable in the long-term (LEV Revolution). The power of the electric scooter is measured by its consumption, defined in units of watts. The higher the wattage, the more powerful the scooter will be (Electric Scooter Guides).

## 5.3 Product comparison

With a greater understanding of the components of the electric scooter, the following tables have been created to compare their functionality in the European and American markets:

Table 2 E-scooter comparison - EU market

EUROPEAN MARKET					
<b>Company</b>	Floatup SL	SmartGyro	Zee clo	Olsson and Brothers	Compatinet S.L
<b>Brand</b>	iWATMotion	SmartGyro	Zee clo	Olsson and Brothers	City Street Gran Scooter
<b>Price range</b>	189€-369€	269-749€	359-1599€	189-649€	499€-600€
<b>KM range</b>	10-30km	24-45km	14-22km	15-25km	20-55km
<b>Motor Watts</b>	250W	-1000W	250W	200-500W	500W-1500W
<b>mAH battery range</b>	5000-7800mAH	6600-13000mAH		2600-14000mAH	12000mAH
<b>Charging duration</b>	180-240min (3-4h)	3-7h	3-6h	3h	2-4h
<b>IP</b>	IP54/ IP55	NA	NA	NA	NA
<b>Weight</b>	11-13.5kg	10-26kg	12.5-	7.5-12-5kg	20kg
<b>Material</b>	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
<b>Country design</b>	Spain	Spain	Spain	Spain	Spain
<b>Country manufacture</b>	China	China	Chile & China	NA	China
<b>Website</b>	<a href="http://www.iwatboard.com/pt/">www.iwatboard.com/pt/</a>	<a href="http://smartgyro.es/">smartgyro.es/</a>	<a href="http://zee clo.com/">zee clo.com/</a>	<a href="http://olssonandbrothers.com/">olssonandbrothers.com/</a>	<a href="https://www.gran-scooter.com/">https://www.gran-scooter.com/</a>

The European market, from which the e-scooters will be purchased, has a price range of 189€-1599€, whilst the km range spans anywhere from 10-55km per hour. In terms of the motor power, companies offer scooters starting anywhere from 250W and up to 1500W, and the average charging time is about 3 hours. The weight of the scooters range between 10-20kg.

Moreover, nearly all IP ratings are absent under the European market as there are standard minimum requirements for velocipedes sold within the European Union. As such, if the product meets the IP, as well as other requirements, they are given an identification number which serves as such proof.

Table 3 E-Scooter comparison – US Market

<b>AMERICAN MARKET</b>				
<b>Company</b>	EcoReco Corporations	Razor USA LLC	Segway Inc	UNAGI
<b>Brand</b>	EcoReco	Razor	Ninebot	UNAGI
<b>Price range</b>	539€-989€ (599\$-1099\$)	116€-629€ (129\$-699\$)	449€-799€	904,95€
<b>KM range</b>	16-32km (10-20miles)	10-25km	20-25km	14.4-27km
<b>Motor Watts</b>	600-700W	80-350W	250-350W	250W
<b>mAH battery range</b>	8000mAH	NA	5200-15300mAH	9000mAH
<b>Charging duration</b>	2-4.5 hours	12h	3.5-6h	4-5h
<b>IP</b>	NA	NA	IP54	IP54
<b>Weight</b>	12.2-17.7kg	3.33-16.14kg	11.3-18kg	10.4-12kg
<b>Material</b>	Aluminum	Aluminum/heavy duty steel	Aluminum	Aluminum & Carbon Fibre
<b>Country design</b>	USA	USA	USA & China	USA
<b>Country manufacture</b>	NA	NA	China	China
<b>Website</b>	<a href="http://ecorecoscooter.com/">ecorecoscooter.com/</a>	<a href="http://global.razor.com/pt/?cr=pt">global.razor.com/pt/?cr=pt</a>	<a href="http://pt-pt.segway.com/">pt-pt.segway.com/</a>	<a href="http://www.unagis-cooters.com/">www.unagis-cooters.com/</a>

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# VI. BUSINESS DESCRIPTION

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*JANO RIDES*  
*E-Scooter rental shop*

## 6.1 Needs statement

The world has changed immensely in 2020; the global economy is on the brink of collapse, intolerance for social injustice has reached its peak, and environmental degradation has reached the point of no return. As nations strive to adapt to the new circumstances, the impending COVID-19 pandemic puts further pressure on the entire human system. Uncertain times calls for innovative solutions. Creating businesses that meet new demands is crucial in preventing irreparable economic crisis, social disorder, and the destruction of nature. Small tourism businesses can thrive if they change their offers to meet current needs. Destinations should prioritize making visitors feel safe, and to give them plenty of space, and clean air. Beach destinations such as Peniche become increasingly popular, and how they manage the pandemic crisis will set the stage for tourism demands in the coming years.

### 6.1.1 Economy

International travel bans and restricted mobility due to the pandemic has had a significantly negative impact on the global tourism and entertainment industry, the gravity of which has yet to be fully grasped. Various international organizations have made estimates of the degree of such an impact, and as it turns out, the effects are much worse than it had been provisioned. In the first half of 2020, Europe's arrivals dropped by 66%, and the initial lockdown, caused arrivals to drop by 96% in May, and by 90% in June (UNWTO, 2020, p.7). To recover the same levels as 2019, it is estimated that it would take at least 3, to 4 years, depending on the unfolding of the pandemic, and the economic state of the countries by then (Ibid., p.11). These estimates are made in comparison to the recovery periods following the SARS epidemic of 2003, which took 11 months, the 9/11 attacks of 2001, which lasted 14 months, and 19 months following the financial crisis of 2008/09 (Ibid).

Domestic tourism has on the other hand become increasingly popular. It is on this segment of the market which Small and Medium-size Enterprises (SMEs) should focus on by adjusting their products and services accordingly.

Portugal's employment dropped from 70.2% in the first quarter of 2020, down to 67.7% in the second quarter of the same year (OECD, 2020) It is imperative that the employment rate does not drop any further, however, the crumbling tourism industry will with certainty cause immense job losses. It is thereby a necessity to break from the old tourism paradigm and move towards new products and services that are both socially acceptable for our times, but also continue to contribute to economic growth. The business of micro-mobility is absolutely welcome as there is rising demand for individual mobility, and necessary, as it will create a chain of jobs, from administration to mechanics and maintenance.

### 6.1.2 Society

There is a two-tier pressure which has greatly changed societal behavior; the first comes in the form of regulations, and the second, is psychological. Governmental bodies across the globe have adopted differing regulations and have imposed quarantine measures. As a result, there has been an adverse effect on mental health, such as "infection fears, frustrations, and boredom" amongst others (Brookes et al, 2020).

Furthermore, domestic violence, especially "against women tends to increase during every type of emergency, including epidemics" (WHO, 2020). Reduced access to social services and contacts with outside support groups such as family and friends, lengthy confinement with intimate partners and family members, rise in unemployment, and resource scarcity, are all risk factors for an increase in domestic violence cases (Ibid.).

