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MSc in Technology, Innovation & Entrepreneurship

Report in the module of:

INNOVATION & NEW PRODUCT DEVELOPMENT **(TIE-4240)**

with subject:

Development of a new product from idea to launch

By
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Thessaloniki – 19th of December, 2008

ABSTRACT

This coursework is about the process of developing a new service. The proposed one is a mobile e-commerce service which will be offered in a discrete environment, and this is the local transportation bus in the city of Thessaloniki. Actually, this effort is addressed to the Board of Directors of O.A.S.Th, the local transportation company of Thessaloniki.

We are an external group which undertakes the responsibility to investigate and present the initial idea to the company.

What we propose to the Board of Directors is this: *Make your buses e-commerce mobile kiosks, make them more useful to their passengers, and add value to the thousands of lost hours that are spent during traffic time. In parallel, create the potential for growth for the organization. Make O.A.S.Th an innovative company which will lead local community to the paths of high technology.*

The aim is to break the barriers of being a typical local transportation company and exploit technological achievements in order to incorporate them in company's daily services to its passengers. We are going also to exploit the massive use of the mobile phones by people in Greece in order to create an innovative service. Based on the analysis we have made we have concluded that it is a viable opportunity which can be transformed to a successful service; however, top management commitment and appropriate choice of members that will participate at the development team is required.

Table of Acronyms

IT	Information Technology
O.A.S.Th	Thessaloniki's Organization of Local Transportation
PIC	Product Innovation Charter
VPN	Virtual Private Network
WiMAX	Worldwide Interoperability Microwave Access

Table of figures

- **Figure 1.** Mind-mapping of projects tasks - chapters *page 2*
- **Figure 2.** Study of the Internal Value Chain *page 10*
- **Figure 3.** Study of the Network Value Chain *page 10*
- **Figure 4.** Porter's five forces *page 14*
- **Figure 5.** Industry attractiveness *page 15*
- **Figure 6.** SWOT analysis *page 18*
- **Figure 7.** ATAR Model Estimation of Demand *page 24*
- **Figure 8.** The 3 elements of Concept Statement *page 27*

Table of Contents

• Introduction		page..... 1
• Purpose	1	
• Practical implementations	1	
• Design/Methodology/Approach	1	
• Originality/Value	2	
• Keywords	2	
• Paper type	2	
• <u>Main Body</u>		
CH.1. The Company (O.A.S.Th)		page..... 3
1.1 History	3	
1.2 Current status	3	
1.3 Product range	3	
CH.2. Description of the Service		page..... 5
2.1 Latest advancements at the company	5	
2.2 Analyzing the idea	5	
CH.3. Development of the Business model		page..... 7
3.1 Core Strategy	7	
3.1.1 Business mission	7	
3.1.2 Product – Market Scope	7	
3.1.3 Basis for differentiation	7	
3.2 Strategic Resources	8	
3.2.1 Core competence	8	
3.2.2 Strategic assets	8	
3.3 Partnership network	8	
3.3.1 Partnerships	8	
3.4 Customer interface	9	
3.5 The value of the service	9	
CH.4. Industry and Competitor Analysis		page..... 12
4.1 Industry Analysis	12	
4.1.1 Industry attractiveness	12	
4.1.2 Porter’s five forces	12	
4.1.3 Identification of barriers to entry	15	
4.1.4 Industry type	16	

4.2 Competition Analysis	17	
4.2.1 Identification of Competitors	17	
4.2.2 SWOT Analysis	18	
4.2.3 Characterization of competitors	19	
CH.5. Product Innovation Charter		page..... 20
5.1 Background	20	
5.2 Focus	20	
5.3 Goals and Objectives	21	
5.4 Guidelines	21	
CH.6. Opportunity evaluation		page..... 22
6.1 Areas of evaluation	22	
CH.7. Initial demand estimation		page..... 23
7.1 ATAR Model	23	
CH.8. New Service Concept Statements		page..... 25
CH.9. Run a Concept Test		page..... 26
9.1 Market Worth	27	
9.2 Firm Worth	28	
9.3 Competitive Insulation	28	
9.4 Purpose of the concept test	28	
9.5 Methodology and target group	29	
9.6 Willingness to join the new service and extraction of statistics	29	
CH.10. Financial Analysis & Sales Forecast		page..... 31
10.1 Initial cost of investment	34	
10.2 ROI (Return on Investment)	35	
CH.11. New Service Protocol		page..... 36
11.1 Target Market	36	
11.2 Positioning of the service	36	
11.3 Service attributes	36	
11.4 Competitive comparison	36	
11.5 Augmentation dimensions	37	
11.6 Timing	37	
11.7 Marketing requirement	37	
11.8 Financial requirements	37	
11.9 Production requirement	37	
11.10 Regulatory requirements	38	

11.11 Corporate strategy requirements	38	
11.12 Potholes	38	
11.13 Key industries	38	
CH.12. Product Use Tests		page..... 39
12.1 Alpha Testing	39	
12.2 Beta testing	39	
Conclusions		page..... 40
References		page..... 41
Bibliography		page..... 42
Appendices		page..... 45

INTRODUCTION

Purpose

Our purpose is to develop a new service. We have decided to choose among the unlimited opportunities an innovative service which combines technological and economical aspects. Our proposition concerns the development of a wireless network interconnecting all the buses of the public transformation organization of Thessaloniki in order to provide mobile e-commerce services to the passengers.

Practical Implications

We provide some useful information and analysis about the potentials of the service. But due to the word limit restrictions, we have analyzed only the topics that were asked for the purposes of the assignment.

Design/Methodology/Approach

The main body of this report is consisted of twelve chapters. At the first chapter, we present some data about the company to which we propose the service. Then, at the second chapter, our proposed service is described in order to clarify what it is about.

Moreover, at the third, fourth and fifth chapters we present the business model, the industry and competitor analysis and the PIC respectively. Furthermore, at chapters six and seven we make a preliminary evaluation of the idea and an initial demand estimation using the ATAR model. In addition, we continue our coursework with the concept statements, the concept test, the financial analysis, the new service protocol and the product use test, at the last five chapters of our report.

Finally, we end up with the conclusions and recommendations based on what have been previously analyzed at the previous chapters.

We have decided to follow a mind-map, which is given right below, and illustrates with clarity the stages where upon we have built our thinking. This mind-map helped us as a

guide in order to cover all requested tasks, while in parallel to follow a definite path trying to cover the assignment's requirements.

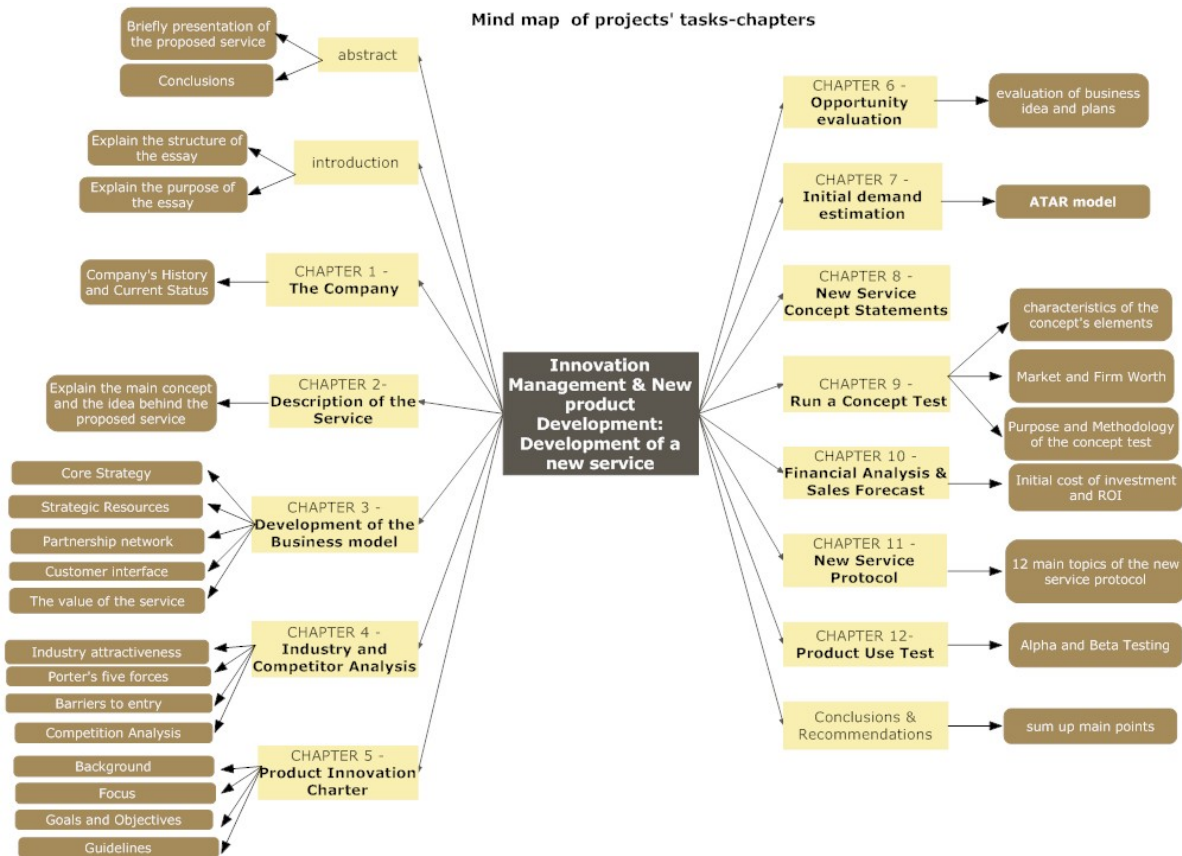


Figure 1. Mind-mapping of projects' tasks-chapters

Originality/Value

This report was prepared as the seventh paper to submit for the MSc in Technology, Innovation and Entrepreneurship course (University of Sheffield – CITY Liberal Studies). The relevant module is the *“Innovation Management & New Product Development”*, with module director *Dr. Nikolaidis Dimitrios*.

Keywords: New Product development, industry and competitor analysis, business model, PIC, ATAR model, concept test, product use test.

Paper type: Group Assignment

CHAPTER 1 – The Company (O.A.S.Th)

1.1 History

Although the necessity for public transportation in Thessaloniki was first captured and implemented back in 1879, the actual progress in this sector took place during the decade of 1930. Private investors, early saw the opportunity and created the first independent private companies that offered transportation to the public with buses (20-25 seats). During the decade of 1940, there were already more than 150 buses available to the public (of 40 seats each). [1]

In 1957, O.A.S.Th, was established, with the exclusive responsibility to offer public transportation services to the city of Thessaloniki. Although it would act as an independent organization, it would operate under the supervision of the Government and according to a skeleton contract. Since then, the organization makes contract renewals from time to time with the State till at present.

1.2 Current status

O.A.S.Th, operates as a private company and is based in a number of small investors who hold its shares. Shareholders are 2,000 individuals who have a direct representation in company's Board of Governors. There are 2,400 employees and 536 owned buses of different types. There are 68 different routes that serve more than 150 million passengers per year. Plus, last year the company started a new project of modernization regarding its fleet. It has started to replace the old models of buses with new ones and till now approximately the 80% of the fleet has new buses on the routes. [2]

1.3 Product range

Today, the company is a monopoly. It has the privilege to be the only medium of mass transportation in a city of approximately 1,5 million inhabitants. ***The only service offered is the one of transporting people to certain destinations and within its network of routes.*** The service is addressed to all inhabitants. There is a small fee as an entry ticket because the bus is considered since past years, the transportation medium for labor class.

It covers all ages and classes though, as it is the medium that reaches many different destinations and has a big timetable of services hours during the day.

CHAPTER 2– Description of the Service

2.1 Latest advancements at the company

Recently O.A.S.Th, has established an internal information system in the bus transportation network. In the bus stops there are small digital screens where it is possible for the passengers to see the estimated arrival time of a bus line in the specific bus stop. This is a simple IT service which is based in the current design of bus routes and the duration of time that a bus needs to cover the distance of the route, combining to its current position (positioning coordinates).

2.2 Analyzing the idea

Motivated by the fact that traffic is a general problem in the big cities, and can be translated in many waiting-hours for passengers either while waiting in the bus stops or being inside the bus, *it could be an opportunity to make this situation much more interactive and productive.*

For instance, during travel time (including waiting time in bus stops), passengers will have the opportunity *to interact with a number of e-services through their mobile phones*. Such e-services are to make on-line purchases, reply to e-commerce offers from different sellers, make a reservation in a theater, being informed about special offers in stores that possibly are interested in etc. All these sub-services will be available in passengers' mobiles. The services sent to each passenger will be selective according to their declared profile. In *Appendix A*, there is an attempt of illustrating the proposed service.

More specifically:

- First it would be necessary for people to register in this new service by providing a short personal profile through their mobile phones. The registration should be sent to the local transportation company (O.A.S.Th) that will manage the information system.

- This profile will be analyzed, translated and matched with certain customer profiles.
- The system will learn (agent) from the profile of the customer and will make analysis of his/her habits and preferences, in order to update this profile.
- It is necessary for customers to use Bluetooth technology from their mobiles in order to exchange information.
- During the route the passenger will have the opportunity to receive a number of useful information according to his/her profile. There will be the agent which will handle each customer separately and send small posters to his/her mobile with e-commerce discount offers.
- When a user chooses a specific product to purchase he will get directions and an image (Google Map alike) describing the place of the market and a special number uniquely identifying the transaction.
- The agent will learn customers' habits and adopt e-commerce offers to their needs through the transportation network (artificial shopping agents).

