



Retális

Cooperativa Rádio Táxis de Lisboa, CRL

The decline in the taxi industry

Diogo Gonçalo Simões Antão

Advisor: Nuno Magalhães Guedes



Business Strategy Case Study

MSc in Business Administration

Lisbon, February 2012

Abstract

Title: Retalis, Cooperative Radio Taxis Lisboa: The decline in the taxi industry

Author: Diogo Gonçalo Simões Antão

After a little more than 30 years of existence, in 2008 the cooperative Retalis faced one of the biggest crisis since its foundation. Some of its associates, dissatisfied with the service were leaving the company. There were also unsatisfied end-consumers with the lack of effectiveness and the waiting time of the service. The internal problems aligned with a general economic crisis, rising of oil prices and the growth of the largest competitor (Autocoope) led Retalis president to propose the adoption of a new allocation of services system, the GSM/GPRS system.

The company's deadlock in 2008 offers then a series of discussion possibilities on courses of strategy or innovation. In addition to the case study, the dissertation also includes a literature review that contains the suggested concepts and frameworks that can be used to analyze and assess the company's situation, internal and external environment and the new technology adoption impact. Finally the teaching note suggests an approach to the case that might be used to guide a class discussion or the preparation of it.

Through the case analysis it is possible to conclude that the adoption of the GSM/GPRS system can be optimal because it would improve Retalis performance and, above all, create a source of competitive advantage over competitors in the taxi industry. However, there were also some threats and barriers for the new system adoption like the economic crisis, the associates characteristics and a deeply rooted working culture. The strategy of the new system adoption will only succeed if the company is able to motivate most of its associates and to raise awareness of this change through a marketing campaign.

Resumo

Título: Retalis, Cooperativa Rádio Táxis Lisboa: O declínio na indústria do táxi

Autor: Diogo Gonçalo Simões Antão

Após pouco mais de 30 anos de existência, a cooperativa Retalis enfrentava em 2008 uma das maiores crises desde a sua fundação. Alguns dos seus associados, insatisfeitos com o serviço prestado estavam a abandonar a empresa e existia igualmente uma procura de clientes insatisfeita com a eficácia do próprio serviço e o tempo de espera para ter um táxi a sua porta. Os problemas internos alinhados a toda uma crise económica geral, o aumento dos preços do petróleo e o crescendo de associados pela maior concorrente Autocoope fizeram o seu presidente propor a adopção de um novo sistema de atribuição de serviços, o sistema GSM/GPRS.

A situação de impasse da empresa em 2008 oferece então uma série de possibilidades de discussão em cadeiras de estratégia ou de inovação. Para além do caso de estudo, a dissertação inclui também uma revisão de literatura que contém a sugestão de conceitos e ferramentas que podem ser utilizados para analisar e avaliar a situação da empresa, o ambiente interno, externo e o impacto da adopção de uma nova tecnologia. Por último, a nota de ensino sugere uma abordagem ao caso que poderá servir de base a uma discussão em aula ou preparação para a mesma.

Através da análise do caso, é possível concluir que a adopção do sistema GSM/GPRS poderá ser ótima pois iria melhorar a performance e acima de tudo criar uma vantagem competitiva para com os competidores na indústria do táxi. Contudo também existiam algumas ameaças e entraves há adopção deste novo sistema como a crise económica, as características dos associados e toda uma cultura de trabalho extremamente enraizada. A estratégia de adoptar o novo sistema só terá sucesso se a empresa for capaz de motivar maior parte dos seus associados e através de uma campanha de marketing dar a conhecer esta mudança.

Acknowledgments

The exceptional possibility to interview Retalis president Jose Dionisio was crucial for the completion and accuracy of the dissertation. In a moment where he no longer belongs to the company's management, I have to thank his availability and openness to share its experience as Retalis president. Furthermore I am also grateful to the current president Pedro Lopes for the sharing information and for the opportunity to watch the new system working process.

I also must thank Nuno Magalhães Guedes, the seminar advisor, for his support, feedback and advice that helped me throughout the completion of the dissertation. In addition, I am thankful for the opportunity to discuss my work with the colleagues from the dissertation seminar.

Ultimately, I must thank my family and friends, especially my parents, Idilia and Dinis, for their wise counseling, support and for all the opportunities that lead to this moment. I would like to make a special mention, again, to my father Dinis for making it possible to contact the company. At last, I am deeply grateful to Sara Pinheiro for her unconditional support, kindness and for her faith in my work.

Table of Contents

Abstract.....	I
Acknowledgments	II
I. Introduction.....	1
II. Case Study.....	2
The decline in the taxi industry	2
Company History.....	3
The Situation in 2008.....	4
-Industry competition.....	5
-The Radio Taxis phone Service	7
-The GSM/GPRS system	9
What to do next?	10
Exhibits.....	12
III. Literature Review.....	18
1. Competitive advantages and Strategic Management.....	18
2. Environmental analysis	19
2.1 PESTEL Analysis	19
2.2 Porter Five Forces.....	20
2.3 SWOT Analysis.....	20
3. Strategy formulation.....	21
3.1 Aligned Strategy with Vision and Mission	21
3.2 Competitive Advantage	22
4. Strategy Implementation	22
4.1. Monitoring and Control.....	23
5. The Relation of Innovation with Business Performance	24
5.1. S-Curve.....	24
6. The Innovation Adoption from Organizations	25
6.1 New Technology adoption drivers	25
6.2- Value Chain.....	27
7. Factors that influence the adoption/rejection of innovative technologies.....	28
7.1 New technology adoption Steps	28
7.2 Perceived Risk	28
IV. Teaching Note	30

1. Case Summary	30
2. Learning objectives.....	31
3. Suggested assignment questions	32
4. Class Plan	33
5. Analysis	34
Assignment Question 1	34
Assignment Question 2	37
Assignment Question 3	41
Assignment Question 4	43
Assignment Question 5	46
6. Blackboard plan, suggested teaching methods (role playing, written exercises), suggested time allotment for each major discussion focus	51
7. Conclusion.....	53
8. What happened.....	54
V. Conclusion	56
VI. References.....	58

Table of Exhibits

Exhibit 1- Lisbon Population until 2008	12
Exhibit 2- Number of vehicles register in Lisbon in 2008.....	12
Exhibit 3- Company structure of governing bodies	13
Exhibit 4- Evolution of oil prices.....	14
Exhibit 5- Carris demand per year until the end of 2007	14
Exhibit 6- Metro Demand per year.....	15
Exhibit 7: Costs and Revenues in 2007	15
Exhibit 8- Evolution of number of taxis in Lisbon.....	16
Exhibit 9- Average number of services per day per car in Retalis	16
Exhibit 10: KM travelled by year by car.....	17

I. Introduction

For more than thirty years, Retalis, the cooperative Radio Taxis Lisboa has been competing in the taxi competitive industry and was the industry leader for several years. In the beginning of 2008, the company had 1.316 million Euros in annual revenues and continued to be the largest Portuguese taxi cooperative and the market leader, despite working only in the Lisbon area. But the company's situation had been worsening in the last years and several challenges had appeared: the costs have been increasing, there were service problems, several members were leaving the company, the information systems were outdated and one of the main competitors, Autocoope, was growing, threatening Retalis leadership. The President Eng. Jose Dionisio and his team had too much to do, so they proposed the adoption of a new system for the company that would solve some of the problems in their perspective.

This dissertation aims then to analyze the company's performance in the market and also to discuss the adoption of the GSM/GPRS system and its implications for the future of Retalis. The Case Study (II) offers the opportunity for business strategy students to analyze and discuss two main issues: how the service provided by Retalis to both associates and clients was working and how the shift to a more recent system could help the company to solve its problems. The result of the analysis, both individually and in class, enables to address the key issue of the case: should Retalis adopt the GSM/GPRS system?

However, the goal of this thesis is not only do describe Retalis but also to suggest, through a Literature Review (III), the theoretical frameworks and concepts that might be used in the study of the case. Finally, the dissertation includes a Teaching Note (IV) with a detailed examination of Retalis past and future challenges with the aim of helping the instructor preparing and enhancing the class discussion.

If the adoption of the GSM/GPRS will bring a solution for the Retalis main problems only time will tell. However, students may analyze and suggest what the company should do regarding the new system adoption.

II. Case Study

Retalis, Cooperative Radio Taxis Lisboa

The decline in the taxi industry

In the beginning of 2008, Radio Taxis Lisboa or Retalis was the largest Portuguese cooperative company in the Taxi Industry with annual revenues of 1.316 million Euros. Operating only in the Lisbon area (a city with more than 2.5 million habitants where more than 1 million cars circulate daily, exhibit 1 and 2), it had almost 50% of the market. However it only represented 22% of the number of taxis in Lisbon since there were 1810 cars that belonged to individual owners or private associations. Retalis only had 790 cars from the total of 1740 that had a radio system. Despite the leadership in the market they were facing many challenges: the costs had been increasing year after year, there was a problem in service, several members were leaving the company and the information systems were outdated. Moreover, one of their main competitors, Autocoope, was growing in the number of cars and also in the number of services provided per day.

Eng. Jose Dionisio, the new president had much to worry about, including the need to improve the 30 year old business system. He entered the company in 2006 as a member of the financial board and tried to implement a couple of changes with no success, since he was only the treasurer. Most of his ideas were not even approved within his team. Convinced that he could contribute more to benefit the company, he broke out with the previous direction and formed his own team for the elections of 2008. And he won them.

He knew that something needed to change at the company but it would not be easy. There was a deeply rooted work culture since some of the members had more than thirty years of affiliation. The new technology systems were an opportunity that should be explored, having in mind, as Eng. Jose Dionisio said that:

“Technology is not an end, only a mean to an end. And that end is to please the people that are involved with the company, from the customer to the taxi drivers and owners and the operators. It is necessary to show them that the change is positive to everyone”.

Company History

The cooperative Radio Taxis Lisboa (Retalis) was formed in 1977 by 50 partners that had the ultimate goal of being the leader in the taxi transportation industry. The formation of this cooperative was a response to the creation of another one two years before (Autocoope), which was created by the members of the union of the taxi drivers. Autocoope had, at that time, the ultimate idea of creating a radio taxi service. It was possible for the customers to call for a taxi for the wanted address with no need to get out into the streets looking for one. This innovative service was having great results and the other drivers that did not belong to the company felt the need to create a similar service in order to have higher revenues, since it was not possible for the drivers that did not belong to the union, to be a part of the venture.

Retalis had a decentralized hierarchy (exhibit number 3), with three main divisions including the Direction responsible for the management of the company, the audit committee that was in charge of the accounting and the general assembly that represented the taxi owners in the company and was responsible for managing the board meetings and addressing the associates grievances and requests.

The initial investment made by the partners in the acquisition of the equipment was around 46.000 escudos (230 Euros in the current currency) besides the cost of setting up the company. It was an high investment for that time and some of the partners could not arrange the money to buy it. Of the 50 members that formed the company only 10 had the possibility to buy the radio system.