Transportation has been highly affected by the pandemic, making movement very difficult for certain population groups, which is an additional instigator for mental health-related issues, and domestic violence.

Finally, outdoor recreation is at an all-time high as people are more likely to spend time in nature and engage in open-air activities. It is absolutely crucial for SMEs and start-up businesses to not only adopt safety measures as indicated by regulatory bodies, but also for them to modify their offers according society's needs and wants. Having readily available micro mobility within reach that does not require a trip to the gas station is not only in demand during this time, but it can also save lives, and even more so in remote tourism destinations such as Ferrel.

### 6.1.3 Environment

Portugal's industrial activities consumed 27.24% of its energy in 2017. The energy supply accounts for 29% of the emission of Greenhouse gases (GHG) such as CO<sub>2</sub> and the like, in the country. In 2017 alone, over 70.5 million tons of GHG was produced by Portugal, a number that has been steadily rising (EEA, 2020).

Ferrel, and its center, gets overcrowded with cars, trucks, tractors, and the like, especially in the mornings, and during lunch, and dinner times, as, in addition to residents and tourists, people working in various industries in the region go there to have coffee or a meal and park their vehicles in the middle of the road, and on the school grounds, because there are no parking spaces. In fact, the apartment buildings in the center don't have any parking garages. Moreover, the road crossing the village is the main road connecting the neighbouring municipalities, which means that there is a steady transit of vehicles throughout the day, and night. There has been a new municipal plan proposal to cut this transit, but any changes made to the urban landscape might not be approved and the underlying motives of the municipality is questioned (102FM Radio Peniche).

It is thereby not just a question of limited space and roads, but a problem of there being too many vehicles. Using electric micro-mobility will not only ease transportation for tourists, but also for the locals. Reduced air and noise pollution due to vehicles will make the environment much more healthy and pleasant to be in.

There is limited public transportation available which connects Ferrel to Baleal, Peniche, Atouguia da Baleia, and Praia D'El Rey. Moreover, most tourists rely on car rentals, taxis, or bicycle rentals, thereby, a mode of transportation is needed that requires little physical exertion, is affordable, is ecologically sustainable, and provides safety from contamination. The mode of transportation provided for tourists staying in Ferrel area should give them easy and quick access to all the beaches on the northern littoral, to Peniche city, to Atouguia da Baleia, to the nearby pine forest of Ferrel, and to the Praia D'El Rey Golf and Beach Resort.

## 6.2 Mission statement

JANO RIDES provides an electric scooter rental service in the heart of Ferrel, Peniche, that is **eco-friendly**, because of the zero-emissions required to charge and operate it, **budget-friendly**, because of its comparatively low rental costs, **user-friendly**, because of its easy mechanism and not needing a driver's license, and **COVID-friendly**, as it is a solitary ride.

## 6.3 Vision statement

JANO RIDES aims at becoming a profitable micro-mobility hub which inspires both visitors and locals to opt for sustainable modes of transportation along the silver coast of Portugal. The idea is to alter the overall ambient of Peniche and especially that of the center of Ferrel, and the coastal route from Baleal to Peniche to become more appealing; thus, eliminating the lingering bothersome noise and air pollution, and the downright unsightly amassment of cars.

The following goals characterize JANOS RIDES as a sustainable tourism business:

### **Environmental objectives**

- JANO RIDES first and foremost provides an alternative mode of transportation to tourists, that is ecological, as conservation of non-renewable sources, and the use of sustainable energy sources, is a priority.
- The rental service aims at reducing the overall air pollution of Peniche, in the long-term, not just through its services, but also by inspiring the community to create similar SMEs in sustainable micro-mobility.

### **Social objectives**

- JANO RIDES will continuously promote sustainable transportation in the silver coast of Portugal and engage the local community as much as possible to reduce the overall CO2 footprint produced from transportation.
- Our services and products aim at eliminating the risk of the spread of COVID-19 virus, by providing individualized micro-mobility to visitors.

### **Economic objectives**

- Restitution of start-up costs in the first year of earnings is priority whilst minimizing additional non-essential costs such as website creation, brand merchandise in form of brochures/cards, t-shirts etc. is avoided. In fact, the business takes a minimalist approach for visibility and promotion as there are limited units for rental.
- To reach and maintain an annual net-income of 45,000€ - 50,000€ as of Year 3.

## 6.4 Business Details

JANO RIDES is a for profit electric scooter rental shop that operates as an individual company under the sole proprietorship of Tooka Pourgive, situated at Rua das Escolas nº 12, 2520-131 Ferrel. The business is managed by the owner and has one other employee.

### 6.4.1 Products and Services

The main product offered is the foldable CityStreet electric scooter produced by Compatinet S.L, under the brand name Gran Scooter. The scooter has a detachable seat, front and back brakes, as well as night lights. Additional side mirrors can be purchased to add onto it. The scooter has 2 speed options, and can go up to 42km per hour, which is a lot faster than the average electric scooter speed of 25km (Gran Scooter).

Table 4 CityStreet Electric Scooter information (Gran Scooter, Manual de Usuario)

Model	ES5014
Dimension	110cm x 56cm x 120cm
Motor Power	500W-1500W
Autonomy	50km
Battery	Lithium 46V/12AH
Battery longevity	800 charges /2 years
Charging time	2-4 hours
Weight	20kg

There are several advantages for offering CityStreet electric scooter. Firstly, although the scooter parts are manufactured in China, the product is purchased from neighbouring Spain. Secondly, having personally purchased this product, the company has proven reliable in terms of timely delivery and communication. Any issues arising can be communicated with them by e-mail and WhatsApp, and it is quickly addressed. Close proximity of the company is very important if any spare parts are needed, especially during this time which online orders made outside of the EU can take a much longer time to arrive. Thirdly, offering an electric scooter with a higher than average autonomy is necessary as the closest locations to Ferrel, are rather

far; northern Peniche is around 10km away, Supertubos beach is about 7km away, and Praia D'El Rey Golf Beach Resort is about 9km away. If the client, in addition to arriving at the destination, would like to ride around the area, and still make it back to Ferrel, a higher autonomy than the regular 25km electric scooters is required. This is especially important as the path is not flat, and uphill surfaces require more energy. Finally, in terms of product efficiency, lithium battery is much more durable and quicker to charge, whilst a higher velocity makes the product more desirable.

The main service offered is the rental of the CityStreet electric scooter to people above 18 years of age. Many of the visitors coming to Peniche seek a low-cost beach destination, as is reflected in the prevalence of numerous hostels. Renting a car can be pricey and a bit of a hassle, as are taxis in the area. Having a lighter transportation at disposal that can be charged anywhere with electricity, is a lot more convenient.