The target should be to turn passengers into subscribers of the service. This will give a broad perspective to the company, adding in its nature a new challenging image.

There will be some free services offered in order to attract the passengers to use service. Therefore, the customer will be able to be informed about the weather, the news through a very simple GUI. Also, the new service should give the estimated arrival time the customer's destination based on the route he/she follows. Such information only our system can provide.

It is worthy to clarify that passengers will not use their telephone providers; therefore they will not get any charges for sending or receiving any kind of information. Instead, they will use the wireless network of O.A.S.Th which operates at all buses.

We will name the new service "**Habit**".

CHAPTER 3 – Development of the Business model

The real potential for a successful e-business is in the choice of a correct business model. [3] Our key concept should be customer satisfaction and this will happen through the successful integration of a number of factors that are included in the business model.

3.1 Core Strategy

3.1.1 Business mission

The mission of our company should be: (a) to bring technology in the local transportation network to satisfy passengers' needs, (b) to turn people's waiting time into valuable actions and entertaining interactions, (c) to add value in O.A.S.Th by re-positioning its service from a purely transportation to innovative and hi-tech related company, (d) to create growth in local participating companies by bringing them in a common network with targeted markets, (e) to continuously introduce an innovative business model, always updated and transformed according to local population's needs and expectations, (f) to secure sustainability of the service through the establishment and maintenance of a key network consisted of all market's forces.

3.1.2 Product – Market Scope

- Offer products or services from participating companies with special discounts (CDs, clothes, perfumes, educational-seminar offers, hi-tech products, food and beverage offers, theater or cinema tickets, concerts etc).
- Make on-line purchases or reservations through the system directly to the trader, no mediators involved.

3.1.3 Basis for differentiation

We have already implied so far, that the basis for differentiation is depended on the environment and the circumstances that take place during the traveling time of

passengers. We focus in this time and offer a variety of service within the bus, converting a boring time to entertaining and productive.

3.2 Strategic Resources

3.2.1 Core competences

There is a unique set of resources, since the company owns a big number of buses with serious daily presence in many areas within and around the city. The network is already in operation and the only request is to be equipped with the extra technology that will support the service. The market is definite. We will offer the unique service of exploiting special offers while travelling, at no cost. A mobile experience in a predefined environment where people has no many alternatives is an additional advantage. Additionally, it is obvious that we are investing in the idea of **first-mover advantage** and actually we are considering our strategy as a surprise-based one. We are confident that the management team through passion and commitment, with the first-mover attitude will position the company at the top. [4]

3.2.2 Strategic assets

We could identify as strategic assets the machinery and equipment that already exists in the company. This comprises the framework where upon work the transportation service. With some amendments and additions the new service could be introduced (WiMax as the WAN core network and Bluetooth as a LAN). Also, as it is referred previously, the company has already huge customer base and strong brand awareness.

3.3 Partnership network

3.3.1 Partnerships

These could be done through networking. Companies can build stronger business models if they assess their own capabilities and the context for a co-development partnership. [5] We aim in the big stores that operate in Thessaloniki as well as the different municipalities. We expect though some of our future competitors to participate through offers in the partnership network (such as the mobile phone operators).

As described in an earlier chapter, the one option for passengers is to accept offers and make purchases; the other is to have fun or being informed for free. This could be done through a network of digital providers who will advertise companies, send social messages, while in parallel transmitting songs, images or games.

3.4 Customer interface

The overall target market is the passengers of the O.A.S.Th buses. Another important issue will be the pricing structure. Passengers will not pay anything directly to the company for using its network since the actual purchases will not take place inside the bus. The transportation network will operate as an additional income funnel for the participating companies. The aim for them should be to generate revenues through their participation in our network with the number of passengers and buses. Our revenue will derive from a certain percentage from the goods purchased by passengers through the use of the service, as well as from advertisements that the passengers will show interest.

3.5 The value of the service

It is crucial to make a short study in both the internal and the external value of all chains that participate in the proposed service. This helps us to illustrate and realize which entities exist in the roadmap to launch our service. Such analysis creates a better image of the participants, their contribution and their status throughout the project.

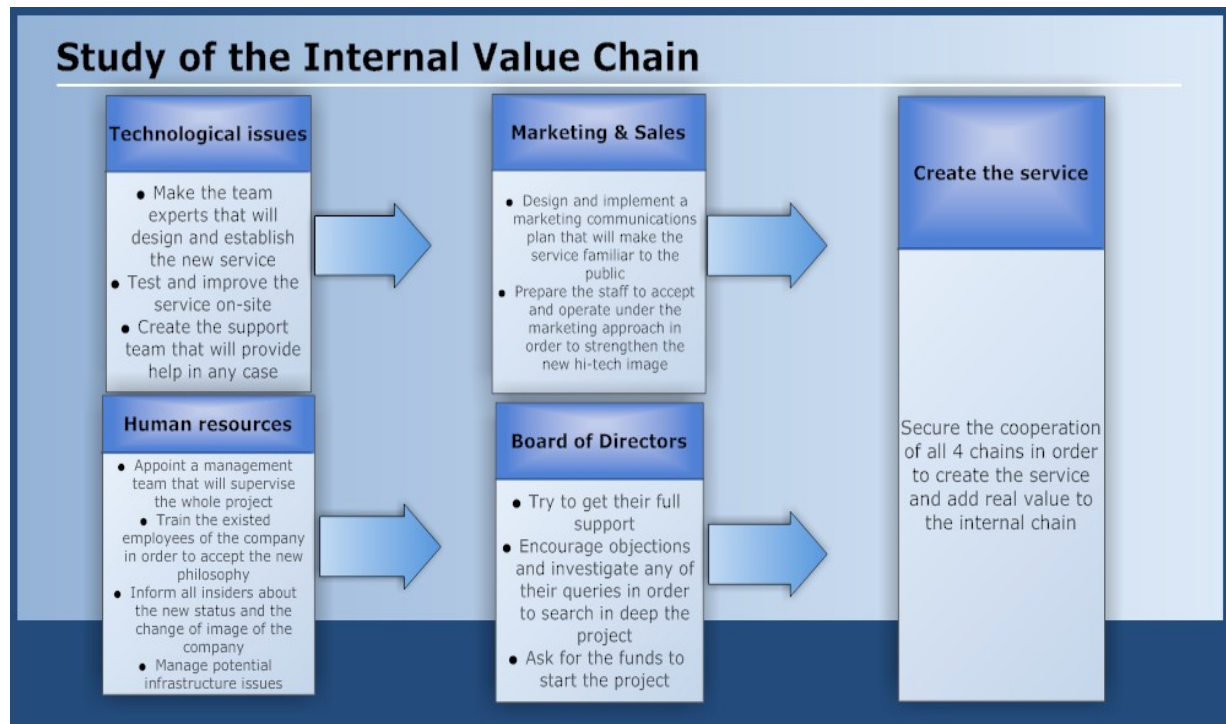


Figure 2. Study of the Internal Value Chain

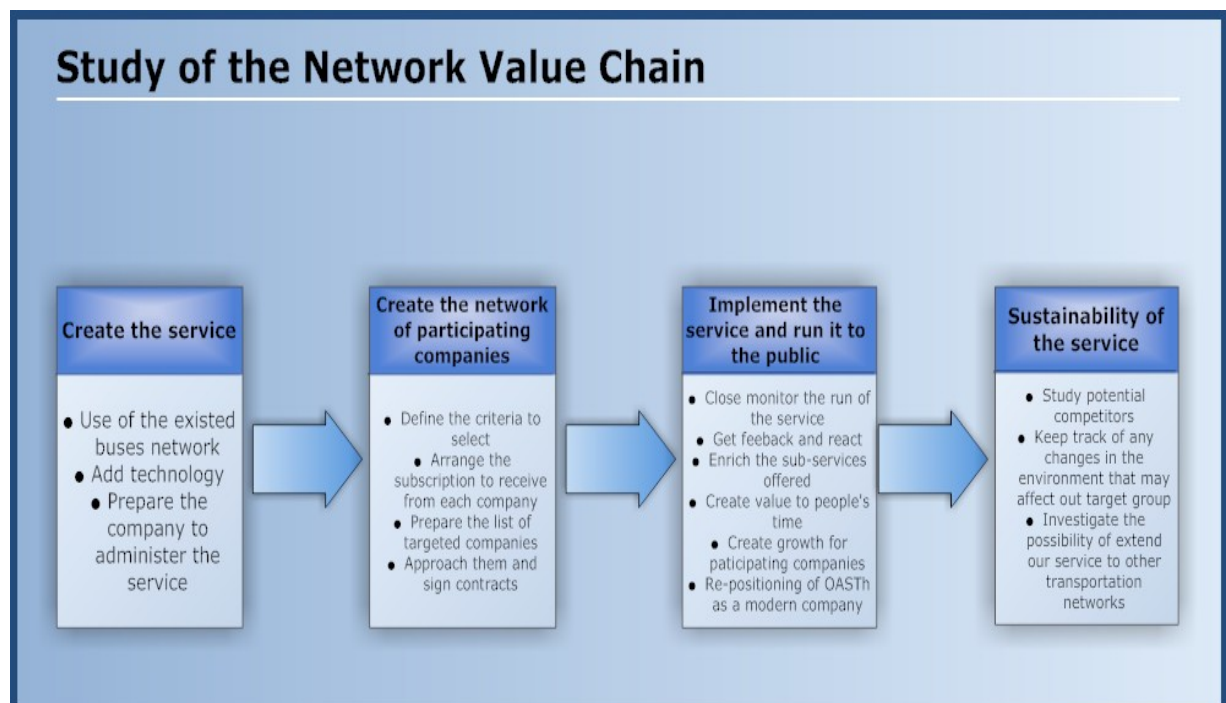


Figure 3. Study of the Network Value Chain

We have tried to describe so far the business processes of the service, to identify competition, partnerships and describe the network model.

CHAPTER 4 – Industry and Competitor Analysis

4.1 Industry Analysis

4.1.1 Industry attractiveness

The proposed service belongs to a combination of e-commerce and telecommunication industries (mobile e-commerce). We could identify it as a *high-tech utility addressed to all mobile phone users*. *Mobile e-commerce* is a fairly new ground which could be directed to new paths for the sake of consumers.

The philosophy of the service is based in the use of mobiles and tries to exploit the already established habit of most people to keep their mobile phones as necessary equipment. Let us remind at that point that the penetration of mobile use is among the highest in Europe, which means that the most of the population is familiar with the use of the mobile phones. There are more than 18.08 million connections and the nominal percentage of penetration is 164.9 %. It is also very important to mention that the real percentage of penetration is between 85% and 90%, which means that the majority of the population processes and also spends a lot of time and money on mobile phones. Therefore the customers are familiar with the use of the mobile phones and it would make it easier for us to introduce a new service that includes the use of the mobile phones (*Appendix B*). Moreover, according to Context World, 80% of mobile phones will support the Bluetooth technology. [6]

A small survey directed us to the conclusion that such service is not operating anywhere, at least under the suggested scheme. We tie three different sectors under this service and these are: (a) public transportation, (b) e-commerce and trading, (c) mobile phones.

4.1.2 Porter's five forces

- *Potential entrants*: It is expected to see new entrants in the market, but not as direct competitors. At least, for the next five years, when the construction of subway will be completed, no other local mass mean of transportation will exist.

Moreover, it requires a lot of money spent in building an IT infrastructure and partnership network which would make possible competitors reluctant to enter the market. Mobile phone companies could offer also such a service. Nevertheless, they operate under a different business model and their services are charged.

- **Potential Substitutes:** This force is expected to be the most important and should be under continuous supervision by the company. Here, is expected for us to meet the vast majority of potential competition. In case the service is proven to be popular, it is almost certain that taxis network will follow. Moreover, it is expected for other companies to offer similar services that will follow the same philosophy but of course not in combination with the transportation, which will be our competitive advantage.
- **Buyers:** Passengers is expected to require for more sub-services and this will oblige the company to continuously enrich its portfolio. However, the bargaining power of the buyers is low, since they are fragmented and many and there are no alternative means of transportation offering that kind of service.
- **Suppliers:** At this point, participating companies are considered of major importance or us. The more participation of companies the more valuable the e-commerce network will be. Nevertheless this force is weak since they are also segmented and there are a lot of different companies that would like to take advantage of the new service
- **Rivalry among Existing firms:** There are no direct existing firms that offer the same service in the city of Thessaloniki. But there are markets that in any case operate under similar rules. Such transactions could be made through internet. But, still, our advantage is mobility in a predefined network of transportation.

Below we are giving a graphical illustration of the “Identification of Porter’s 5 Forces” approach, as it is our first attempt to map the different components that participate in the specific market.