Despite the initial setback that the company went through in its first year of operation, it was able to provide on average 4 services per car per day over the new radio service out of a total of 30 services. Most of Retalis taxis work 24 hours per day, with two shifts of 12 hours of each driver. Watching the results, other taxi micro-companies started to join the company. In 1986 the number of cars was five times higher than in the beginning, with a total of 250 cars. Each one was performing on average 38 services per day, 7 of them from the radio service. Since throughout that year, the 250 existing cars were more than enough to respond to the radio generated demand, and new members were not accepted for a year.

After that year, new entrances were allowed again and in 1991 there were already 410 cars in Retalis, which represented a growth of 82% in only four years. In the same year the Radio Taxis Lisboa social fund was created, for which each car had to contribute with 3400 escudos (17 Euros in the actual currency). The fund aimed to assist the members of the company in case of a big damage of their cars or if the acquisition of a new one was

necessary. This support was granted through a very low interest loan (1% interest per month).

In 1994 a new type of revenue for the car owners was introduced. For the first time in Portugal, some of the Retalis cars showed in their exterior an advertisement for the new Renault Twingo that had just been launched in the Portuguese market. This allowed the drivers to have extra revenue per month besides the regular services that they were delivering. With a strategy of supporting their members and giving them new ways of making money, Retalis became an attractive company to work for and in the beginning of the new millennium there were already 650 cars working with the company. The maximum number of affiliates was reached in 2006: 825 cars. Each car had on average 28 services per day, 8 of them generated by the radio service. The average revenue was 7 Euros per service.

Although the company had been growing since its foundation, there were two external factors concerning the entire industry. The increase of the oil prices in the last years and the beginning of an apparent world economic crises. In order to protect the company and its members an agreement was signed with the multinational gas company BP. The members of Retalis were entitled a discount of 6 cents per liter, while the company got one additional cent per liter. This was a way of making the members happy by saving some money and at the same time increasing the revenues of the company.

Despite the effort of the company, the price of oil continued to grow (as it can be seen in exhibit 4), and the world economic crisis had really started, making the taxi industry less profitable for the players and less attractive to new entrants. With the crisis and the high costs of parking in some areas the population also began to circulate more on public transportation such as Carris buses and Metro subways to save some costs (as it can be seen in exhibit 5 and 6). Until the entrance of Eng. Jose Dionisio direction, in the beginning of 2008, there were no more admittance and some of the members started to leave the company. The majority of them preferred to continue the activity by their own or by moving to another cooperative.

The Situation in 2008

For the first time in history, the company was not able to grow for the two previous years. From the peak (with 825 cars) in the beginning of 2006 to the entrance of the new direction in 2008 there was no growth in the number of cars at the company. Even worse, there were some members leaving, because they felt that there was no return in the fee (30€ per month

per car) that they had to pay to the company in order to have the radio system. With fewer cars working with the company the revenues went down. All the company revenues are directly linked to the number of existing cars, the mensal fees paid, the discount per liter in BP gas station, a percentage of the advertisement made by other companies in the cars, and also a percentage in the credit service. This credit service consists on agreements to allow companies or regular clients to pay the services at the end of the month. Retalis charged an extra percentage over the total of the services provided to the different clients.

One of the main tasks of the company was handling the credit services for the associates. It received the payment from clients at the end of each month and then it would repay the associate who provided the service. In the end of 2007 the payment of credit services reached almost 885.000 Euros. The other big costs of the company were the salaries of the central workers, the direction travels and communication (as it can be seen in exhibit number 7). There were no costs regarding the marketing of the company for the attraction of new associates, trusting only in the word of mouth among taxi drivers and clients.

-Industry competition

One of Retalis main competitors, Autocoope, had been growing in the past years threatening the leadership of the company in the taxi industry (as it can be seen in exhibit number 8). Until 1996 Autocoope followed the policy of not let anyone enter in the company keeping the exclusivity of it 150 members. The business model of this cooperative was completely different from the one used by Retalis: the cars belonged to Autocoope and not to micro-companies. So they supported all the costs of the 150 cars, like diesel costs, car maintenance and the drivers' salary. This model of business was completely ineffective and it was losing money year after year. With the entrance of the new president the policy had changed. He decided to sell the cars to the drivers at a low cost and they were responsible for the exploration of the car. They supported the costs and got the revenues, having just to pay a mensal fee similar to the value in Retalis. The president also decided that it was important to increase the number of cars, so he opened the company to new members. The main differences from the Retalis model, was that they did not have to pay an entrance fee to join the company but they would not get diesel discounts or other extra benefits. They run a marketing campaign among the taxi drivers (something that Retalis never did, trusting only in the word of mouth), to attract them to the company. With these measures Autocoope started to grow, threatening the leadership of Retalis.

In 2008 there were 3550 taxis working in the Lisbon area, where 790 were from Retalis, 600 from Autocoope, 350 from Teletaxis (another cooperative) and the remaining from individual owners or small groups of associations, like “Taxis do Lumiar” or “Taxis do Restelo”¹.

The main difficulty felt by Retalis in attracting customers was the expansion of public transportation. The economic crisis led the population to prefer public transportation for the daily movements along the City.

In 2002 the bus company Carris started a renewal of its fleet. With this renewal the buses became more comfortable, more hygienic, with air conditioning and with more seats. Carris not only renewed the buses, but also their distribution. The maximum waiting time anywhere in the city was listed to 30 minutes.

With better buses reaching all parts of the city, with normal waiting times between buses of 7 or 10 minutes, and with convenient links with other mean of transport Carris began to gain the trust of customers who saw there an alternative to the use of taxi.

It was not just Carris that led customers to use public transportation as an alternative to taxi. The development of the Metro was another reason.

In 2008, the Metro had four lines that were divided into several areas covering not only the metropolitan area of Lisbon but also areas outside the city as Amadora and Odivelas for example. The Metro had become a real choice because it was faster, with little waiting time and with stations all along the city. By reaching areas in the suburbs the Metro allowed daily trips by customers who did not live in the city center but had to move daily to study or work. Car commuters take twice as long to get to the city because of traffic congestion problems. Also the costs of using the car daily have been increasing in the last years. The increase of oil prices and the increase of parking costs in some Lisbon areas made some people to prefer the public transportation instead of the individual car.

At that time the percentage of people that used public transportation daily was around 57%. From this percentage only 4% use the taxi while the rest used other means like Metro or Carris. Relatively to individual transportation it corresponds to 41%.

Over the years Retalis had been taking measures targeted to the associates, like the BP agreement, the advertisements and other measures, whose main beneficiary was the associate himself and not the final customer. The new direction knew that something needed to change in the company, and the main questions according to Jose Dionisio were:

¹ Lumiar and Restelo are neighborhoods within the city of Lisbon;

“Where to go? What changes should be implemented? Should the company renew the whole fleets of taxis? Renew the drivers? Change the way they operate? Or re-think the entire philosophy of the company?”

After an analysis of the company, the new direction identified that the radio system was obsolete. It had been the same system over the past 30 years and fewer changes have been made since the beginning which made it ineffective for the modern times. There were several calls arriving at the central asking for a taxi but it was only possible to find a taxi for one customer at a time and the whole procedure could take several minutes. This made some customers to be unsatisfied for the time and money spent on the call or even to give up waiting.

-The Radio Taxis phone Service

Besides the regular taxi service that consists of picking up customers randomly on the streets or on the taxi stands, Retalis also provides to its members a radio service that helps them to get a service without the need of driving around the city looking for customers.

This radio service requires a series of steps which involves the customer, a Retalis operator and the taxis on duty. Although picking up a taxi for a customer seems a quite simple task, it requires background work since the call from the customer until the taxi gets to his/her door.

The first step is done by the customer, when he makes the decision of calling the company asking for a taxi to the wanted address. After that the operator takes note of the address and announces in the radio that a customer is requiring a taxi into a certain address. In this process all the Retalis cars listen to the announcement either if they are available or if they are driving a client.

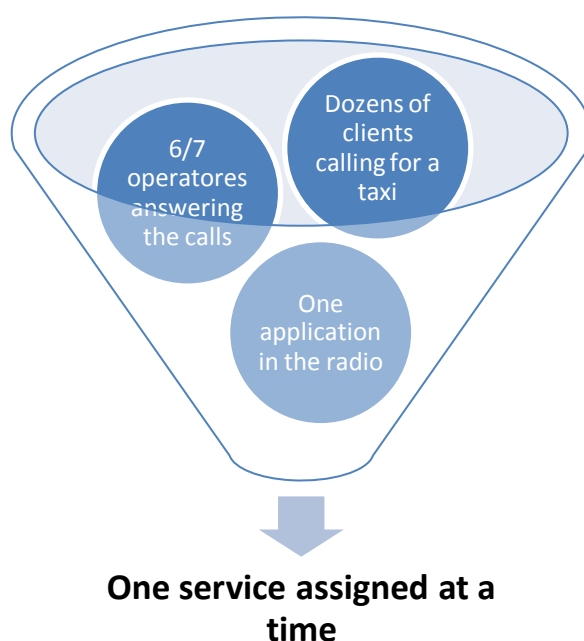
The next step is taken by the taxi drivers. After listening to the announcement of the operator, the cars that are near the address apply for the service, once at a time. In the application the driver has to give his location (address where he is) in order for the other drivers to know if it is worth to apply for the service, in case they are nearer. Since there is no device to ensure that the taxi driver is giving the correct information about his location, the only option is to trust the drivers' word. However, there were several stories of lies, with a driver saying that he was in a given location and another one seeing him in a different one. This type of events happened a lot of times, which contributed to the image of the taxi drivers as being tricky people that do everything to get more money. After the different applications, the car that is closer to the client's address wins the service and drives to meet the customer.

At the same time the operator, which is also listening to the taxi radio, communicates to the customer that number “xxx” is on the way to meet him. The decision of which is the closest car is not always clear. In case of doubt there is a decision commission, chosen in advance, composed by other taxi drivers that decide what car should take the required service based on the address that they gave before. This commission has the power to replace the car that was previously indicated for the service by another one that also applied, if they think that the second one is closer to the customer’s address. In this case, when the new car indicated for the service arrives has to inform the customer that he comes in place of the taxi number told by the operator. From this moment on the steps of the radio service are over and the regular service provided by taxis begins.

This was a long process that required a lot of attention and cooperation between the intervenients in order to avoid mistakes and keep the customer satisfied.

Last year performance showed that the taxi service had stagnated and the average number of services, both over the radio and not, were worse than the one’s from twenty years ago (according to the information on the exhibit 9). For the maturity of this service contributes, according to Eng. Jose Dionisio, “the time spent on the different steps and, most of all, because it was only possible to manage one request at a time, creating a funnel effect (figure A). With this, there was no possibility of growth with the use of this 30 year-old system”.

