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Geomarketing as an Entrepreneurship Tool

2017-1-IT02-KA203-036955 – CUP I82F17000390006

O2: Research on Geomarketing

Editor :	Nikos Lambrinos (AUTh)
Revision :	1.0
Due date of deliverable :	30 April 2018
Start date of project :	01 October 2017
Project duration :	24 months

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ABSTRACT

This deliverable is the publication based on research undertaken before the second meeting of Geomarketing as an Entrepreneurship Tool Project. It is based on literature research and surveys of project participants. It can be considered as the report on Geomarketing Research.

The publication considers the current needs for the development of Geomarketing for youth employment needs. It examines some of the ongoing methods for research and implementation and explores current needs issues.

It consists of 7 chapters. The first chapter is the introduction of the report. It connects the deliverable to the project aims. The second chapter shows the objectives of the publication/report. This is in accordance to the objectives of the project. The third chapter is divided in seven sub-chapters. It starts by giving the definitions of Geomarketing found in the international literature and continues with the places where Geomarketing is/may be used. It continues with the definitions of Location Intelligence and how it is involved in Geomarketing and connects all the above with the expansion of Cloud computing and its role in business creation and development. The chapter ends with the presentation of cases of good practice from the five participating countries. The cases show companies that use geomarketing and how they are benefitting from it.

Chapter four is dedicated to Open Data. A very important factor for the evolution of Location Intelligence and Geomarketing. It presents the necessary spatial layers needed for decision making in entrepreneurship.

The fifth chapter is about the research methods used in Geomarketing. It presents the most frequently used software and the research models and finally presents the questionnaires about Location Intelligence (LI) / GIS application on entrepreneurship and decision-making (number of questions, kind of questions, recipients) as well as the questionnaire about youth unemployment and business creation (from GIS / LI point of view). The chapters ends with a brief analysis of the questionnaires.

The sixth chapter is about the Focus Group. It presents the report from each partner/country including the members of the Group and how they were chosen as well as the contribution of the Group to the project.

The last chapter, presents the conclusions of this report per country and in total.

The report ends with an annex with the questionnaires and templates that were used for the integration of the report.

Contents

1.0   Introduction

Geomarketing and location intelligence concepts can effectively support business creation in optimum locations, thereby allowing any entrepreneur to implement their business ideas and achieve their objectives, as a route out of unemployment.

In this context, the focus of the "Geomarketing as an Entrepreneurship Tool" (GET UP) project revolves around the:

- creation of geographic relationships among relevant spatial data and learning how to use it as basis to initiate start-up businesses
- ability to understand and analyze complex phenomena through the use of Geomarketing techniques
- use of Geomarketing as a management tool, in order to attract investments and businesses

The present report on "Research on Geomarketing" is a detailed research on Geomarketing and Location Intelligence, undertaken as part of the GET UP project. It is based on literature research and surveys of project participants.

It initially includes a description of its objectives in chapter two, followed by a brief explanation of core terms and related definitions, based on international references in chapter three. Chapter four focuses on open data collection – from maps to demographics and labor force information. Subsequently, in chapter five, some critical research factors are addressed (software, models used in Geomarketing etc.), while relevant questionnaires and their analysis is also included. Chapter six concerns the reports from focus groups (consisting of experts on Geomarketing) from the countries involved in the GET UP project. In the seventh chapter, the results of a cross Analysis between Research on Entrepreneurship (O1) and Research on Geomarketing (O2) are presented. Finally, the conclusions from the ensemble statistical analysis, as well as per involved country, are drawn in chapter eight.

2.0   Publication Objectives

This publication aims to clarify Geomarketing and its related concepts, pinpoint its application to business decisions and identify the data that can be used thereto. The report especially considers the current requirements for the development of Geomarketing for youth employment purposes. It examines some of the ongoing methods for research and implementation and explores contemporary need issues.

To this end, it collects and analyses information on updated research concepts regarding Geomarketing and Location Intelligence, its application on business decisions, geographic location optimization for business, as well as how data can be used for business management. It also collects open geospatial data to be used in business analysis, because location intelligence is more than just a map with dots on it; location intelligence could be a full-fledged analytical system.

The related questionnaires are employed in order to investigate the level of knowledge of the main target group – i.e. unemployed youth – with a view to acquiring useful insights for the development of modules in O3. They also contribute to the analysis of expectations and motivations of young people to become entrepreneurs, as well as their perception of the term

"entrepreneur" itself. In this context, the target group preferences on related learning approaches, environments and type of learning activities are also examined.

3.0 Definitions

3.1. What is Geomarketing

What does "Geomarketing" really mean? Looking at the international bibliography it is clear that the term tries to combine two digital technologies: a) Geographical Information Systems (GIS) and b) Location Intelligence (LI). However, the difference between these two is not so clear. Both address spatial data and try to give answers to "why", "what" and "where" since this technology was applied. This is because these were/are the most frequent geography questions, at least until few years ago. Nowadays, these questions have been altered and "why" has been replaced by "how is it combined", "what" by "if it didn't exist" and "where" by "why there" (Lambrinos, 2018). In fact, these newly expressed questions show the new capabilities of geospatial technology. Knowing where existing and potential markets are is crucial to any business.

The term "Geomarketing" is not a global term, yet. Instead, the term "Business-GIS" is used although there is a difference between "Marketing" and "Business". "Marketing" is limited to the customer-oriented activities, while "Business" is more comprehensive and related to production-relevant aspects (Verschuren, 2006). Fischer (2001) sees differences between "Business-GIS" and "Geomarketing" but they remain related to each other. He gives the following definitions: Business-GIS: 'A computer-supported information system for Collection, Storage, Administration, Analysis, Visualization and Presentation of companies' internal and - external data with a geographical relation for the purpose of decision support'. It is an information system consisting of a mixture of a MIS and GIS. Geomarketing: 'The use of Business-GIS tools for address focused marketing on the basis micro-geographically entities'. Business-GIS is more or less an information system where Geomarketing is part of" (from Verschuren, 2006).

Geomarketing is a multifaceted approach that allows for both a comprehensive overview of market and company data as well as detailed micro geographic analysis (Hardt-Beischl, 2012). The analysis is addressed to the customers' spatial behavior and covers the principle of least effort, connectivity and accessibility (Roşu, Blăgeanu and Iacob, 2013).

Geomarketing is the integration of geographical intelligence into various aspects of marketing, including sales and distribution while Geomarketing research is the use of geographic parameters in marketing research methodology, including from sampling, data collection, analysis, and presentation. (Suhaibaha et al., 2016).

GeoMarketing is a discipline that connect the power of geographic apprehension and analysis with Marketing techniques and insight, aiming to enhance the ultimate goal of the latter: to sell products, services, or ideas (McCarthy, 1960, from Zuluaga & Escobar, 2017).

Geomarketing is a new way of knowledge-based marketing, which is supported by digital maps and specialized GIS software. Knowledge-based marketing use packaged information such as marketing information systems, such as model building, data mining, etc, in order to determine customer profiles, deviation analysis, and trend analysis (Atalik and Uyguçgil, 2017).

More "Geomarketing" definitions can be found at Verschuren, (2006:16-17) – eight definitions- all of which have GIS and geographical data at the core of their explanation.

3.2. Where is it used (sectors of entrepreneurship)

Geomarketing is used in almost any kind of entrepreneurship, small, medium or large. It is more practical to name the sectors of applications instead of the entrepreneurships themselves. For example it may be used in a:

1. Personal Company

2. Social Cooperative Company

3. Limit Liability Company

4. SA

5. General Partnership

6. Limited Partnership

7. Start Up

8. Private Capital Company

Considering the given definitions it is clear that Geomarketing is a tool for either commencing or expanding a company and more or less, location is a key factor for geomarketing. Geographical locations together with demographic data are used in geomarketing analysis to study the routing plan, territorial planning and site selection (Suhaibaha et al., 2016).

For many businesses, the decision of where to locate their commercial outlets will be the most important determinant of their success (Freire and Santos, 2012).
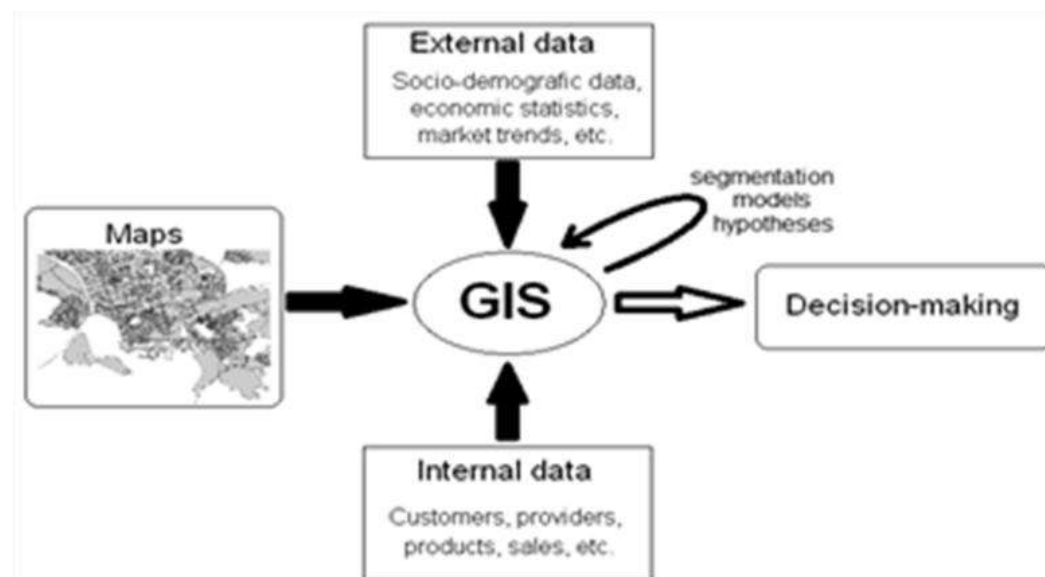

Fig. 1. Basic elements of a geomarketing system (Wandosell, Baños, Parra, 2015)

3.3. What is Location Intelligence

"Location intelligence is defined as the capacity to organize and understand complex data through the use of geographic relationships. Business intelligence (BI) and geographic analysis put together to discover powerful new insights. That is location intelligence (LI) (ESRI, 2016).

"Location Intelligence (LI) is a discipline for turning location data into business outcomes through data enrichment, visualization, and iterative analysis. Distinct from Business Intelligence, Location Intelligence brings together tools and techniques from data science and spatial analysis to build interactive data visualizations that optimize business functions more than merely plotting points on a map" (Carto 2018).

However, there are opinions like that of Lal and Pathak (2011) who state that "there is negligence of retail location studies. In most of the marketing research studies, the central concern is channel of distribution, store environment and image and not the location".

There are also opposite opinions, however, stating that geomarketing copes with information in order to gain competitive advantage and effectiveness in business, by using geographical criteria to optimize commercial actions (Afonso, Gomes and Abrantes, 1998 in http://www.geocomputation.org/1998/58/gc_58.htm retrieved 16-7-18)

3.4. How Location Intelligence (LI) is involved in Geomarketing

Location Intelligence is a technical way to organize spatial data with business and human data in a geographically correct way in order to reveal hidden relationships that may lead to benefit for a business and/or to avoid spatially wrong located investments. It is combined with Business Intelligence (BI) in order to analyze and organize a vast amount of data and show the influence of geography on behaviors, activities and processes (ESRI, 2016).

At the Report "State of Location Intelligence 2018" 94% of the respondents said that their organization collects and stores location data in various ways and also that their organization intends to invest in Location Intelligence within the next one year (78%) to three years (84%).

In January 2016, Dresner Advisory Services, LLC, published the 2016 Edition Report on "Location Intelligence Market Study" where they state, about the importance of Location Intelligence, that LI is in the middle of 25 topics (ranks 12th), being less important than traditional topics like, dashboards, end-user self-service and data visualization and ahead of topics like cloud computing, Big Data, open source software etc. (DAS, 2016). For LI itself, the responses showed that for "Critically important" voted 16%, for "Very important" 36.9%, for "Somewhat important" 34.2% and "Not important" 12.8%.

In the same report the "very important" responses increased slightly from 2014 to 2016 and "not important" decreased slightly.

The situation looks different in the same report of 2018 (DAS, 2018) where dashboards, for example, are mentioned as "Dashboard inclusion of maps" and being much lower in the rank and the topics are more space–oriented (Off-line mapping, choropleths (area fill) maps, animation of data on maps, etc.) (https://www.forbes.com/sites/louiscolumbus/2018/02/11/what-new-in-location-intelligence-for-2018/#7a12cef514b5 retreived 16-7-18)

3.5. The role of Cloud in Geomarketing

The technology of Cloud is being used by everyone for some decades now mainly through email services. Gradually, email services are substituting surface mail / postal systems.

Remote Sensing, GIS, GPS and virtual globes like Google Earth (https://earth.google.com/) and World Wind of NASA (https://worldwind.arc.nasa.gov/) form the four basic tools of geospatial technology. This technology is the spearhead of geospatial research in a) the connection between technology and thinking, b) training and c) professional upgrade (Baker et al. 2015).

All of the above tools are essential for the improvement of a business because they are real time data, they can collect, visualize and analyze their client's assets in real time in combination with the real world of a satellite image or any other airborn imagery (i.e. image from a drone) and the process of the data in real time. This allows an almost instant updating of the maps used by the business. This can be done when the business uses a web mapping software in order to update their database. All web mapping software are on the cloud and give the opportunity to be used from any place any time by any employee of the company who has the right to do so. Also, the database is on the cloud and can be retrieved accordingly.

These two (the software and the database) interest everyone who intends to start a company for many reasons. The interested person is looking for answers in questions like a) where should I locate my business, b) what kind of businesses does this area have, c) how many people are living in this area, d) what is their income, e) what is their education level, etc.

Most of these data can be found in the internet for free. The administrative division is free and even up to zip code division can be found and be extracted from OpenStreetMap (OSM) from the cloud.

All these data can be stored in layers and used in a web map to show the current state of peoples' marketing profile.

So, the use of cloud gives a great help in decision-making because it contains all the data someone needs.

Besides, there are applications which can help someone either to find a company or look around to find a suitable place to start up a new company like in http://gis.acci.gr/ (the Chamber of Commerce in Athens, Greece) or in https://www.zoomprospector.com/ (a US portal which connects businesses with communities). In the first case everything is uploaded on the cloud and all the enterprises in Athens can be found either by subject or by the address and/or name of the enterprise. The user can locate a point and with a radius of 0-4000 meters can see all the enterprises within that circle.

3.6. Impact of Geomarketing on Business

The World Wide Web has made the process of collecting data easier, adding to the volume of data available to businesses. Many organizations have realized that the knowledge, stored in these huge databases, is important to supporting organizational decisions (Nunes, et al., 2014). The knowledge about customers is critical for marketing decisions but, much of this useful knowledge is hidden and untapped (Weaven, Grace, Dant, and Brown, 2014).

The analysis of geomarketing data uses a huge data pool such as location residential areas and topography, it also analyzes demographic information such as age, genre, annual income and lifestyle.

Almost a decade ago, the data were not available freely. This happened after November 2006 due to the INSPIRE resolution (an EU resolution which made spatial data and spatially referenced data from public sources available for free in large quantities). Until then, small and medium enterprises hesitated to use spatial data due to high cost and a missing competence in GIS. Also, geographic data and georeferenced market data needed updates which were very costly (Ernst, Voss and Berghoff, 2007).