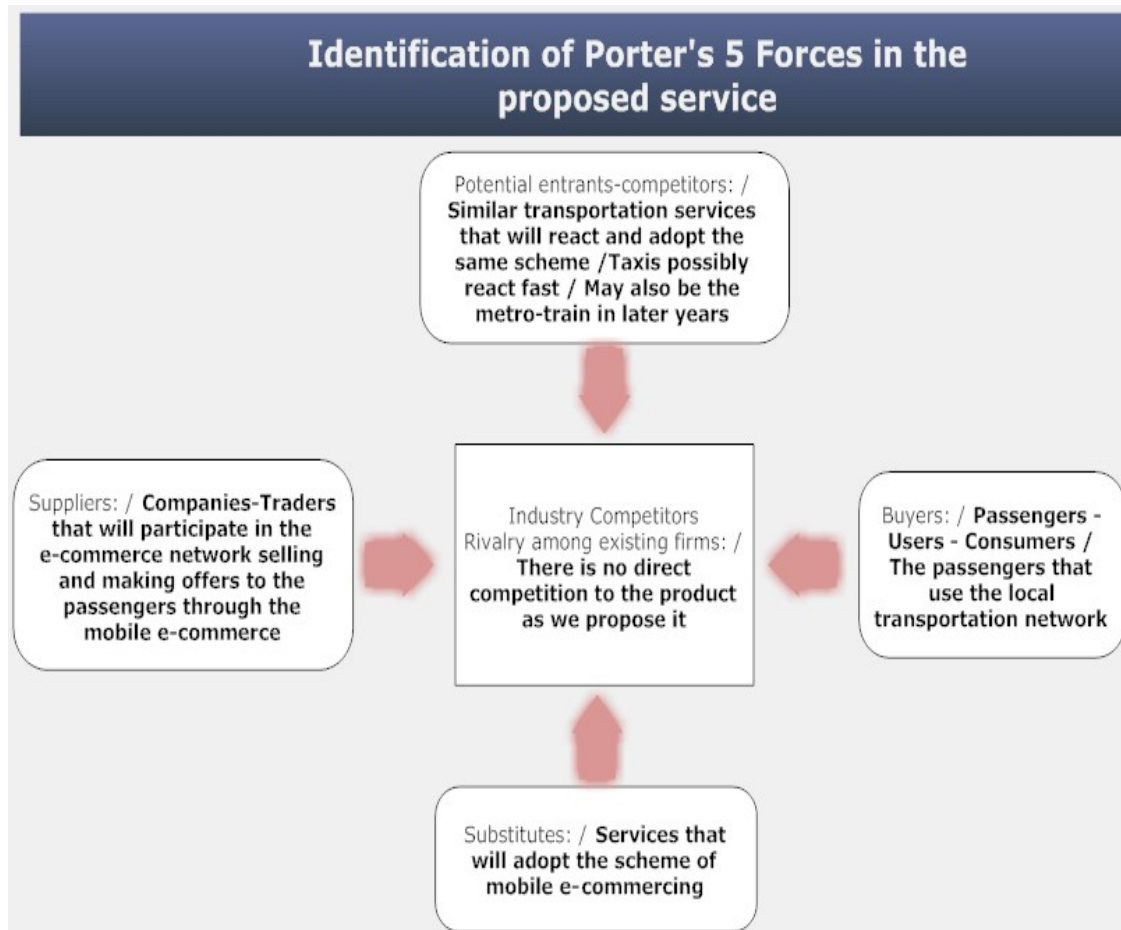


Figure 4. Porter’s five forces

The above figure is introducing these 5 main components as described, and with the help of it we have proceeded to the design of another figure which represents the industry attractiveness of our service in comparison to certain parameters.

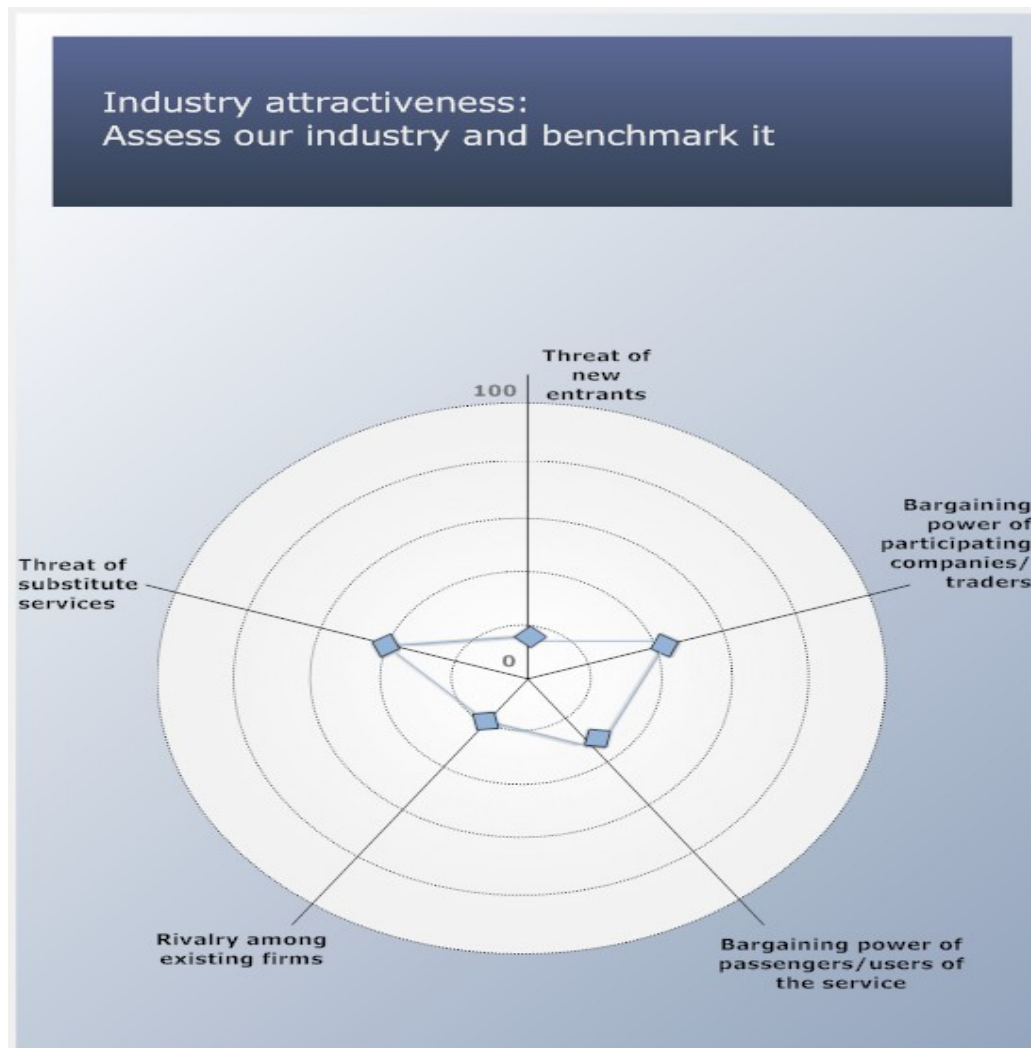


Figure 5. Industry attractiveness

We identify that the industry is mostly attractive to the development of the service.

4.1.3 Identification of barriers to entry

At this point we do not identify any **legal or government barriers** to the application of our service. Since it will operate in the same manner of a wireless service, it is possible that we will need a **technical license for the radio frequency** in order to declare in the state the existence of this service. A preliminary survey made in the area of mobile WiMax, it has been identified that this has not been certified yet in Europe but is

expected to be done within 2009. [7] Also, it should be investigated the overall complexity of combining all the different technologies (**interoperability**).

The monopoly of the company creates more or less a **secure distribution channel**, since passengers are accommodated within the buses for a period of time. The use of the proposed service requires subscription from people's side by sending some personal information to the company's database (passenger's profile). This is considered as an important factor that may operate negatively, at least during the introductory period and raises some privacy issues.

On the one side, there is a free service offered to passengers while on the other side they have to supply with some personal information this service. There is an exchange here, but as mentioned above, there might be **fears and obstacles** from people in giving such data. The suggestion is to offer the service in a leveling way so to avoid from the beginning strict reactions and loss of potential customers in our network. This will operate in an analogy of "the more you give the more you get".

4.1.4 Industry type

The proposed service belongs to new technology products which brings new culture and requires some skills and characteristics from the users' side. It may be parallelized with the "iTunes" or "MySpace" model, under a more social perspective while in addition tries to create wealth through interactions that take place under certain circumstances (within a bus waiting). By all odds, this is of prime significance. This is an advantage which is expected to operate as the stimulus and will create transactions.

Therefore, we conclude that the service belongs to the **emerging industry type**, which means more focus in the entry market strategy and special efforts to succeed in achieving the first mover's advantages.

4.2 Competition Analysis

4.2.1 Identification of Competitors

Currently there is no direct competition. There is no other brand that offers **similar service**, which is a combination of mobile trading within a bus, in the **same target market** (similar-specific). The target market is the city of Thessaloniki and its inhabitants. So far, there is no **similar service** offered in any **different target market** so we do not have data about possible product competition, although this could be an opportunity for others to get in a bigger market with the same idea. For example, Athens could be a good target for the competition. Nevertheless, our quick response and surprise tactic will enable us to keep the first movers advantage, since we will first, experience the implementation of such technological service to people.

Companies that give people the ability to make on-line purchases through internet could be considered as “**different service – same need**” competitors. They are competing with us in the area of customer’s need and how this need is satisfied. Moreover the mobile phone operators/providers could be considered as indirect competitors, since our service could possibly replace the need for making calls in their customers. It is necessary to point though that, at the proposed service, users will not simply do purchases through technological equipment. The e-commerce industry and the potential of ordering products or use services through mobile phone operators or other providers could be considered as “**different service – different need**” competition. At this level, people are concerned of purchasing products, acquire services and accomplish expectations of different needs.

However, although there are no direct competitors we could identify a number of indirect, who are involved in hi-tech services or products. Mostly they are experiencing in substitute services.

COMPETITORS (in relation to the proposed service)		
Direct	similar service – same target	None at the time
	similar service – different target	None at the time
Indirect	different service – same need	e-commerce web sites, on-line purchasing, use of mobile operators to make calls, send SMS or MMS
	different service – different need	any on-line transactions through internet, companies that operate and support such services

4.2.2 SWOT Analysis

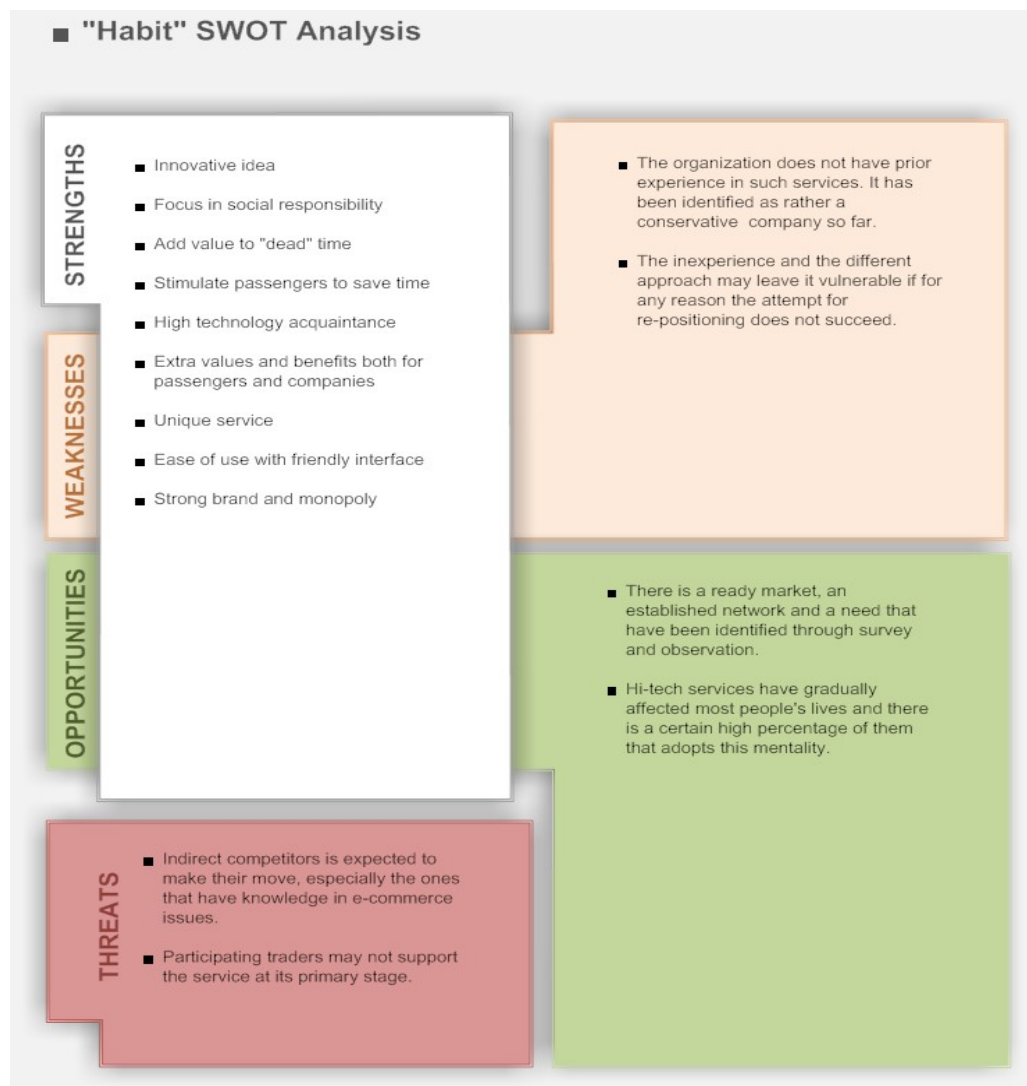


Figure 6. SWOT Analysis

4.2.3 Characterization of competitors

Undoubtedly, current competition is strong in relation to their expertise and technological resources. Especially mobile phone providers have the level of resources and the “know-how” of developing similar services. In addition, it is almost certain that their R&D departments could easily design and implement parallel services to ours, very fast. Their status though it is not expected to be close to our service “package”.