Figure A- The Funnel effect



“The need to adapt the system to the state-of-art technologies was something that should be explored. Society was already in the 3G era and the company had stopped 30 years in the past”, according to the new president.

Some electronic systems had already been implemented in other countries with great results. The president felt the need to do something similar in his company in order to update the system, making it more effective, and to satisfy the customers.

However, he knew that it would not be easy to implement, because there were associates with more than 30 years of affiliation to the company. They were used to work with the old system and, with their low level of education, some of the members looked to these new technological systems in a distrustful and skeptical way. It was necessary to show them that this would be a good investment that would be profitable in the future because it will allow them to generate more services and with that more revenues. Taxi drivers were not the only ones who would be affected by the changes. It was necessary to show to the operators and the remaining employees that nobody was going to lose their jobs and, on the contrary, their work would be facilitated.

-The GSM/GPRS system

Before the decision of what should be implemented, several systems were analyzed in order to see which one had the functionalities that would fit better with the characteristics of the company and its culture. Also the system should be an easy one to work with, because of the type of people that were going to use it.

The chosen system was the GSM/GPRS, a system that included treating information over mobile voice (listen and speak, GSM) and data on the same electronic band (GPRS). This was a user friendly system that had already been implemented in Madrid some years ago.

The treatment of the information provided by all the intervenients would be treated electronically, instead of the voice in the previous system. The first step would be made by the customer, when he/she calls Retalis asking for a taxi to a certain address. After hearing the customer, the operator just had to input in the system the address and it would automatically identify the nearest free car over the GPS system. Then the number of the car that is going to pick him/her is communicated to the customer. The next time that the customer calls from the same number the system would automatically identify the address from the previous call (each number can have up to 6 addresses register).

When the system identifies the closest car it shows up in that car system device the information of the address of the client and the driver has 20 seconds to press the button to accept the service. If in 20 seconds the driver does not press any button, the system

automatically passes the service to the second nearest car and so on. With this new system it would be possible to find a car for a customer in seconds instead of minutes, allowing the client to save time and money on the call. At the same time, this new system will eliminate the funnel effect of the previous system, since it would be possible to assign more than one service at a time, making the radio service at Retalis more effective.

Because this was a system that would be expensive to implement, and since it was a cooperative venture, it was necessary to approve the proposal in the general meeting with more than 50% of the votes from the associates. The implementation of the new system would cost 1 million Euros divided by the different associates (1400 Euros per car), so it was necessary to show them that the investment would be worth it in the near future.

What to do next?

There was a need to change. It was necessary to stop members to resign and to attract more associates to the company. In the past years, the main focus of the company was to please the associates, making agreements to get them more revenues or to reduce their costs. This new direction was proposing a different approach. It was necessary to think about the clients and their satisfaction in order to get more services and revenues for the associates.

In this new point of view the GSM/GPRS system was the right way to go. This new system would allow the elimination of the company bottleneck and provide a better service for the client, with no need of staying several minutes on the phone waiting for the service to be attributed. Instead, in some seconds, it was possible to know the car number that was on the way to the required address. In Eng. Jose Dionisio opinion: *“This was an opportunity that should be taken, and by being the first cooperative to adopt this service, we would get a first-mover advantage which is very important in every business”*.

However, the implementation of the service was not going to be easy. There were several associates against it: the fear of the change, the work style deeply rooted and the investment needed for the change were the main reasons for the doubts about the adoption of the service. Also most of the people that were in the Taxi business (taxi owners and workers) had low-medium college instruction and were old. They look for the new technologies with distrust. It was necessary to show to the taxi owners that with this service it was possible to increase the revenues and reduce the empty kilometers (traveled without clients, exhibit 10) and show to the taxi drivers that their average salary of 700 Euros could increase.

Moreover, Retalis was a cooperative enterprise with hundreds of associates and it was hard to convince all of them about the advantages of the new system. And the ones that were against the new system and the investment of almost 1 million Euros were free to leave the company and join another cooperative or work by their own. Large investments were feared mainly because of the crisis that was felt at national level. Also it was necessary to give training to every taxi driver, taxi owner and operator in the period of transition to the new service.

The president knew that some members were against the new system and they would leave the company if the proposal was accepted. So he asked himself several questions: *“Should we move to this system or try to find a less expensive one? Is this the right time to implement the system? Or should we move to a different kind of restructuring?”*

Despite the threats, innovation and the possibility of growth were an opportunity that the direction did not want to miss.

Exhibits

Exhibit 1- Lisbon Population until 2008

Population	Portugal	Lisbon	Great Lisbon
2008	10.627.250	789.975	2.029.458
2007	10.617.575	782.786	2.025.628
2006	10.599.095	774.697	2.019.529
2005	10.569.592	766.172	2.012.925
2004	10.529.255	757.113	2.003.584

Source: INE,

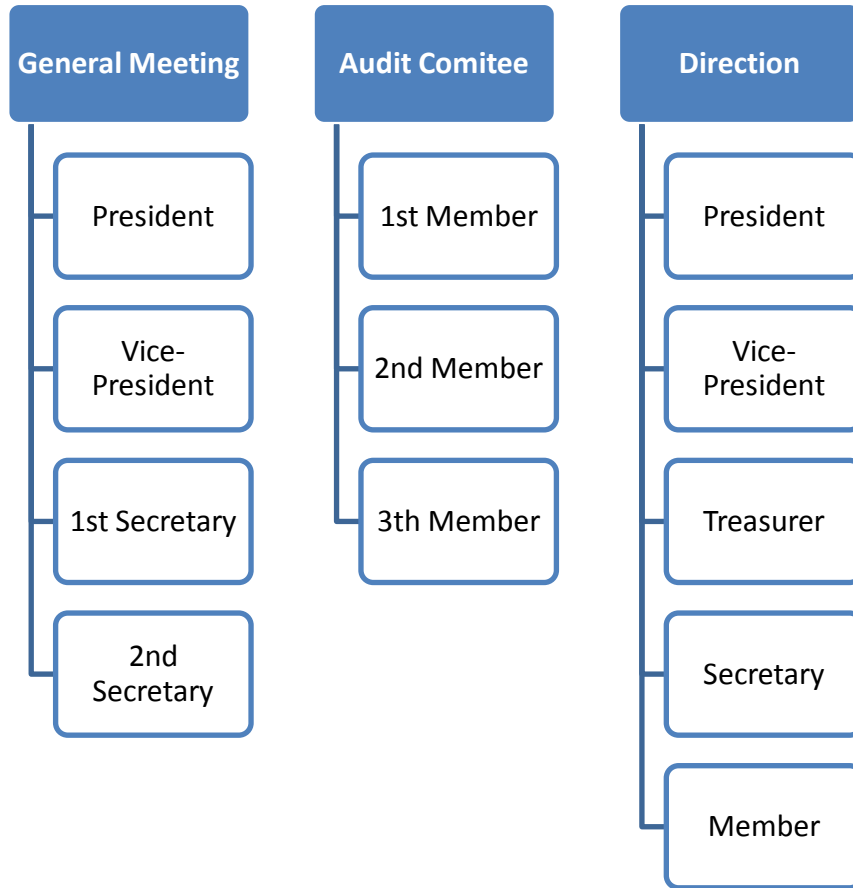
http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&indOcorrCod=0000611&contexto=pi&selTab=tab0

Exhibit 2- Number of vehicles registered in Lisbon in 2008

	Individual cars	Comercial cars	Public transportation	Motos	Total
Lisbon	1 013 728	203 470	2 436	93 066	1 312 700

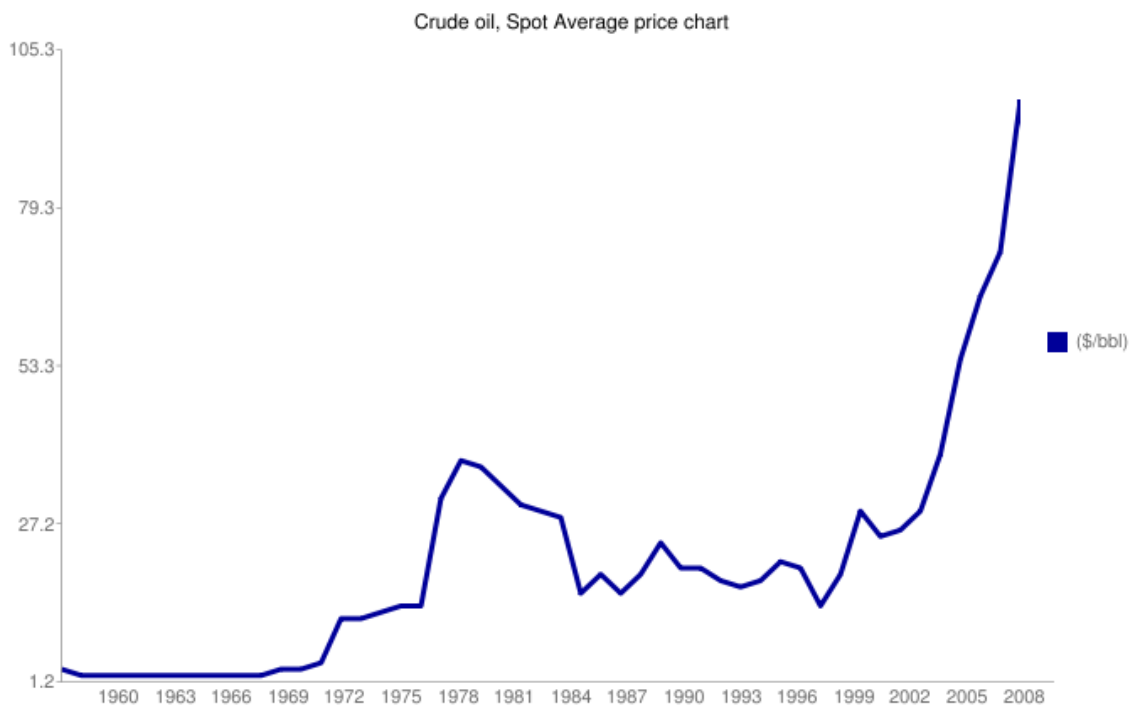
Source: <http://www.autoinforma.pt/estatisticas/estatisticas.html?MIT=36458>

Exhibit 3- Company structure of governing bodies



Source: 2007 Retalis annual report

Exhibit 4- Evolution of oil prices



Source: http://www.mongabay.com/images/commodities/charts/crude_oil.html

Exhibit 5- Carris demand per year until the end of 2007

Total public service	2004	2005	2006	2007
Passengers (millions)	256,6	240,8	234,9	236,4
Passengers x Km (millions)	850	796	776	768,9

Source: Carris website <http://www.carris.pt/pt/indicadores-de-atividade/>

Exhibit 6- Metro Demand per year

Year	Passenger x km (millions)	Average circuit r passenger (km)	Coefficient of occupation (%)
2007	862,3	4,65	22,59
2006	855,5	4,65	22,14
2005	862,3	4,65	22,08
2004	801,2	4,46	21,22
2003	739,7	4,2	22,52
2002	757,5	4,2	23,07