Even when the data were freely available, they needed further processing in order to be combined with other market layers to give the expected result. This means that SMEs needed to have special software and experts to work with the software. All these were very expensive for small enterprises.

A web portal with web mapping facilities and market data layers which use free data updated frequently and an easy to use web mapping software could be a sustainable solution. All these can be quite cheap as long as they are on the cloud and there is no need to have an expert to deal with the portal. There are portals like www.mapchart.com (in Germany), http://gis.acci.gr/ (in Greece) and https://www.zoomprospector.com/ (in USA), to name a few, that do some simple business location services for marketing purposes (retail/wholesale), some of them for free and some of them not, depending on user's needs. The user doesn't have to be an expert. The only thing he/she needs is to know what he/she is looking for. For more complex business analysis the user has to get in contact with the portal's responsible person.

The fact is that there is no straight evidence on how business location/geomarketing helps youth unemployment. However, there are indirect conclusions showing that Geomarketing helps existing companies to grow and, in turn, the companies need more employees for their expansion. So, there are two different cases (a direct and an indirect): a) in the first case, young entrepreneurs use geomarketing to find the most suitable place to start their business and b) young people get a job in a company which uses geomarketing for its expansion.

In "IT solutions for the management of Geo-Business" Mareş, Mareş and Ilincuţă, (2009) it was concluded that "the results of GIS integration in business generates new perspectives for strategic decisions, market niches, strategic and operational marketing and in the activities of development and sales", among other conclusions on Geo-Business, but they say nothing about how IT can improve youth employment. Taking into account that GIS implementation in marketing had begun many years earlier, it seems that youth employment and Geomarketing are not connected yet.

In the mid 80's, the concept of "Intellectual Capital" (IC) appeared (Castilla-Polo and Gallardo-Vázquez, 2008). Stewart (1997) defined IC as the total stocks of collective knowledge, information, technologies, intellectual property rights, experience, organizational learning and competence, team communication systems, customer relations and brands that are able to create values for a firm. "IC consists of three main components (Sydler et al., 2014): human capital (knowledge, skills, and competences of the company's employees), structural capital (managerial philosophy, corporate culture, intellectual property, management processes, etc.), and relational capital (relationships of the organization with employees, suppliers,

dealers, sellers, and customers)" (from Wandosell, Baños and Para, 2015). All the above show that there is a connection between ICT, which nowadays is expressed by GIS, marketing and people's engagement. This is because the evolution in IC is highly correlated with the growth of Knowledge Management (KM) as a new management discipline (Mohamed and Mohamed, 2011).

IC information is related to the management control of knowledge resources. ICTs respond to the increasing demand for the identification of organization's IC to provide managerial insights in knowledge intensive industries (Wandosell, Baños and Para, 2015). ICTs are useful for IC (Arntzen and Nkosi-Ndlela, 2008), and IC is important to evaluate ICTs (Calabrese et al., 2013).

According to Wandosell, Baños and Para (2015), Intellectual Capital is very critical for organizations. In their research paper it was concluded that "there are other useful ICTs, including GIS, which can be used for acquiring and managing IC", "Geomarketing methods are useful tools to acquire and process information about internal and external resources (suppliers, dealers, sellers and customers) taking into account the geographical variable" and "these strategies allow them (the companies) to collect valuable information in order to identify the points where they can have maximum impact (e.g. which is the best location for a new facility), to determine which is the best way to establish relationships with suppliers, dealers, sellers and customers, select marketing channels, marketing strategies and promotional campaigns, etc." (Wandosell, Baños and Para (2015:365).

3.7. Reference on existing Cases of good practice (all cases can be found in Annex 3)
There are a number of Good Cases from each of the partners. Some of the cases are focused mainly on entrepreneurship using internal data like amount of customers, rates of sale, customer's profile etc. and marketing data, and others are focused on geomarketing using GIS and spatial data like demographics and topographic data.

There are two cases from Greece, one from a private milk company and the second from a municipality, three cases from Ireland, one from an international private company, the second from a real-estate company and the third from a Local Authority, four cases from Spain, two cases from private food companies, the third is a political party and the fourth is from the main telecommunication company of Spain.

The Greek cases show that although the size of the milk company is quite big, with a wide network of retail sales in Greece and abroad, the company doesn't use any system that may analyze the spatial distribution of its customers or forecast the expansion of its network based on new demographic and marketing data. In the second case a municipality uses a GIS system to locate the best places for garbage bins and to find new –better- routes to collect the bins. It is a kind of marketing, different from the rest, but it uses a GIS for the benefit of the "customers" (the members of the community).

The Irish cases show an international company which makes a wide use of geomarketing techniques for the benefit of their customers and for the company itself and a private real estate company which uses geospatial analysis to maximise profitability and reduce risk for its clients. Finally, a public authority uses geospatial analysis to react incredibly quickly to an emerging crisis, in this case to help people escape from flooded regions.

The Portugal cases are comprised of three big private companies. They all use GIS in their market analysis to understand their current and potential customers and also predict sales and market share, to support the system of definition of commercial goals per sales point and to optimize operations and reduce costs.

The Spain cases are from two multinational private food companies, an international telecommunication company and a political party. They all use GIS in order to define the typology of potential customers, visualize and geolocate all the points of sale on a map, define exclusive areas and/or similar areas, identify hot spots, incorporate Big Data analysis and, make a strategic plan to distribute campaign events more efficiently and concentrate efforts in critical electoral districts and areas.

As seen from the above, all big companies use a GIS to communicate with their customers, to organize their future policy, to find or relocate their retail sales points and to expand their sales in new territories. Only the Greek cases show a reluctance in applying geospatial analysis although one of the companies has an international profile. Even in this case, there is a business plan which proposes the use of geomarketing in the future.

4.0 Open Data collection

Getting spatial data was difficult and expensive a couple of decades ago in comparison with today where free spatial data can be found in numerous web sites supported by local governments, international organizations, companies and/or individuals (i.e. https://dragons8mycat.com/gis-data-sources/, http://www.mapcruzin.com/, https://www.eea.europa.eu/data-and-maps, https://www.gislounge.com/data-and-gis-resources/) just to name a few. Depending on the purpose of use, the data can be divided into external data (statistics, demographics and topographic data) and internal data (amount of customers, rates of sale, customer's profile etc.). Companies and entrepreneurs are interested in both, according to the above chapters.

The use of the data pre-supposes the knowledge of the GIS software. As said before, most of the companies don't invest in GIS specialized employees or they try to do the job with as low as possible cost. So, the software must have certain characteristics in order to be user friendly and for the employees get involved in very short time.

In fact, most of the companies, as long as they want to use a GIS in order to get involved in geomarketing, are looking for: a) a user-friendly software, b) available in a local language with as few technical terms as possible and c) a low training requirement (Lambrinos, 2018).

When they get these then the effort goes to the quality of the data. The data focus on external data. Usually, companies don't want to share their internal data. Besides, internal data can't be found for free on the internet.

Before proceeding, we have to make a distinction. External data focus mainly on topographic data and demographics. Companies are interested, usually, in both, external and internal data. This project deals with external data that may be used as layers in a web mapping system in order to help companies or individuals to evaluate their marketing plans. For this reason the proposed data are referenced potentially to each participating country.

A web mapping system for geomarketing should contain, all or most of, the following map layers:

4.1. Map Layers

4.1.1 Administration Division according to NUTS

There are three NUTS (*Nomenclature of Territorial Units for Statistics)* levels and two levels of Local Administrative Units (LAUs) that are below NUTS levels. The three NUTS levels cover the whole area of a country. This division is suggested because it is common for all European countries and is used officially since 2003 in Europe. All levels can be downloaded for each country from https://land.copernicus.eu/ and/or https://sentinels.copernicus.eu/web/sentinel/sentinel-data-access , http://data.geocomm.com/ , http://www.diva-gis.org/gdata http://www.statsilk.com/maps/download-free-shapefile-maps . Also, users can download free map layers from OSM.

4.2. Cartographic layers

Country			City	
	Level	Sub-level		Level
Borders	NUTS 1 NUTS 2 NUTS 3		Municipalities (borders)	
Transportation	Roads	Highways National Local	Building Blocks	Hospitals Schools Parks (recreational areas) Theaters/movies Museums
	Rails Ports Airports			
Populated areas	Cities Villages			
Population Density				

Morphology	DEM	
Rivers	Drainage areas Channels	
Lakes	Natural Artificial	
Environment	National Parks National Forests Aesthetic forests Wetlands	
Points of Interest		
Archaeological sites		

4.3. Demographics

Main category	Level
Population (two successive censuses)	Density
	Sex
	Age distribution
Households	Number
	Income distribution (in 10ks)
	Size (in number of persons)
Housing status	Private
	Rent
Labor	Labor force status (two successive censuses)

	Unemployed	
	Employed	
Education Level	Compulsory	
	High School	
	Vocational	
	Higher	Degree
		MSc
		PhD

4.4. Consumer expenditures

Apparel Footwear Education Books Tuition Food Mortgage	Recreational / Entertainment Health care Fees Insurances (any kind) Rental cost Household services and supplies	Transportation (Public, private) Heat cost (fuel oil, etc) Electricity Natural Gas Phone cost (any kind of phones, internet, etc) Gifts Donations

4.5 Labor force

Establishments by size. In terms of size we mean the number of employees and not the space.

Establishment by Type of entrepreneurship i.e. Agriculture, Fishing, Forestry, Agricultural service, Mining, Constructions of any kind, Office and administrative support, Sales, Manufacturing, Wholesale and Retail trade, Services, etc.

Depending on the type of company, the number of employees varies. Accordingly, the number of employees determines the space needed for the company and can provide suggestions for the best location (in certain places it is easier to find the labor force the company needs). These two parameters (size and type) should attract special attention and should be combined with other layers before the final decision is taken.

4.6 Other data

Commercial space (m2). This parameter is important for two reasons: a) it can show the empty stores that have the minimum space required by the law for starting a new business and b) it is combined with the cost for renting or purchase of the place.

Number of adjacent similar enterprises. The layer shows how many and where similar enterprises are. In this way a new entrepreneur can estimate the desirable minimum distance where his/her enterprise should be located in relation to competing businesses.

Accessibility. This is a key layer that refers mainly to the customers. It is shown that customers prefer enterprises that are closer to them or to the main road before they search for other parameters (i.e. cost, varieties, etc).

5.0 Research factors

5.1. Most frequently used Software

There are two different approaches: a) software used for entrepreneurship and b) software used for geomarketing. In this section we will focus on the second approach.

The predominant software is Geographical Information System (GIS), either proprietary or free.

The most frequently used software belongs to ESRI, USA (ArcGIS). Apart from ArcGIS there are applications that use MapInfo Pro (Pitney Bowes, USA), QGIS and gvSIG (they are both free and open software and can be downloaded from https://qgis.org/en/site/forusers/download.html and http://www.gvsig.com/en/products/gvsig-desktop/downloads respectively).

5.2. Research Models used in Geomarketing

5.2.1. Buffer zones

This is a common utility in every GIS software that creates polygons around input features to a specified distance. Due to the fact that in most of the cases the areas covered by the map are small (for example a city) the type of buffer zone is Euclidean. When the area is large then Geodesic type is used in order to avoid distortion of the curved earth surface (http://desktop.arcgis.com/en/arcmap/latest/tools/analysis-toolbox/buffer.htm).
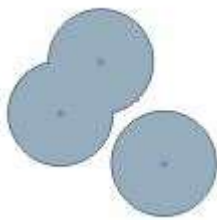
Fig. 1. Buffer zones with circular shape around points (ESRI 10.6 Help)

A buffer zone is any area that serves the purpose of keeping real world features distant from one another. Buffer zones are often set up to protect the environment, protect residential and commercial zones from industrial accidents or natural disasters, or to prevent violence. Common types of buffer zones may be greenbelts between residential and commercial areas, border zones between countries, noise protection zones around airports, or pollution protection zones along rivers (https://docs.qgis.org/2.18/en/docs/gentle_gis_introduction/vector_spatial_analysis_buffers.html?highlight=buffer retrieved 30-7-18).

This method is very useful when the user wants to locate what is enclosed within a certain distance from a specific point. The point can be a potential place to locate the company and the user wants to find out what kind of companies are located within a certain distance from that point. The shape of the zone can be circular or irregular.
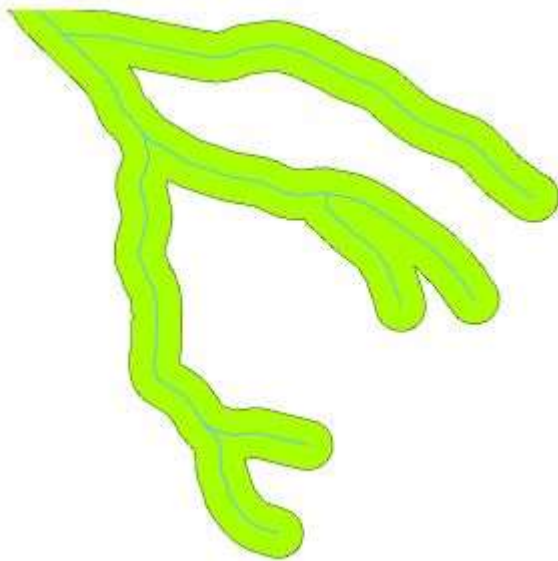
Fig. 2. A buffer zone around vector polylines of river channels (from https://docs.qgis.org/2.18/en/docs/gentle_gis_introduction/vector_spatial_analysis_buffers.html?highlight=buffer)
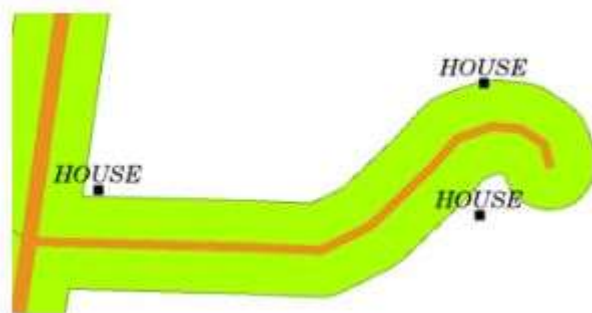
Fig. 3. Buffer zone around a road map. Some houses are inside the zone while others are outside (from https://docs.qgis.org/2.18/en/docs/gentle_gis_introduction/vector_spatial_analysis_buffers.html? highlight=buffer)

5.2.2. Location-allocation analysis

A location-allocation analysis layer is useful for choosing a given number of facilities from a set of potential locations such that a demand will be allocated to facilities in an optimal and efficient manner. Location is often considered the most important factor leading to the success of a private or public-sector organization. Private-sector organizations can profit from a good location, whether a small coffee shop with a local clientele or a multinational network of factories with distribution centers and a worldwide chain of retail outlets (ESRI 10.6 ArcMap Help http://desktop.arcgis.com/en/arcmap/latest/extensions/network-analyst/location-allocation.htm).

In other software there are similar procedures which may be named differently but do the same analysis (i.e. in QGIS it is found as part of Network Analysis and in various plugins like Location Lab QGIS Plugin [go to http://gis-support.com/location-lab-qgis-plugin/ for more])

5.2.3. Origin Destination cost matrix

The Origin Destination (OD) cost matrix finds and measures the least-cost paths along the network from multiple origins to multiple destinations. When configuring an OD cost matrix analysis, you can specify the number of destinations to find and a maximum distance to search (ESRI 10.6 ArcMap Help http://desktop.arcgis.com/en/arcmap/latest/extensions/network-analyst/od-cost-matrix.htm).