CHAPTER 5 – Product Innovation Charter

5.1 Background

OASTh is an old company with conservative characteristics which is dedicated to transportation services. It has a number of strict principles regarding offered services and passengers. We could characterize the company as a low profile one with a slow relationship with technology. Probably this status restrains any innovative effort or new challenges that could be exploited for the sake of the company. So far it doesn't show a record of serious advancements. The image cultivated is the one of a small local company that deals with the safe transportation of people within and around city.

The new service is aiming to differentiate the company from the other similar transportation companies, located in other cities and re-position it as a highly service-oriented company. This will create indirect competition but the effort should be to create first benefits for the people in order to gain excellence through our responsiveness to the passengers' needs.

5.2 Focus

Technology dimension

The only technological aspect in the company which was established recently is the internal arrival information system.

The new service prescribes a new technological scheme to be established. It is characterized by technological innovativeness since it uses the following hi-tech ingredients:

1. WiMAX wireless network
2. Bluetooth technology used in mobile phones
3. Knowledge technology of an intelligent agent (an advanced software) which will administer and coordinate almost the whole of the service.
4. Data Warehouse

We are establishing an advanced “thinking” network that will cultivate a different on-line mentality to people.

Market dimension

The new service is focusing in an existed market that it was not discovered so far. Operating proactively, we have identified that the 150,000,000 of passengers per year, is a good number to start engaging in an effort that will work both ways. We claim the opportunity to offer a hi-tech service in a pre-arranged environment getting the chance of changing people’s attitude.

5.3 Goals and Objectives

The company will be committed to this project to the extent that it will become the first mover and in continuous the leader in the specific market. Furthermore it will seek for peoples’ satisfaction from the new service, seek for re-positioning and seek for changing its image from a conservative to a breakthrough company.

5.4 Guidelines

The above stated goals will be achieved through the cooperation of both the internal and external value entities as illustrated in the previous figures. First of all, the company’s dedication to the new service, the support from the top management and the investment in the human capital will be of primary concern. Second, processes and relationships are considered as key topics for close monitoring and continuous feedback. Additionally, since it is a new hi-tech service a close cooperation with both telecommunication and IT companies to succeed the high quality performance of the service during the development phase and afterwards as well. In other words, the whole project should be segmented and some parts should be outsourced since the company doesn’t have the necessary resources for the successful implementation of the task.

CHAPTER 6 – Opportunity evaluation

There are many business ideas but only few of them reach the market. And even fewer are turn to be successful products or services. In order to minimize the risks and raise the chances of a successful service we are going to states which are the most important points that the entrepreneurs should investigate before launching a new product.

6.1 Areas of evaluation

In order to evaluate opportunities the following issues are the most crucial:

- a. Value Proposition:* Due to traffic a lot of time is spent by people on busses waiting to reach their destination.
- b. Target Market:* The passengers of the local transportation (150 million per year).
- c. Revenue Model:* Advertising, fees from traders.
- d. Unique selling proposition:* Only O.A.S.Th has a transportation network in operation.
- e. What are the barriers to entry:* privacy and security issues, technological complexity.
- f. Competitive Analysis:* No direct competitors.
- h. Market Size and Growth:* It is a new market and it is expected to grow with high rates.
- i. Market Share:* First into the market, so it is expected the biggest share.
- j. Lifestyle or High Potential, Sole Proprietorship or Corporation:* Our goal is to bring technology and innovation into the company although it is considered to be conservative.
- k. Start-up Costs:* around 2.0 million Euros.
- l. Investment needs:* EU funds, Government Grants, financing from the company.
- m. Exit Strategy:* Follow the established exit strategy of the organization.
- n. Return on Investment:* It is estimated that in less than two years the investment will be paid back.

CHAPTER 7 – Initial demand estimation

7.1 ATAR model

In the ATAR model we will try to make a first estimation of the potential demand. Actually this model is based in a number of acknowledgements from the side of the company that is about to launch the new service.

Awareness is the first step to take. People, consumers have to be aware of the service, they have to be informed about it and how it works. Second, people have to be willing to try it. Therefore, the creation of willingness is a major step as well. Third, the service has to be available and operating when customers would like to use it.

Potential: this is the number of potential passengers that will join the network and use the service. Based on the data given by the company, there are 150,000,000 passengers per year that use the local transportation. This is derived from the number of tickets, and actually means 150,000,000 uses of the bus, not persons. This is the overall potential market for the new service. The service is addressed to all passengers. The plan is to achieve a high awareness during the first year of operation. In continuous while the awareness will be high we will aim in increasing the percentages of trial and repeat. We accept that the total number of passengers will remain the same during the next 5 years (150,000,000).

Awareness: the percentage of awareness that the new service will manage to create through promotion during the first year is estimated in **50%**.

Trial: the percentage of passengers that is expected to try it is estimated in **60%**.

Availability: the percentage of the companies and traders that will be convinced to participate in the new service is estimated in **100%**, so the service is expected to be in full availability since the first day of launch.

Repeat: the percentage of users/passengers that would recommend the service to others is estimated in **70%**.

Margin: We aim to receive **0.10** cent as gross income per use. That means: $(150,000,000 \times 0.10 = 15,000,000 \text{ euro})$. From the preliminary cost analysis, the unit cost is the revenue minus cost which is as follows: $(0.10 - 0.06 = 0.04 \text{ euro})$.

Profit contribution = $(150,000,000 \times 0.50 \times 0.60 \times 1.0 \times 0.70 \times 0.04) = 1,260,000 \text{ euro}$

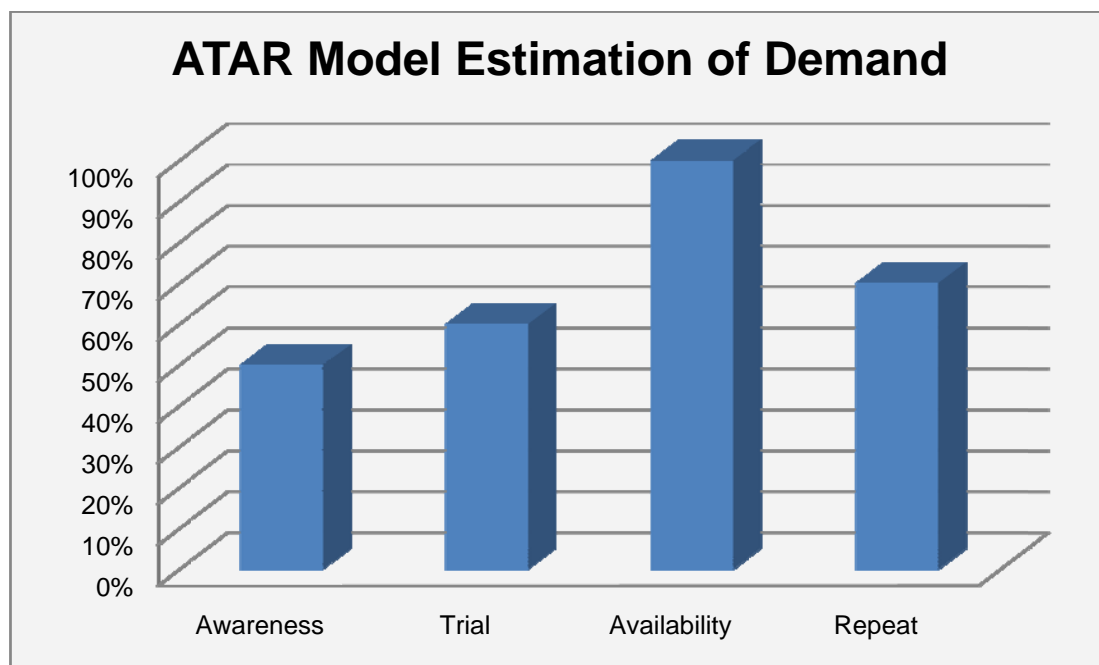


Figure 7. ATAR Model Estimation of Demand

CHAPTER 8 – New Service Concept Statements

*“**Habit**” is a new free hi-tech service which aims to turn the lost time of a passenger in a local bus, to a productive and entertaining occasion, by simply using his mobile phone. It is a practical and innovative game which aims to **turn bore to action with interaction**.*

*“**Habit**” No more loss of time on the bus!*

*“**Habit**” the mobile experience!*

CHAPTER 9 – Run a Concept Test

The core benefit proposition (CBP) of the service is that enables people to have full potential of their time with no direct cost.

Below we are trying to register some characteristics of the concept's elements:

BENEFIT	FORM	TECHNOLOGY
<ul style="list-style-type: none"> It is a free high-tech service 	<ul style="list-style-type: none"> It uses the local transportation network as the main platform 	<ul style="list-style-type: none"> It is wireless and can be adopted by any type of modern mobile phone
<ul style="list-style-type: none"> It make the travel more productive/ the passenger can perform tasks that can be done on-line 	<ul style="list-style-type: none"> It uses the buses of the company as the real market where interactions take place 	<ul style="list-style-type: none"> It uses an innovative and advanced knowledge based system
<ul style="list-style-type: none"> It provides a network of entertainment 		<ul style="list-style-type: none"> Its technological requirements in order to be established by the company are feasible and already in use
<ul style="list-style-type: none"> It helps people to take advantage of the technology, even under stress daily 		
<ul style="list-style-type: none"> People feel that participate and interact in a big private network where many things could be done at their wish 		

The three elements of the Concept Statement

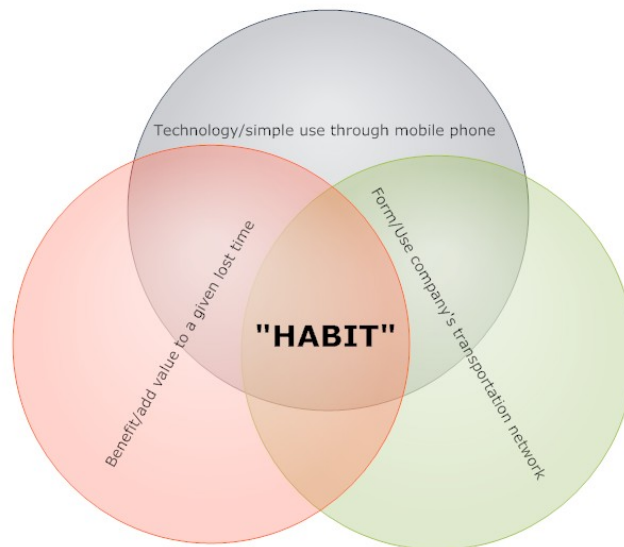


Figure 8. Concept Statement

The company has adopted and established recently a GIS technology in its routes. It receives support and is involved with technological issues. Although the knowledge acquired so far in this area is not advanced, the innovativeness and the characteristics of the new service are challenging.

9.1 Market Worth

We expect that our target groups will be attracted by the new service due to its technological characteristics, the options that give and because it is for free. It provides multiple functions to a passenger, with a wide range of sub-services which include, from simple purchases, to do job tasks and participate in entertaining communities. The most important parameter is that manipulates effectively time, and economizes valuable amount of it in a daily scheme.

9.2 Firm Worth

“Habit” is expected to be viewed positively by the top management of the company. At least it is necessary to achieve their contribution to this effort, since we will try to enrich company’s simple service with a new hi-tech one. This will gradually re-position the company in people’s mind, as an innovative and technologically seeking company, which respects society and exploits new services.

In addition the new service will bring revenues and create growth. The existed service of transportation will acquire value and a more competitive status.

9.3 Competitive Insulation

Competitors are expected to copy immediately the service trying to take the advantages of the seconds’ entrants. This could be accomplished by following us and learn from our mistakes. It is certain that our service just any other, will go through the usual lifecycle. We will oppose though a continuous innovative mentality, where new subservices will be added and the core characteristics of the service will change according to people’s needs and expectations. Our commitment to the service will change and different approaches will be applied if the market asks for it.

Our advantage should be the research and development of innovative technological artifacts through a social responsibility perspective.

9.4 Purpose of the concept test

The testing effort will help us to investigate potential customers’ reactions and confirm if our concept is acceptable and high promising. It will enable us to further examine the intentions of our target market, identify possible weaknesses of our service as well as important details that were misleading during the design of the service. Moreover, we will have the opportunity to cross check people’s perceptions, wishes and demands and reveal improvements.

Therefore, the examination of intentions and reactions will lead us to more secure conclusions and increase the percentage of our success to the launch.

9.5 Methodology and target group

We have decided that the most appropriate methodology should be **to make a survey** within the buses during working hours. It would be necessary for this survey to long at least for one month and take place in all routes and timelines of a working day. Since the bus is not the perfect place to fill in a questionnaire, we have decided to make it the smallest possible and will have the format of a coupon, in order to be more attractive. In Appendix C, there is the relevant questionnaire.

Young people that would be hired as a promotion team will distribute the small coupons/questionnaires, which will contain the concept statements. Then passengers will be requested to drop their coupon anonymously to boxes that will be placed in the exit doors of the bus.

The trick and the strong point of this survey should be that the promotion team will not distribute the same coupon to all passengers. Although the questions will remain the same, each coupon will have a different color according to the category. There will be 3 different coupons, each one addressed to the different group of our target market: *High school students, university students and young active people.*

The survey will be done in real life conditions and will be addressed to all potential customers. The concept statement might be re-phrased following a more adapted phrasing to the group's interests as were primarily identified.

Moreover, big posters of describing the idea, demonstrating a graphical illustration of the new service will be placed in each bus during the period of the survey. This will support the idea of distributing the questionnaires, as people will start to be familiar with the service.