Clients have the option of charging the scooter at the shop, during working hours, and for rentals longer than 1 day, they can leave the scooter to charge at the shop overnight. Additional gear which each scooter rental includes are, a charger, a helmet, a lock, and a km tracker. The helmet will be that of a motorbike, the 'LS2 OF562 AirFlow' model with a full movable visor, UV protection, and a removable interior that can be washed (Eurobikes, 2020). The locks will be for bicycles, a spiral cable manufactured by Auvray City (deporvillage, 2020). Each e-scooter will have a KM tracker attached to it so that they can stay aware of their usage and avoid running out of battery mid-road. The model 'B'Twin 500 Amarelo Van Rysel' will be purchased (Decathlon, 2020).



*Figure 10 CityStreet e-scooter*

## 6.4.2 Safety measures

Vehicles are disinfected, and fully inspected and charged before each rental. Clients are given instructions of road safety rules, the safest roads to ride on, and how to operate the scooter. They are taken outside for a supervised test ride beforehand.

Clients have to show their ID to prove that they are above 18 years of age. They are asked to fill out a form, as well as sign the following terms and conditions form:

JANO RIDES  
Electric Scooter rental services

Terms and Conditions

**Article I Terms of service**

1.1 The renter agrees to the rental of the following items for the duration of \_\_\_\_\_, from \_\_\_\_\_, to \_\_\_\_\_:

- 1) City Street Electric Scooter
- 2) Helmet
- 3) Charger
- 4) Lock
- 5) KM tracker

1.2 In the event of accidents, the renter is responsible for any damage caused to the person operating the electric scooter, or to other persons, including to the vehicle. There is no insurance coverage provided by the rental shop.

1.3 The renter must pay a security deposit of 50€ for rentals up to a day, and 100€, for rentals exceeding a day. The liability of the renter for any damage to the electric scooter cannot exceed more than double the amount of the security deposit, or a total of 200€.

1.4 The security deposit is returned to the renter who has signed the terms and conditions, upon the return of the electric scooter at the designated time, in the conditions which it was rented out in.

1.5 The electric scooter shall not be used outside of Peniche municipality, with the exception of travel to Praia D'EL Rey Golf Beach Resort, which is in Óbidos municipality.

**Article II safety**

2.1 The renter is aware of the dangers of riding an electric scooter, and that accidents and injuries can occur from operating such a vehicle.

2.2 The renter thereby assumes all associated risks of injury, and damages which may arise from riding the electric scooter, and waives all potential claims against the rental shop, and its personnel for on- road damages caused to themselves, and to other people, including physical injuries, and, or death.

2.3 The renter acknowledges that the electric scooter is not to be operated under the influence of alcohol, drugs, or heavy medication.

2.4 The renter shall not use the electric scooter in poor weather conditions, such as rain, and strong winds that will expose the electric scooter to high humidity or put the driver at risk of accidents.

2.5 The renter agrees to use the electric scooter individually and will NOT under any circumstances allow another person or animal onto or attach to the vehicle.

2.6 The renter agrees that the electric scooter cannot be used to race, or drift, or for stunt performance.

2.7 The renter must at all times stay closest to the right side of the road and drive in the direction indicated by road signs, and never in the opposite direction.

**Article III maintenance**

3.1 The renter does not leave the electric scooter in a public space without locking it in a safe location and will not leave it in the open air, over night.

3.2. The renter agrees to not ride on unsuitable surfaces, such as, on the beach, or across puddles of water, which may cause damage to the battery.

I, \_\_\_\_\_ have read and acknowledge the above terms and conditions.

Date \_\_\_\_\_ Signature \_\_\_\_\_

Figure 11 Terms & Conditions

### 6.4.3 The shop

As previously mentioned, the rental shop will be situated at Rua das Escolas nº 12, 2520-131 Ferrel, shown in the following photos, outlined in red. The shop will be rented for a 2-year period, with possibility of the renewal of contract, for 650€ monthly fee. This does not include utility expenses. The rental shop will operate 6 days a week from 9am to 7pm, from Tuesday-Sunday, with lunch breaks from 1pm-3pm.



*Figure 12 scooter rental Shop street view*



*Figure 13 scooter rental shop front door*



*Figure 14 Scooter rental shop interior 1-4*

The interior of the shop is spacious, has a backdoor leading onto the backstreet, and a bar counter which can serve as the reception area. The shop has two bathrooms which will be made into women's and men's bathrooms, separately.



*Figure 15 electric scooter charging station*

Given that the shop was previously a barbershop, there is a space (Figure 15) in which there are several electric sockets. This area is ideal for leaving the electric scooters to charge.

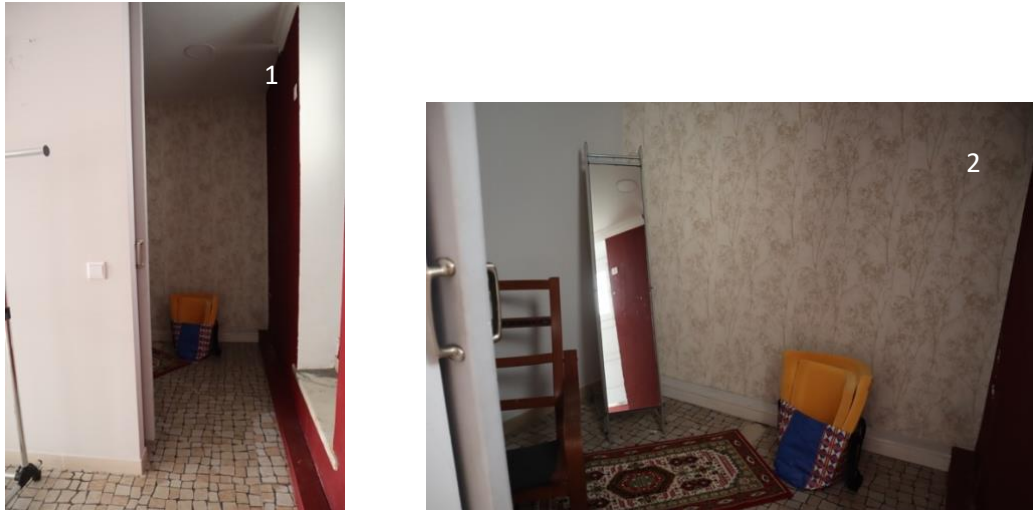


Figure 16 storage and repair room 1 & 2

The shop also has a smaller room (Figure 16) right before the back door. This area will serve as a mechanics/repairs area, as well as for storage of materials and equipment.

#### 6.4.4 Licensing

The establishment of any business requires licensing, and in Portugal, there are specific codes given to each economic activity that should be registered under the business license. The following codes have been gathered that can accumulate to the e-scooter rental services.

Table 5 CAE - Code of economic activity (INE, 2007)

Designation	Subclass
Reparation and maintenance of electrical equipment	33140
Reparation and maintenance of transport equipment	33170
Rental of recreational and sportive goods	77210
Rental of other machinery and equipment	77390

The company will be registered through 'Empresa na Hora' service, for which the relevant costs for its establishment are found in the following chapter (Justiça, 2020). JANO RIDES Will be registered as an individual company under sole proprietorship, the owner of which will be exempt of "having minimum capital", and "a business contract". In turn, all losses and debts are the owner's responsibility (ucfInternational, Vendus 2020).