5.2.4. Service Area analysis

Service areas created by Network Analyst also help evaluate accessibility. Concentric service areas show how accessibility varies with impedance. Once service areas are created, you can use them to identify how much land, how many people, or how much of anything else is within the neighborhood or region (ESRI 10.6 ArcMap Help (http://desktop.arcgis.com/en/arcmap/latest/extensions/network-analyst/service-area.htm).

Fig. 4. Two, four and six hour service areas around five cities (from http://desktop.arcgis.com/en/arcmap/latest/extensions/network-analyst/service-area.htm).

6.0 Focus Group

6.1. Members of the Group

According to the proposal, each partner chose a number of persons who are somehow connected to the principles of the project. These persons have a relationship either with entrepreneurship or with marketing. In two cases the persons are involved as University teachers in subjects related to the scope of the project. In the other cases, there are project managers, administrators, GIS experts and entrepreneurs.

In all cases they are people with many years' experience in marketing and entrepreneurship in big companies, national or international, or people that have founded their own business. Their opinion is considered important for the construction of the learning platform of GET UP project because of their background and activities.

6.2. Contribution of the Focus Group to the project

The completed questionnaires of the Focus Group from each country are presented in Annex 2ii.

All the questionnaires were aggregated into one for making the analysis simple. Participants could give multiple answers. The aggregated results show that:

For the Entrepreneurship Questionnaire

Q1. Open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories are "Extremely Important in the future" (31.4% in total) and "Very Important in the future" (28.57% in total). There was also "Extremely important today" answered by 22.86%. No one responded "Not Important in the future or today". All the participants understood the importance of data geomarketing and location analytics in relation to entrepreneurship.

Q2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Participants replied that they "strongly agree in the future" (25.8%) or "… today" (29%) and "Agree in the future" (16.13%) or "Agree today" (19.35%). It is worth saying that there were participants who said that "I don't understand how research on entrepreneurship can support these activities" (6,45%) even if the percentage is low.

Q3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve.

Participants put in the highest rank and the medium rank (with the same percentage) that they would chose to "Develop innovative channels for communication and marketing" (31%)

"Training employees to increase sales and customize the product / service offering" is at the lower rank (2 out of 5) for 42.86% of the participants.

"Impact of ICT on local business strategy identification and development" in at the highest rank (4 and 5 out of 5) for 59.26% of the participants.

For the Geomarketing research Questionnaire

Q4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

"Extremely important for the future and today" responded 60.61% of the participants. Only 3% replied "I don't know what Location Intelligence is"

Q5. "If you are thinking of starting your own business what would you research beforehand?"

The answers in this question are very scattered. In fact, the participants reply in all they could choose from. We can say that they agree that "Finance needed" in not so big problem to deal with first (37%) except in Greece and Portugal. They do believe that "Market research" and "Business plan and structure" are important (25% and 28.57% respectively) but the most

important seems to be "Personnel" (27.59%). "Location of the business" looks like being not important or very important at the same time (30.43%).

6.2.1. Questionnaires per Country (in alphabetical order)

<u>Greece</u>

Q1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

The Group suggests that it is "extremely important in the future and today" (5 out of 9 answers) and "very important in the future and today" (3 out of 9). Only one participant said "not very important today"

Q2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

The answers were equally distributed. All participants, but one, "strongly agree in the future and today" or "agree in the future and today". The exception suggested that "somewhat agree today"

Q3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

The most important, and equally ranked, issues are "Impact of ICT on local business strategy identification and development" and "Taking entrepreneurial decisions for tactical needs as well as for strategic needs". No other options are important.

Q4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Five out of eight responses are "Extremely important in the future and today". There is only one answer "I don't know what Location Intelligence is".

Q5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

"Finance needed" is the most important while the less important is "Market research" and "Location of the business"

<u>Ireland</u>

 Q1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

"Very important in the future" is the most frequent answer (4 out of 11) while "extremely important in the future and today" and "Very important today" take 2 out of 11 each. There is also one answer "Not very important today"

Q2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

"Strongly agree …" get the majority of the answers (7 out of 10) while "Agree…" gets the rest.

Q3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

The most important answer is "Developing innovative channels for communication and marketing" and the less important is "Knowing the local market and discover market needs in new territories" followed by "Training employees to increase sales and customize the product / service offering". "Impact of ICT on local business strategy identification and development" seems to be important but not so much. We can say that participants are more or less reluctant in taking a clear position on that.

Q4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

"Very important …" is the dominant answer followed by "Extremely important …". A clear position about the meaning of Location Intelligence in business.

Q5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

The most important issue is "Personnel" followed by "Business plan". Less important are "Market research" and "Location of the business". "Finance needed" is not considered to be a priority. It was expected to have "Location of the business" as the most important or one of the most important issues, taking into account the answers in Q4, but this is not the case.

Portugal

Q1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

The importance is mainly focused on the future, either extremely important or very important (7 out of 9 answers). In any case all these are considered important for the future.

Q2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

The participants "Agree…" that research can help (5 out of 7 answers). But there are two answers saying "I don't understand how research on entrepreneurship can support these activities".

Q3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

"Impact of ICT on local business strategy identification and development" is considered to be the most important issue for the participants and "Training employees to increase sales and customize the product / service offering" comes second. "Taking entrepreneurial decisions for tactical needs as well as for strategic needs" is the less important.

Q4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

"Extremely important …" is the dominant answer (8 out of 10).

Q5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

In this question the answers are almost equally distributed among the participants. "Location of the business" is not so important while the other options are considered to be important issues for starting a business.

Spain

Q1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

"Extremely important" is the dominant answer (5 out of 6). One answer is for "Very important in the future". So, in fact all participants agree on the importance of this issue.

Q2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

In this question the participants replied "Strongly agree in the future and today" (5 out of 5).

Q3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Although the answers are scattered, it seems that "Developing innovative channels for communication and marketing" gets most of the attention of the participants. As for "Impact of ICT on local business strategy identification and development" there are two answers, one on each end of the ranking (1 and 5) which makes it a little bit confusing. The same is for "Knowing the local market and discover market needs in new territories".

Q4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

"Extremely important in the future and today" is the answers (4 out of 5). The fifth answer ranked as "Very important today".

Q5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

"Location of the business" is the most highly ranked answer, the second being "Finance needed". Less important is "Personnel".

6.3. Comments on the Focus Group Questionnaire

<u>Greece</u>

Q1. One of the comments says "The availability of a huge volume of information has definitely assisted in this shift and, because of this shift, data are becoming more and more available, leading to a vicious circle of "spatialization" in the field of marketing." which was found in other questionnaires too. Most of the participants focused on the existence and need of many data, especially open data.

Second comment says "Geospatial marketing not only benefits from an analysis like that (as geospatial data within space and time coordinates, historical relative data, location statistics), but I would dare state that it cannot hold and support any decision without Time-Space data and analysis."

Q2. There are comments associated to the Greek crisis and the consequent economic recession. But there are also comments pointing on the nature of a young entrepreneur who should look into research.

"I believe that business techniques are already at a very good level and the main problem in Greece is the general negative environment which prevents growth."

"Because of the fact that technologies advance in high speeds in all areas there has to be continuous research to take advantage of all the tools available each time to reach an expected outcome and increase revenue."

"Knowledge is the key, the power to suggest improvements and lead the entrepreneurial sector to success and excel."

Q3. "The feeling of a shared goal and the profound devotion stemming from inspiring and highly educational training has the potential to pay the highest dividends in the long term."

"I believe that the knowledge of the local markets and their particularities is a key issue. Secondly, in the area of services the quality and competence of employees can be the winning point."

"With social networks and all the new emerging technologies the traditional perspective of how to run a business has changed dramatically and new channels for distributing products and services must be found."

"So, training the employees is crucial in order to apply new techniques as research results imply…"

On a first reading, those comments are contradicted to the analysis of Q3 question. However, if read them carefully then we can see that participants are fond of ICT and its applications in entrepreneurship but, as they state, the implementation counts which means that the employees must be adequately trained to implement these new techniques.

Q4. "Location Intelligence is almost impossible to do without in the 21st century, primarily because of the established competitive peer pressure."

"If time and space are omitted, then that project, that lacks Location Intelligence, is like driving blind folded…"

No doubt about the importance of Location Intelligence. It is mentioned in every comment.

Q5. "… the hardest part, and the one worth focusing most of the effort on, is the constitution of a dedicated, dependable and trustworthy team."

"…Finance needed to start a business is in most cases the most vital research, especially in startups"

"good and detailed market research along with a complete business plan would be the best start."

The participants don't ignore the importance of the Location of the business but they focus mainly on Personnel and Finance.

Ireland

Q1. There was a mixture of responses here with the majority of participants feeling that open and geospatial data was extremely or very important both currently and in the future.

One participant felt it was not very important currently.

Comments from participants included:

• Very important today, particularly where business to consumer marketing is concerned and it is likely to be more important in the future.

• Extremely important for digital companies / platforms e.g 'faang' (best-performing tech stocks, namely Facebook, Apple, Amazon, Netflix and Alphabet's Google) type companies. It was noted that this data can be quite costly and could be inaccurate and while it has potential to improve decision-making is it worth spending a lot of time on?? Traditional market research is still hard to beat.

Two further comments concurred with this somewhat……….

• This information is an additional element to Market Research which can significantly influence the success or otherwise of specific businesses.

• Geo-marketing can be a powerful source of data; however, the data is only meaningful if you already have an understanding of marketing principles and then be able to apply this data to your business management and marketing mix strategies.

Other respondents felt the potential for such information was underdeveloped……

• Speaking from the point of view as a mentor and facilitator of entrepreneurship related activities, the potential of such data and services is still underutilized and under-appreciated and I believe in the future this is going to become more of a trend among the companies, who will become more aware of the benefits and features.

• Successful marketing involves reaching the right person with the right product at the right time, and the methodologies and technologies mentioned above will enable companies more and more to achieve this type of very targeted reach with their marketing activity. While larger companies are working in these areas for a while, we are only at the tip of iceberg in relation to how SMEs and entrepreneurs can engage with and utilise these technologies, and benefit from this level of information and knowledge.

• I do not believe that the potential of geomarketing, real time data etc. is fully understood at this point in time. I suspect that many budding entrepreneurs believe they can't afford the investment in time in such areas. However, ironically understanding geomarketing and geospatial data would save them so much time and allow them to target and focus their efforts in the right way.

Q2. Again, there was a mixture of responses here with the majority of participants agreeing that research on entrepreneurship could be very supportive to businesses development both currently and in the future.

Some particular observations were as follows:

- It definitely helps to have a better understanding of how to identify and exploit new strategic approaches etc.

- No matter what size, age or industry, entrepreneurial companies are faced with the challenge of continuous and dynamic change. At increasing speed and in a more complex environment, both new threats and new opportunities emerge. Identification and exploitation of these opportunities is the essence of entrepreneurship and strategic management identifies how these opportunities can be transformed into sustainable competitive advantages. Research into entrepreneurship can help identify trends and patterns of behavior that can underpin the strategic management activities and aid decision-making.

- Strategic planning is key in terms of defining strategy or direction, and making decisions on best allocating resources.

- Yes, research is hugely important. The challenge for the researcher is making sure that the relevant research reaches the overworked and time limited entrepreneur.

- Thorough knowledge of your target market and how you might best reach them is key to successful entrepreneurship, and is the basis for identifying new business opportunities whether it be new ways to communicate with your customers, new ways to reach them, new ways to make them happy and / or identifying new ways to satisfy their product requirements.

One specific comment was that "…many businesses have depended on footfall and now have to go "online" to succeed. There are significant population shifts and this info is required for good decision-making".

Q3. Most respondents suggested that **"Knowing the local market and discover market needs in new territories"** was an area that they would choose to improve.

The next areas was **"Impact of ICT on local business strategy identification and development"** followed closely by **"Taking entrepreneurial decisions for tactical needs as**

well as for strategic needs" and **"Training employees to increase sales and customize the product / service offering".**

The area viewed as being of lease importance perhaps was **"Developing innovative channels for communication and marketing",**

In support of these observations particular feedback / comments were as follows:

- If you don't know your market needs you cannot improve your product / service offering. The market ultimately decides the success of your business. Entrepreneurs have to move on through business development and executing strategy. I'm not a huge believer in innovative channels for marketing, etc.

- Digitalisation is a trend that impacts all spheres of business and how it affects the business models is becoming increasingly more intense. Furthermore, market knowledge is still one of the key pillar strategies are being built on, and the knowledge here needs to be dynamic and adaptable.

- The priority is to have as much reliable market info as possible

- Entrepreneurs must inform consumers about their goods or services and know where their key customer base is. Businesses develop marketing strategies to deliver specific messages to consumers in the economic marketplace, which I think is very important in moving the business forward.

- If you don't know your customers and what they want, then you can't be sure you are giving them what they want, regardless of where they are located, or how you reach them, or how fancy your marketing is, or how smart your strategy or tactics are.

- Understanding what you need it fundamental and then putting the measures in place to deliver it. All the points mentioned are very relevant and while we have discussed ranking them in importance, they are all very much interlinked.

Q4. Most respondents felt that Location Intelligence was extremely important or very important (today and in the future) in ensuring the success of companies. A very limited number of respondents felt it was not very important but may be attributed to their lack of familiarity with the topic.

Some specific comments in relation to the subject matter were as follows.....

- Mapping information to establish trends and to uncover new data is very important today and likely to become even more important in the future in leading to commercial success.

- Not very important in some industries but definitely much more important in others.

- In the context of the acquisition of new business leads, my company would not use LI, however I would see LI as extremely useful tool for conducting market research on behalf of third parties as part of the consultancy process to add value.

- You always need to know where your customers are coming from so LI can be useful there.

- This jump in LI can be attributed to the growing popularity of smart connected devices. It is creating a buzz and will lead to creation of huge data stores about what we do, how we do it, and where it happens. The key will be in how do we interpret / use that information.

In terms of those respondents who did not know too much about LI……

- I'm not hugely familiar with how much LI is being utilised at the moment, particularly among SMEs, except maybe when they use technologies developed by larger companies such as FB targeted advertising etc. However, I expect that in the future, the kind of targeting that it can facilitate will become the norm and so it will be crucial to success.

- I only have a basic awareness about Location Intelligence. However, I believe anything that gives us a deeper understanding of the marketplace potential has to be a good thing. A small concern that I have is that it needs to be user friendly and easy to grasp.

Q5. During the discussion on which areas people would research before commencing a business it was felt that Business Planning and Team Development were most important. Thereafter the key issues were Market Research and Finance Needed with Location of the Business the last on the list.

However, some of the comments pointed to a need for caution in this regard as there were some divergent views ……

- While we are being asked to rank these issues they are all very interlinked. I chose Market Research as being most important as I believe that a solid market needs to be identified before putting finance in place etc. If it was me undertaking the research, location would be a factor in my market research also.

- Dependant on the nature of the business.

- A business plan is a very important strategic tool for entrepreneurs. A good business plan helps entrepreneurs to focus on the specific steps necessary for them to make business ideas succeed.

- Finance has often been the most thing holding me back from entrepreneurship. Unless you start extremely small having vast sums of money is likely to be very important. For a brick and mortar enterprise location is crucial. Again knowing market needs is also crucial for success. Having a solid business plan could be crucial in getting investors on board. The team can usually be built slowly and would take the least priority.

- In terms of feasibility, establishing levels of demand would be my first priority, there would be no point to all the other activities if this was not researched and confirmed as viable.