Source: Metro Website

<http://www.metrolisboa.pt/Default.aspx?tabid=115&SY=2002&EY=2008>

Exhibit 7: Costs and Revenues in 2007

COSTS	
Services	884.496,86 €
Costs of the Central	19.186,52 €
Communication	18.541,49 €
Direction travels	49.275,20 €
Specialized works	31.328,64 €
Salaries and Social Security	232.269,80 €
Other	51.658,78 €
TOTAL	1.286.757,29 €

REVENUES	
Affiliation fee	278.466,84 €
Services	1.011.690,71 €
Interest	2.316,16 €
Entrance fee	3.790,88 €
Other	34.119,04 €
TOTAL	1.330.383,63 €

Source: 2007 Retalis annual Report

Exhibit 8- Evolution of number of taxis in Lisbon

	Retalis	Autocoope	Teletaxis	Taxis with radio	Taxis without radio	Total
1975	-	150	-	150	3050	3200
1977	10	150	-	160	3040	3200
1980	150	150	50	350	2850	3200
1986	250	150	100	500	2800	3300
1991	410	150	320	880	2570	3450
1996	500	150	340	990	2510	3500
2006	825	500	350	1675	1825	3500
2008	790	600	350	1740	1810	3550

Source: Antral and Retalis database

Exhibit 9- Average number of services per day per car in Retalis

	Over the radio service	Total
1977	4	30
1986	7	38
1996	10	32
2006	8	28
2008	8	26

Source: Radio Taxis Database

Exhibit 10: KM travelled by year by car

	2003	2004	2005	2006	2007
Km with clients	133	153	125	114	126
Empty Km	109	102	103	91	84
Total Km per day	242	255	228	205	210
Annual Km	87120	91800	82080	74992	75719
Monthly Costs with diesel	580,80 €	634,95 €	615,60 €	637,43 €	706,71 €

Source: IMTT

http://www.imtt.pt/sites/IMTT/Portugues/CentroDocumentacao/RepertorioIMTTanteriora2008/Estudos/Documents/IMTT_TaxisEstudo2006.pdf

III. Literature Review

1. Competitive advantages and Strategic Management

The strategy of a company is based on a balanced and rational management of its resources to create competitive advantages that enable the creation of value. Only, through a strategic positioning it will be possible to obtain products or services that will satisfy the customer's needs and desires in a better way than the competition, according to Michael Porter (1996).

A strategy is needed to promote consistency, define an organization, reduce uncertainty, be ahead of competition, and involve everyone in the company and most of all to define the direction to go, according to Mintzberg (1987). According to this author, there are five dimensions for a strategy that complement each other and help in the clarification of the concept. The dimensions are:

1. Strategy as a plan: A set of guidelines to be followed for a specific situation. In this case, the strategy is developed in a purposeful and conscientious way and is done before the actions to which it applies are carried out;
2. Strategy as a ploy: A set of maneuvers that aim to overcome a competitor;
3. Strategy as a pattern: It emerges from the adopted behaviors, whether they are intentional or not;
4. Strategy as a position: The way that the company is positioned in its environment. The strategy thus become the mediating force between the internal and the external context of the company;
5. Strategy as a perspective: The way that the company looks to the world around it. The vision is shared between all the employees, through their actions and intentions.

To define a strategy it is necessary to understand the long-term goals and objectives of the company, taking into account the environment in which it operates. Basically you should try to understand what is the way that the company wants to follow, taking into account its

resources and internal operations, and external factors of its environment like economics and demographics, political legal, socio-cultural, technological and ecological , among others.

Most of the companies develop their management based on the budget and operational plan, focusing only in the financial performance. With the several economical and social changes, and with competition based on information, the capacity of exploring intangible assets has become much more important than the capacity of managing tangible assets.

The management tools must provide all the elements that enable the identification and sustainability of the competitive advantages of the company, in an environment that is constantly changing and is very competitive.

Thomas Wheelen and J. David Hunger (2006), consider that strategic management involves four steps: financial planning, external guidance, forecasting and the strategy planning. On the other hand strategic management includes other four fundamental elements: environmental analysis, strategy formulation, strategy implementation and monitoring and control.

2. Environmental analysis

2.1 PESTEL Analysis

The internal and external environment should be examined in a thorough way, because only in that way it is possible to define a global strategy for the company. For Thomas Wheelen e J. David Hunger (2006), the external environment analysis could be done through a PESTEL analysis, which will help identify the external factors that influence the performance of the company in the market.

-Political: Policies on the political framework where the company is involved;

-Economical: economical and demographic factors that influence the company;

-Social- Life-style: social values and educational level;

-Technological: evolution of science that influence the company activities and the development of new products or processes;

-Environmental: Involvement and commitment with the environment and social responsibility;

-Legal: Related to the legal environment where the company operates

2.2 Porter Five Forces

For Michael Porter (1980) the essential factor that influences more the company activity is the sector of activity where it is inserted or the group of sectors where the company competes. The intensity of the competition depends on five forces: bargaining power of buyers, bargaining power of suppliers, threat of new entrants, threat of substitutes and rivalry among competition.

According to Michael Porter (1980) the bargaining power of buyers allows them to exert a pressure on the sector, making the margins lower and obtaining products and services of better quality. This power can be influenced by several characteristics like the number of players in the market, having an undifferentiated product or service and the search of better prices.

For Porter (1980), the larger the size of the supplier the greater is the supplier negotiation power. The concentration of suppliers, lack of inputs and substitutes and high switching costs are conditions that ensure a higher bargaining power of suppliers.

The threat of new entrants is related to economies of scale, high capital requirements, product differentiation, restricted access to distribution channels, technology and specific know-how.

The pressure of substitute products, that have the same use as the product of a particular sector that satisfy the same client needs, influences the prices of the industry and its importance increases according to the appetite of customers for the substitution. The existence of substitute products limits the gains of the companies of that industry, because it has to maintain competitive prices. Thereby the degree of attractiveness of the industry decreases.

The rivalry among existing firms is influenced by all the aspects mentioned before. The number of competitors, product differentiation, switching costs, exit barriers and the diversity of companies are all aspects that condition the competitiveness of an industry.

2.3 SWOT Analysis

The internal analysis shows that in most cases, although the market trends are the same for the several companies that belong to a certain sector, the results obtained by them are different from each other. This situation happens because of the different management capabilities of each company and the efficient use of its resources.

Thomas Wheelen and J. David Hunger (2006) believe that it is necessary, at an internal level, to analyze the core and differentiated competences of each company, in order to create competitive advantages and a strong organizational culture. For Mintzberg (1988) we should also analyze the company structure, internal resources and competences and the culture and operations of the company. In order to achieve success it is necessary to create, develop and sustain competitive advantages that allow them to keep the leadership in the markets where they operate. In the internal analysis, could be used the SWOT analysis, combining the strengths and weaknesses of the company with the threats and opportunities of the market.

3. Strategy formulation

3.1 Aligned Strategy with Vision and Mission

It is necessary to know the vision and mission of a company to outline a strategy. The vision projects how the company wants to be seen by society while pursuing its mission. It influences the performance of the employees that by feeling identified with the goals of the company will become more motivated to work there. This will benefit also the performance of the company.

The mission must be seen as a long-term guide of the company, that hardly changes and that should not be a specific goal or a strategic action. Every company should have its own identity and values. Throughout the definition of strategy, the company establishes its goals and the direction that should be taken to achieve those goals. All the goals should be measurable, specific, tangible, result oriented and defined in time.

For Peter Drucker (2000) there are five phenomena that should be considered in the formulation of a strategy, because they are the known factors of the external environment. These phenomena are a consequence of large changes in the society and they are the new parameters in the definition of performance, decreasing of birth rate in the developed countries, global competition, lack of accompaniment between the economic globalization and politics and the changes in utilization of incomes.

For Robert Kaplan and David Norton (2000) the companies that are strategy oriented should adopt 5 principles: align the strategy with the organization, set the strategy in an operational way, involve everyone in the company with the strategy, convert it into a continuous process and mobilize the change.

3.2 Competitive Advantage

According to Michael Porter (1980) there are three types of strategies that create competitive advantage:

Cost Strategy: where the company concentrates its efforts in productive efficiency, production growth and in minimization of costs like advertising, distribution or R&D. In this type of strategy the main advantage is the price that is extremely competitive and is a factor of attractiveness for the consumer. On the other hand, the risks of this strategy are the threat of new competitors with a more advanced technology that can produce at a lower cost and the market can rapidly change and value other features in the product beside the price.

Differentiation: The Company invests in areas like image, R&D, new technologies or quality of a certain product or service in order to differentiate from the competition. The main advantage of this strategy is that it creates differentiated criteria recognized in the market, which creates value for the product or service. In terms of risks the main ones are the high price and possibility of ignoring other criteria of the market.

Focus: In this strategy the company chooses a restrict target and trough differentiation or cost, concentrates its goals in the satisfaction of that specific segment or niche. The main advantage is the possibility of identifying clearly the clients and consumers for that product or service. On the other hand the chosen segment may not sustain the operation of the company.

4. Strategy Implementation

In order to achieve the five principles suggested, according to Robert Kaplan and David Norton (2000) there are some actions that must be developed: the strategy should be presented for every worker in the company, in a simple and creative way, in order to motivate them and make them work aligned with the defined strategy; it is necessary to align the strategy and communication between all the departments of the company, in order to achieve common goals; look at the strategy as a learning process in order to get some feedback; and make a big effort to do the necessary changes.

After a careful internal and external analysis of the company and the industry and look at the social-political phenomena it is possible to formulate hypothesis and then choose the right strategy to follow.

With the fast and unexpected economic and social context changes, some authors suggest a more intuitive approach and a lower level of planning when the companies have to decide which strategy should be implemented. In Gary Hamel (1996) opinion companies should take advantage of its core competences in order to achieve the set objectives.

According to Hamel (1996) the efforts of the companies, in the recent years, have been focused on the inside, where its aim is to improve performance and be at the same level of the competitors in the competitive parameters. But from this author point of view the companies are doing it wrong, they should be trying to achieve better capabilities, which will allow creating new markets. Hamel (1996) also defends that competition will influence the future business opportunities and do not see it as a player in the sector to split the profits.

For Hamel (1996) there are two types of companies, the ones that will possible suffer some difficulties in the future because they have not adopted significantly changes, and the ones that deal well with organizational changes, trying to understand what will happen in the future and trying to adapt their strategy to it.

The managers feel the need to anticipate the changes in the external environment and customer's behavior in order to choose the right strategy for the company. All the decisions related to the future prediction are the hardest ones to take. The need to anticipate future scenarios generates changes in the organizations (Hayes and Garvin 1982).

Thomas Wheelen and J. David Hunger (2006) believe that for successful strategies it is necessary to define procedures, processes and implement action-oriented programs. Throughout the different steps it is necessary to get some feedback, in order to check if the implemented strategy is the right one to achieve the goals set by the company.