## 6.4.5 Regulation

It is imperative to understand the regulations of Portugal with regards to electric micro-mobility. Electric scooters can be used as of the age of 18 years old, and according to article 121<sup>o3</sup>, do not require a driver's license ((PGDL, REGULAMENTO DA HABILITAÇÃO LEGAL PARA CONDUZIR).

Article 112.º

Cycling

1-“A velocipede is a vehicle with two or more wheels driven by the driver's own effort by means of pedals or similar devices.

2- A velocipede with a motor is one equipped with an auxiliary motor with a continuous maximum potency of 0.25KW, the supply of which is progressively reduced with increased speed and is interrupted if it reaches a speed of 25km/h, or earlier, if the driver stops pedaling.

3- For the purposes of this Code, motor-powered bicycles, kick scooters, electric powered devices for circulation, self-balancing and self-propelled circulating devices, or other similar motor-driven circulating devices shall be treated as velocipedes.”

*Figure 17 Article 112º transcription (PGDL)*

Figure 17 is a transcription of the law under article 112º which describes in detail the categorization of e-scooters as a velocipede (Ibid.). As mentioned above, the Portuguese law regarding electric scooters only refers to vehicles with a maximum speed of 25km per hour, however, there remains a loophole in the law as electric scooters such as the city street can at the least reach 32km per hour, and at most, 40km per hour, yet they are distributed for persons above the age of 18 who don't have a driver's license. Given this scenario, it is best to always ask clients whether they have a driver's license and regulate the speed settings of the electric scooter accordingly.

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<sup>3</sup> 6 - A condução, na via pública de velocípedes e de veículos a eles equiparados, está dispensada da titularidade de licença de condução (PGDL, Artigo 121.º Habilitação legal para conduzir)

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# VII. MARKET ANALYSIS

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## 7.1 SWOT Analysis

### 7.1.1 Strength

EU leaders have, for the last decade or so, aimed at bringing about new initiatives to reduce overall pollution within their borders. The “Decarbonising Transport in Europe” (DTEU) is one such project which will help in quantitatively proving the effects of CO<sub>2</sub> mitigation, and also to identify “the most effective policy measures” for lowering CO<sub>2</sub> emissions (OECD, International Transport Forum, 2020). As part of the project, the “Decarbonising Transport Initiative” works towards zero-carbon mobility, in an effort to overcome climate change (Ibid). It is estimated that transportation will “increase by 60% by 2050” (Ibid); thereby, the implementation of preventative measures and the proposal of alternative modes of transportation that are carbon-neutral is crucial at the local level.

Although several modes of transportation are available in Peniche, the electric kick-scooters have yet to become mainstream. It is only in the last year that few people are seen using this mode of transportation, and rental services are unavailable for it. Opening a rental shop in a coastal tourism destination such as Ferrel-Baleal is very likely to succeed as there are no equivalent businesses, and there is a need for better access from Ferrel to Baleal and Almagreira beaches, and also, to neighbouring parishes inside the municipality, as well as to Praia D’El Rey Golf Beach Resort.

### 7.1.2 Weakness

The electric kick-scooter is a rechargeable electric vehicle, and often times, the battery is placed at the bottom of the deck, which is wired to the accelerator, and to the front and back wheels and their respective breaks. This means that although a certain degree of protection is available, it is not waterproof. The City Street electric scooter can withstand light rain, but it is not recommended to expose the vehicle to humidity. Moreover, strong winds can send the scooter reeling and can be potentially dangerous to ride. Its usability is therefore highly dependent on ideal weather conditions, which, given Peniche’s climate, and tourism numbers, will mean that the related business is seasonal.

Riding any vehicle has its safety hazards. As electric kick scooters don’t require a driver’s license, there is always a road-safety risk associated with its rental. The CityStreet is by far much faster than the average electric scooter and can exceed 40km per hour. Getting to know

customers beforehand, giving clear instructions, and signing the terms and conditions form are all measures taken to minimize such a risk.

There has been a lot of dispute regarding how green electric vehicles are, and whether they are any more environmental-friendly than their gas guzzling ancestors. The main issue with all electric vehicles lies in the high energy consumption required in the manufacturing process, especially for the lithium-ion batteries. A secondary problem is that the batteries need to be replaced after a certain period, and the disposed batteries, in the event of no proper recycling installations, can cause heaps of pollution, an estimated 250,000 tons just from electric cars sold in 2017 alone (Morrison, 2019). However, with the introduction of recycling programs, and cleaner energy options, it has been concluded that in Europe, an electric vehicle produces half of the greenhouse gas emission in its entire lifecycle than its gas-run counterpart does in only 2-3 years (Matousek, 2019).

### 7.1.3 Opportunity

The pandemic has caused an unpredictable economic and social wave. Governments have gone from imposing lockdowns, to easing, to reimposing. It is not very clear as to what the future holds, but one thing that has been consistent throughout is a need for social distancing, especially in public spaces. As such, it is a great opportunity, and a necessity for the micro mobility industry to establish itself in new locations which previously relied on shared transportation and fuel-based vehicles. Ferrel is the ideal location as it lies strategically between several parishes and beaches, yet it remains far enough to make it a hassle to walk or to cycle to.

### 7.1.4 Threat

As previously mentioned, the two major e-scooter sharing companies in Portugal are Lime and Hive, both of which operate through a smartphone application. With a similar ideology to this business plan, Lime aims at providing “smart, affordable mobility” across the world (Lime, 2020). They have hubs located in many cities in the United States, but also internationally in countries such as Australia, New Zealand, Canada, Brazil, Chile, and South Korea, amongst others. Lime has also taken over Europe, with a very strong presence in multiple German cities. They offer both e-scooters and e-bikes (Ibid).

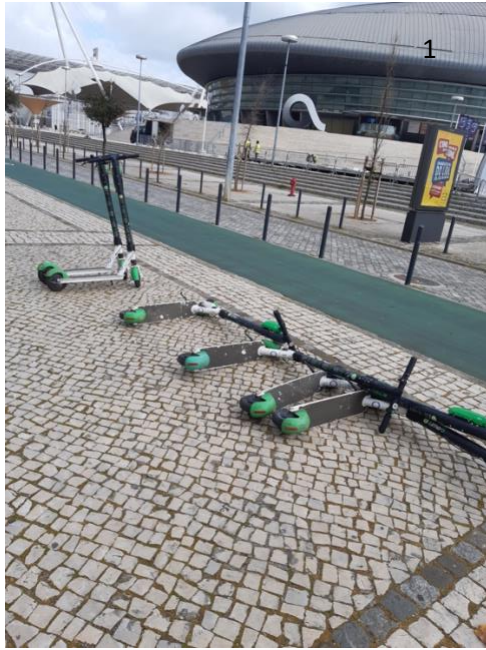


Figure 18 E-scooters in Lisbon 1 Lime, 2 Hive

The Lime e-scooters are available in Lisbon city, Park of Nations (Parque das Nações). However, there is neither a parking instalment, nor a setup to protect the e-scooters from harsh weather conditions. This has resulted in an unsightly hub of fallen e-scooters as seen in figure 18, in a very touristic zone of Lisbon. Hive is yet another e-scooter and e-bike sharing company with a hub located right next to the central bus station of Lisbon. They however have seized their operations since the start of the pandemic (hive, 2020).