- Only when you are satisfied with Market Research should the rest follow.

Q1. Responses to the Focus Group's first question show a common response pattern, all the interviewees answered this question as being extremely important or very important. The majority of those interviewed (60%) considers that in the future open data, geospatial data, geomarketing, real time data and location analytics will be extremely important criteria in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions. Also, at present, 60% of those interviewed think these criteria are very important.

Regarding the comments provided those interviewed said the following:

"There is no doubt about the need for information and aggregation of data that may contribute to the decision-making processes within the scope of management activities or in particular marketing."

"Open data sources (such as OSM) improves the development of new business but also the current business strategy."

"Today there are already significant data sets with potential to be use for the indicated activities. In the future they will be critical."

"Relevant and up-to-date information on consumer preferences and habits (whether individual or company) determine management strategy and tactics.

The entrepreneur can decide more assertively and effectively on the investment initiatives (i.e: entry into new market segments, expansion of the offer of services according to the "customer journey" / user experience) if they have access and know how to use data information that results from IT improvement."

"Nowadays, there is already a need to use geolocation to improve results in our business, with gains in terms of time, efficiency and assertiveness.

In future, those who are not well positioned in this area will have more difficulties in the face of competition."

All of the interviewees noted that the access and analysis of information in real time is crucial for the development of the business idea, allowing a more efficient and effective decision making.

Q2. The experts have different opinions regarding the importance of research on entrepreneurship - some agree with the research while others do not understand the relationship. Two of our experts do not consider research in entrepreneurship as being fundamental to support new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service; however they also said that research in any area is important and can be used as a case study or benchmarketing. The other 3 experts Agreed (40% today and 40% in the future) that research in entrepreneurship is essential to better manage the above criteria and facilitates the choice of a business at different levels.

Regarding the comments provided those interviewed said the following:

"Research on entrepreneurship, considering its various definitions, does not add much to the decision-making related to economic activities.

Research on strategy, innovation, marketing, management, sales and distribution management, customer management, financial management, business plan development are essential to become entrepreneur, and be able to undertake a business successfully.

Usually entrepreneurship is wrongly seen as the main lever of business, but in fact, it is an abstract concept, resulting from traditional activities usually allocated to management.

An individual is not born entrepreneur, he becomes entrepreneur in carrying out these activities.

There is no entrepreneurship, without the individual taking steps in that direction, to convert business ideas into concrete implementation actions.

It is a result, not the beginning.

Research on entrepreneurship is to find stories, which in the last case, if well directed, may function as a case study or benchmarking.

"I do not understand the question. Is too abstract. What kind of research on entrepreneurship? Research in any area is always important"

"Today there are already significant data sets with potential for use in the activities indicated. In the future they will be critical"

"The examples are always inspiring; both positive and negative.

In the first case we can inspire our future action by learning and determining the strategy and tactic that is successful.

In the second case we recognize what should not be done, and we gain time and money from it."

"Being aware of the concept of entrepreneurship can facilitate the choice of business at various levels, such as location, target audience, competition, raw materials among others."

Q3. Based on the answers obtained it is possible to conclude that the experts consider that all the above presented criteria are important to improve the knowledge of an entrepreneur.

The most well-ranked criteria, on average, was the communication and marketing channels, followed by the training of human resources and the use of ICT in the identification and development of a business strategy.

Regarding the comments provided those interviewed said the following:

"ICT can be a competitive advantage in the market in which a business operates, being able to leverage the business, both by the various aspects of innovation (according to Schumpeter) and by the differential of competitive advantages that can be generated against the competition"

"I know ICTs very well that is why I give more importance to the distribution channels."

"Nothing to say"

"A strong (and irreversible) process of Digital Transformation is under way.

We have always been using and perfecting information technologies in business processes, in the value chain of production, in the way the various agents involved in the production and sales process are articulated.

What really changes with digital evolution?

It changes the business strategy that starts to align technological innovation with the goal of transforming the way organizations develop:

Relations

• Provide services to customers and users

• Deal with suppliers and partners

• Interacting with employees

Performance

• Promote the continuous development of the operation

• Pursue operational excellence

Innovation

• Invent new business

• Create new business models"

"ICTs are extremely important in the modern entrepreneurship component, namely in the approach to potential clients, and in the knowledge of market dynamics at the local, regional, national and global levels, if applicable. The training issue is essential to any employee of any business area."

Q4. All experts (100%) consider that smart location will be important to the success of companies and 60% of them believe that smart location is extremely important today.

Regarding the comments provided the interviewees said the following:

"Management supporting systems, based on intelligent location systems, make it easier, faster and more efficient to operate information"

"Smart location is part of Bluecover's core services. Our primary concern today is the impact on data privacy policy in smart location."

"Everything happens somewhere. And it is not possible to benefit from the Internet of Things (...) without the recognition of the precise location and in real time.

It is crucial to think about the usefulness of the captured data and not just the simple collection.

The treatment of the data allows (as I have already mentioned): new Relations, Performance and Innovation.

Let's see an example of "Performance" where I highlight, eg, Operational Excellence. By collecting and analyzing equipment and machine data, companies can increase productivity,

minimize or eliminate downtime, and better manage uptime; consists of generating additional revenues by reducing operating costs, and is based mainly on automation (...) and simplification of processes - is a short-term impact.

But if we want to project the long term, we can visualize potential opportunities for differentiation and transformation: new business; new business models."

"At present, we already have data that allow us to make more advanced analysis of the territory dynamics in terms of business, such as consumer behaviour, competitive positioning, emerging business areas, high pressure areas, cold zones, proximity to accessibility and transportation , risk areas. Access to this type of data will be essential in the future."

Q5. According to our experts, the market study and the business model assume greater relevance, followed by human resources and financial resources.

Regarding the comments provided the interviewed said the following:

"Business plan (financial model) and structure obliges the answer of the remaining points and other more essential so that one has a notion of feasibility of the business."

"The answer depends on the type of business. So, this answer assumed that the business to start would be from consulting services. In this case, the location is irrelevant."

"Airnbn is the largest chain of "hotels" in the world, and has no hotels!

Uber is the biggest operator of "taxis", and there are no taxis!"

"For the creation of the business itself it is important to start with the business plan and market research, because without these elements the business can be compromised from the start. Then the financial resources and human resources location are the following steps to take special care."

Spain

Q1. All participants supported the idea of data of any kind related to geomarketing. Also there was a point on mobile devices and their importance today and in the future for collecting data on the go.

"Open data, geospatial data geomarketing, real time data and location analytics are extremely important factors that could help to improve entrepreneurship outcomes in terms that these indicators could allow to identify the socioeconomic behaviour of a territory."

"Most people have mobile devices. They look for information about product and service offerings. They buy products online. They need geolocalised information to identify the points of sale…."

Q2. "Research on entrepreneurship is extremely important and necessary in order to identify new strategic approaches: Entrepreneurship Creates New Businesses, Entrepreneurship Adds value to National Income, Entrepreneurship Also Creates Social Changes and helps to create new communication models, sales, etc."

"The international entrepreneurship research programs such as GEM or GUESS provide us valuable information on the profile of successful or failing entrepreneurs and business models. The results are also very useful to compare the Rate of Entrepreneurial Activity between countries and over time."

"…Investing in entrepreneurship means investing in innovation, business opportunities and the future."

All participants strongly agree on the impact of research in entrepreneurship.

Q3. "New technologies should be applied to all areas as a differential value, allowing businesses to save costs and find new opportunities."

"…the changes in the supply of new products and services are explained mainly through new technologies of digitization (products and processes) and Industry 4.0 (automation of processes, self-learning of machines). "

"…Beginning by defining the macro geographic area in which the business wants to operate. … to define the target market … the use of available data sources: Use data sources that are freely available about companies' lines of business, areas of operation, number of employees, IT infrastructure, fleet size…"

There are comments on the New Technologies which should be applied on the market but also comments on the needs of new markets in new territories. It seems that the participants are divided in two groups although all are fond of new technologies. The first group emphasizes the technologies and how they can boost an entrepreneur and the second focuses on new markets and why the entrepreneur should be aware of their needs.

Q4. "… To monitor the product delivery process. To monitor transportation and to have localized products and delivery vehicles. To geolocate the products when they are already being used by the customers … "

"… I think Location Intelligence is critical to the companies´ success because it gives an overview of how geographically distributed their business models are …"

All participants strongly agree that Location Intelligence is extremely important for the growth of a company

Q5. "… . One of the earliest decisions any entrepreneur has to make is where to locate his or her business…"

"… This (the needs of the potential consumer) requires market research in which the entrepreneur participates personally… it is necessary to design the innovative offer and the business model, which will involve designing a business plan... it is necessary to make a forecast about the profitability of the business and its financial sustainability so that the value for the client is transformed in value for the company … The people and the location of the business are aspects that must be adapted to the strategy that has decided to start the company."

The answers are quite scattered. It seems that location of the business and finance are the most important issues but the participants commented on how the market might grow in the future and so they count on new technologies to help address this growth and development issue.

7.0 Conclusions from the analysis of the questionnaire (in total, per country)

The analysis shows that, although entrepreneurship has the same meaning in all countries, each country focuses on different aspects. They all agree that entrepreneurship needs lots of data, from various sources, in order to improve today and into the future, but there are discrepancies amongst the countries on the way of the best entrepreneurship approach. This means that the improvement on entrepreneurship goes through different paths in each country like "Developing innovative channels for communication and marketing" in Greece, Ireland and Spain or "Impact of ICT on local business strategy identification and development " mainly in Portugal and secondly in Greece. It is quite interesting that "Knowing the local market and discover market needs in new territories" is not so interesting in Greece and Ireland but it is somehow interesting in Spain and definitely in Portugal. All countries agree that research on entrepreneurship can help new businesses in various ways today and in the future although there are some doubts about it (Greece and Portugal).

Talking about research, Location Intelligence is a very useful tool for research. As said in 3.3, 3.4 and 3.6, Location Intelligence and geomarketing are very well linked. The question "please indicate how important you believe Location Intelligence is/will be to your company's success" targets exactly at this point. Almost 60% of the participants of all countries replied that location intelligence is "extremely important", Portugal being the most "fanatic" followed by the Greeks. But, there is also a number of participants (almost 12%) who said that it is "not very important" (Ireland) or "I don't know what location intelligence is" (Greece). Looking at the questionnaires, the participants who replied as such are people who are involved in GIS and so, it is very difficult to believe that they don't know how GIS is involved in geolocation. It seems that they don't know how GIS is connected to geomarketing and maybe this is the motive for making a learning platform for young entrepreneurs. Older entrepreneurs have an excuse if they are not informed about geolocation and geomarketing and the benefits they can get from the implementation of these techniques. This is obvious from the last question of the questionnaire (If you are thinking of starting your own business what would you research beforehand?) because the option of "Location of the business" was the less chosen by the participants while most of them chose "market research".

Because of what the analysis of the questionnaire revealed, it is quite profound that there is a need to inform young entrepreneurs about how technology can help them today to improve their choices when they are going to start their own business. There is a need for a user friendly tool which can help them take the right decision on issues concerning the "where" and "what" of their business. This tool may be based on a geomarketing tool and has to have a pedagogically well-constructed platform.

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i. GET UP Focus Group - Research Phase (O1 and O2)

A. Profile of the participants:

(*please, describe briefly the type of participants involved in the focus group and the organizations they represent*)

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	
	Today	
Very important	In the future	
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	
	Today	
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	

I don't understand how research on entrepreneurship can support these activities	

Please explain your chosen response above in a few words or give other suggestions

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	
Developing innovative channels for communication and marketing	
Training employees to increase sales and customize the product / service offering	
Knowing the local market and discover market needs in new territories	

Please explain your chosen response above in a few words or give other suggestions

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	
	Today	
Very important	In the future	
	Today	
Not very Important	In the future	
	Today	

Not important at all	In the future	
	Today	
I don't know what Location Intelligence is		

Please explain your answer in a few words

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5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	
Finance needed	
Location of the business	
Personnel (team construction)	
Business plan (financial model) and structure	

Please explain your answer in a few words / provide additional comments

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GET UP Focus Group - Research Phase (O1 and O2)

A. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

		Total number of answers
Extremely important	In the future	11
	Today	8
Very important	In the future	10
	Today	4
Not very important	In the future	0
	Today	2
Not important at all	In the future	0
	Today	0
I do not understand their importance in relation to entrepreneurship		
sum		35

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

		Total number of answers
Strongly agree	In the future	8
	Today	9
Agree	In the future	5
	Today	6
Somewhat agree	In the future	0
	Today	1
Don't agree	In the future	0
	Today	0
I don't understand how research on entrepreneurship can support these activities		2
SUM		31

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

						SUM
	1	2	3	4	5	
Impact of ICT on local business strategy identification and development	3	3	5	8	8	27
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	2	4	7	5	6	24
Developing innovative channels for communication and marketing	1	5	9	5	9	29

Training employees to increase sales and customize the product / service offering		12	6	4	6	28
Knowing the local market and discover market needs in new territories	5	4	6	4	6	25

B. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

		Total number of answers
Extremely important	In the future	11
	Today	9
Very important	In the future	3
	Today	6
Not very important	In the future	1
	Today	2
Not important at all	In the future	0
	Today	0
I don't know what location intelligence is		1
SUM		33

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5	SUM
Market research	7	5	8	5	7	32
Finance needed	1	10	5	5	6	27
Location of the business	2	7	4	3	7	23
Personnel (team construction)	3	5	6	7	8	29

Business plan (financial model) and structure	1	6	8	6	7	28

Per Country

Greece

A. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

		Total number of answers
Extremely important	In the future	3
	Today	2
Very important	In the future	2
	Today	1
Not very important	In the future	
	Today	1
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

		Total number of answers
Strongly agree	In the future	2
	Today	2
Agree	In the future	2
	Today	2
Somewhat agree	In the future	
	Today	1
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5
Impact of ICT on local business strategy identification and development	1	1		2	1
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	2			2	1
Developing innovative channels for communication and marketing			3		2
Training employees to increase sales and customize the product / service offering		3	1		1
Knowing the local market and discover market needs in new territories	2	1	1	1	

B. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

		Total number of answers
Extremely important	In the future	2
	Today	3
Very important	In the future	1
	Today	
Not very important	In the future	
	Today	1
Not important at all	In the future	
	Today	
I don't know what location intelligence is		1

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5
Market research	3		1	1	
Finance needed		2			3
Location of the business		3		1	1
Personnel (team construction)	1		1	2	1
Business plan (financial model) and structure	1	1	2	1	

Focus Group Case 1

A. Profile of the participants:

(*please, describe briefly the type of participants involved in the focus group and the organizations they represent*)

Philippos I.Karipidis

Professor -Dpt Agricultural Technology –Agricultural Economics, Alexander TEI of Thessaloniki

The study object is "marketing of agricultural products"

I am not an entrepreneur….

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	X
	Today	X
Very important	In the future	
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

Businesses operate in an open, globalized economic environment today. They need a lot of information at any moment that business owners can hardly acquire or they can't undertake the cost of its acquisition.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	X
	Today	X
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	

I don't understand how research on entrepreneurship can support these activities	

Please explain your chosen response above in a few words or give other suggestions

Because businesses operate in a turbulent environment….