4.1. Monitoring and Control

After the implementation of the strategy comes the monitoring and control. The traditional systems in most companies are based on financial indicators that result from the variables that were on the budget. These budgets are based on the sales, costs, results and profitability which are important information but do not guarantee the future success of the company. Through the analysis of non-financial data it is possible to know the customer satisfaction, the quality of service provided, the reception level of the market to the introduction of a new product and how new technologies are being used, among other aspects, whether they are key success factors for the company's future success (Kaplan and Norton, 1996).

The measures chosen to evaluate the company performance should be strategically relevant, taking into account the future activities and the time and resources allocated to the information processing. With monitoring and control of the implemented strategy it is possible to know how the strategy is being implemented and if it is going in the right way in order to achieve the required goals (Kaplan and Norton, 1996).

The goal of feedback processes is to know if the set objectives have been achieved, not only at the company level, but also at the different departments and employees' level. These processes are extremely useful for the strategy planning, to generate learning and have the capacity to improve constantly.

5. The Relation of Innovation with Business Performance

Technological innovations are a key success factor for the future of the organizations. On one hand they are a source of creativity that allows the companies to grow, and on the other hand they are a destructive force that can put the company in a dangerous position in comparison with its competitors (Utterback, 1994).

Christensen and Bower (1995) defend that in the business world it is almost impossible for a company to remain leader of a certain sector when there is a technological change or a market evolution. The market is always evolving and it is essential for companies to understand that evolution and create new technologies in order to remain competitive. Although it is important to be careful with innovation, it can challenge the current company knowledge and positioning in the market.

For Porter (1985) innovation is also very important for the success of an organization. But innovation is not a competitive advantage by itself. It is only a source of generating competitive advantages in the company.

5.1. S-Curve

The S-curve is a tool frequently used to analyze competition and technological innovation (Callahan, 2007). It is extremely useful to understand how technology is performing and anticipate when the change for a new one is needed, because every technology has its life-cycle. And new technologies with better performance are always appearing.

The S-curve is determined in its vertical axis by the technology performance and in its horizontal axis by the effort or money invested in a certain technology, using time to measure

them. As the time of implementation goes by the technology performance tends to improve, because in the initial state the functionalities are not that well understood and not working at its maximum. For Foster (1982) during the initial state the effort is applied in a limited technology improvement and then, only when the knowledge is acquired and established, progress increases until it reaches the limit. When reaching this limit the improvements start to be lower until they drop to zero. When this process is closer to its maturity, it becomes more vulnerable and subject to the substitution of a new technology process.

For Christensen (2003) the S-curve is a useful framework to predict and understand when an emerging technology will replace the current technology. The point where it is predicted that a new technology will overcome the existing one is called the inflection point of existing technology.

According to Rogers (1995), in its diffusion of innovations theory, there are five categories of adopters along the S-curve adoption model. There are the innovators, early adopters, early majority, late majority and laggards. By using this model, the company will be able to figure out who are the potential adopters and when they will adopt it. By knowing that, the company will be able to anticipate market opportunities before the competitors, and focus its sales effort according to the adoption level.

6. The Innovation Adoption from Organizations

Besides the decision of what technology should be adopted, aligned with the company strategy, there is also another important issue that consists on deciding if the company wants to be a technological follower or a leader. According to Porter (1985) technological leadership consists of being the first to introduce a technological change and, with that, being able to support the company's strategy.

For Porter (1985) the choice of being the technological follower or technological leader is based on three issues: what are the advantages of being the first to adopt a technological change; what are the disadvantages of moving first to a new technology than competitors; and at what extent the leader is able to sustain the technological change over its competitors.

6.1 New Technology adoption drivers

Chandy and Tellis (2000) showed in their study how influential companies resist to new technologies and how they can lose their leadership quickly after the introduction of a new technology in the market that replaces the previously established technology. There are

several reasons for this behaviour like the organizational inertia, too much dependence on fixed assets, incorrect assessment of the market or pure conservatism.

As a result of this behavior, incumbent companies tend to react late and invest small amounts of money in new technologies. Usually companies only tend to react to a certain problem or need and there are five main factors that might explain the adoption of new technologies and innovation by the firms:

New Competitors: the entry of new entrepreneurs could facilitate the adoption of new technologies because they are less exposed to the interests and routines inherent of an industry. Consequently the possibility of a radical change in an industry grows. Christensen (1997). Also companies from a different sector can develop a new technology that might give them a competitive edge in a different sector.

External Crisis: According to Hoffman (1999), a crisis can be seen as an “occasional event” that interrupts a period of stability and requires the adoption of practices different from the ones that are being performed. Crisis are important mechanisms for the adoption of new technologies: they create and accelerate the necessity of companies and sectors to develop and adapt their activities to new technologies, they offer the opportunity of reflection of the current practices and uncertainty makes the companies take more risks in the adoption of new technologies.

New Technology Performance: the third factor that influences the adoption of a new technology is the performance and the learning curve of that technology when compared to the existing one. Usually new technologies are more expensive and complex than the existing ones, but it has a better chance to bring more benefits in the medium-long run (Christensen, 1997).

Changes in the Market: It can occur through the emergence of new alternative technologies or as a result of the changing needs of consumers who can demand new features in the product or service that they need. The first option is a push strategy, which consists in pushing the new technology to the customers. The second one is a pull strategy, where the changes in the demand may lead to experimentations with new technologies, which over time can break down the existing ones.

Industry Competitiveness: the competition among the firms of the same sector is also a factor that influences the adoption of new technologies. According to Porter (1985) technology influences the competitive advantage if it has a significant role in determining a cost position or differentiation. So the adoption of new technologies can give the chance of winning a competitive advantage over the competitors.

6.2- Value Chain

Despite all the factors that influence the adoption of new technologies it is essential that the innovation adopted create value for the clients and for the company. Through the analysis of the Value Chain is possible to see how the adoption of a certain technology can create that value, in comparison to the value that was provided before the new technology adoption.

The value chain concept was introduced by Porter with the goal of analyzing what are the sources of competitive advantage of the company, by examining its different activities in how they perform and interact in the different areas.

According to Porter the value chain should be constructed at the company level and not at the industry level. Although some companies within the same industry can have similar value chains, they have certain differences and those differences are what create sources of competitive advantage.

For Porter it is through technological and physical activities, which represent value activities, that a company creates value for their customers. The value obtained by the difference of the total value and the total cost of the value activities performed represents the margin. Both margin and value activities are the total value represented in the value chain.

In the value chain we have two types of value activities: the primary activities that involve the creation of the product, its sale and the after sale support and the support activities that support the primary activities and each other by providing the different company functions like technology, human resources or purchased inputs. They are subdivided in five categories and four activities respectively.

Regarding the primary activities, they include inbound logistics, operations, outbound logistics, marketing, sales and service. For Porter (1985), each of these categories has a higher or lower role in the companies' competitive advantage according to the industry that they belong to. On the other hand the support activities are subdivided in procurement, technology development, human resources management and firm infrastructure.

According to Porter (1985) value activities have a key influence in the company's competitive advantage. The way that each activity is performed, aligned with the company economics, has an impact on the cost of product or service provided and on whether the company has a high or low cost comparing to its competitors. The execution of each activity will contribute to the creation of some differentiation when compared to other competitors. This difference will determine the competitive advantage of the company.

There are several products that do not go directly from a company to the consumer, so Porter says that a company value chain is part of a larger system, named The Value Chain System. This system relates the value chain of upstream and downstream suppliers. The upstream suppliers are the ones that create and deliver inputs to a certain company that uses them in its value chain. The downstream suppliers receive the product and deliver it to the buyers and the activities performed by them will influence the company activities and the buyer's chain.

7. Factors that influence the adoption/rejection of innovative technologies

7.1 New technology adoption Steps

In order to find out what are the factors that influence the adoption/rejection of innovative technologies, it is necessary to understand how an innovation spreads along to consumers. According to Rogers (1995) the innovation diffuses, first, through the selective communication channels and, over time, among the members of the society. For Rogers (1995) there are five sequential steps for the adoption of innovations: the first one is the acquisition of the necessary information about the innovation; then is the formulation of an opinion about it; the third is the decision about the adoption; the fourth implementation of it; and finally the review of the decision.

The second step is the most critical, where according to the perception of the innovation characteristics, potential buyers develop an overall opinion about it. The capacity of understanding the different features of the innovation contributes to a higher probability of adoption. There are five features that represent a huge importance according to Rogers (1995): relative advantage, according to its performance and cost; compatibility in terms of values and norms; complexity in the difficulty of understanding and use; experimentation, regarding the degree where the innovation can be experimented; and the observation, where the effects of the adoption are visible.

7.2 Perceived Risk

Although in the adoption of an innovation there is always the uncertainty element, and there is also the risk that the innovation does not create the expected final benefit or even create social and economical losses for the consumer. According to Stone and Grønhaug

(1993) there are six interrelated perceived risks that contribute to customer resistance in the adoption of a new technology:

Financial Risk: it represents the probability of the customer losing money when he/she acquires the product or service. In fact most consumers are looking for a short payback period, when they decide to use more efficient technologies.

Performance Risk: represents the probability of something going wrong with the performance of a certain product or service. The other thing that can happen is that customers have certain expectations and if the performance of that product/service does not fit, it can damage the company business.

Physical Risk: reflects the concerns of the customers regarding the safety of a certain product or service.

Psychological Risk: represents the possibility of a product or service not to fit well in the life style and personal image of the customers. Most of the consumers still have insufficient information about the use of new technologies, which influences its adoption.

Social Risk: represents the risk that a purchase of certain product or service affects how the society will look to the user of it.

All this five different risks related contribute to another risk that is the possibility of adoption of alternative products or services. In the case of the taxi industry there are other means of transportation like individual cars, Metro and buses that can substitute the service provided by the taxi.

IV. Teaching Note

1. Case Summary

Retalis is a cooperative enterprise that was created in 1977 with the major objective of being the leader in the taxi transportation industry. Its core competences were mostly related with a radio service provided for the different cars in order to help them finding the clients, with no need to search for them along the Lisbon streets.

In the first years of its existence the company was able to grow exponentially and in the new millennium it reached 825 cars working with Retalis radio service. However, in the last years the company had been threatened, not only by the growth of one its competitors, Autocoope, but also by the resigning or quitting of some members that were unsatisfied with the company service. Those members were resigning because they perceived that the money spent to have Retalis radio service was not useful. In 2008 there were only 790 cars in Retalis and the company was providing over the radio on average 8 out of 26 services per car per day. For some members the money spent on the monthly fee did not have the expected return.

In 2008 a new direction was elected. Jose Dionisio was the president and he had to make a lot of changes in the company. Despite the leadership in the taxi industry, Retalis was facing many challenges: some members were leaving the company; the costs had been increasing in the last years; the information systems were outdated; there was unsatisfied demand; and the main competitor was growing, threatening Retalis leadership.