Lime is already operating its e-scooters, and other similar companies will likely emerge as people will want to avoid crowded public transportations. Although dockless e-scooters are only concentrated in big cities, there is always the possibility of them opening in smaller towns such as Peniche, in which case they will be a key rival and very difficult to compete with.

Currently the law regarding e-scooters only refers to those vehicles which have a limit of 25km per hour, which means that there is a loophole, as faster e-scooters are in use with no driver's license. Furthermore, e-scooters are more likely to get away with riding on both bicycle paths and on roads. It is thereby inevitable for the laws to change in the near future to address this issue. As such, related businesses may be affected, and further licensing and safety measures will be required.

## 7.2 Target Market

Given the complete closure of borders in the aftermath of the COVID-19 pandemic, and the unstable nature of travel regulations ever since, the latest statistics prior to the pandemic are acknowledged, and modified in accordance with the removal of travel restrictions.

In January and February 2020, over 217,000 and just over 262,000 guests were hosted in the Centre region of Portugal, respectively (INE, 2020). Just over 70% of the first month, and 75% of the second month were Portuguese residents (Ibid.) The following charts represent the remaining total number of foreign guests:

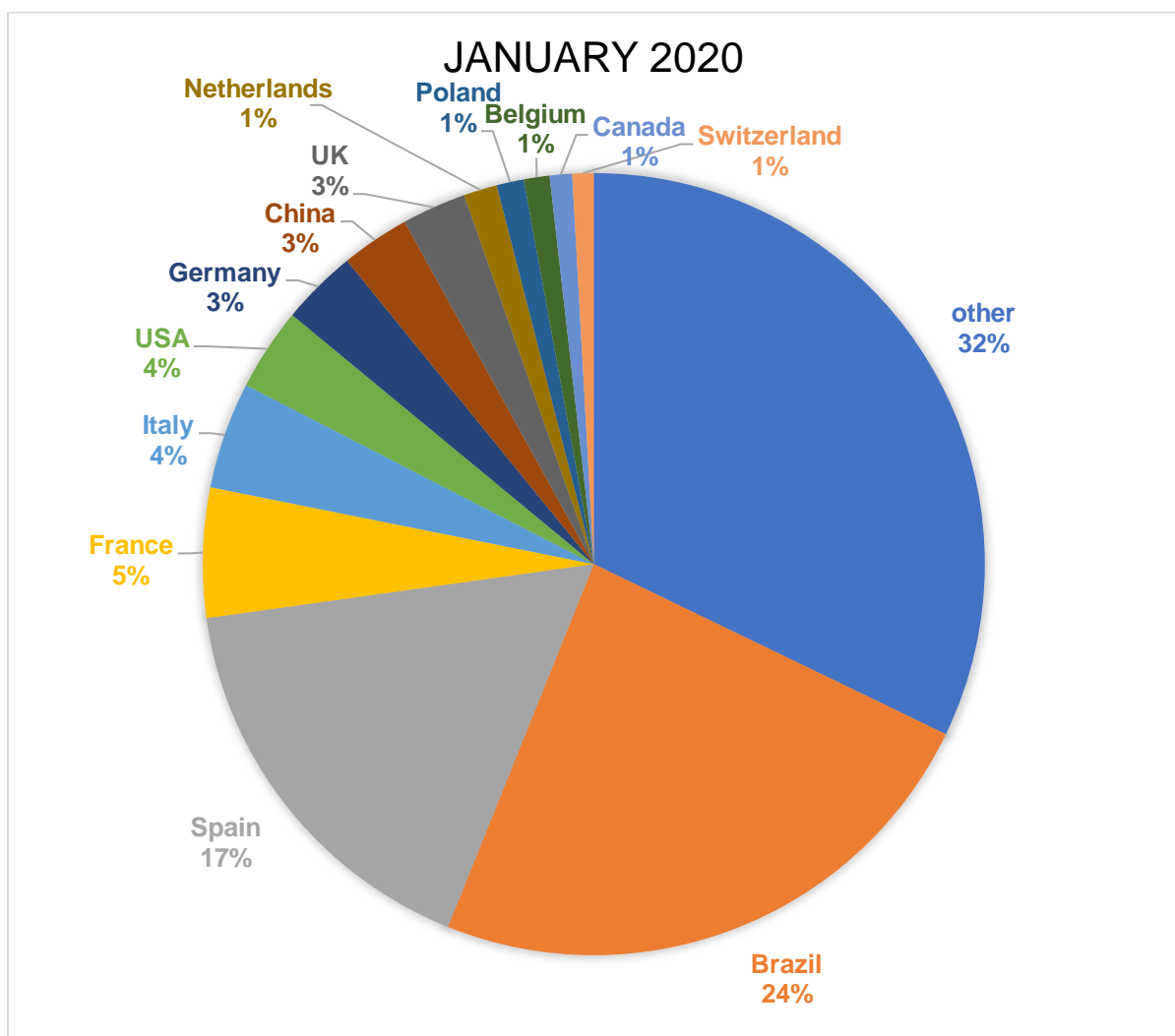


Figure 19 Foreign guests in Centre region of Portugal - January 2020 (INE)