9.6 Willingness to join the new service and extraction of statistics

The survey is aim to identify whether the different groups will be willing to participate in the service and make use of it. It is crucial to evaluate the replies would derive from these

people who will be the potential customers. The bottom line would be to investigate the positive attitude and try to translate it into numbers.

Participating companies and traders will be also handed a relevant questionnaire, as given in Appendix C, since we are consider them as customers too.

Feedback received will be of high importance at this stage and the interpretation of survey's results will be a key issue for any further developments. The anticipated outcome should be to clearly understand whether we might have consumers' goodwill as well as their positive attitude.

This will count on both sides as we expect to earn the confidence of both passengers and traders.

CHAPTER 10 – Financial Analysis & Sales Forecast

Profitability will come from various channels:

- The utilization of the big database of users-passengers that the organization will administer.
- The fees that will pay the traders (shops, super markets etc) to the company, in order to participate in its network and have direct access to the passengers.
- The small fees that will pay the traders from each transaction (e-bay inspired).
- The extended use of electronic advertising and targeted messaging to the passengers that match certain criteria.
- Revenues from Corporate Social Responsibility programmes of large companies. Transportation is a public good and is addressed to all people no matter their income or social status.

In a previous chapter of this study, where we have developed the ATAR model, we have tried to identify initial demand estimation. We were based in the admittance that the overall market is 150,000,000 passengers, who use the local bus transportation annually, and our service is open to anyone of them. We expect to begin with a 50% awareness percentage during the first year of operation. In a 5-years' plan, we expect to reach gradually the percentage of 90%. We consider that the calculations have followed a rather conservative attitude, in reference to the expected customers that will join the service after the first year. Nevertheless, below there is table that illustrates the expected increase of awareness of the potential customers.

1st year-entry point	50%
2 nd year	60%
3 rd year	70%
4 th year	80%
5 th year	90%

As shown above, by the fifth year, we expect to reach awareness in the 90% of the total market, giving the parameter that the number of passengers will remain the same during the next 5 years.

YEAR 1

Profit contribution = $(150,000,000 \times 0.50 \times 0.60 \times 1.0 \times 0.70 \times 0.04) = 1,260,000$ euro

Market Share = $A \times T \times A \times R = 0.5 \times 0.6 \times 1.0 \times 0.7 = 0.21 = 21\%$

Sales = Market Share \times Units \times Price per Unit = $0.21 \times 150,000,000 \times 0.10$ cents = 3,150,000 euro

YEAR 2

Profit contribution = $(150,000,000 \times 0.60 \times 0.70 \times 1.0 \times 0.80 \times 0.04) = 2,016,000$ euro

Market Share = $A \times T \times A \times R = 0.6 \times 0.7 \times 1.0 \times 0.8 = 0.336 = 33.6\%$

Sales = Market Share \times Units \times Price per Unit = $0.336 \times 150,000,000 \times 0.10$ cents = 5,040,000 euro

YEAR 3

Profit contribution = $(150,000,000 \times 0.70 \times 0.80 \times 1.0 \times 0.80 \times 0.04) = 2,688,000$ euro

Market Share = $A \times T \times A \times R = 0.7 \times 0.8 \times 1.0 \times 0.8 = 0.448 = 44.8\%$

Sales = Market Share \times Units \times Price per Unit = $0.448 \times 150,000,000 \times 0.10$ cents = 6,720,000 euro

YEAR 4

Profit contribution = $(150,000,000 \times 0.80 \times 0.80 \times 1.0 \times 0.90 \times 0.04) = 3,456,000$ euro

Market Share = $A \times T \times A \times R = 0.8 \times 0.8 \times 1.0 \times 0.9 = 0.576 = 57.6\%$

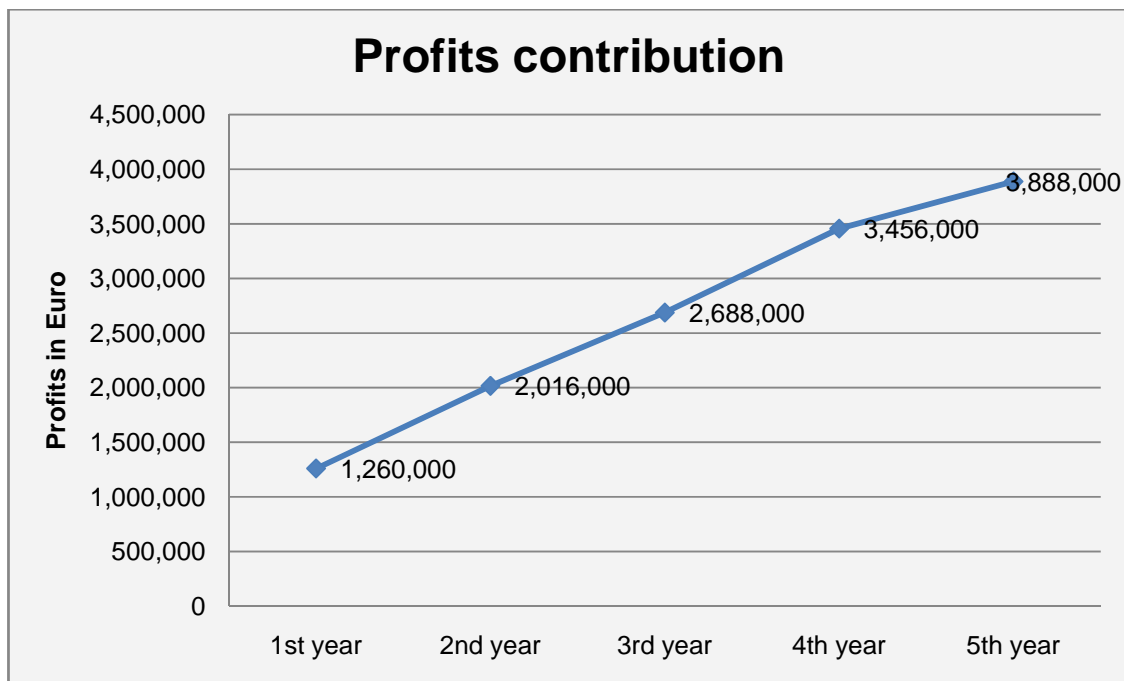
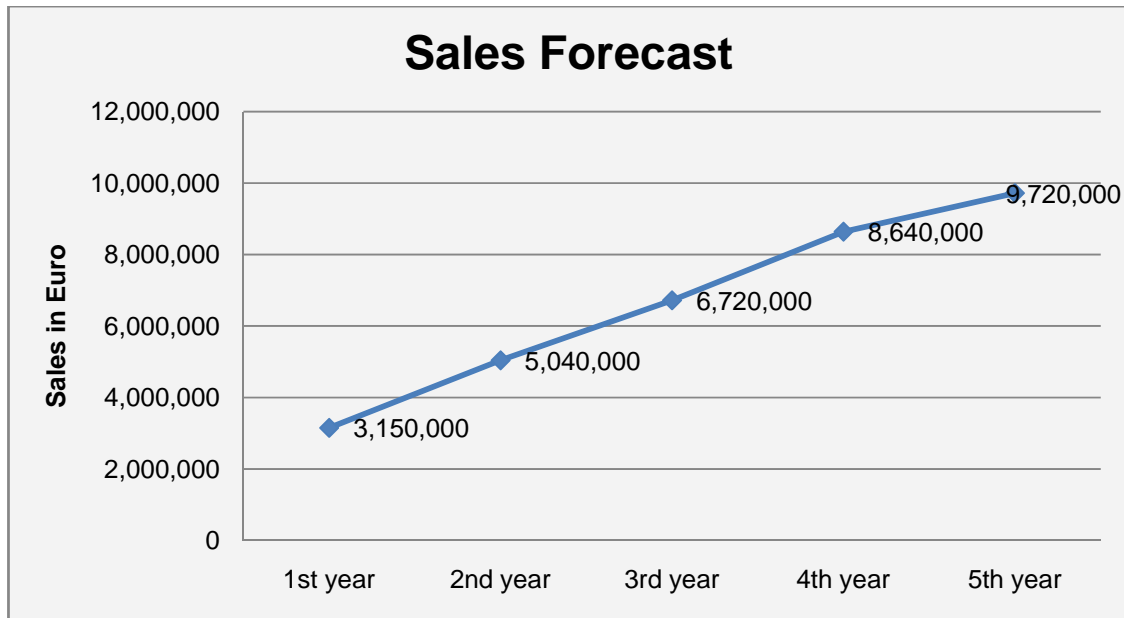
Sales = Market Share \times Units \times Price per Unit = $0.576 \times 150,000,000 \times 0.10$ cents = 8,640,000 euro

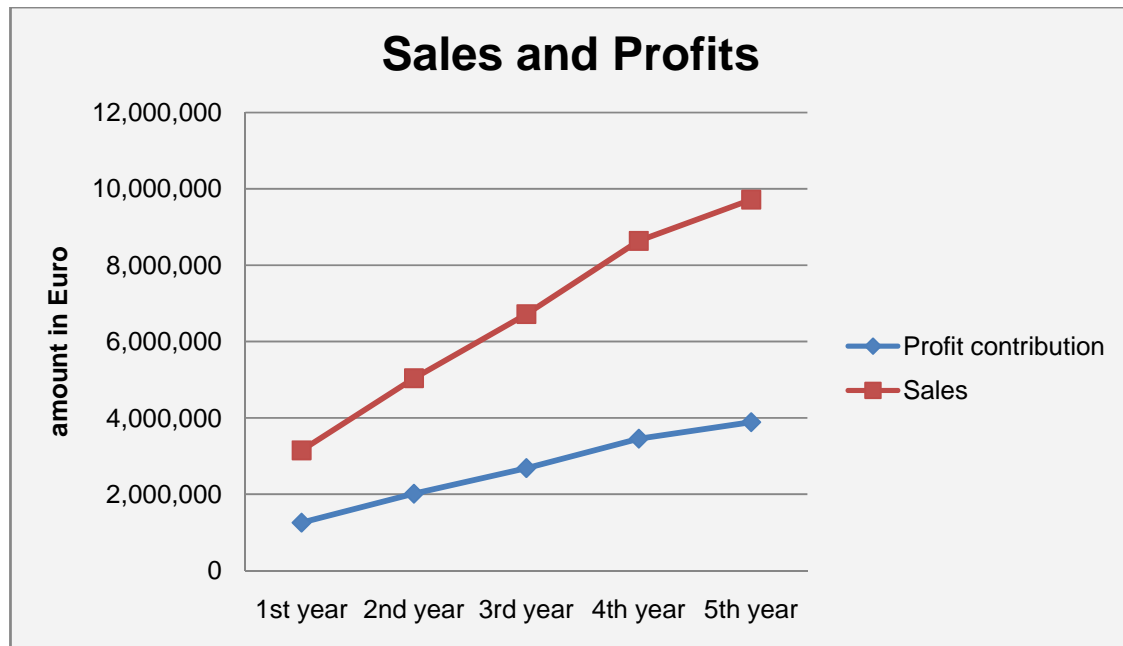
YEAR 5

Profit contribution = $(150,000,000 \times 0.90 \times 0.80 \times 1.0 \times 0.90 \times 0.04) = 3,888,000$ euro

Market Share = $A \times T \times A \times R = 0.9 \times 0.8 \times 1.0 \times 0.9 = 0.648 = 64.8\%$

Sales = Market Share x Units x Price per Unit = 0.648 x 150,000,000 x 0.10 cents = 9,720,000 euro





10.1 Initial cost of investment

The company will need one year before launch the new service. This year will be considered as the preparation period, where all staff will work for the same reason. The design and implementation of the service should be considered as a different project for O.A.S.Th and it will not be included in its current framework.

As a result a different team is necessary to be hired in order to contribute for the new service.

We have tried to make an estimation of the initial cost of investment as follows:

Research & Development of the service	150,000 euro
Operating expenses / administrative issues	100,000 euro
Operating expenses / technical issues	100,000 euro
Technical infrastructure and purchase of equipment	1,000,000 euro
Marketing expenses	650,000 euro
TOTAL:	2,000,000 euro

This is the initial cost for the service to be transformed from an idea to reality. As mentioned in the earlier chapters of this study we expect to receive 0.10 cents per each

use. This amount will be taken from the participating companies through various ways, as explained. The 60% of this amount (0.06 cents) is considered as the cost while the rest 40% (0.04 cents) will be the net profit. As it is realized, the company should continuously invest in the service and return high revenue from the sales to the research and marketing in order to invest in its sustainability.

Based on the extracted data, the company is expected to fully receive its investment within the first two years. Following is the calculation:

10.2 Return on Investment

ROI (Return on Investment in the first year) = ((Profit contribution of 1st year) – Initial cost of investment) / Initial cost of investment = $((1,260,000) - 2,000,000) / 2,000,000 = -740,000 / 2,000,000 = -0.37$

ROI (Return on Investment in the first and second year) = ((Profit contribution of 1st year + Profit contribution of 2nd year) – Initial cost of investment) / Initial cost of investment = $((1,260,000 + 2,016,000) - 2,000,000) / 2,000,000 = 1,276,000 / 2,000,000 = 0.63$

CHAPTER 11 – New Service Protocol

Below we give in details 13 main topics that are strictly related to the new service and serve as a contract.

11.1 Target Market

We target into 3 different groups, which each one for its own reasons is expected to join the new service. Although we have devoted a whole section earlier regarding target group for convenience we will mention the groups once again.