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	4
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	5
Developing innovative channels for communication and marketing	3
Training employees to increase sales and customize the product / service offering	2
Knowing the local market and discover market needs in new territories	1

Please explain your chosen response above in a few words or give other suggestions

I assume a typical food company…

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	X
	Today	X
Very important	In the future	
	Today	
Not very Important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what Location Intelligence is		

Please explain your answer in a few words

Please keep in mind that I don't keep a company. I give my answers by assuming a hypothetical typical company…

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	1
Finance needed	5
Location of the business	2
Personnel (team construction)	3
Business plan (financial model) and structure	4

Please explain your answer in a few words / provide additional comments

It is possible to foundate a new company with no money and no workers…

Focus Group Case 2

A. Profile of the participants:

Dimitrios Terzopoulos is a very successful young (30) entrepreneur and the Chief Technical Officer at Vianair Inc. Vianair develops a state-of-the-art optimization software for integrated terminal airspace planning and design. Dimitrios leads the software development team. He is an experienced programmer in software design for large scale IT projects. He has been the lead programmer at e-Geo soft and holds an MSc. in Applied Mathematics & Computer Science and an MEng in Rural and Surveying Engineering from the Aristotle University of Thessaloniki.

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	
	Today	
Very important	In the future	
	Today	X
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

The referenced sources act as a power supply in the business domain, in the sense that target audiences have always been highly consistent in their behaviors on a geographical basis. Geographical patterns are the key to optimizing the routing (and, potentially, customization) of products/services to the receiving end. As numbers increase, the "who" aspect is more and more deeply nested and encoded in "where", which matters the most in the end. The globalization of commerce and services has effectively shifted the focus of significance from the individual to the location, and being apt in detecting and exploiting geographical patterns is more important than ever. The availability of a huge volume of information has definitely assisted in this shift and, because of this shift, data are becoming more and more available, leading to a vicious circle of "spatialization" in the field of marketing.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	
	Today	
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	X
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		

Please explain your chosen response above in a few words or give other suggestions

Because of an apparent explosive increase in entrepreneurial activity, a diverse multitude of past cases can be analyzed and various predictors of outcome can be modeled. However, the accumulated expertise, which is expected to have already reached a critical mass by the early 21st century, should probably already have very good and effective strategic approaches for what may look very significant on the receiving or researching end, but otherwise constitutes boilerplate entrepreneurial commonalities. For a variety of reasons, best practices are not currently being applied to adequate extents and a significant piece of research might be better redirected to uncovering the reasons that underlie this type of shortcoming.

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

| Impact of ICT on local business strategy identification and development | 2 |

Taking entrepreneurial decisions for tactical needs as well as for strategic needs	1
Developing innovative channels for communication and marketing	3
Training employees to increase sales and customize the product / service offering	5
Knowing the local market and discover market needs in new territories	4

Please explain your chosen response above in a few words or give other suggestions

While all of the delineated items are extremely important in the field of entrepreneurship, most of them are clear and backed up by well-defined strategies supported by vast volumes of literature and accumulated expertise. The most elusive part, in my opinion is, always, how to pass on knowledge to employees in the best and most productive way. Improvement in all other items practically increases the chances of success and establishment, but more so in a linear manner. An improvement in leadership and the cultivation of the true sources of productivity, which are the working individuals, through proper training, actually multiplies the talent factor, thus increasing the volume/levels of success. The feeling of a shared goal and the profound devotion stemming from inspiring and highly educational training has the potential to pay the highest dividends in the long term.

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	
	Today	X
Very important	In the future	
	Today	
Not very Important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what Location Intelligence is		

Please explain your answer in a few words

Location intelligence is almost impossible to do without in the 21st century, primarily because of the established competitive peer pressure. Because of the available technologies, spatial data have a big influence on decision-making and form the basis of educated choices in almost all departments of any company, from following spatial patterns of product/service usage to uncover passive popularity expansion modalities, to forecasting forthcoming needs through the monitoring of the evolution of the problem domain in space and time.

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	3
Finance needed	2
Location of the business	4
Personnel (team construction)	5
Business plan (financial model) and structure	1

Please explain your answer in a few words / provide additional comments

All of the items can be researched individually and a good starting point of knowledge is relatively easy to establish or reach, with the potential help of well-versed specialists for consultation. However, in my opinion, the hardest part, and the one worth focusing most of the effort on, is the constitution of a dedicated, dependable and trustworthy team.

Focus Group Case 3

A. Profile of the participants:

Loukia Kakatsi is a Rural and Surveying Engineer (MSc), with a long expertise in Cadastral operations. Loukia has been working in the private sector – focusing on cadaster - for more than 20 years. She is currently the head of cadastral section of Geoapodosis S.A., which is a company in Kavala, Greece, which operated both nationaly and internationaly.

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	X
	Today	
Very important	In the future	X
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

Our projects mainly involve collection, assessment and elaboration of geodata. Open data facilitate and speed extremely all procedures.

The main problem is that common people is not yet very familiar with these (new in Greece) technologies and very sensitive about privacy of personal data. From an entrepreneurial point of view this may delay the collection procedures.

This is the reason that I promote the importance of open data in a future period when people will be more mature on this matter.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	
	Today	
Agree	In the future	X
	Today	X
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		

Please explain your chosen response above in a few words or give other suggestions

Research brings Knowledge and from this point of view is always a benefit.

On the other hand, I believe that business techniques are already in a very good level and the main problem in Greece is the general negative environment which prevents growth.

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	5
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	4
Developing innovative channels for communication and marketing	3
Training employees to increase sales and customize the product / service offering	2
Knowing the local market and discover market needs in new territories	1

Please explain your chosen response above in a few words or give other suggestions

I believe that the Knowledge of the local market and their particularity is a key issue. Secondly, in the section of services the quality and competence of employees can be the winning point.

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	
	Today	
Very important	In the future	
	Today	
Not very Important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what Location Intelligence is	X	

Please explain your answer in a few words

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	1
Finance needed	2
Location of the business	5
Personnel (team construction)	4
Business plan (financial model) and structure	3

Please explain your answer in a few words / provide additional comments

Ranking the above parameters is extremely difficult because they are all of them indispensable for starting any new business activity.

Focus Group Case 4

A. Profile of the participants:

(*please, describe briefly the type of participants involved in the focus group and the organizations they represent*)

Polyvios Vladenidis holds the degrees of Geologist (BSc.), as well as Rural and Surveying Engineer (MSc.). He has been working as a freelancer Geologist and Surveying Engineer for more than 15 years in Northern Greece.

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	
	Today	
Very important	In the future	x
	Today	
Not very important	In the future	
	Today	x
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

It is crucial for startups to have access to open data to lower their starting costs and succeed a viable and sustainable financial model. Also, nowadays, people are getting to use their smartphones more everyday for searching and buying goods and services at their local area but most importantly when they travel in new places for work or pleasure. I think that each Business should use geomarketing techniques to increase their income, especially those targeting on non local customers or travellers.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	
	Today	
Agree	In the future	x
	Today	x
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	

I don't understand how research on entrepreneurship can support these activities	

Please explain your chosen response above in a few words or give other suggestions

Businesses are affected by changes in the technological environment. Because of the fact that technologies advance in high speeds in all areas there has to be a continuous research to take advantage of all the tools available each time to reach an expected outcome and increase revenue.

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	4
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	1
Developing innovative channels for communication and marketing	5
Training employees to increase sales and customize the product / service offering	2
Knowing the local market and discover market needs in new territories	3

Please explain your chosen response above in a few words or give other suggestions

With social networks and all the new emerging technologies the traditional perspective of how to run a business has changed dramatically and new channels for distributing products and services must be found. Therefore it is crucial for a business to take advantage of all the tools available and innovate to be able to keep ahead of the competition.

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	
	Today	
Very important	In the future	x
	Today	

Not very Important	In the future		
	Today	x	
Not important at all	In the future		
	Today		
I don't know what Location Intelligence is			

Please explain your answer in a few words

> Depending on the type of the Business, Location Intelligence can be important to analyse data and help in strategic decisions concerning targeted geomarketing actions.

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	4
Finance needed	5
Location of the business	2
Personnel (team construction)	1
Business plan (financial model) and structure	3

Please explain your answer in a few words / provide additional comments

> The above rankings can vary according to the type of the Business. Location of the Business, for example, must be the first thing someone must research in specific types of Businesses that need to be easily accessed by their customers. On the other hand Finance needed to start a business is in most cases the most vital research, especially in startups.

Focus Group Case 5

A. Profile of the participants:

(*please, describe briefly the type of participants involved in the focus group and the organizations they represent*)

My name is Alexandros Kalathas and I am a senior GIS technician for Marathon Data Systems (MDS). MDS is a local distributor for ESRI for Greece and Cyprus. ESRI plays a leading role globally in the software market of Geographical Information Systems, for the last 3 decades, at least. I started working for MDS in 2002 and have participated in a large number of projects, regarding the implementation of GIS in organizations of the public and private sector ever since. Examples would be Geoportal of Egnatia Odos, Electricity Authority of Cyprus project, Greek Cadastral project, various Municipalities projects, NATO project, various Real Estate Agencies projects etc. My

involvement in these projects includes training, consulting, managing, designing tasks. Most of them aim at analysis results that help involved organizations benefit from displaying and correlating various data, in order to make a series of serious decisions in order to adjust operations, establish marketing structures or defining rules and regulations. Applications of these projects may or may not be visible to wide public audience.

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	√
	Today	√
Very important	In the future	
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

In order to plan, one would need a piece of paper. In order to design one would need a functional workspace with various parameters defined. In order to conduct a complete and robust enterprise plan, one would definitely need to know space and its parameters (exact and relative location of the project, neighbouring establishments that influence its operation, infrastructure etc). So I would strongly recommend Geolocational Analysis that takes into account various factors, such as geospatial data within space and time coordinates, historical relative data, location statistics. Geospatial marketing not only benefits from an analysis like that, but I would dare state that cannot hold and support any decision without Time-Space data and analysis.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	√
	Today	√
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	
Don't agree	In the future	

	Today	
I don't understand how research on entrepreneurship can support these activities		

Please explain your chosen response above in a few words or give other suggestions

> As the Greek philosopher Heraclitus said "everything flows". This is obvious, especially nowadays, as plethora of factors continuously affect the way people live, study, enjoy, work etc. Due to continuous evolving of the market, it is absolutely necessary to perform research on entrepreneurship, in order to identify (if possible) patterns of these changes. Knowledge is the key, the power to suggest improvements and lead the entrepreneurial sector to success and excel.

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	1
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	4
Developing innovative channels for communication and marketing	5
Training employees to increase sales and customize the product / service offering	3
Knowing the local market and discover market needs in new territories	2

Please explain your chosen response above in a few words or give other suggestions

> ICT offers the tools to analyze and understand who, where, how or when something happens and the way it affects the market. So it is important to use these tools, performing Geolocational and time aware analysis. Data as input for such an analysis is essential, and as a result, knowledge of the local market is critical. This theoretical and hypothetical analysis would not be beneficial of not applied. So, training the employees is crucial in order to apply new techniques as research results imply, in order to improve sales through product customization. Last, but not of least importance, entrepreneurial decisions for tactical needs and innovative channels for communication and marketing are more or less equally important in this sector.

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	√
	Today	√
Very important	In the future	
	Today	
Not very Important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what Location Intelligence is		

Please explain your answer in a few words

Location or spatial or business intelligence is extremely important, today as well as in the future. History is a great source of knowledge and history shows, that the success of a project, no matter how small or great this project could be, that it is always important to take into account all the factors that are related. If time and space are omitted, then that project, that lacks Location Intelligence is like its driven blind folded, as space and time, that always play a crucial role, are left out.

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	1
Finance needed	5
Location of the business	2
Personnel (team construction)	4
Business plan (financial model) and structure	2

Please explain your answer in a few words / provide additional comments

Initial market research, regarding where and how things are done, play the most important roles in the life of a successful enterprise project. So, good and detailed market research along with a complete business plan would be the best start. These two could indicate the best location for an establishment, which could positively inspire not only people working for this business, but also prospect clients. As a result, we could have a successful business, that might greatly save funds and achieve high return on investment.

A. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

		Total number of answers
Extremely important	In the future	2
	Today	2
Very important	In the future	4
	Today	2
Not very important	In the future	
	Today	1
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

		Total number of answers
Strongly agree	In the future	4
	Today	3
Agree	In the future	1
	Today	2
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5
Impact of ICT on local business strategy identification and development	1	1	2	1	1
Taking entrepreneurial decisions for tactical needs as well as for strategic needs		2	1	2	1
Developing innovative channels for communication and marketing	1		2		3
Training employees to increase sales and customize the product / service offering		3	2	1	
Knowing the local market and discover market needs in new territories	3	1	1	1	

B. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

		Total number of answers
Extremely important	In the future	2
	Today	1
Very important	In the future	2
	Today	3
Not very important	In the future	1
	Today	1
Not important at all	In the future	
	Today	
I don't know what location intelligence is		

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

	1	**2**	**3**	**4**	**5**
Market research	3		2		1
Finance needed	1	2	2	1	
Location of the business	2	2	1		1
Personnel (team construction)		1		2	3
Business plan (financial model) and structure		1	1	3	1

Focus Group Comments from Irish participants

The participants of the GET UP Focus Group were as follows:

Eunan Cunningham is a board member on state board (Údarás na Gaeltachta) which supports development of entrepreneurship and enterprise in rural areas.

Helena Deane is the founder of Business Connection Ireland (BCI) is a business and economic consultancy providing specialist services to public sector clients, community organisations and Small and Medium Enterprises (SMEs).

Seamus McCormack is the Chairman Clár IRD was established in 1993 to coordinate and develop the economic, social and cultural development of Claremorris and the surrounding area. The organisation is non-profit and has a Board of voluntary directors, drawn from a wide range of people from a variety of backgrounds and disciplines. The organisation is a company limited by guarantee. All funding for Clár IRD is raised within the community and through relevant grant assistance.

Carmel Haughey is the administrator of An Fiontarlann - a new state of the art Incubation & Enterprise Centre located in the rural Gaeltacht setting of Baile Mún , Cill Chartha (Kilcar, Co. Donegal), 39 Km from Donegal town. Suitable for knowledge based and office businesses.

Joan Fahey is the Project Manager of Mayo Ideas Lab, a collaboration of the development and enterprise support agencies in Co. Mayo. A key role of hers is the co-ordination of the annual Mayo Ideas Week initiative, a week-long series of idea generation, entrepreneurship and business events which showcases successful innovators and business people and highlights the supports available to help Mayo businesses innovate and grow.

The focus group was coordinated by **Ultan Faherty**. As a Halo Business Angel Network (HBAN) representative in the west and north-west region, Ultan works to match private investors with pre-screened investment opportunities in start-up, early stage and developing business and to create a community of investors in the region. For almost 25 years he has worked as Area Manager with WestBIC in providing tailored support to innovative enterprise from the initial stages, from concept through to commercialisation, and in identifying incubating and supporting value-added enterprise opportunities.

Two other contacts were also asked to participate in the Focus Group but they were only able to participate remotely. Their feedback is incorporated into this report.
Pauric Cunningham is a UCD Bachelor of Commerce graduate and summer intern with Perfect World Co. and works also part time as Labour Manager with 3D Personnel, Dublin.

Karen McCormick is a project officer with the Department of Development at Letterkenny Institute of Technology. Karen previously worked within the Economic Development Division of Donegal County Council, the local government authority. Further to this she worked in small business development through a cross-border mentoring project, matching SMEs with large multinational companies to help SME business development. Having also worked in the political sphere, Karen has a keen personal and professional interest in entrepreneurship, enterprise development and wider economic development. Her masters research focused on the Export Performance of Donegal SME's and factors that affect their success.

D. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

There was a mixture of responses here with the majority of participants feeling that open and geospatial data was extremely or very important both currently and in the future.

One participant felt it was not very important currently.

Comments from participants included:

- Very important today, particularly where business to consumer marketing is concerned and it is likely to be more important in the future.
- Extremely important for digital companies / platforms e.g 'faang' (best-performing tech stocks, namely Facebook, Apple, Amazon, Netflix and Alphabet's Google) type companies. It was noted that this data can be quite costly and could be inaccurate and while it has potential to improve decision-making is it worth spending a lot of time on?? Traditional market research is still hard to beat.

Two further comments concurred with this somewhat……….

- This information is an additional element to Market Research which can significantly influence the success or otherwise of specific businesses.
- Geo-marketing can be a powerful source of data; however, the data is only meaningful if you already have an understanding of marketing principles and then be able to apply this data to your business management and marketing mix strategies.

Other respondents felt the potential for such information was underdeveloped……

- Speaking from the point of view as a mentor and facilitator of entrepreneurship related activities, the potential of such data and services is still underutilized and under-appreciated and I believe in the future this is going to become more of a trend among the companies, who will become more aware of the benefits and features.
- Successful marketing involves reaching the right person with the right product at the right time, and the methodologies and technologies mentioned above will enable companies more and more to achieve this type of very targeted reach with their marketing activity. While larger companies are working in these areas for a while, we are only at the tip of iceberg in relation to how

SMEs and entrepreneurs can engage with and utilise these technologies, and benefit from this level of information and knowledge.

- I do not believe that the potential of geomarketing, real time data etc. is fully understood at this point in time. I suspect that many budding entrepreneurs believe they can't afford the investment in time in such areas. However, ironically understanding geomarketing and geospatial data would save them so much time and allow them to target and focus their efforts in the right way.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Again, there was a mixture of responses here with the majority of participants agreeing that research on entrepreneurship could be very supportive to businesses development both currently and in the future.

Some particular observations were as follows…………………

- It definitely helps to have a better understanding of how to identify and exploit new strategic approaches etc.
- No matter what size, age or industry, entrepreneurial companies are faced with the challenge of continuous and dynamic change. At increasing speed and in a more complex environment, both new threats and new opportunities emerge. Identification and exploitation of these opportunities is the essence of entrepreneurship and strategic management identifies how these opportunities can be transformed into sustainable competitive advantages. Research into entrepreneurship can help identify trends and patterns of behavior that can underpin the strategic management activities and aid decision-making.
- Strategic planning is key in terms of defining strategy or direction, and making decisions on best allocating resources.
- Yes, research is hugely important. The challenge for the researcher is making sure that the relevant research reaches the overworked and time limited entrepreneur.
- Thorough knowledge of your target market and how you might best reach them is key to successful entrepreneurship, and is the basis for identifying new business opportunities whether it be new ways to communicate with your customers, new ways to reach them, new ways to make them happy and / or identifying new ways to satisfy their product requirements.

One specific comment was that "…many businesses have depended on footfall and now have to go "online" to succeed. There are significant population shifts and this info is required for good decision-making".

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Most respondents suggested that **"Knowing the local market and discover market needs in new territories"** was an area that they would choose to improve.

The next areas was **"Impact of ICT on local business strategy identification and development"** followed closely by **"Taking entrepreneurial decisions for tactical needs as well as for strategic needs"** and **"Training employees to increase sales and customize the product / service offering".**

The area viewed as being of lease importance perhaps was **"Developing innovative channels for communication and marketing",**

In support of these observations particular feedback / comments were as follows:

- If you don't know your market needs you cannot improve your product / service offering. The market ultimately decides the success of your business. Entrepreneurs have to move on through business development and executing strategy. I'm not a huge believer in innovative channels for marketing, etc.
- Digitalisation is a trend that impacts all spheres of business and how it affects the business models is becoming increasingly more intense. Furthermore, market knowledge is still one of the key pillar strategies are being built on, and the knowledge here needs to be dynamic and adaptable.
- The priority is to have as much reliable market info as possible
- Entrepreneurs must inform consumers about their goods or services and know where their key customer base is. Businesses develop marketing strategies to deliver specific messages to consumers in the economic marketplace, which I think is very important in moving the business forward.
- If you don't know your customers and what they want, then you can't be sure you are giving them what they want, regardless of where they are located, or how you reach them, or how fancy your marketing is, or how smart your strategy or tactics are.
- Understanding what you need it fundamental and then putting the measures in place to deliver it. All the points mentioned are very relevant and while we have discussed ranking them in importance, they are all very much interlinked.

E. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Most respondents felt that Location Intelligence was extremely important or very important (today and in the future) in ensuring the success of companies. A very

limited number of respondents felt it was not very important but may be attributed to their lack of familiarity with the topic.

Some specific comments in relation to the subject matter were as follows.....

- Mapping information to establish trends and to uncover new data is very important today and likely to become even more important in the future in leading to commercial success.
- Not very important in some industries but definitely much more important in others.
- In the context of the acquisition of new business leads, my company would not use LI, however I would see LI as extremely useful tool for conducting market research on behalf of third parties as part of the consultancy process to add value.
- You always need to know where your customers are coming from so LI can be useful there.
- This jump in LI can be attributed to the growing popularity of smart connected devices. It is creating a buzz and will lead to creation of huge data stores about what we do, how we do it, and where it happens. The key will be in how do we interpret / use that information.

In terms of those respondents who did not know too much about LI......

- I'm not hugely familiar with how much LI is being utilised at the moment, particularly among SMEs, except maybe when they use technologies developed by larger companies such as FB targeted advertising etc. However, I expect that in the future, the kind of targeting that it can facilitate will become the norm and so it will be crucial to success.
- I only have a basic awareness about Location Intelligence. However, I believe anything that gives us a deeper understanding of the marketplace potential has to be a good thing. A small concern that I have is that it needs to be user friendly and easy to grasp.

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

During the discussion on which areas people would research before commencing a business it was felt that Business Planning and Team Development were most important. Thereafter the key issues were Market Research and Finance Needed with Location of the Business the last on the list.

However, some of the comments pointed to a need for caution in this regard as there were some divergent views ......

- While we are being asked to rank these issues they are all very interlinked. I chose Market Research as being most important as I believe that a solid

market needs to be identified before putting finance in place etc. If it was me undertaking the research, location would be a factor in my market research also.

- Dependant on the nature of the business.
- A business plan is a very important strategic tool for entrepreneurs. A good business plan helps entrepreneurs to focus on the specific steps necessary for them to make business ideas succeed.
- Finance has often been the most thing holding me back from entrepreneurship. Unless you start extremely small having vast sums of money is likely to be very important. For a brick and mortar enterprise location is crucial. Again knowing market needs is also crucial for success. Having a solid business plan could be crucial in getting investors on board. The team can usually be built slowly and would take the least priority.
- In terms of feasibility, establishing levels of demand would be my first priority, there would be no point to all the other activities if this was not researched and confirmed as viable.
- Only when you are satisfied with Market Research should the rest follow.

Portugal

A. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

		Total number of answers
Extremely important	In the future	4
	Today	1
Very important	In the future	3
	Today	1
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	

I do not understand their importance in relation to entrepreneurship		

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

		Total number of answers
Strongly agree	In the future	
	Today	1
Agree	In the future	2
	Today	2
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		2

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5
Impact of ICT on local business strategy identification and development		2	3	5	5
Taking entrepreneurial decisions for tactical needs as well as for strategic needs		3	4	1	4
Developing innovative channels for communication and marketing		5	4	3	5
Training employees to increase sales and customize the product / service offering		4	3	4	5
Knowing the local market and discover market needs in new territories		2	4	2	5

B. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

		Total number of answers
Extremely important	In the future	5
	Today	3
Very important	In the future	
	Today	2
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what location intelligence is		

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5
Market research		5	4	5	5
Finance needed		5	3	2	4
Location of the business		1	3	1	4
Personnel (team construction)		4	4	3	4
Business plan (financial model) and structure		3	4	4	5

Due to serious difficulties in reconciling the different agendas, individual interviews were conducted with each of the experts in geomarketing and entrepreneurship. Following a brief presentation of each participant and the organization they represent:

- ○ **Mário Cardoso** Graduated in Marketing and Advertising, and with a Master in Entrepreneurship and Innovation Management. Mário Cardoso is a specialist in management and business development. Great enthusiast of the new

technologies and creative industries, has the ability to solve problems strategically and in an innovative way, improving the efficiency with business results, and leveraging the clients' satisfaction, always with the focus on market and operational profitability. As consultant, has experience in support managers and entrepreneurs in developing business, since the earlier first steps of a startup, and in existing businesses already in the market. He has a large experience in different kind of markets with different dynamics where had capitalized different perspectives enlarging the capacity to analyze problems and find strategic and operational solutions in a fast way. As university professor and researcher, he already published some papers in the technology field, business and projects development, and had also developed unique methodologies for business analysis, business plan and global marketing strategies.

o **Nuno Duro** is a founding partner of BLUECOVER; a start-up company founded in 2014 specialized in geolocation services. The company provides solutions to aerospace, sports and surveillance businesses based on real-time tracking technology. The company uses Space products to provide solutions at the global market, taking advantages from Copernicus, EGNOS operational services and the coming Galileo services. The current products are TRUESHOT (golfing), GPS Waypoints (surveying) and SWAIR (aviation).

o **Rui Pedro Julião** is an assistant Professor at NOVA IMS Information Management School at Lisbon. GIS and Spatial Analysis Teacher & researcher at CICS.NOVA at Lisbon. Ph.D. in Geography, professor of higher education for more than 25 years, with some experience as a public entity manager and also as a business administrator President of the Portuguese Association of Geographers.

o **Rui Proença** is graduated in Business Management, specialized in the financial area. He began his professional career as manager of a national B2C franchise operation, and later developed his executive career in a multinational. Has a solid business leadership experience in the B2B segment of payment services, network management, and outsourced benefits. In 2013 created an innovative joint venture (Edenred / Novo Banco), implemented a process of digital transformation of the company, expanded the benefits market and led the company to became the leader in the national market. Under its leadership, this joint venture has been awarded the Great Place to Work award for 3 consecutive years between 2013 and 2015. Former General Director in B2B Payment Services and Extras Fees Benefits, write regularly on his blog "*Construir consolida* ".

o **Sérgio Prazeres** is a geographer, dedicated to technical consulting services in Geographic Information Systems (GIS), digital mapping and remote sensing. Managing Partner at the USE Concept company, with experience and positioning in the national market in the field of GIS, Spatial Planning and Land-use Planning. Higher education teacher for more than 10 years, Teaching of GIS and Remote Sensing on the Degree of Geography, and GIS on the Degree

of Tourism. Also teaching of Aeronautical Geography on the Degree of Aeronautical Management at Lusofona University of Lisbon. Recently teaching GIS on the Degree of Tourism at Higher Institute of New Professions of Lisbon. PhD candidate in Geography and Regional Planning at New University of Lisbon, with investigation line on integrated geospatial systems and aeronautical information management.

F. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

		Interviewee					Total number of answers	% of Total n of answers
		1	2	3	4	5		
Extremely important	In the future	1		1	1	1	4	80%
	Today	1					1	20%
Very important	In the future		1	1		1	3	60%
	Today		1				1	20%
Not very important	In the future						0	0%
	Today						0	0%
Not important at all	In the future						0	0%
	Today						0	0%
I don't know nothing of them								

Responses to the Focus Group's first question show a common response pattern, all the interviewed answered this question has extremely important or very important. The majority of the interviewed (60%) considers that in the future open data, geospatial data, geomarketing, real time data and location analytics will be extremely important criteria in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions. And for the present time also 60% of the interviewed think these criteria has very important.

Regarding the comments provided the interviewed said the following:

"There is no doubt about the need for information and aggregation of data that may contribute to the decision-making processes within the scope of management activities or in particular marketing."

"Open data sources (such as OSM) improves the development of new business but also the current business strategy."

"Today there are already significant data sets with potential to be use for the indicated activities. In the future they will be critical."

"Relevant and up-to-date information on consumer preferences and habits (whether individual or company) determine management strategy and tactics.

The entrepreneur can decide more assertively and effectively on the investment initiatives (i.e: entry into new market segments, expansion of the offer of services according to the "customer journey" / user experience) if they have access and knows how to use data information that result from IT improvement."

"Nowadays, there is already a need to use geolocation to improve results in our business, with gains in terms of time, efficiency and assertiveness.

In future, those who are not well positioned in this area will have more difficulties in the face of competition."

All the interviewed considers that the access and analysis of information in real time is crucial for the development of the business idea, allowing a more efficient and effective decision making.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

		Interviewee					Total number of answers	% of Total n of answers
		1	**2**	**3**	**4**	**5**		
Strongly agree	In the future						0	0%
	Today				1		1	20%
Agree	In the future			1		1	2	40%
	Today			1		1	2	40%
Somewhat agree	In the future						0	0%

	Today						0	0%
Don't agree	In the future						0	0%
	Today						0	0%
I don't understand how research on entrepreneurship can support these activities		1	1				2	40%

The experts have different opinions regarding the importance of research on entrepreneurship, some agree with the research others do not understand the relationship. Two of our experts do not considered that the research in entrepreneurship is fundamental to support new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service; however from they also said that research in any area is important and can be used as a case study or benchmarketing. The other 3 experts Agreed (40% today and 40% in the future) that research in entrepreneurship is essential to better manage the above criteria and facilitates the choice of a business at different levels.

Regarding the comments provided the interviewed said the following:

> "Research on entrepreneurship, considering its various definitions, does not add much to the decision-making related to economic activities.
> Research on strategy, innovation, marketing, management, sales and distribution management, customer management, financial management, business plan development, it's what is essential premises that an individual can work to become entrepreneur, and be able to undertake successfully.
> Usually entrepreneurship is wrongly seen as the main lever of business, but in fact, it is an abstract concept, resulting from traditional activities usually allocated to management.
> An individual is not born entrepreneur, he becomes entrepreneur in carrying out these activities.
> There is no entrepreneurship, without the individual taking steps in that direction, to convert business ideas into concrete implementation actions.
> It is a result, not the beginning.
> Research on entrepreneurship is to find stories, which in the last case, if well directed, may function as a case study or benchmarking.
>
> "I do not understand the question. Is too abstract. What kind of research on entrepreneurship? Research in any area is always important"

"Today there are already significant data sets with potential for use in the activities indicated. In the future they will be critical"

"The examples are always inspiring; both positive and negative.
In the first case we can inspire our future action by learning and apprehending the strategy and tactic that is successful.
In the second case we recognize what should not be done, and we gain time and money from it."

"Being aware of the concept of entrepreneurship can facilitate the choice of business at various levels, such as location, target audience, competition, raw materials among others."

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

	Interviewee					Average of the answers obtained
	1	**2**	**3**	**4**	**5**	
Impact of ICT on local business strategy identification and development	x	2	3	5	5	3,75
Taking entrepreneurial decisions for tactical needs as well as for strategic needs		3	4	1	4	3
Developing innovative channels for communication and marketing		5	4	3	5	4,25
Training employees to increase sales and customize the product / service offering		4	3	4	5	4
Knowing the local market and discover market needs in new territories		2	4	2	5	3,25

Based on the answers obtained it is possible to conclude that the experts consider that all the above presented criteria are important to improve the knowledge of an entrepreneur.