The president knew that something had to be done to change the course of the events. So he came up with the measure of reformulating the company strategy and the information systems. In the past measures were taken to beneficiate the associates by creating agreements to reduce their costs or increase their revenues (like the BP agreement to reduce the diesel costs or the advertisement campaigns to increase revenues). It was necessary to change that; Eng. Jose Dionisio thought that the measures taken should beneficiate first the end consumer, and consequently they would also please the associates.

So to please the customer, Eng. Jose Dionisio realized that the information systems should be updated. The radio system that had been used in the last 30 years was completely ineffective and there was unsatisfied demand. He did a research and found a GSM/GPRS third generation system that could be extremely useful for the company, in a way that it would reduce the time spent in the allocation of each service. Instead of the average 5 minutes in the old system, this new one would allow to allocate a service in 20 seconds.

Despite the obvious advantages of the system, the application of it in Retalis was not going to be easy. The investment to adopt the new service would cost 1400 Euros by car. And with the economic crisis in Portugal the associates did not have that money available to spend in the new system. But the factor that most concerned Jose Dionisio was the mentality of the associates. There was a work culture deeply rooted where some of the members had more than thirty years of affiliation. Most of the members looked at these new technologies with distrust and were afraid of change.

As the company was a cooperative, the members that did not want to adopt the new system could leave the company. This would have a huge negative impact in the company, because all its revenues were directly linked to the number of working cars.

So the president was facing a huge dilemma, whether the adoption of the new information system would be the right measure to make, taking in consideration that “*Technology is not an end, only a mean to an end. And that end is to please the people that are involved with the company, from the customer to the taxi drivers and owners and the operators. It is necessary to show them that the change is positive to everyone*” Eng. Jose Dionisio.

2. Learning objectives

The Case Study was done to be used in business strategy classes and the Teaching Note was designed in a way to allow the instructor to choose the concepts and frameworks that should be used in class. But, as it has an innovative component, it might also be interesting to analyze the case in a class related to innovation and the impact of new technologies in organizations.

The approach used in the Teaching Note aims to ensure that, after reading and analyzing individually and in class the case study, students are able to know how to:

1- Use common strategic frameworks and concepts to understand and evaluate the performance of the company in the industry, namely:

a) Applying the SWOT and PESTEL analysis to understand how the company is performing and the external factors that influence that performance.

b) Comparing industry attractiveness through the Porter Five Forces analysis.

c) Understanding through the Value Chain how the company is adding value to both associates and end-consumers.

2- Apply Innovation frameworks and concepts to provide a deeper analysis of the adoption of a certain technology, namely:

a) Understanding what reasons led the company to change, despite its leadership in the market.

b) Applying the S-curve framework to compare the performance of the used technology and the one proposed to implement.

c) Analyzing the risks inherent in the adoption of a new technology.

d) Using the Value Chain framework to understand how the new technology can create value to the associates and end-consumers.

3- Evaluate the dilemma of the company and give different options to adopt for the future.

3. Suggested assignment questions

The following questions are guidelines for the students' preparation of the class. The questions are structured for a strategy course, before the adoption of the new technology.

1) Analyze the internal and external environment of Retalis.

2) How attractive is the industry where Retalis is?

3) What are the problems and the dilemmas that the company is facing? What are the reasons that lead the company to this scenario?

4) "Technology is not an end, only a means to an end. And that end is to please the people that are involved with the company, from the customer to the taxi drivers and owners and the operators. It is necessary to show them that the change is positive to everyone", summarized Jose Dionisio

Analyze how the adoption of the new technology could create value to the players that are involved with the company.

5) You have been appointed as Vice-President in Jose Dionisio team. And the first meeting is about to begin in a few moments. The president wants to know from you the analysis of the adoption of the new technology, as well as your recommendations for the future of the company.

4. Class Plan

The following questions are suggested topics to address in class, in order to ensure a thorough analysis of the case study. In order for students to understand the strengths and weaknesses of their answers in the different assignments as well as learn where they can use the frameworks learned, it is important that the class topics are taught in an interactive way. The frameworks and time allotment for each assignment are suggested in the Blackboard plan.

Assignment Question 1

- a) Describe the overall performance of the company before 2008 and its strategic goals.
- b) Summarize the macro-environmental factors that have been influencing the company's performance.

Assignment Question 2

- c) Analyze Retalis competition in the transport industry.
- d) Compare Retalis primary activities with the other taxi cooperative companies in Lisbon.

Assignment Question 3

- e) Highlight the main issues and problems that were concerning Jose Dionisio and his team.
- f) Analyze the reasons that lead the company to propose the adoption of the new technology.

Assignment Question 4

- g) Compare the value that would be added by the adoption of the new technology with the value that is currently added.
- h) Analyze the risks that the company is subject to if it decides for the adoption of the new technology.

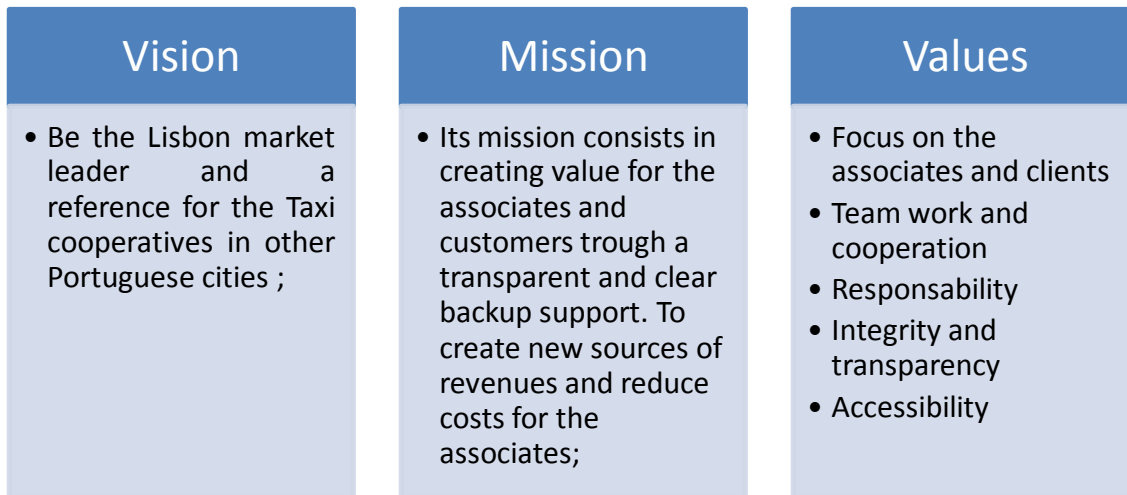
Assignment Question 5

- i) Summarize the analysis done and decide whether the adoption of the new technology is the right measure to take.
- j) Understand how the adoption of the new technology can create a source of competitive advantage and assess its sustainability.

5. Analysis

a) Describe the overall performance of the company before 2008 and its strategic goals.

In order to describe the overall performance of a company and its strategic goals, it is important to describe the company's mission, vision and values. In the Retalis case, the company works based on the follow vision, mission and values:



The vision of Retalis shows how the company wants to be seen by the society. It influences the employees' performance and motivation to work with the company. The mission is seen as a long term guide that hardly changes and influences the company goals. The values are also the way that the company wants to be seen and demand its employees to work on that way.

Having in mind the company vision, mission and values, the company formulates its own strategic goals:

- To provide more radio services for the associates;
- To provide stable and continue extra revenues for the associates besides the taxi service;
- To develop the service quality of the company;
- To create loyal individual and business clients;
- To improve the image of the taxi drivers among the society;

Finally, it is possible to analyze, based on the information supplied on the case, how the company was performing in the market before 2008. The internal analysis shows how the use of resources and management capabilities can have impact on the company results. For

this internal analysis, the SWOT analysis could be used, combining the strengths and weaknesses of the company with the threats and opportunities of the market.

Strengths

1. Powerful brand name in the industry. When people think in taxi, automatically think in Radio Taxis;
2. Market leader in the taxi industry;
3. Ability to create extra revenues for the associates and consequently for the company;
4. Agreement with BP to reduce the costs;
5. Well-defined company structure;
6. Simple cost structure;

Weaknesses

1. Advanced age and low education level of associates;
2. Company revenues all related to the number of cars;
3. Outdated technology systems;
4. Dependency on associates to make decisions;
5. Geographically limited business operations;
6. Price policy defined by the local government;

Opportunities

1. Possibility of developing in the near future the business of adapting and selling the system to other cities;
2. Local agreements with companies to create loyal clients;
3. To make agreements with the municipal council for transportation policies;
4. Development of marketing campaigns to attract new associates;
5. Increase of Lisbon population;
6. Increasing cost of parking in some Lisbon zones;

Threats

1. Increasing market share of Autocoope;
2. Creation of small taxi associations;
3. Increasing oil prices;
4. Economic crisis that lead population to use cheaper means of transportation;
5. Improvements made in Carris and Metro;
6. Taxi drivers and firms are badly viewed in the society;

In order to achieve its strategic goals and mission, the company needs to change its operations. The company weaknesses have a bigger impact on the results than the strengths, and due to the threats of the market, some of the strengths can disappear in the near future if Retalis continues to operate in the current way. In terms of identified opportunities, they can influence positively the business but it is not certain that they will generate revenues for Retalis.

So as a conclusion, the overall performance of the company is not satisfactory, since there are a lot of features that are weakening and threatening the company operations and improvements to be made.

b) Summarize the macro-environmental factors that have been influencing the company performance.