- High school students (age 14-18)
- University students (age 18-25)
- Young active people (age 25-40)

11.2 Positioning of the service

This is a free hi-tech service which aims to add value in passengers' time during their travel. It brings together passengers, traders, public services, advertisements, and it creates a valuable communication community.

11.3 Service attributes

- It is a free service
- It adopts the latest knowledge technologies' components and applications
- It uses e-commerce and auction-based techniques
- It is available within all buses in the local transportation network
- It is easy to use since it utilizes the mobile phone equipment

11.4 Competitive comparison

The service has no direct competition at the moment, but it is expected to face soon after its launch. In any case, indirect competitors may be considered: the mobile telephony

providers, the taxi services, web and on-line companies that offer similar services in the internet. Therefore, the service is competitive in the e-commerce sector.

11.5 Augmentation dimensions

There is no cost for the e-commerce services to the consumers. The service is offered with friendly environment and easy use interface through personal mobile phones.

11.6 Timing

The service is expected to be the first in the market.

11.7 Marketing requirements

The service will be marketed very strongly during the first year of its operation. Since the decision is to create and introduce continuously new sub-services throughout time, the participation of marketing issues will be necessary at all times. It is aimed to acquire a high percentage of customers' awareness from the beginning.

Moreover, the new service requires a very strong advertising campaign both through posters, radio and TV. The buses will be used as local kiosks of information during the strong advertising period.

11.8 Financial requirements

Initial investment will not exceed 2,000,000 euro as described earlier. The ROI formula has proved that the investment' expense will be covered within the first two years, based on a conservative assuming. Furthermore, it is worth to mention that the total expected profits after the second year, for the third, fourth and fifth, will exceed 9,000,000 euro. In addition, the unit cost has been calculated under very tough demands strictly dedicated in the ensuring of service's sustainability.

11.9 Production requirements

The technological equipment has to be well-established and checked for a certain period of time prior to the launch. This has to be at least one month. Quality standards required

will be closely monitored and achieved. The service should be easily available on a 24/7 basis.

11.10 Regulatory requirements

All necessary licenses, according to Greek State laws, will be acquired. Any further requirements, especially for the WiMax technology, should be prioritized in order to comply with local laws.

11.11 Corporate strategy requirements

Since the new service adds a different perspective to the company's overall strategy, it is of primary importance to focus in the top management's support. According to the financial analysis, the specific service is expected to add value and give growth to the company.

11.12 Potholes

Since this is a new hi-tech service, it is possible to face technical inadequacies during the equipment's installation period.

11.13 Key industries

- Telecommunications,
- e-commerce and
- on-line companies that offer similar services.

CHAPTER 12 – Product Use Tests

The product use tests are used at our case to identify if certain changes have to be made to the service, what features of the service make your service look appeal to the users and if the service fulfils and satisfies customer needs according to the service protocol. In other words they can provide the development team with valuable customer insights.

12.1 Alpha Testing

First, the company will develop the application that the users will use to interact with the system. A database with test data will be created and the whole scheme will be simulated. Before launching the service, the developer team and members from the marketing and management department will be able to start using the service at the laboratories. The tests will take place an extended period in-house by lab personnel experts and employees. After correcting possible mistakes or gaps in the new product and its production, derived from alpha test results, a long-term beta test will take place.

12.2 Beta testing

The survey will include users from all the target groups of the users and the traders as well. Possible bugs and glitches will be indentified. By this way we will be sure that the service performs well and we are ready to launch it. The tests will take place on a bus on real conditions.

- (a) *What we need to learn:* **If the users like it, and if they intend to use the service.**
- (b) *User group:* **Customers**
- (c) *Mode of Contact:* **Point of use, personal**
- (d) *Identity Disclosure:* **Branded and Unbranded**
- (e) *Degree of Explanation about Usage:* **Commercial**
- (f) *Degree of Control over Use:* **Supervised**
- (g) *Singularity:* **Monadic test**
- (h) *Duration of Use:* **2 weeks**
- (i) *Recording Reactions:* **Descriptive/Diagnostic**

CONCLUSION

We are aiming to develop a model of mobile e-commerce as an alternative to the existing pathways that use similar technologies. By adopting knowledge technologies and applying new services, such as “Habit”, in the market, we expect to add value in the local community through different perspectives. This is a really new service. It is innovative, customer-oriented and covers a time gap that most of the people experience on their daily schedule.

We are trying to approach the human attitude and behavior. On the one side “Habit” incorporates consumerism, information, knowledge, ideas exchange, while on the other side it foments a certain attitude and behavior. Technology serves as a convenient liaison to bring them together and foster their dynamic to a positive outcome.

The essence of mobility has already cultivated new fertile grounds, and we expect to contribute in this direction. Our primary targets should be to bring new way of thinking within the company rather than make a revenue machine.

Although the financial planning is a most promising, the bottom line should be for O.A.S.Th, to acquire a new position of a highly innovative company which leads towards a purely different developmental scheme. It is known that the best companies are located in the best regions. There is *value* behind this project. There is a *development of value* which does not end to the customer/user, but moves forward throughout the circle which connects all entities involved.

Concluding, this idea supports a framework where the organization will deliver benefits to individuals, companies, the community and itself as an entrepreneurial effort. The uniqueness of the idea described in this part of the coursework, is based in the combination of economy and technology through an innovative philosophy.

REFERENCES

[1] [2] O.A.S.Th, useful material about the company was retrieved by its official website at: www.oasth.gr

[3] Owens D. Jonathan, “*Electronic Business: A business model can make the difference*”, Journal of Electronic Commerce, Institute of Management Services, Spring 2006.

[4] Nikolaidis Dimitrios, “*Innovation Management & New Product Development*”, Unit literature for the MSc in Technology, Innovation & Entrepreneurship course (University of Sheffield), November 2008.

[5] Chesbrough Henry and Schwartz Kevin, “*Innovating business models with co-development partnerships*”, Journal of Research and Technology Management, January-February 2007.

[6] Statistics extracted by the following website: <http://www.contextworld.com/>

[7] WiMax Forum at: www.wimaxforum.org

BIBLIOGRAPHY

Allison Kay, *“Secrets from the innovation room”*, McGraw Hill, 2005.

Åsa Rudström, Martin Svensson, Rickard Cöster, and Kristina Höök, *“MobiTip: Using Bluetooth as a Mediator of Social Context”*, Swedish Foundation for Strategic Research.

AT&T, *“Emerging Technologies in the enterprise: A qualitative review of survey findings, WiFi, WiMax and RFID technologies to help companies gain a competitive advantage”*.

Barringer Bruce, Duane Ireland, *“Entrepreneurship: Successfully Launching New Ventures”*, (2nd Edition), NJ: Prentice Hall, 2008.

Barry Lavelle, Daragh Byrne, Cathal Gurrin, Alan F. Smeaton, Gareth J.F. Jones, *“Bluetooth Familiarity: Methods of Calculation, Applications and Limitations”*, White paper, Irish Research Council for Science Engineering and Technology and Science Foundation Ireland.

Brousseau Eric, *“The Economics of Digital Business Models: A Framework for analyzing the economics of platforms”*, Journal of Review of Network Economics, 6:2, June 2007.

Computerworld Custom publishing, *“The Top 10 Critical Challenges for Business Intelligence Success”*, White paper, June 30, 2003.

Fuller Steve, *“Product Usage Testing in Clinical Settings”*, Informedix Marketing Research Institute, business presentation, April 2008.

Garbani Jean-Pierre, *“How to predict which IT innovations will succeed”*, White Paper, Forrester Research Company, April 12, 2005.

Hedgebeth Darius, *“Making use of knowledge sharing technologies”*, The journal of information and knowledge management systems, 37:1, 2007, pp. 49-55.

Hitcher Waldo, *“The Innovation Paradigm”*, McGraw Hill, 2006

IBM Global Business Services, *“Five barriers to innovation: key questions and answers”*, Executive technology report, November 2006.

Jin-Shyan Lee, Yu-Wei Su, and Chung-Chou Shen, *“A Comparative Study of Wireless Protocols: Bluetooth, UWB, ZigBee, and Wi-Fi”*, The 33rd Annual Conference of the IEEE Industrial Electronics Society (IECON), Nov. 5-8, 2007, Taipei, Taiwan.

Kana Software, *“Turning mobile e-commerce into anytime, anywhere”*, presentation.

Keleman Zita, *“New Product Development”*, business presentation.

Lalkaka Rustam, *“Fostering Technological Entrepreneurship and Innovation”*, Foundation for International Training, Millennium Book Chapter, Toronto-Canada, 2001.

Moore L. William, *“Concept Testing”*, Journal of Business Research, 10:1982, pp. 279-294.

Munnelly Jennifer, *“Context Awareness in Mobile Phone Based Applications Using Bluetooth”*, Dissertation submitted in the University of Dublin, 2005.

Redmond William, *“The potential impact of artificial shopping agents in e-commerce markets”*, Journal of Interactive Marketing, 16:1, Winter 2002, pp. 56-66.

Rigau German, Magnini Bernardo, Agirre Eneko, Vossen Piek and Carroll John, ***“MEANING: A Roadmap to Knowledge Technologies”***, Association for Computational Linguistics, 2002.

Aphrodite Tsalgaidou, Jari Veijalainen, Jouni Markkula, Artem Katasonov and Stathes Hadjiefthymiades, ***“Mobile E-Commerce and Location-Based Services: Technology and Requirements”***, Research Paper.

Sheng Philip Yihua, Mykytyn P. Peter Jr. and Litecky R. Charles, ***“Competitor Analysis and its defenses in the e-marketplace”***, Communication of the ACM, August 2005, 48:8.

Tarasewich Peter, Nickerson Robert and Warkentin Merrill, ***“Issues in Mobile E-Commerce”***, Journal of Communications of the Association for Information Systems (Volume 8, 2002) 41-64.

Yli-Renko Helena and Janakiraman Ramkumar, ***“How customer portfolio affects new product development in technology-based entrepreneurial firms”***, Journal of Marketing, Vol. 72, September 2008, pp. 131-148.

Westech Communications Inc. on behalf of the WiMAX Forum, ***“Can WiMAX Address Your Applications?”***, White Paper, WiMAX Forum, 24 October 2005.

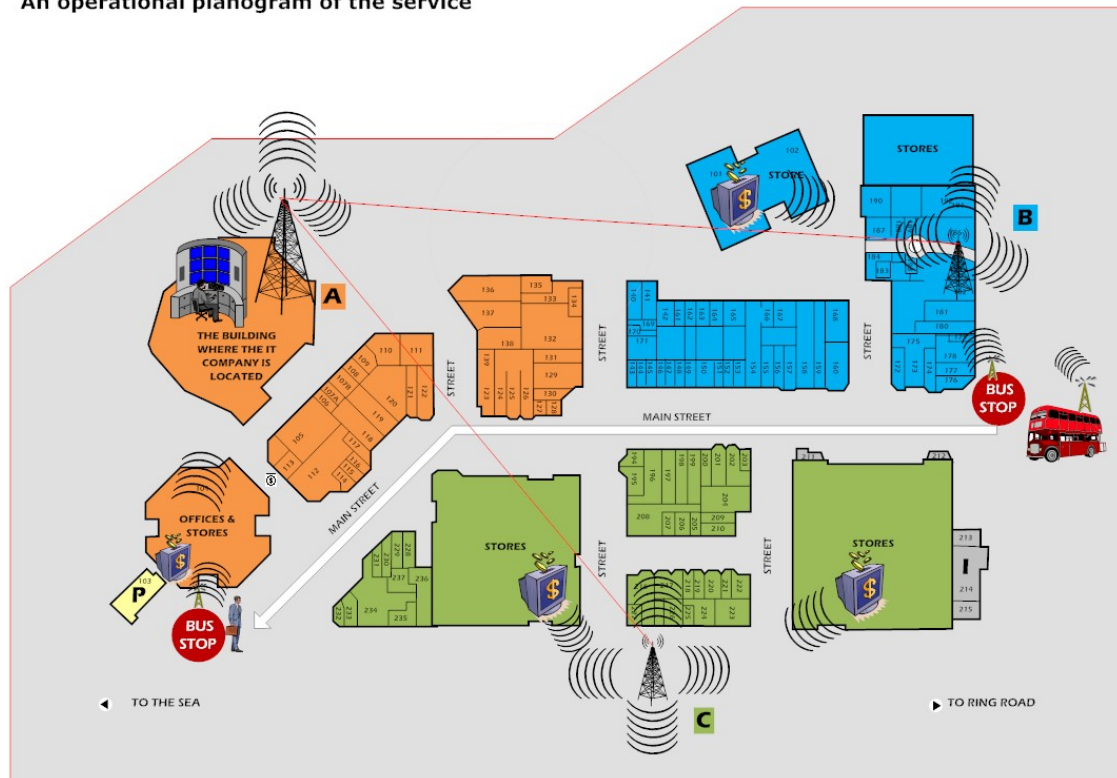
Internet resources

- <http://www.contextworld.com/>
- <http://www.zeromillion.com/entrepreneurship/business-idea-evaluation.html>
- <http://www.vrc.gr:8080/npd-net/en/npd/index.html>
- AWARE, "SWOT Analysis and Value Chain Analysis" (<http://www.marketing-intelligence.co.uk/aware/services/swot.htm>), AWARE Inc
- Bobete, K "SWOT Analysis - Strengths, Weaknesses, Opportunities and Threads" (<http://www.websitemarketingplan.com/Arts/SWOT.htm>)
- Psi-Press, "SWOT Analysis" (<http://www.psi-press.co.uk/default.asp>), 2002