The most well-ranked criteria, on average, was the communication and marketing channels, followed by the training of human resources and the use of ICT in the identification and development of a business strategy.

Regarding the comments provided the interviewed said the following:

"ICT can be a competitive advantage in the market in which a business operates, being able to leverage the business, both by the various aspects of innovation (according to Schumpeter) and by the differential of competitive advantages that can be generated against the competition"

"I know ICTs very well that is why I give more importance to the distribution channels."

"Nothing to say"

"A strong (and irreversible) process of Digital Transformation is under way.
We have always been using and perfecting information technologies in business processes, in the value chain of production, in the way the various agents involved in the production and sales process are articulated.
What really changes with digital evolution?
It changes the business strategy that starts to align technological innovation with the goal of transforming the way organizations develop:
Relations
• Provide services to customers and users
• Deal with suppliers and partners
• Interacting with employees
Performance
• Promote the continuous development of the operation
• Pursue operational excellence
Innovation
• Invent new business
• Create new business models"

"ICTs are extremely important in the modern entrepreneurship component, namely in the approach to potential clients, and in the knowledge of market dynamics at the local, regional, national and global levels, if applicable. The training issue is essential to any employee of any business area."

G. Geomarketing Research Questionnaire

1. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

		Interviewee					Total number of answers	% of Total n of answers
		1	2	3	4	5		
Extremely important	In the future	1	1	1	1	1	5	100%
	Today	1	1		1		3	60%
Very important	In the future						0	0%
	Today			1		1	2	40%
Not very important	In the future						0	0%
	Today						0	0%
Not important at all	In the future						0	0%
	Today						0	0%
I don't know nothing of them								

All experts (100%) consider that smart location will be important to the success of companies and 60% of them consider that smart location is extremely important today.

Regarding the comments provided the interviewed said the following:

> "Management supporting systems, based on intelligent location systems, make it easier, faster and more efficient to operate information"

> "Smart location is part of Bluecover's core services. Our primary concern today is the impact on data privacy policy in smart location."
> "Everything happens somewhere. And it is not possible to benefit from the Internet of Things (...) without the recognition of the precise location and in real time.
> It is crucial to think about the usefulness of the captured data and not just the simple collection.

The treatment of the data allows (as I have already mentioned): new Relations, Performance and Innovation.

Let's see an example of "Performance" where I highlight, eg, Operational Excellence. By collecting and analyzing equipment and machine data, companies can increase productivity, minimize or eliminate downtime, and better manage uptime; consists of generating additional revenues by reducing operating costs, and is based mainly on automation (...) and simplification of processes - is a short-term impact.

But if we want to project the long term, we can visualize potential opportunities for differentiation and transformation: new business; new business models."

"At present, we already have data that allow us to make more advanced analyzes of the territory dynamics in terms of business, such as consumer behavior, competitive positioning, emerging business areas, high pressure areas, cold zones, proximity to accessibility and transportation , risk areas. Access to this type of data will be essential in the future."

2. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

	Interviewee					Average of the answers obtained
	1	**2**	**3**	**4**	**5**	
Market research		5	4	5	5	4,75
Finance needed		5	3	2	4	3,5
Location of the business		1	3	1	4	2,25
Personnel (team construction)	X	4	4	3	4	3,75
Business plan (financial model) and structure		3	4	4	5	4

According to our experts, the market study and the business model assume greater relevance, followed by human resources and financial resources.

Regarding the comments provided the interviewed said the following:

"Business plan (financial model) and structure obliges the answer of the remaining points and other more essential so that one has a notion of feasibility of the business."

"The answer depends on the type of business. So, this answer assumed that the business to start would be from consulting services. In this case, the location is irrelevant."

"Airnbn is the largest chain of "hotels" in the world, and has no hotels!
Uber is the biggest operator of "taxis", and there are no taxis!"

"For the creation of the business itself it is important to start with the business plan and market research, because without these elements the business can be compromised from the start. Then the financial resources and human resources location are the following steps to take special care."

<u>Spain</u>

A. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

		Total number of answers
Extremely important	In the future	2
	Today	3
Very important	In the future	1
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

		Total number of answers
Strongly agree	In the future	2
	Today	3
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5
Impact of ICT on local business strategy identification and development	1				1
Taking entrepreneurial decisions for tactical needs as well as for strategic needs			2		
Developing innovative channels for communication and marketing				2	
Training employees to increase sales and customize the product / service offering		2			
Knowing the local market and discover market needs in new territories	1				1

B. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

		Total number of answers
Extremely important	In the future	2
	Today	2
Very important	In the future	
	Today	1
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what location intelligence is		

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

	1	2	3	4	5
Market research	1		1		1
Finance needed		1		2	
Location of the business		1		1	1
Personnel (team construction)	2		1		
Business plan (financial model) and structure		1	1		1

Focus Group Case 1

A. Profile of the participants:

(*please, describe briefly the type of participants involved in the focus group and the organizations they represent*)

My name is Daniel García-Moreno Rodríguez and I am the coordinator of Ávila 1,131, a startup accelerator located in Ávila.

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	
	Today	
Very important	In the future	OK
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

> I think it's very important. It's a knowledge that can make the difference between the success or failure of an entrepreneurial project. It is important to invest more efforts in making known the advantages of these matters.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	
	Today	OK
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		

Please explain your chosen response above in a few words or give other suggestions

> Strongly agree. Entrepreneurship is the present and the future of the spanish and global business affairs. Investing in entrepreneurship means investing in innovation, business opportunities and the future.

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	5
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	3
Developing innovative channels for communication and marketing	4
Training employees to increase sales and customize the product / service offering	2
Knowing the local market and discover market needs in new territories	1

Please explain your chosen response above in a few words or give other suggestions

> Is important to develop in impact of ICT on local business strategy identification and development. New technologies should be applied to all areas as a differential value, allowing to save costs and find new opportunities.

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	
	Today	
Very important	In the future	
	Today	OK
Not very Important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what Location Intelligence is		

Please explain your answer in a few words

I can now mark a before and after in my company. I think it is very important from the present moment.

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	3
Finance needed	4
Location of the business	2
Personnel (team construction)	1
Business plan (financial model) and structure	5

Please explain your answer in a few words / provide additional comments

It is important to know in detail the strengths and weaknesses of a business plan based on the particularities of the area in which it is located.

Focus Group Case 2

A. Profile of the participants:

(*please, describe briefly the type of participants involved in the focus group and the organizations they represent*)

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	X
	Today	X
Very important	In the future	
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

Open data, geospatial data geomarketing, real time data and location analytics are extremely important factors that could help to improve entrepreneurship outcomes in terms that these indicators could allow to identify the socioeconomic behavior of territory.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	X
	Today	X
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	
I don't understand how research on entrepreneurship can support these activities		

Please explain your chosen response above in a few words or give other suggestions

Research on entrepreneurship is extremely important and necessary in order to identify new strategic approaches: Entrepreneurship Creates New Businesses, Entrepreneurship Adds value to National Income, Entrepreneurship Also Creates Social Changes and helps to create new communication models, sales, etc.

The interesting interaction of entrepreneurship and research has vital inputs and inferences for policy makers, development institutes, business owners, change agents and charitable donors. If we understand the benefits and drawbacks, a balanced approach to nurturing entrepreneurship will definitely result in a positive impact on economy and society.

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	1
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	3
Developing innovative channels for communication and marketing	4

Training employees to increase sales and customize the product / service offering	2
Knowing the local market and discover market needs in new territories	5

Please explain your chosen response above in a few words or give other suggestions

I think that one of the most effective way of improving the knowledge on entrepreneurship is learning about the macro geographic area: Beginning by defining the macro geographic area in which the business wants to operate. This should be a simple decision based on strategy, which will generally be driven by expansion, reduction or product.

The second stage must be addressed to define the target market: Who is going to be the user of the products you sell or launch? Ensure that you have a clear definition of who they are to make the exercise as accurate as possible.

Other important point will be the use of available data sources: Use data sources that are freely available about companies' lines of business, areas of operation, number of employees, IT infrastructure, fleet size and so on to give you an idea of what the potential could be. The ability to calculate or estimate the potential spend or purchases of prospects or customers in the target market you have chosen means drilling down to a granular level to calculate the average spend of each customer in each area.

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	X
	Today	X
Very important	In the future	
	Today	
Not very Important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what Location Intelligence is		

Please explain your answer in a few words

I think the Location Intelligence is critical to the companies´ success because it gives an overview of how geographically distributed their business models are, companies dominate all other industries, and could help to plan and execute field sales campaigns, blends market data, consumer demographics, retailer information, and more to ensure the best possible alignment of salespeople, locations, and strategy. The result will be a highly efficient field coverage model.

5. If you are thinking of starting your own business what would you research beforehand?
(please rank your answer from 1 [low] to 5 [high])

Market research	5
Finance needed	2
Location of the business	4
Personnel (team construction)	1
Business plan (financial model) and structure	3

Please explain your answer in a few words / provide additional comments

It think the most important starting point is exploring the market. In order for a business to be successful, it must solve a problem, fulfill a need or offer something the market wants. There are a number of factors that need to be considered in choosing a location for a business. One of the earliest decisions any entrepreneur has to make is where to locate his or her business. In order to do this, he or she has to make a careful assessment of costs. The ideal location would be one where costs are minimised. The entrepreneur would need to look at the benefits which each area had to offer as well as any government help which might be available. Then, it will be needed to elaborate a business plan and structure and search for finance needed. The last point will be the composition of the personnel team.

Focus Group Case 3

A. **Profile of the participants**:
(*please, describe briefly the type of participants involved in the focus group and the organizations they represent*)

Pablo Antonio Muñoz-Gallego:

Professor of marketing University of Salamanca. Faculty Business and Economics. He has been Dean of the Faculty of Economics and Business of the University of Salamanca (USAL), director of the Department of Business Administration and director of the doctoral program and the master in Research in Business Administration in the same University. He was President of the Economic and Social Council of Castilla y León between the years 1996 and 2000. His lines of research and publications are focused on electronic marketing, commercial distribution and innovation and entrepreneurship. He has published in international magazines such as Tourism

Management, Journal of Travel Research, Journal of Retail, Food Quality and preference, Meat Science, Journal of Small Business Management, among others. He usually performs consultancy activities for companies in sectors such as tourism and promotion of entrepreneurs. Currently is director of the master in International Business at the USAL and NEXT business school.

B. Research on Entrepreneurship Questionnaire

1. From an entrepreneurial point of view, how important is open data, geospatial data, geomarketing, real time data and location analytics in terms of improving entrepreneurship outcomes within territories, while also supporting targeted marketing actions?

Extremely important	In the future	X
	Today	X
Very important	In the future	
	Today	
Not very important	In the future	
	Today	
Not important at all	In the future	
	Today	
I do not understand their importance in relation to entrepreneurship		

Please explain your chosen response above in a few words or give other suggestions

Most people have mobile devices. They look for information about product and service offerings. They buy products online. They need geolocalized information to identify the points of sale. This allows to have geolocalized information about the client, that can be treated through business analytics. The Geonavigation applications allow you to know the routes followed by the users in their journeys by car, while they walk or while they practice sports or tourism.

2. Research on entrepreneurship can help to identify new strategic approaches to take better decisions and implement effective activities in relation to business opportunities, communication, sales, distribution and customer service?

Strongly agree	In the future	X
	Today	X
Agree	In the future	
	Today	
Somewhat agree	In the future	
	Today	
Don't agree	In the future	
	Today	

I don't understand how research on entrepreneurship can support these activities	

Please explain your chosen response above in a few words or give other suggestions

The international entrepreneurship research programs such as GEM or GUESS provide us valuable information on the profile of successful or failing entrepreneurs and business models. The results are also very useful to compare the Rate of Entrepreneurial Activity between countries and over time.

3. If you wanted to improve your knowledge on entrepreneurship, what would you choose to learn or improve? (please rank your answer from 1 [low] to 5 [high])

Impact of ICT on local business strategy identification and development	X
Taking entrepreneurial decisions for tactical needs as well as for strategic needs	
Developing innovative channels for communication and marketing	
Training employees to increase sales and customize the product / service offering	
Knowing the local market and discover market needs in new territories	

Please explain your chosen response above in a few words or give other suggestions

Currently, the changes in the supply of new products and services are explained mainly through new technologies of digitization (products and processes) and Industry 4.0 (automation of processes, self-learning of machines). The application of these technologies is changing business models and how to compete in the market. Proposing to the consumer offers that they could hardly have been anticipated by him: - 3d printing - Augmented reality - Artificial intelligence - Blockchain - Electronic sales Platforms -Internet of things ......

C. Geomarketing Research Questionnaire

4. If you know what Location Intelligence is, then please indicate how important you believe Location Intelligence is/will be to your company's success?

Extremely important	In the future	x
	Today	x
Very important	In the future	
	Today	
Not very Important	In the future	
	Today	
Not important at all	In the future	
	Today	
I don't know what Location Intelligence is		

Please explain your answer in a few words

> For consumers to know where you are.
> For the company to know where their customers are.
> To monitor the product delivery process.
> To monitor transportation and to have localized products and delivery vehicles.
> To geolocate the products when they are already being used by the customers.
> To know the presence of products and estimate the market share by micro-geographic areas.
> To geolocate the customer route in buildings or places of sale.

5. If you are thinking of starting your own business what would you research beforehand? (please rank your answer from 1 [low] to 5 [high])

Market research	1
Finance needed	4
Location of the business	5
Personnel (team construction)	3
Business plan (financial model) and structure	2

Please explain your answer in a few words / provide additional comments

> The fundamental thing is to know the needs of the potential consumer, the market segmentation and their degree of dissatisfaction with the current offers and their expectations over the future products. This requires a market research in which the entrepreneur participates personally (1).
>
> Secondly, it is necessary to design the innovative offer and the business model, which will involve designing a business plan (2).
>
> It is necessary to make a forecast about the profitability of the business and its financial sustainability so that the value for the client is transformed in value for the company (3).
>
> The people and the location of the business are aspects that must be adapted to the strategy that has decided to start the company.

Annex 3: Cases of Good Practice by Country

<u>Greece</u>

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.	Personal Details of the supplier

Name   Anna Vergidou

Country   Greece

Email

Website

Position   BSc., MSc. in European Youth Policy

2.	Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). Factory

Year of implementation. 2015

Country of the implementation. Greece

Website address/reference (if published) of the Case.

https://dspace.lib.uom.gr/bitstream/2159/17563/8/VergidouAnnaMsc2015.pdf

3.	Connection to Geomarketing

[ ]   The Case Study uses spatial data like statistics, demographics and topographic data (external data)

X   The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)

[ ]   The Case study uses GIS to integrate both internal and external data

[ ]   The Case study refers only to marketing data

4.	Short description of the Case

MEVGAL is a food company specialized in milk products since 1950. They are active in the whole of Greece

and since 1985 in 30 countries in 5 continents. Although MEVGAL is interested in exports and innovation, its

relationship with technology has not developed as much as it should in retail sales because they don't have

yet developed e-commerce.

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.   Personal Details of the supplier

Name   Hatzichristos Thomas, Marseli Constantina, Spastra Yiota

Country   Greece

email   thomasx@survey.ntua.gr

Website

Position   Phd in Geoinformatics, MEng in Surveying, National Technical University of Athens

2.   Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). Municipality of Alimos, Attica, Greece

Year of implementation. 2013

Country of the implementation. Greece

Website address/reference (if published) of the Case.

https://www.researchgate.net/publication/275183960_Municipality_Waste_Management_Study_Case_Study_Alimos_Greece

3.   Connection to Geomarketing

☐ The Case Study uses spatial data like statistics, demographics and topographic data (external data)

☐ The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)

X   The Case study uses GIS to integrate both internal and external data

☐ The Case study refers only to marketing data

4.   Short description of the Case

Redesign of a municipality's waste management infrastructure and its basic elements in three stages: Delineation of waste collection zones, Location allocation of trash and recycling bins and Redesign of garbage trucks routes.