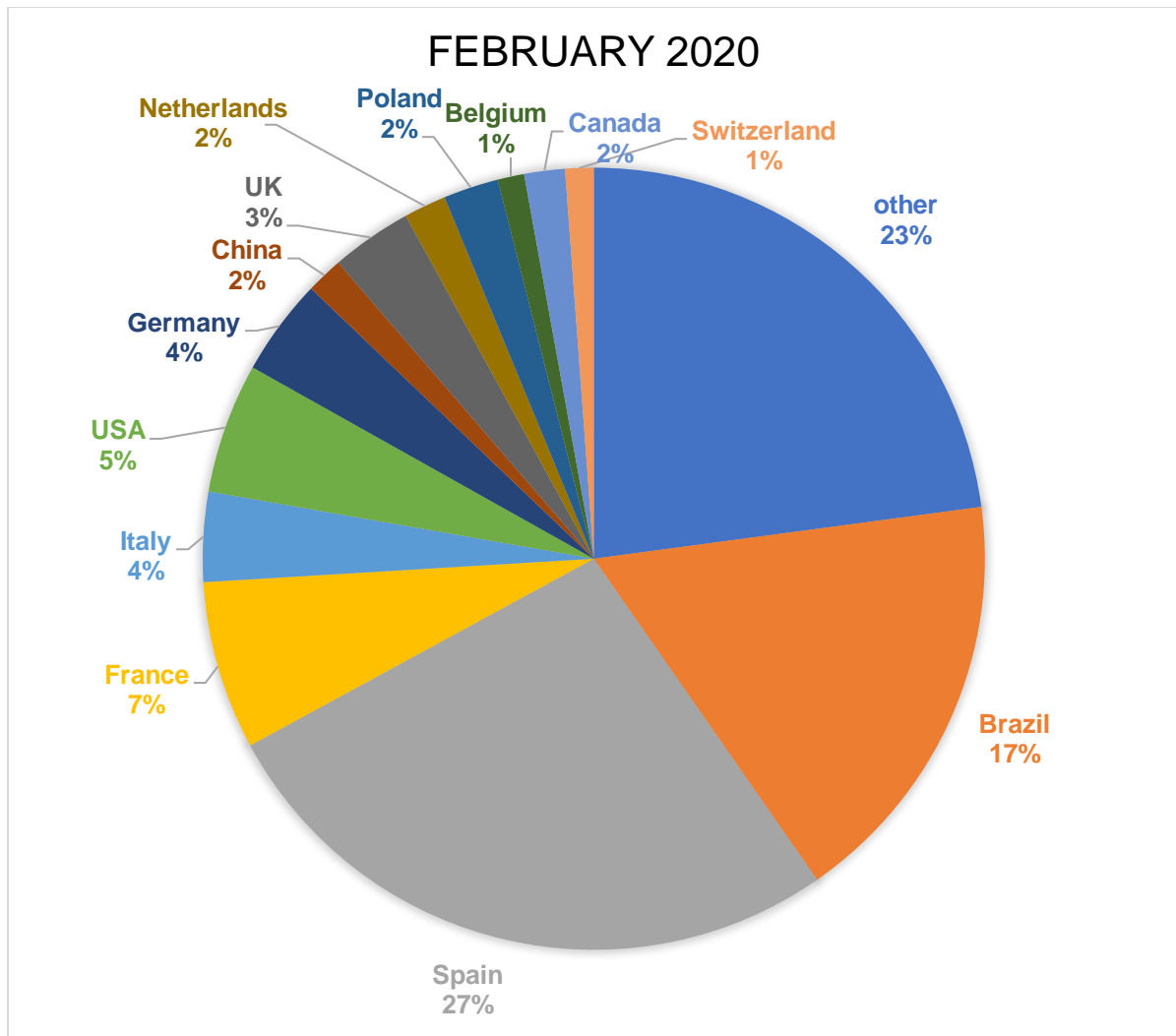


Figure 20 Foreign guests in Centre region of Portugal - February 2020 (INE)

When considering the average of both months, the top ten visitors of the Centre region are from: 1) Portugal, 2) Spain, 3) Brazil, 4) France, 5) USA, 6) Italy, 7) Germany, 8) UK, 9) China, and 10) Poland (Ibid.). Due to the subsequent pandemic, nationals of countries such as the United States, and Brazil continue to be prohibited to enter Portugal for non-essential travel (IATA, 2020).

With the pandemic repercussions that are to last for at least another 2 years, tourism in Portugal will continue to be concentrated locally, and regionally. The targeted nationality segment will therefore consist mainly of Portuguese and neighboring European countries. The following table reflects the overall target market segment for JANO RIDES:

Table 6 Target Segment Market for JANO Rides

Target market segment	Nationality	Age range	Motivation for renting	Marketing
Coastal tourists;  Tourists travel to Peniche namely for its beaches and related activities such as surfing.	<ol style="list-style-type: none"> <li>1. Portuguese</li> <li>2. Spanish</li> <li>3. French</li> <li>4. British</li> <li>5. German</li> </ol>	-Young adults/Adults,  18-40 years old	<ul style="list-style-type: none"> <li>-No driver's license needed</li> <li>-Socially distant mode of travel</li> <li>-Ideal transportation for short 1-3-day trips</li> <li>-Sustainable transportation</li> </ul>	-Social media presence on Facebook and Instagram, and an indication of the shop on Google Maps is sufficient for visibility.

The key target market will be young adults and adults till the age of 40, whom seek beach breaks. In this group, there are many solo travelers, couples, and those who travel with friends. Unfortunately, due to the solitary nature of the e-scooters, and the minimum age limit, this product is not for families with children and teenagers. Many young adults don't have a driver's license, or can't afford to rent a car, and generally end up renting bicycles. The e-scooter is a much better alternative for them especially if they are there for a short period and would like to visit as much of Peniche as possible, in a limited time span. Reaching such an audience through social media platforms is fairly straightforward. Given that the e-scooters can only be rented on-site, and no reservations can be made in advance, there is no need for a website. Younger adults are more environmentally conscious, and due to social distancing measures, an e-scooter will be an utmost appealing choice of transportation to them.

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# VII. FINANCIAL PROJECTIONS

## 6.1 Start-up costs

Table 7 Registration & equipment costs<sup>4</sup>

Registration costs	
Registration fee	360€
Association to products and services	244€
Certification	70€
Shop entry fee	50€
Fee for 10 e-scooters	200€
<b>Total</b>	<b>924€</b>

Equipment costs (Units A)			
Item	Number of units	Price per unit	Total
City Street e-scooter	10	399.96€ (with 20% discount)	3,999.6€
Side mirrors	10	23.5€ (with 20% discount)	235€
Helmet	12	40€	480€
Lock	12	10€	120€
KM tracker	10	20€	200€
Cleaning & first aid supplies (alcohol, hand sanitizer, disinfectant, masks etc.)	-	-	150€
Mechanical kit	1	120€	120€
<b>Total</b>			<b>5,304.6€</b>

<b>Grand Total</b>	<b>6,228.6€</b>
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<sup>4</sup> Information is based on the fees on 'Empresa na Hora' website.

## 6.2 Income statements

### 6.2.1 YEAR 1 Income statement

Table 8 Expenses- YEAR 1

Fixed costs		
Service	Monthly average	Annual cost
Rent	650€	7800€
Utilities (electricity + water)	65€	780€
Internet/cable/phone	30€	360€
Fuel	20€	240€
<b>Total</b>	<b>765€</b>	<b>9,180€</b>

YEAR 1 Direct Labour Budget												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Employee salary	480€	480€	960€	960€	960€	960€	960€	960€	960€	960€	480€	480€
Employee tax (23,75%)	114€	114€	228€	228€	228€	228€	228€	228€	228€	228€	114€	114€
<b>Total</b>	594€	594€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	594€	594€
<b>Grand Total</b>	<b>11,880€</b>											

Table 9 Earnings – YEAR 1

E-scooter rental Prices	
Duration	Price
Half day /4 hrs	15€
Full day/8 hrs	25€
Weekend Special/ Sat-Sun-Mon	50€

YEAR 1 Earnings Projection												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rental rate %	-	-	50%	50%	75%	100%	100%	100%	75%	50%	-	-
Total	-	-	3,300€	3,300€	4,950€	6,600€	6,600€	6,600€	4,950€	3,300€	-	-
<b>Grand Total</b>	<b>39,600€</b>											

YEAR 1 Revenue	
Earnings	39,600€
Expenses (fixed + labour)	21,060€
Start-up costs (registration & equipment)	6,228.6€
Depreciation rate of Units A (15%)	795.69€
Municipal tax (1%)	396€
<b>Net income</b>	<b><u>11,119.7€</u></b>

In the first year, there are several start-up costs, primarily registration fees and equipment purchase. As previously mentioned, the registration will be made through 'Empresa Na Hora', and the fees presented in Table 5 are indicated by the respective entity.