APPENDICES

Appendix A

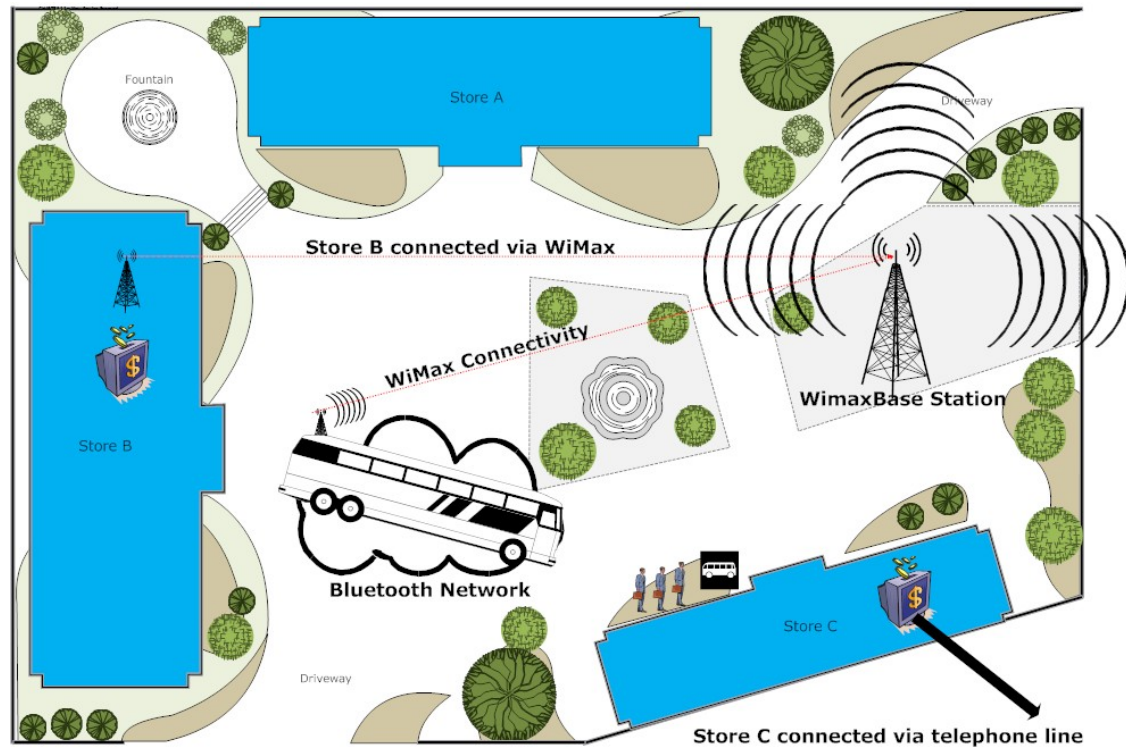
E-commerce utility for passengers in O.A.S.Th An operational planogram of the service



The above map illustrates the communication channels that could be developed in order for the e-commerce model to take place, with the use of WiMAX technology.

Participated entities are:

- The company which will offer and administer the new service
- People as users
- Stores as traders
- Public transportation company through buses



The stores can be connected to the central system at the central building either by the WiMAX network or via the telephone line using a VPN network.

Also, we should point that the range of the Bluetooth network is only within the bus.

Appendix B

The customer base of the mobile phone companies in Greece by the end of September 2008

	Total number of connections	Market Share (%)	New connections (third trimester)	Market share the third trimester (%)
Cosmote	7.410.728	40,99	489.821	62,67
Vodafone	5.621.000	31,09	79.000	10,11
Wind Hellas	5.048.498	27,92	212.722	27,22
TOTAL	18.080.226		781.543	

How much money spend and how often the Greeks use their mobile phones

	Average Revenue Per Unit (ARPU)	Average Monthly Operation per Unit (AMOU)
Cosmote	24,4 Euros	184 minutes
Vodafone	22,1 Euros	145 minutes
Wind Hellas	20,5 Euros	123 minutes

Appendix C

Concept Test Sample Questionnaire for users

Sex: Male/ Female

Bus Routes preferred:

Bus Use Frequency: daily/ weekly/ monthly

1) How often do you use your mobile phone?

- a. Very often b. Often c. Sometimes d. Seldom

2) How likely would you use a service like this, if we create it?

- a. Definitely would use b. Probably would use c. Might or might not use
d. Probably would not use e. Definitely would not use

3) Do you think the functionalities of a service like this covers your needs, if we make it?

- a. Definitely yes b. Probably yes c. Might or might not
d. Probably not e. Definitely not

4) What extra features would you like the proposed service to support?

.....
.....

Concept Test Sample Questionnaire for traders

1) Would you participate at our partnership network, if we make it?

- a. Definitely yes b. Probably yes c. Might or might not
d. Probably not e. Definitely not

2) Do you have a PC at your store?

- a. Yes b. No

3) Do you have an internet connection at your store?

- a. Yes b. No

4) How much are you willing to pay for each customer?

- a. Less than 0.03 E
b. Between 0.03 and 0.05 E
c. Between 0.05 and 0.07 E
d. Between 0.07 E and 0.10 E
e. More than 0.10 E

5) What extra features would you like the proposed service to support?

.....
.....
.....
.....



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INSTRUCTOR'S NAME	Dr DIMITRIS NIKOLAIDIS		

To be completed by the front desk secretary or the course administrator

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MSc in Technology, Innovation & Entrepreneurship

Report in the module of:

INNOVATION & NEW PRODUCT DEVELOPMENT **(TIE-4240)**

with subject:

Development of a new product from idea to launch: A short **marketing communications plan**

By
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Module Director: Dr Dimitris NIKOLAIDIS

Thessaloniki – 19th of December, 2008

ABSTRACT

In this individual section of the coursework, the aim is to develop a short marketing communication plan based on the data demonstrated so far in the previous chapters.

The plan will be built on “Habit” the proposed mobile e-commerce service. It is to make clear that targeting entities for us should be not only the passengers but the traders as well. We should aim to cultivate a mentality of trust and need among all participating entities, since the proposed service is new and the expectations are high.

TABLE OF CONTENTS

INTRODUCTION	page..... 1
Market Segmentation	2
Market Targeting	4
Advertising Strategy	5
Creative Strategy	7
CONCLUSIONS	page..... 9

INTRODUCTION

Our aim in the marketing communications plan should be to establish a shared meaning among the company and its customers. It would be a challenge in finding effective ways to convey our thoughts and meanings to individuals.

We are determined to use most of the tools offered by marketing communications, in order to facilitate the idea of new service and turn “Habit” into a need. All efforts should be concentrated in the area of Thessaloniki.

It is worthy to mention that except the passengers, the participating companies could be considered as our potential customers too. Since we are acting as liaisons in a private network where we manage to bring two entities together, we should adopt an analogous marketing plan for the traders as well. Actually these are the people that will pay the service. After all, we focus in generating sales and contacts for them through the use of the passengers, but still revenues for us will come from this circle of contacting.

Our strategy, whichever this will be, it should include and imply the participation of the traders in the service. Without their presence, the service considered non-existed.

In any case, main strategy is that all tools should be applied in combination and in parallel. This technique is expected to increase the awareness and the information to potential customers, while tend to affect their psychological attitudes through building a relationship with them and shaping their behavior. The primary concept should be to ensure the synergy and coordination of all marketing communication tools, and get advantage of it.

Market Segmentation

The market pool is all passengers that use the transportation network. This is the overall market of “Habit”. Although everyone could have access to the new service, we do not consider them all, as our target market. Therefore, we will try first to identify and then separate the target market into distinctive groups based on a number of characteristics and evaluating their profiles.

Identify bases for segmenting the market

Since “Habit” is a hi-tech innovative service, we identify as main parameters for making the segmentation the following:

- (a) If potential customers have a friendly relationship or not with technology and their mobile phones;
- (b) Whether they have a dynamic way of living (intensive working days, etc);
- (c) If they prefer to follow innovative models of interaction and communication;
- (d) If they have a certain minimum of income that allow them to spend and are willing to do so.

Our criteria should be social, demographic and economic. We will segment the market according to these criteria in order to define their profile.

Develop Segment Profiles

Further to the above mentioned, the target market could be segmented in four major groups;

- (a) the teenagers, (b) the university students, (c) the active working youths, (d) the middle-aged and (e) the elder people.

	Needs	Characteristics/ Preferences	Behavior/Purchasing attitude
Group A: Teenagers (age 14-18)	They want interaction, they search for a different attitude, they try to imitate	Quick learners	Very impulsive, easily attracted by new and innovative products or services
Group B: University students (age 18-25)	Communication	Quick learners, less money to spend	Looking for the best in the cheapest price
Group C: Active working youths (age 25-40)	Save time	They have their own income	Be modern, attractive
Group D: Middle-aged (age 41-55)	They are dominant and need to be effective, do more in less time, enjoy their status, increase self esteem and social awareness about them	They have money to spend	They look for the unique and different
Group E: Elder people age (55+)	Feel secure and nice	Not so familiar with technology, avoid new methods of communication, anything new may be odd and seems unfamiliar to them	Follow old-fashion ways, keep doing things in the safe side

The above table will help us to identify the attributes of each target group. Based on each profile we will develop a customized strategy for the promotion of our new service. We will focus all effort in the most effective way.

Market Targeting

We aim to approach passengers that: (a) have a friendly relationship with technology and their mobile phones; (b) they have a dynamic way of living; (c) they prefer to follow innovative models of interaction; (d) they have an adequate amount of money to spend and are willing to do so.

Therefore, we are focusing mostly on young and middle-aged energetic people, who like technology, follow modern lifestyle and have satisfied income. We expect that this kind of users will be attracted and will be willing to participate.

In result, the target market is consisted of groups B, C and D.

Our marketing efforts should be based in the above segmentation and we will adopt different messages for each group (segment marketing). This will be the first technique to apply while throughout the operation of the service it would be advisable to adopt a more customized approach. Due to the nature of our service we could have access to needs, preferences and behavior of our clients. Moreover, having the means of technology, it would be an advantage to apply individual marketing practices (individual marketing).

“Habit” is dynamic service which can offer different set of options to different customers. Through interaction and direct communication, we can implement a platform of personalized marketing adapted to each customer’s needs and expectations.

Besides the target market as defined above, we should include in our efforts the approach to companies. This is an additional but separate target market for us, which covers the other side of our service.

Advertising Strategy

Setting the objectives

- Who:** Our target audience is consisting of 3 groups; (a) University students – age 18-25, (b) Young working adults – age 25-40 and (c) Middle-aged people – age 41-55.
- What:** We expect to accomplish two goals, (a) to raise awareness and (b) attract the potential customers to try the service. Awareness and trial during the first year of operation are expected to reach 50% and 60% accordingly. According to our initial plan we are expecting to reach a 21% of the market during the first year of operation.
- When:** The advertising strategy will start one month before the launch of the service and will continue during the first year of operation. Therefore, the total duration is estimated in approximately one year.

Budget

The initial amount dedicated to the advertising strategy has been calculated to 650,000 euro. This amount is expected to cover the costs during the first year of operation. Advertising strategy will continue though during the next years. As it was explained in the financial analysis, on chapter 10, the planning is for 5 years. Within the unit cost, which is 0.04 euro, has been included a 25% for advertising purposes. Therefore as we have already incorporated this expense for future use we will continue the strategy during the 5-year plan.

Creating Messages

- (1) “Habit” turn your bore into action with interaction
- (2) Sometimes it’s good to have a “habit”
- (3) At this moment...in a store near you... something interesting is happening...
You can “habit” it

Selecting the Advertising media

The media tools to be used will be:

- **Personal selling**, through the establishment of information kiosks within city, aiming to demonstrate and educate people about what is the service and how it works. It is well accepted that the oldest sales technique, this of personal communication gives value and create the conditions for better results. In these kiosks, there will be also established artworks with the simulation of the service and demo applications on the spot.
- **Media advertising**, through the use of local TV channels, local radio stations, local newspapers and the internet, mostly in portals that offer local information. The selection will be discrete and based in the popularity of each medium. This tool will create brand awareness and will prepare the target groups to accept or decline the new service.
- **Place advertising**, through transit ads that will be placed in all buses. Moreover, posters will be placed in transportation hubs.
- **Direct response**, through direct mailing that will be sent to companies, associations, and professional organizations. In the web site of the organization (www.oasth.gr) will be incorporated a special forum to discuss directly with passengers and traders any relevant issue and get immediate feedback.
- **Trade and Consumer oriented promotions**, through pre-arranged on-line meetings between traders and passengers using the new service and our network. Nobody is paying anything at these promotional actions. We just want to prove how strong our network is and facilitate “Habit” as a common scheme. Such a marketing communication tool is directed both to wholesalers, retailers and to the final users.
- **Event Marketing & Sponsorship**, through the participation in hi-tech events (cultural, scientific, professional, artistic) of the city. We will try to join and sponsor events, conferences and related activities. We expect to acquire incrementally the image of pure technological organization.
- **Public Relations & Publicity**, through the distribution of press releases and articles in local papers and magazines.
- **Point-of Purchase Communications**, through internal changes in buses. Buses at this case are the points of sales. We will establish in-bus digital displays as well as other technical internal interventions in order to attract the attention of customers.

Creative Strategy

Step 1: Specify the key fact

Turn bore into action with interaction.

Use “Habit” for free.

“Habit” the facts.