In order to understand the key macro-environmental factors that are influencing the activity of Retalis, it is important to consider the PESTEL analysis, with the aim of identifying the main external factors that influence the company's performance in the market and the demand behavior within the industry. All the factors that are influencing the company activity as well as the demand behavior are graphically summarized in Table 1:

Table 1

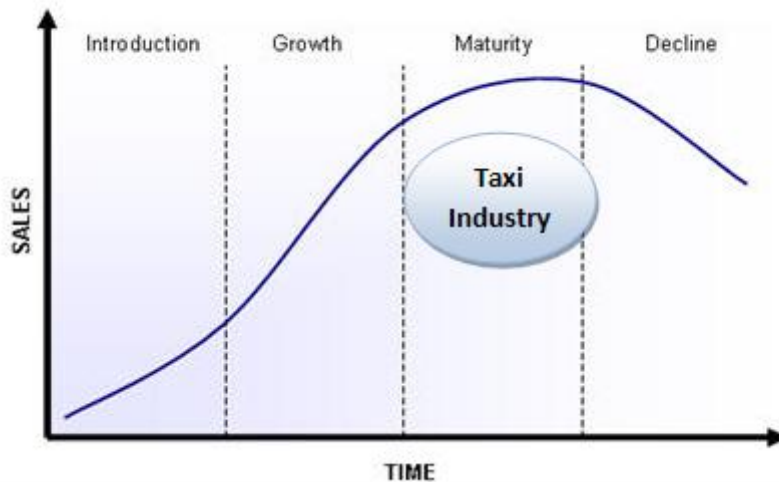
PESTEL Analysis	Description	Impact on Demand	Impact on Retalis
Political/Legal	<ul style="list-style-type: none"> -Municipal Council controls the prices to be charged by taxis to the consumer; - Controls the number of taxis that can circulate in Lisbon; -Municipal Council is giving incentives to the use of collective public transportation; -Continuous improvements in Carris and Metro in terms of quality and coverage; -Lisbon taxis only can take services inside the city; -Increasing taxes 	<ul style="list-style-type: none"> -With prices set by the government customers know what price to expect; -Consumers have more options to move from a place to another; - Are more willing to use cheaper means of transportation; 	<ul style="list-style-type: none"> - The government incentives make consumers prefer cheaper means of transportation; -The increased taxes make some affiliates leave the company to reduce costs; -Limited number of cars and covered area;
Economical	<ul style="list-style-type: none"> -Current world's economic crisis is reducing the buying power of consumers; -Taxi is seen as an expensive mean of transportation; -Banking national crisis affects the loans to make improvements in the company; -Increasing oil costs; 	<ul style="list-style-type: none"> -Demand currently decreasing, mostly due to the economic crisis; - Increase of oil prices makes potential customers prefer public transportation, instead of their own car; 	<ul style="list-style-type: none"> - With less clients the company revenues are decreasing; -Increase of oil prices makes the costs to grow and reduce margins;
Social	<ul style="list-style-type: none"> -Customers more quality demanding; -Customers more price-sensitive due to the economic crisis; - Taxi drivers are seen as tricky people; -Very competitive market; -Growth of Lisbon population 	<ul style="list-style-type: none"> - All the four initial factors have a negative impact on the demand for the taxi service; - The population growth increase the demand; 	<ul style="list-style-type: none"> - Less consumers make the revenues of associates decrease; - One associate bad act can be generalized to the entire company;

Technological	<ul style="list-style-type: none"> -Very low innovation technology; - Outdated technology systems; 	<ul style="list-style-type: none"> - More technological advanced society, demands better quality in the service; - Unsatisfied demand; 	<ul style="list-style-type: none"> -Associates unsatisfied with daily number of radio services; - Too much time spent in the allocation of each service;
Environmental	<ul style="list-style-type: none"> -Incentives and legislation against the CO2 emissions; -Energy consumption of the cars is extremely high; 	<ul style="list-style-type: none"> -Ecological society that tend to use less polluting vehicles; -High prices due to environmental rules; 	<ul style="list-style-type: none"> -Increased costs due the energy consumption; -High costs due to environmental rules;

c) Analyze Retalis competition in the transportation industry.

The first step needed to analyze the competition within an industry is to analyze its life-cycle. The taxi industry was already a mature market, where the different companies battled to allocate more services to their associates, in order to keep them in the company and attract new ones. According to the information provided in the case there are three main companies in the taxi industry that are in different phases of their lives, due to different strategies of their managers. But this framework can only be used to analyze the industry, so in the Graph 1 it can be seen the position of the industry in the respective life-cycle.

Graph 1



After analyzing the industry life-cycle, it is important to understand the structural attractiveness of the industry. The most solid framework to analyze this attractiveness is the Porter Five Forces.

In the Table 2 there is an evaluation of the taxi industry attractiveness through the application of the Porter Five Forces framework.

Table 2

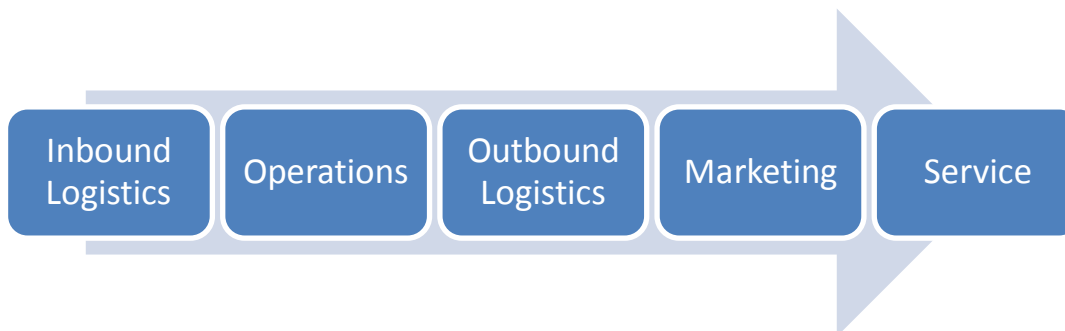
	Taxi Industry
Threat of New Entry	<p>Low</p> <p>With the current legislation, where the municipal council controls the number of taxis in Lisbon there is no threat to potential entrants in the industry. There are already 3 big companies operating in the business and there is not a big opportunity to new entrants. So the threat is low.</p>
Bargaining Power of Buyers	<p>High</p> <p>The current economic crisis makes the consumer rationalize expenses and cut in the consumption of products and services that are not indispensable. Also there are a lot of competition in the industry and a lot of taxis to choose from. Finally the consumer has several choices in terms of means of transportation. So the bargaining power of buyers is very high.</p>
Bargaining Power of Suppliers	<p>Moderate/Low</p> <p>In terms of suppliers in the taxi industry they mostly consist in the gas stations and the drivers of the taxis that are the ones responsible to supply the service for Retalis customers. The gas stations have a big interest to have such a big client that consumes their product daily and the taxi drivers also have a big interest to provide the service in order to win more money. So the power of suppliers is moderate/low</p>
Threat of Substitutes	<p>High</p> <p>There are several means of transportation that a person can choose from to move from a place to another in Lisbon. From his/her personal car, to metro, bus, tram and train. There are a lot of options to choose from and with the current crisis consumers tend to choose from cheaper means of transportation. So the threat of substitutes is very high.</p>
Competition Rivalry	<p>High</p> <p>The very high threat of substitutes and the very high bargaining power of buyers aligned with the huge amount of taxis in Lisbon make the rivalry among competition to be very high.</p>

Through the five forces analysis it is possible to conclude that the taxi industry attractiveness is low, mostly because of the high existing rivalry, the diversity of existing substitutes and also because it is already a mature market with a small potential to grow.

d) Compare Retalis primary activities with the other taxi cooperative companies in Lisbon.

In order to characterize the company’s business activity, it is useful to use Porter’s Value Chain. With the aim of evaluating how the company’s activities are performing, the company’s typical business is going to be compared with the main competitor, namely Autocoope.

Graph 2



The primary activities performed by Retalis and Autocoope are very similar. Since they are companies that only provide services to their taxi drivers, they are very limited in terms of value chain. In terms of inbound logistics their inputs are particularly the same, their suppliers consist in telecommunication companies that only supply the equipment for the central and for the cars to receive the services over the radio. Each company works with a different operator but there are not huge differences among them.

In terms of operations the two main companies work similarly: they receive the client call and announce the information over the radio similarly in order for the associates to apply for the service. The allocation process for the services works in the same way for both companies. Also at the operational level, these companies are responsible to search for agreements with individual clients and companies to create some new sources of revenues and loyal clients for the associates. In this chapter each company have different agreements that differentiate from each other, and Retalis has more diverse and specialized contracts, like the BP agreement, the advertisement in the cars and the Radio Taxis social found.

In what concerns the Outbound logistics, it consists in the communication with the client where the car number that is going to his/her address is specified and the predicted time that is going to take. This step works in the same way for both companies.

Regarding marketing, the two companies have been working differently in the last years. On one hand, Retalis has been doing nothing in terms of marketing, trusting only in the word of mouth over the taxi drivers to attract new associates. On the other hand, Autocoope dropped the affiliation fee and was reaching for the taxi drivers that did not belong to any

cooperative association. This difference made Autocoope grew a lot and be very close to Retalis numbers.

Finally the end-service consists in the transportation of a client from one place to another and it is performed by taxi drivers. Each service is different, there are services that are well performed but there are others that dissatisfied the customer. In the last case the main complains are the antipathy of the driver and the client's feeling that the driver took a longer way than necessary in order to charge more money. If the client feels the need to complain, he/she goes to the police and the driver can be suspended by the cooperative for a certain period of time. These acts can damage the company image, because one bad act from an associate can be generalized to the entire company, making it loose customers. On the other hand both companies provide credit services to the customers. In table 3 the core differences between the two companies and its effects on margin are analyzed.

Table 3

	Core Differences	Effect on Margin
Inbound Logistics	-There are not huge differences. The companies work with different telecommunication suppliers but the processes are very similar.	- As they work similarly, there is not a big impact on the companies' margins.
Operations	-Business processes to allocate services to the associates are the same. What differentiates the companies is the extra revenues processes and specific agreements.	- With more diverse agreements and sources of revenues provided, Retalis is able to attract new associates and maintain the existing ones. Has a positive impact on the margin.
Outbound Logistics	-There are not big differences between companies	-No Impact
Marketing	-Retalis has been doing almost nothing regarding marketing. On the other hand Autocoope dropped affiliation fee and was promoting among the taxi drivers that did not belong to any cooperative to attract them to the company.	- The marketing by Autocoope attracted several associates to the company and some Retalis associates that were unsatisfied. Has a negative impact on Retalis margin.
Service	-A taxi service is similar for both companies and is performed by the different associates. - The credit service provided by both companies are also similar.	-As there are a large number of associates, a bad act from one of them can create a generalization to the entire company. Affects the company margin negatively.

e) Highlight the main issues and problems that were concerning Jose Dionisio and his team.

To understand the key issues and problems that were affecting the company it is important to analyze the threats that the company was facing at that time and also analyze the performance of the used technology systems through an S-curve analysis.

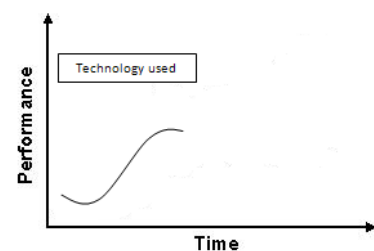
Based on the case there were several threats that were affecting the company business, namely:

Threats
Increase of Autocoope market share
Increase of oil prices
Outdated technology system
Associates leaving the company
Unsatisfied demand
Economic crisis

Some of these threats were directly linked to the company core competences and it was necessary to do something to change it. On the other hand, the increase of oil prices, Autocoope growth and the economic crisis were factors outside the company that should be taken into consideration in the adoption of a new strategy for Retalis.

Also it is important to highlight that the internal problems facing the company were related with each other. So, by upgrading the technology system to a modern and effective one it would be possible to satisfy better the demand and consequently the associates would not leave the company. They would have more radio services, and Retalis would differentiate from the main competitors.

From the analysis of the S-curve (graph 3), it would be possible to conclude that the technology used had reached its maximum performance, that it was outdated and that the company should move to a new one in order to satisfy better the customers and stop the associates resigning.