The e-scooters and side mirrors will be purchased from Gran Scooter at a 20% discount, whereas the additional accessories bought at other previously indicated shops. The

total for additional cleaning and disinfection supplies are an estimate for the first year. Finally, a mechanical kit (Newchic) will be essential in case of on-sight reparations needed.

In terms of fixed costs, a monthly average was estimated for energy use and water. Minimal gas would be needed for a standby vehicle to run errands, attend to potential emergency situations, amongst other scenarios.

In relation to labour, 1 worker who is knowledgeable in mechanics will be employed full time during the months which the shop is open, and part time during winter season for maintenance purposes. A 23.75% tax (TSU) is applied for social security purposes (Favery, 2019).

In addition to the expenses, a 1% Municipal tax is applied in Peniche (Autoridade Tributária e Aduaneira, Feb, 2020). Finally, given that the total net income falls below 12,500€, and that the business will likely take form only after 2021, the company is exempt from paying Value Added Tax (VAT) (Autoridade Tributária e Aduaneira, 07/2020).

## 6.2.2 YEAR 2 Income statement

Table 10 Expenses- YEAR 2

Fixed costs		
Service	Monthly average	Annual cost
Rent	650€	7800€
Utilities (electricity + water)	65€	780€
Internet/cable/phone	30€	360€
Fuel	20€	240€
<b>Total</b>	<b>765€</b>	<b>9,180€</b>

YEAR 2 Direct Labour Budget												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Employee salary	480€	480€	960€	960€	960€	960€	960€	960€	960€	960€	480€	480€
Employee tax (23,75%)	114€	114€	228€	228€	228€	228€	228€	228€	228€	228€	114€	114€
<b>Total</b>	594€	594€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	594€	594€
<b>Grand Total</b>	<b>11,880€</b>											

Table 11 Earnings – YEAR 2

E-scooter rental Prices	
Duration	Price
Half day /4 hrs	15€
Full day/8 hrs	25€
Weekend Special/ Sat-Sun-Mon	50€

YEAR 2 Earnings Projection												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rental rate %	-	-	50%	50%	75%	100%	100%	100%	75%	50%	-	-
Total	-	-	3,300€	3,300€	4,950€	6,600€	6,600€	6,600€	4,950€	3,300€	-	-
<b>Grand Total</b>	<b>39,600€</b>											

YEAR 2 Revenue	
Earnings	39,600€
Expenses (fixed + labour)	21,060€
Depreciation rate of Units A (15%)	676.3€
Municipal tax (1%)	396€
<b>Net income</b>	<b><u>16,967.7€</u></b>

Given that the rent, utilities, and telecommunications contracts have duration of 2 years, the fixed costs will remain the same for a second consecutive year. As there will be less demand for fuel, it is highly unlikely for gas prices to rise. Similarly, labour costs and tax will not change.

Rental prices will also not change, but also, no financial risks are taken. The goal of the second year of the business is to save up as much as possible as, as any repeatedly used vehicle will continue to depreciate and reparations are inevitable. The company will continue to be exempt from paying VAT as this is based on its earning from the previous year.

## 6.2.3 YEAR 3 Income statement

Table 12 Overhead costs – YEAR 3

Equipment costs (Units B)			
Item	Number of units	Price per unit	Total
City Street e-scooter	6	425€ (with 15% discount)	2,550€
Registration fees	6	20€	120€
Helmet	5	40€	200€
Lock	5	10€	50€
KM tracker	6	20€	120€
Cleaning & first aid supplies (alcohol, hand sanitizer, disinfectant, masks etc.)	-	-	100€
<b>Total</b>			<b>3,140€</b>

Table 13 Expenses - YEAR 3

Fixed costs		
Service	Monthly average	Annual cost
Rent	650€	7800€
Utilities (electricity + water)	80€	960€
Internet/cable/phone	30€	360€
Fuel	20€	240€
<b>Total</b>	<b>765€</b>	<b>9,360€</b>

YEAR 3 Direct Labour Budget												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Employee salary	480€	480€	960€	960€	960€	960€	960€	960€	960€	960€	480€	480€
Employee tax (23,75%)	114€	114€	228€	228€	228€	228€	228€	228€	228€	228€	114€	114€
<b>Total</b>	594€	594€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	1,188€	594€	594€
<b>Grand Total</b>	<b>11,880€</b>											

Table 14 Earnings – YEAR 3

E-scooter rental Prices	
Duration	Price
Half day /4 hrs	18€
Full day/8 hrs	30€
Weekend Special/ Sat-Sun-Mon	60€

YEAR 3 Earnings Projection												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rental rate %	-	-	50%	50%	75%	100%	100%	100%	75%	50%	-	-
Total	-	-	6,720€	6,720€	10,080 €	13,440 €	13,440 €	13,440 €	10,080 €	6,720 €	-	-
<b>Grand Total</b>	<b>80,640€</b>											

YEAR 3 Revenue	
Earnings	80,640€
Cash savings	5000€
Expenses (fixed + labour)	21,240€
Overhead costs	3,140€
Depreciation rate Units A (15%)	574.8€
Depreciation rate Units B (15%)	471€
Municipal tax (1%)	806.4€
VAT (6%)	4,838.4€
<b>Net income</b>	<b><u>54,569.4€</u></b>

In the third year, 6 new e-scooters will be purchased with additional gear with part of the cash savings of year 2, to expand the business. As such two sets of depreciation rates are calculated for the older e-scooters (Units A) and the new ones (Units B).

Fixed costs such as rent, utilities, and telecommunications are automatically renewed for a period of 2 years, however, as 6 new units are added, electricity bills will increase, thereby, an estimate of a 33% rise has been made. Relatively, e-scooter rental prices will increase by 20%. An overall increase in rental prices, and the 6 added units, boosts the new net income greatly!