Ireland

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.   Personal Details of the supplier

Name   Domino's streamlines the planning of its franchise territories.

Country   International

  email

Website   https://www.pitneybowes.com/ie/location-intelligence/case-studies/dominos-pizza.html

Position

2.   Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). **One of the largest pizza chains in the world / Makes more than 60 million pizzas per year / 21,000 employees with over 900 locations**

Year of implementation. **Current**

Country of the implementation **UK**

Website address/reference (if published) of the Case

https://www.pitneybowes.com/ie/location-intelligence/case-studies/dominos-pizza.html

3.   Connection to Geomarketing

√   The Case Study uses spatial data like statistics, demographics and topographic data (external data)

☐   The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)

√   The Case study uses GIS to integrate both internal and external data

4.   Short description of the Case

Please write a short description of the Case

This international iconic brand simplified territory allocation for franchisees and improved the overall customer experience.

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.   Personal Details of the supplier

Name   Galway County Council / Esri Ireland (sourced by Ultan Faherty)

Country   Ireland

email   mapsmakesense@esri-ireland.ie / +353 (0) 1 8693900

Website   esri-ireland.ie

Position

2.   Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). **Local Authority (with a requirement to**

protect businesses and homes at risk of flooding)

Year of implementation. **2016**

Country of the implementation **Ireland**

Website address/reference (if published) of the Case.

http://www.esri-ireland.ie/~/media/D8418E3B6E864C3796A992E28A21DE69.ashx

3.   Connection to Geomarketing

√   The Case Study uses spatial data like statistics, demographics and topographic data (external data)

□   The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)

√   The Case study uses GIS to integrate both internal and external data

☐   The case study refers only to marketing data

4.   Short description of the Case

Please write a short description of the Case

In December 2015, a chain of severe storms swept across the county of Galway, causing devastating floods. 472 properties became cut off, 62 homes were flooded and major transportation routes became impassable, leading to significant concerns for public safety.

As a result the Council implemented new geographic information system (GIS) technology from Esri Ireland, which gave it the ability to react incredibly quickly to the emerging crisis.

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.   Personal Details of the supplier

Name   Knight Frank / Esri Ireland (sourced by Ultan Faherty)

Country   UK

email   mapsmakesense@esri-ireland.ie / +44 (0)1296 745599

Website   http://www.esriuk.com/contact

Position

2.   Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). **Independent real-estate consultancy**

Knight Frank is using Esris ArcGIS platform to help leading retail organisations find the most

advantageous sites for new stores across the UK.

Year of implementation. **2016 / 2017**

Country of the implementation **UK**

Website address/reference (if published) of the Case. **https://resource.esriuk.com/knight-frank/**

3.   Connection to Geomarketing

√   The Case Study uses spatial data like statistics, demographics and topographic data (external data)

☐   The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)

√   The Case study uses GIS to integrate both internal and external data

☐   The case study refers only to marketing data

4.	Short description of the Case

Please write a short description of the Case

The independent real-estate consultancy Knight Frank is using Esri's ArcGIS platform to help leading retail organisations find the most advantageous sites for new stores across the UK. By performing geospatial analysis on a wide range of factors, the firm can guide its clients quickly towards precisely those locations that are most likely to maximise profitability and reduce risk.

Portugal

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.	Personal Details of the supplier

Name   Esri Portugal Sistemas e Informação Geográfica

Country   Portugal

email   info@esri-portugal.pt

Website   www.esriportugal.pt

Position

2.	Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc)

Year of implementation.

Country of the implementation: Portugal

Website address/reference (if published) of the Case.

3.	Connection to Geomarketing

x   The Case Study uses spatial data like statistics, demographics and topographic data (external data)

	The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)
x	The Case study uses GIS to integrate both internal and external data
	The Case study refers only to marketing data

4. Short description of the Case

Brimogal, owner of AKI and Leroy Merlin, uses the ArcGIS Platform to support their market planning and expansion strategies. Through the analysis of the trade areas of current and potential locations they are able to understand their current and potential customers and also predict sales and market share of that particular location. This gives them a competitive advantage and allows them to minimize the risk of investment. Brimogal also wanted to analyze their marketing campaigns return on investment vs the marketing campaign costs and knowing who the costumer is, where he/she is and identify the consumer patterns and trends was crucial so that they could better select where they were going to distribute the brochures and flyers for their campaigns. This allowed them to communicate with the right costumer and the ArcGIS Platform provide them the tools to achieve those goals.

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1. Personal Details of the supplier

Name   Esri Portugal Sistemas e Informação Geográfica

Country   Portugal

email   info@esri-portugal.pt

Website   www.esriportugal.pt

Position

2. Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc)

Year of implementation.

Country of the implementation: Portugal

3.	Connection to Geomarketing

x	The Case Study uses spatial data like statistics, demographics and topographic data (external data)
	The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)
X	The Case study uses GIS to integrate both internal and external data
	The Case study refers only to marketing data

4.	Short description of the Case

Caixa Económica Montepio Geral is responsible for the banking activity of Montepio Geral – Associação Mutualista. Its business focuses on retail intermediation through fundraising of customers of small and medium savings and the granting of credit to individuals, microenterprises, medium-sized enterprises, entrepreneurs and Third Sector institutions.

The Challenge

To detect the business potential of each sales point, to use all the information in distribution and, finally, to analyse and detect new locations for sales points, as well as the relocation of existing sales points. To use Geomarketing to pinpoint the sites with greatest consumption potential for the optimisation of the sales points in neighbourhoods, cities or regions through the cross-analysis of market, sales or marketing information with geographic databases, enabling the analysis and visualisation of the behaviour of the variables under study in digital maps.

The Solution

Three solutions were designed to meet the goals proposed in the scope of the project. The Model of analysis and detection of business potential is meant to meet the need for a more efficient detection of the business potential of each sales point in order to support the definition of business strategies and the planning of Marketing and to support the system of definition of commercial goals per Sales point. In practical terms, the premise of this model was to answer questions such as "What is the internal potential of the clients – both private entities and companies – of a Sales point?"; "What is the external potential of Non Clients – both private entities and companies – of a Sales point?"; "Where does the area of influence of one Sales point end and another one's begins?" or "How to classify the level of attractiveness of the Sales points?". The preparation of the analysis model of the business potential comprised four fundamental steps: the development of a model that enabled the georeferencing of the entire client database of Montepio and the Sales points, the development of a model that enabled the definition of the areas of influence of each Sales point, of a model that enabled the assessment of the level of attractiveness of that same Sales point and, lastly, the consolidation of those interim models.

Following the preparation of the analysis and detection of potential model, the next step was to use of the information resulting from that model in the distribution, integrating the results obtained from the analysis in the Multichannel application. After the analysis of the business

potential of each Sales point, from which resulted a set of clients and companies to be visited, that information is distributed to the various Sales points. Additionally, this analysis also allows the identification of the areas where the physical network is less attractive and the definition of strategies to intensify the performance of the Remote Channels. The implementation of the Optimisation Model of the Distribution Network comprised several processes that enabled the joint analysis of different demographic, socioeconomic and business indicators. The result was a characterisation of the positioning of the distribution network in light of Montepio's clients, the population and the companies present in the areas of influence of the Sales points, as well as in light of the positioning of the competition in regards to Montepio's Distribution network. This model enabled a more effective identification of the best locations for the opening of a new Sales point or for the merger or relocation of Sales points.

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.   Personal Details of the supplier

Name   Esri Portugal Sistemas e Informação Geográfica

Country   Portugal

email   info@esri-portugal.pt

Website   www.esriportugal.pt

Position

2.   Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc)

Year of implementation.

Country of the implementation: Portugal

Website address/reference (if published) of the Case.

3.   Connection to Geomarketing

[x]   The Case Study uses spatial data like statistics, demographics and topographic data (external data)

The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)

4.　　Short description of the Case

Sonae MC is the national market leader in food retail, with a number of different formats that offer a varied range of high quality products at the best prices: Continente and Modelo Continente (supermarkets), Continente Bom Dia (convenience stores), Bom Bocado (cafeteria and restaurants), Note! (bookstore / stationery), Well's (health, wellness and optical services) and ZU (Pet Care).

The Challenge

When operating various brands in an increasingly competitive market – especially nowadays, with an economic crisis scenario so present in Europe and particularly in Portugal - the adoption of tools that allow the coordination of the multiple dispersed sources of information is not just a growing need, it becomes a market imperative. It is in this context that the various decision-making support systems and, in particular, the GIS have been developing within Sonae MC, given their known and acknowledged ability to incorporate the fundamental spatial dimension in the information.

The Solution

Therefore, the primary goal of the implementation of the GIS platform within Sonae MC was to facilitate access to information on the various issues raised by the business activity and that require differentiated, swift and effective responses. This platform, centralized and integrated with business data, has enabled the assertive support to these decision-making processes. Briefly, the platform meets the needs of four action pillars: Expansion, Geomarketing, Business Solutions and Collaboration. The accumulated know-how, together with the ever evolving technology, has enabled the development of customized solutions, with features such as the automation of certain tasks that allowed technicians greater speed and efficiency in the use of georeferenced information, such as the Territorial Analysis Atlas, the Brands Atlas or the Severity Models, to name a few. These applications are critical to meeting Sonae MC's needs, in particular the preparation of viability studies, the characterization of the stores' areas of influence of the stores or market analysis and positioning in comparison with the competition. In the Geomarketing area, it became possible, for example, to optimize operations and reduce costs by revising the leaflets distribution areas. It also became possible to know the client and to know where the client is. These analyses are made possible by the georeferencing of the customers and their type of consumption, allowing more targeted, assertive and effective analyses that meet the Client's needs. In the collaborative perspective, Sonae has been developing a work of democratization of the access to information, materialized in Sonae MC through the Store Locator Analyst and, more recently, the use of the ArcGIS Online platform. These systems, of the selfservice type and user friendly, have the added advantage of freeing resources for other activities of greater technical depth.

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1. Personal Details of the supplier

Name   Lucas Martínez

Country   Spain

email

Website   http://corporate.danone.es

Position   Customer Developer Manager Proximit

2. Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). **Food industry**

Year of implementation. **2016**

Country of the implementation. **SPAIN**

Website address/reference (if published) of the Case.

https://www.geoblink.com/es/clientes/danone-trade-marketing/

3. Connection to Geomarketing

☐	The Case Study uses spatial data like statistics, demographics and topographic data (external data)
☐	The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)
X	The Case study uses GIS to integrate both internal and external data
☐	The Case study refers only to marketing data

4. Short description of the Case

Danone Group is a French agri-food multinational that has 4 main activities: dairy products, water, infant nutrition and medical nutrition.
They expect to grow over 15% thanks to geomarketing, that had provided the following benefits:

- Mark a very clear strategic line for each point of sale
- Optimization of distribution and commercialization routes
- Decide the type of product according to the point of sale

- Define the typology of potential customers that pass in front of the points of sale
- Visualize and geolocate all the points of sale in a map and thus facilitate the analysis

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.   Personal Details of the supplier

Name	Andreu Beltran. Granier
Country	Spain
email	franquicia@pansgranier.com
Website	https://pansgranier.com/
Position	Marketing Communication Manager

2.   Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). **Food industry**

Year of implementation. **2017**

Country of the implementation. **SPAIN**

Website address/reference (if published) of the Case.

https://www.geoblink.com/es/blog/plan-expansion-sector-panadero/

3.   Connection to Geomarketing

☐	The Case Study uses spatial data like statistics, demographics and topographic data (external data)
☐	The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)
X	The Case study uses GIS to integrate both internal and external data
☐	The Case study refers only to marketing data

Founded in 2010, **Granier** is a bakery and cake shop with more than 350 sale points. By means of franchise arrangements, it has expanded throughout most of Spain, but also in some cities outside the territory such as Lisbon, Rome, London and Miami.

The main uses that Granier makes of Geomarketing are:

> - Support the commercial team: Help commercial developers explore the network of existing stores and generate concise PDF reports with location data on possible new sale points.
> - Define exclusivity areas: Delineate areas of exclusivity and take socio-economic reports and skills for franchisees
> - Define similar areas: Find the ways in which things work well, that is, those that meet the success criteria of Granier bakeries.
> - Identify "hot spots": Locate the best settlements excluding the exclusive areas.
> - Validate the reliability of the project in front of banks

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1.   Personal Details of the supplier

Name	Dialoga Consultores
Country	Spain
email	contacto@dialogaconsultores.com
Website	http://www.dialogaconsultores.com/
Position	

2.   Case of Good Practice

> Kind of Entrepreneurship (factory, service provider, bank, etc). **Political Geomarketing**
>
> Year of implementation. **2012**
>
> Country of the implementation. **SPAIN**
>
> Website address/reference (if published) of the Case.

3. Connection to Geomarketing

☐ The Case Study uses spatial data like statistics, demographics and topographic data (external data)

☐ The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)

☒ The Case study uses GIS to integrate both internal and external data

☐ The Case study refers only to marketing data

4. Short description of the Case

Political Geomarketing
PSOE (Spanish Socialist Party) did a geomarketing based electoral campaign in the province of Seville (south of Spain) in the General Elections (November 20, 2012). Seville became the only province that resisted the overwhelming impulse of the PP (Popular Party).
Geomarketing, allowed optimizing the campaign actions and giving a radical turn to what was predicted by the surveys.
Political geomarketing has been the tool that has provided spatial data to:
- Make an strategic plan to distribute the campaign events more efficiently
- Concentrate efforts in critical electoral districts and areas
- Distribute electoral resources in a more fruitful way

Further analysis demonstrates that they achieved better results than could have been achieved with a traditional campaign.

Cases of Good Practice (use separate sheets for each case)

O2: Research on Geomarketing

1. Personal Details of the supplier

Name   Carmen Pellicer Lostao.

Country   Spain

email   carmen.pellicer@unizar.es

Website   http://www.bifi.es/team/carmen-pellicer-lostao/

Position   Demand Forecast Analyst

2.   Case of Good Practice

Kind of Entrepreneurship (factory, service provider, bank, etc). **Telecomunications**

Year of implementation. **Before 2014**

Country of the implementation. **SPAIN**

Website address/reference (if published) of the Case.

http://www.esri.es/geomarketing-y-telefonica-una-nueva-dimension/

3.   Connection to Geomarketing

☐	The Case Study uses spatial data like statistics, demographics and topographic data (external data)
☐	The Case study uses only internal data (amount of customers, rates of sale, customer's profiles, etc)
X	The Case study uses GIS to integrate both internal and external data
☐	The Case study refers only to marketing data

4.   Short description of the Case

Telefónica is the main telecommunications company in Spain and has a great international profile, especially in Latin America.
Geomarketing through ArcGIS software platform is used for:
-    Network, fiber or 4G planning and implementation. To determine priority locations, possible information errors, or facilitate tracking of information and activity results.
-    Generate market reports, with movement patterns, that facilitate the identification of market trends.
-    Management of points of sale (Movistar stores). Identify areas of influence to make decisions about new openings and closures.
-    Incorporate Big Data analysis. Telefónica is constantly introducing the market intelligence of all the Big Data data in the company.