These are single minded statements that are expected to explain why passengers will join the service. In addition, this key fact could be translated positively by the traders as well, since it could be a challenge for them participating in the network and interact with potential customers for them.

Step 2: State the primary marketing problem

The problem is to communicate effectively the new service to customers. We should be clear and precise in what exactly this service is, and what its benefits are. This is the primary concern while in a second level we should be careful in increasing the awareness to the predefined 50%.

Step 3: State the communications objective

We expect the advertising to surprise and stimulate the target market. We focus in attitude and behavior of current passengers. The use of different advertising tools, which will be applied in parallel and in combination, will persuade potential customers to use the service (trial).

Step 4: Implement the creative message strategy

The positioning statement which will support the creative platform will point out that the service is unique, easy and free. We intend to stand in our customer’s mind as a habit, the free service that can transform their daily bureaucratic, demanding, stressing day to a game.

Step 5: Establish mandatory requirements

Our aim is not to create a revenue machine. We want to establish the new service as a need which adds value to the local community and all the participating entities.

This should be clear and this philosophy should place the lines for our communication framework with others. In any advertising event, we should use the messages and the pre-defined logo which has not been decided yet.

CONCLUSIONS

This is actually a preliminary communication plan based on our vision about the new service and how this should be promoted.

Further study should be done for a certain period of time, in cooperation with the marketing experts to investigate any other possibilities in order to establish a successful image.

We have revised the target groups in this individual section, by adding one more, as deeper consideration drove us in the conclusion that it would be crucial to include the group of middle-age passengers.

In addition, we have made a small artwork in our effort to illustrate the idea and how this works which we intend to present it in the project's presentation as supportive material.



“HABIT”

A MOBILE E-COMMERCE EXPERIENCE ON THE BUS

**Idea brief presentation to the Board of Directors of
O.A.S.Th**

Ergen Evangelos – Koimtzis Christos

“HABIT” build up stages



This the pathway that inspired us

Retrieved from NPD guide found at: <http://www.vrc.gr:8080/npd-net/en/npd/index.html>

Idea capture

Motivated by the fact that traffic is a general problem in the big cities, and can be translated into many waiting-hours for passengers, either while waiting in the bus stops or being inside the bus, ***it could be an opportunity to make this situation much more interactive and productive.***



The idea

During travel time (including waiting time in bus stops), passengers will have the opportunity ***to interact with a number of e-services through their mobile phones for free.***

Such e-services could be: to make on-line purchases, reply to e-commerce offers from different sellers/stores/traders, make a reservation in a theater, being informed about special offers in stores that possibly are interested in etc.



E-commerce utility for passengers in O.A.S.Th

An operational planogram of the service

The IDEA



Our business mission

- 1) to **bring technology** in the local transportation network to satisfy passengers' needs,
- 2) to **turn** people's waiting time **into valuable** actions and entertaining interactions,
- 3) to **add value** in O.A.S.Th by re-positioning its service from a purely transportation to innovative and hi-tech related company,
- 4) to **create growth** in local participating companies by bringing them in a common network with targeted markets,
- 5) to continuously **introduce an innovative business model**, always updated and transformed according to local population's needs and expectations,
- 6) to secure **sustainability** of the service through the establishment and maintenance of a key network consisted of all market's forces.



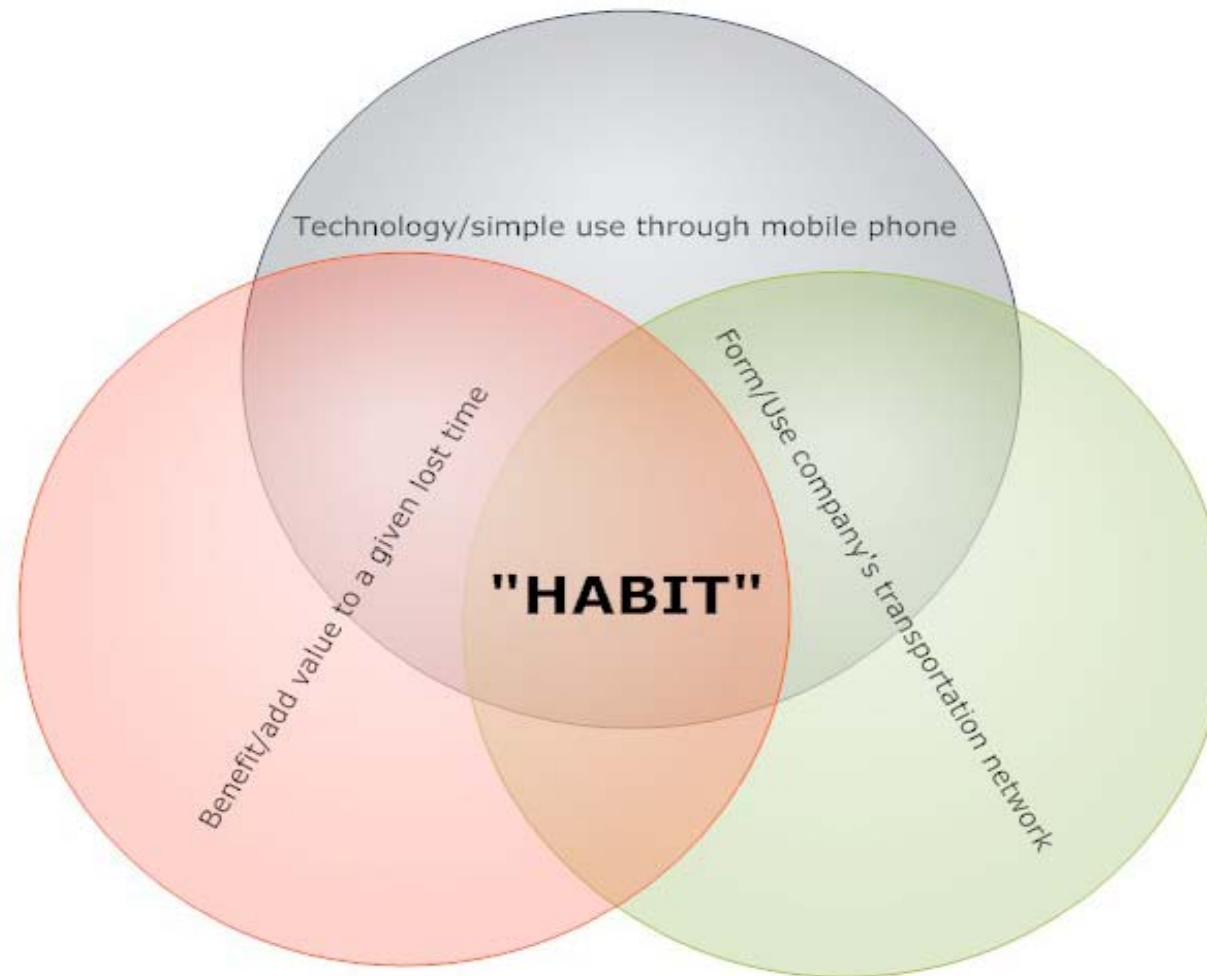
Is it attractive?

The proposed service belongs to a combination of e-commerce and telecommunication industries (mobile e-commerce).

We could identify it as a *high-tech utility addressed to all mobile phone users. Mobile e-commerce* is a fairly new ground which could be directed to new paths for the sake of consumers.



The three elements of the Concept Statement

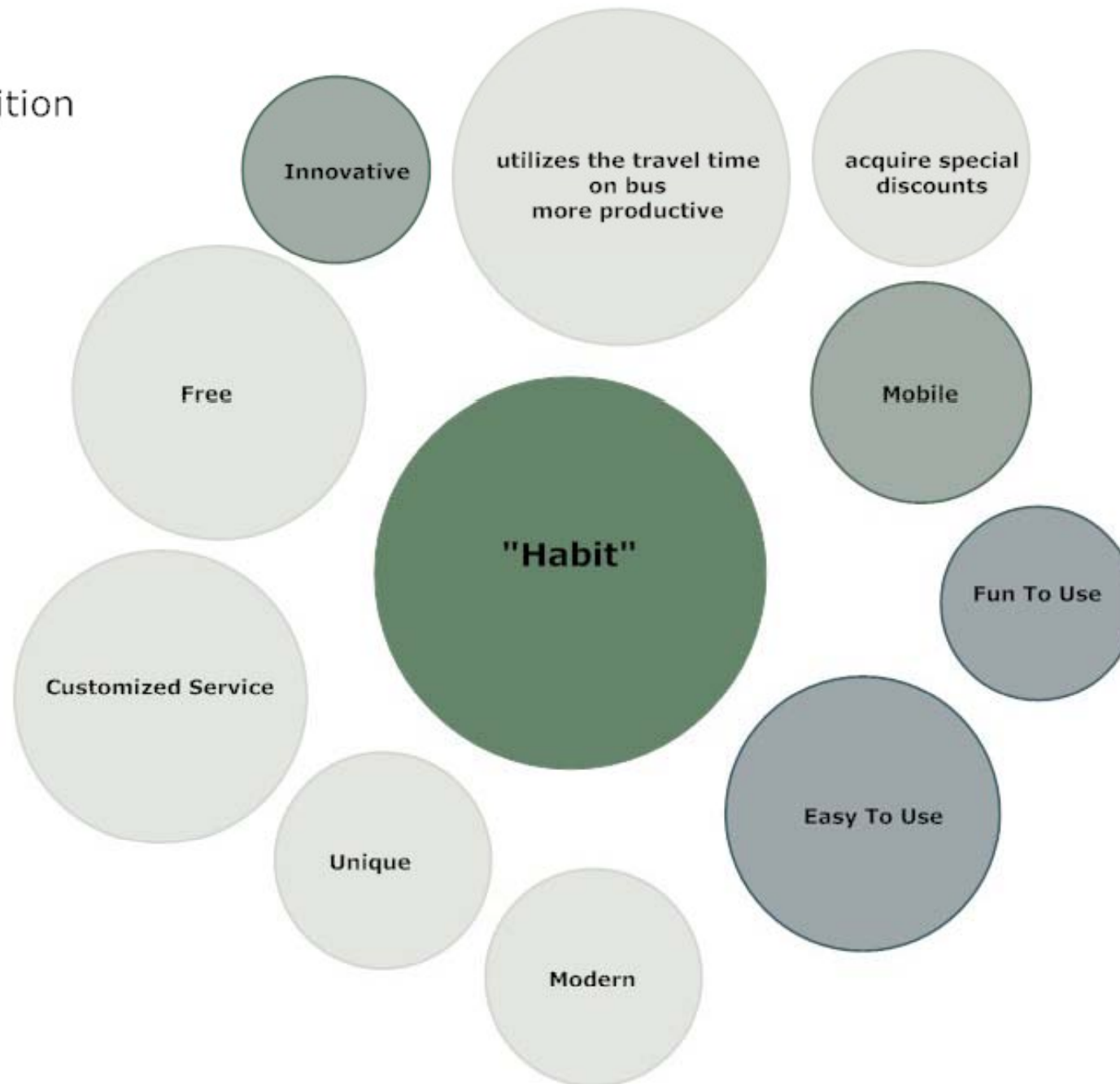


Service attributes

- ✓ It is a free service
- ✓ It adopts the latest knowledge technologies' components and applications
- ✓ It uses e-commerce and auction-based techniques
- ✓ It is available within all buses in the local transportation network
- ✓ It is easy to use since it utilizes the mobile phone equipment



Unique
Selling
Proposition



Our strategy?

- First mover's advantage

Target market

- ✓ The market of passengers
- ✓ The market of participating companies - traders



Target groups in focus

- ✓ High school students (age 14-18)
- ✓ University students (age 18-25)
- ✓ Young active people (age 25-40)



Competitors

COMPETITORS (in relation to the proposed service)		
Direct	similar service – same target	None at the time
	similar service – different target	None at the time
Indirect	different service – same need	e-commerce web sites, on-line purchasing, use of mobile operators to make calls, send SMS or MMS
	different service – different need	any on-line transactions through internet, companies that operate and support such services



Barriers to entry

- Possible technical inconsistencies (budget)
- Issues of personal data privacy (reward system)
- Difficulties to create an extended partnership network (see them as target)



Differences to the classic M-commerce

- ✓ Use Bluetooth as communication protocol
- ✓ Is enhanced with the use of Knowledge Technologies
- ✓ Use of a different business model
- ✓ Take advantage of the transportation network and the predefined customer base



Money issues - Financials

- The initial cost of investment is 2,000,000 euro.
- It is expected to get them back in less than two years.
- We take money only from traders.
- The fee is 0,10 cents per contact (not necessarily purchase or transaction).
- Cost is 0,06 cents and Profit is 0,04 cents.
- We make money from the distribution of messages and the contacts.
- More than 9,000,000 euro are expected as profits during the 3rd, 4th and 5th years of operation.

Advertising Strategy

- ✓ To inform the public and create high awareness about the new service.
- ✓ To persuade the public to use the service and participate to the network.
- ✓ Add value to the core competence of the company, which is still transportation.



Media Selection

- ✓ Media Advertising
- ✓ Place Advertising
- ✓ Direct Response and Interactive Advertising
- ✓ Trade and Consumer Oriented Promotions
- ✓ Public Relations and Publicity
- ✓ Point-of-purchase Communications



Potentials for expansion

- Enrich the services portfolio
 - Create more partnerships
 - Use of Wi-Fi communication protocol to connect mobile phones and laptops to the system
 - Create a private digital community with many privileges
 - Involve more transportation models, such as train, trucks
- 