## 6.2.4 YEAR 4 Income statement

Table 15 Expenses YEAR 4

Fixed costs		
Service	Monthly average	Annual cost
Rent	650€	7800€
Utilities (electricity + water)	80€	960€
Internet/cable/phone	30€	360€
Fuel	20€	240€
<b>Total</b>	<b>765€</b>	<b>9,360€</b>

YEAR 4 Direct Labour Budget												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Employee salary	528€	528€	1,056€	1,056€	1,056€	1,056€	1,056€	1,056€	1,056€	1,056€	528€	528€
Employee tax (23,75%)	125.4 €	125.4 €	250.8€	250.8€	250.8€	250.8€	250.8€	250.8€	250.8€	250.8€	125.4 €	125.4 €
<b>Total</b>	<b>653.4 €</b>	<b>653.4 €</b>	<b>1,306.8€</b>	<b>1,306.8 €</b>	<b>1,306.8 €</b>	<b>1,306.8 €</b>	<b>1,306.8 €</b>	<b>1,306.8 €</b>	<b>1,306.8 €</b>	<b>1,306.8 €</b>	<b>653.4 €</b>	<b>653.4 €</b>
<b>Grand Total</b>	<b>13,068€</b>											

Table 16 Earnings – YEAR 4

E-scooter rental Prices	
Duration	Price
Half day /4 hrs	18€
Full day/8 hrs	30€
Weekend Special/ Sat-Sun-Mon	60€

YEAR 4 Earnings Projection												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rental rate %	-	-	50%	50%	75%	100%	100%	100%	75%	50%	-	-
Total	-	-	6,720€	6,720€	10,080 €	13,440 €	13,440 €	13,440 €	10,080 €	6,720 €	-	-
<b>Grand Total</b>	<b>80,640€</b>											

YEAR 4 Revenue	
Earnings	80,640€
Cash savings	20,000€
Expenses (fixed + labour)	22,428€
Depreciation rate Units A (15%)	488.6€
Depreciation rate Units B (15%)	400.35€
Municipal tax (1%)	806.4€
VAT (6%)	4,838.4€
<b>Net income</b>	<b><u>71,678.25€</u></b>

In the fourth year, fixed costs for utility, rent, and telecommunications will remain the same as that of year 3. On the other hand, the cost of labour will likely rise, and an increase in pay of 10% is included.

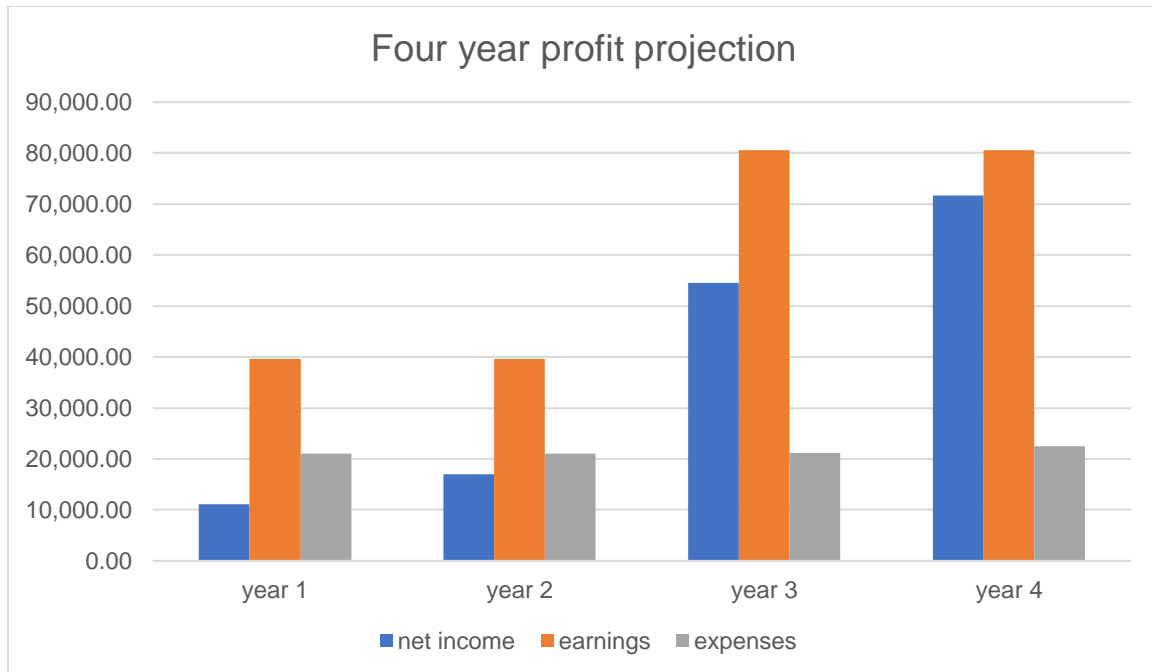


Figure 21 Four-year profit projection for JANO Rides

A steady growth in income is witnessed from the first to the second year of the projections as expenses of the first year are paid off. It is however in the third year, when new units will be added to the mix, and e-scooter rental prices are raised by 20% that earnings skyrocket. In the fourth-year labour costs are increased organically as net-income rises by just over 30%.

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## VIII. CONCLUSION

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The conceptual framework of JANO RIDES was inspired by the researcher's own predicament during her two years of residing in Ferrel village, and repeatedly facing the inadequate transportation woes, and exceeding car pollution. The underlying pillars of the business plan are the sustainable development triad metamorphosed into the socio-economic binary, that generates from the environment. As such, the business seeks to prioritize the immediate environment by providing a service which, in its meager way, helps to minimize pollution in the coastal zone of Peniche, and hopefully act as a catalyst for the community to opt for pollution free transportation.

Thus, a great interest in micro-mobility and non-fuel-based vehicles, as well as exhaustion from riding a bicycle to and from Peniche, led to the purchase of the researchers' very own first e-scooter. It quickly became clear that this is exactly what's missing in many coastal towns in Portugal, and especially in a place like Peniche where thousands of people ride their cars alone, on a daily basis, for very short commutes.

JANO RIDES has demonstrated that a small business with the right intentions for the community, and the environment, can thrive. Moreover, the pandemic has placed a great burden on the tourism industry, and visitors want to feel safe. Shared transportation is far too risky and car rentals are too burdensome. Offering a safe ride to get around at the destination will ensure an enjoyable stay.

As the European Union strives towards enhancing the air quality through policy changes, and the proposal of Clean Air Quality Package (EEA, 2020), Portugal amongst other regions of Southern Europe has a much higher exposure to pollution (The Portugal News, 2019). It is well past the time to wait for EU leaders to initiate change, as the world faces environmental catastrophes, economic crisis, and social calamity. It is time for a bottom-up approach, where innovation sparks at the community level, and the immediate environment is preserved locally. Ferrel is famous for its successful resilience against the nuclear plant project, and the community is very involved in local projects. It is therefore the ideal location to implement a sustainable tourism start-up business.

JANO RIDES began as a self-exploration process and developed into a start-up rental shop that takes into account its environmental impact and serves both visitors and the community in which it resides in, thereby rendering it an exemplary business plan for sustainable tourism development.

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