Graph 3: S-curve

f) Analyze the reasons that lead the company to propose the adoption of the new technology.

There are several drivers that can influence the adoption of a new technology by a certain company, namely: the appearance of new competitors, an external crisis, the appearance of a new technology, changes in the market and in the industry competitiveness.

In the case of Retalis it was a combination of these main drivers that made the company president Eng. Jose Dionisio think of the possible adoption of a new system that would replace the one that had been used in the last 30 years. In table 4 it can be seen how the main drivers influence the company on the adoption of the new technology.

Table 4

Drivers	Influence
New Competitors	Low
External Crisis	Moderate
New technology Performance	High
Changes in the Market	Moderate
Industry Competitiveness	High

In the last years there were no new taxi entrances in the market and the public transportation offered by the government was already well covered. There were several barriers imposed by the government to the entrance of new taxis in Lisbon (the 3550 taxis were more than enough for the demand required), consequently the possible entrance of new competitors were not a big threat that was concerning Jose Dionisio. So the influence, of possible entry in the industry, was **low** for the adoption of the new technology.

An economic crisis is always seen as an event that interrupts a period of stability and requires the adoption of practices different from the ones being performed. In 2008 there was a serious economic crisis in Europe and Portugal was not an exception. Several companies were closing and unemployment was really high. With the economic crisis, people spend less money where they can and the impact in Retalis could be high, because the taxi transportation is not an indispensable good. With the current technology there was unsatisfied demand that was switching to the competitors or to other means of transportation. The company could not take the risk to lose more clients. A change in the way that the company operated was necessary. So the influence of the economic crisis was **moderate**.

The Radio System in Retalis was supported by a completely obsolete more than 30 years old technology. It took a very long time from the call made by the client for the car to arrive in the required address. And the process of allocating the service was susceptible to several flaws, untruths and mistakes. There was a historical of lies made by the taxi drivers saying that they were in a certain place and they were not, just to receive the service. Also the register of the address could be done wrongly and consequently the service would not be delivered. With the GSM/GPRS system all this threats would be reduced, because the system would allow to deliver a service in 20 seconds, the localization of the nearest car would be automatic and the address of a client would be already on the list. The new technology performance could beneficiate a lot the company's activity so the influence in the decision was **high**.

The market change topic is related to the economic crisis and the new technology performance because it is a consequence of them. The market is always changing and currently with new technologies and the economic crisis the clients are getting more demanding in terms of quality. They require a good service in order to see their money spent in a service that they liked. So the influence of the market change was **moderate**.

Finally the industry competitiveness had a **high** influence in the management proposal of a new technology. Autocoope had been growing a lot in the last years and it was threatening the leadership of Retalis in the taxi industry. Also the Portuguese government had made some improvements in the collective public transportation (Carris and Metro), like the quality improvement of buses and metros or the covering of more Lisbon surrounding areas. Thus, public transportation was stealing clients on comfort, functionality and quickness ground.

So the different drivers had an influence in the new technology adoption proposal, but some of them had a bigger impact than others, due to the external environment that was influencing the company business.

g) Compare the value that would be added by the adoption of the new technology with the value that is currently added.

In order to analyze the impact of the new technology adoption in Retalis, it is important to compare its value added with the value that was previously added by the used technology. The adoption of the GRSM/GSM system would have an impact on both primary and support Retalis activity. In terms of primary activities the impact will mostly be seen in operations and in service. Regarding the support activities the main impact would be seen in the technology development and human resources management. As the old system was already discussed

and analyzed in question d), it is important to analyze how the GSM/GPRS system would create value for the associates and end-users of the service.

The GSM/GPRS would have a huge impact in Retalis operations. It would enable the company to allocate more than one service at a time in a better, more efficient and effective way. Instead of receiving the clients address and communicate it over the radio for the associates to apply in a long confuse and sometimes problematic way, the system automatically identifies the nearest car. The driver has up to twenty seconds to apply for the service. If he does not press any button, the service passes on to the second nearest car and so on. The system adoption would create value for Retalis, its associates and clients in different ways but all of them inter-related. That was the main goal of Jose Dionisio, in a way that the technology adoption was not an end by itself, only a mean to an end and that end was to please the people that were involved with Retalis. In table 5 the value added to the different players involved with the company can be seen.

Table 5

	Value Added
Clients	<ul style="list-style-type: none"> -Spending less time over the phone waiting to talk to an operator; -Reduction on the time and money spent waiting to know which car was allocated to him/her; -As the service is quicker there is no need to go to the streets looking for a taxi;
Associates	<ul style="list-style-type: none"> -More than one service at a time means that there will be more services available over the radio; -More radio services allow associates to increase revenues and reduce costs (there is a lower need to drive along the city looking for clients, which means that there would be a lower oil consumption and a lower threat to accidents); -The automatic allocation of services deletes the historical of lies and makes the allocation fairer; -Clients would prefer Retalis due to its effectiveness and efficient service which would also increase the demand for the associates;
Retalis	<ul style="list-style-type: none"> -Opportunity to create a differentiation and consequently a source of competitive advantage; -The quicker allocation of service makes the clients happy and might turn them loyal to Retalis; -More services over the radio makes the associates happier and consequently they will not fell the need to drop Retalis; -By creating a more efficient and effective service, end-users would prefer Retalis and this might attract new associates to the company.

The new technology adoption implies a change on the company's strategy. Since its foundation, Retalis was mainly focused on the creation of extra revenues or agreements that benefit directly the associate. It was not an inappropriate strategy, in a way that the associates are the ones that bring revenues for Retalis. Although in the last years, this strategy was not enough because it did not bring any benefit for the end-consumer of the service provided by Retalis. With the adoption of the GSM/GPRS system there was a change in the company's strategy. It was not only adding value for the associate but also for the end-consumer of the service.

h) Analyze the risks that the company is subject to if it decides for the adoption of the new technology.

In the adoption of a new technology there is always the uncertainty element, where innovation does not create the expected final benefit or even create social and economical losses for the customer. There are five main types of interrelated risks that contribute to customer resistance in the adoption of a new technology: financial, performance, physical, social and psychological risk. These different risks together contribute to the risk of adoption of alternative services that affect directly the company business.

In the Retalis case the adoption of the GSM/GPRS system is subjected to some of these risks in a different way as it can be seen in table 6.

Table 6

Type of risk	Risk Level
Financial Risk	High
Performance Risk	High
Physical Risk	Low
Social Risk	Low
Psychological Risk	Moderate/High
Adoption of Alternative Services Risk	Moderate/High

In the adoption of the new system each Retalis associate needs to spend 1400 Euros to buy and install the equipment in his taxi. In times of crisis it is an high investment, especially for those that have more than one taxi working in the firm. First there is the risk that some of them decide to leave the company because they do not find it worth to spend that amount in

the new system. Also there is the risk that, after the adoption of the new system, the associates demand a short payback period for their investment. But it is known that, after the adoption of a new technology, there is a learning process before it works at the maximum performance. So if the associates become unsatisfied with the new technology, they would start to leave the company, making the level of financial risk **high**.

In what the performance risk is concerned, it is related to the financial risk. The GPRS/GSM looks better than the currently used system but if the expectations of the associates are at high level, they will demand results since the beginning of implementation. And that would not be possible because there is the introduction phase where they need to learn out to work with it, before the maximum performance of the system is reached. These high expectations can make some associates unsatisfied with the system and start to leave the company. So there is a **high** performance risk.

In what the physical and social risks are concerned, they are **low** to Retalis. The new system is perfectly safe and for those that purchase the system it only means a different way to operate in order to get the services over the radio system. And if the system is adopted, society might even look at taxi drivers differently, because the system will show some expertise.

Finally the psychological risk represents a **moderate/high** threat for Retalis. Most of the company associates have more than thirty years of affiliation, a low education level and an advanced age. They look at this new technology system with distrust, do not identify themselves with the system and do not see it as a solution for the company's problems. By adopting the system some of them can leave the company because they do not find the system worth it.

i) Summarize the analysis done and decide whether the adoption of the new technology is the right measure to take.

In the previous class topics both the internal and the external environmental situation were analyzed, through several frameworks and Retalis proposal to adopt the GSM/GPRS system was discussed.

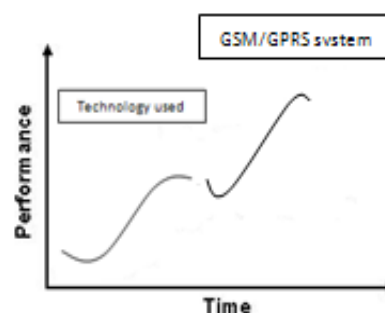
Regarding the internal analysis, Retalis is the biggest cooperative enterprise and is characterized for having a radio service that has the ultimate goal to add value to its associates, by providing more services to them with no need to drive along the city searching for clients and to create new sources of revenues. Retalis had also the goal to satisfy the end consumer, through a practical, quick and effective service. But the company's performance was not going well, it had been losing associates and clients were unsatisfied because the radio service was not effective and was completely outdated. There was also an historical of

lies between the associates when they were applying for a service that was causing troubles and worrying Retalis.

In the external analysis it can be highlighted that the Lisbon taxi industry is a very competitive market and it has a big control from the municipal council in terms of prices and limited geographical area of operation. There were 3500 cars (including Retalis, Autocoope, Teletaxis and individual owners) and the demand for them is not very high. Moreover, Retalis main competitor in the taxi industry, Autocoope, had been increasing its market share, due to a reformulation in the company and an effective marketing campaign to attract new associates, which was threatening Retalis leadership. Also, due to the economic crisis and improvements made in means of transportation like Carris and Metro, potential customers prefer to use cheaper means of transportation that allow them to save money. Finally, the increase in oil prices was affecting the entire industry, because it was an indispensable input and consequently the costs of the activity were increasing drastically.

All internal problems aligned with external threats made Retalis management propose the adoption of the GSM/GPRS system. It was a modern and effective system that would allow the company to distribute more than one service at a time and eliminate the historical of lies that was creating problems. The system would automatically identify the nearest car, so there was no need to discuss it. Also in the clients perspective the system would allow to save time and costs, because the time spent on the phone asking for a service would decrease from an average 5 minutes to 20 seconds.

The S-Curve provides a useful framework to compare the performance of the currently used system and the GSM/GPRS system. In the graph 4 can be seen how the new technology evolves in terms of performance when compared with the previously system. In the beginning there is all the learning process which can be difficult. After that the knowledge is acquired and the performance can grow a lot, creating a source of competitive advantage for Retalis.



Graph 4: S-curves

Despite the performance benefits in terms of allocation of services, Retalis should be aware of the threats that the adoption of this system would create. For that it is important to compare the main opportunities and threats that the company would have if it decides to adopt the GSM/GPRS system:

Opportunities:

- More effective system might attract new associates for the company and keep current members.
- Creation a better image of Retalis and its drivers in the market.
- Increasingly satisfied clients for the same price can create a source of competitive advantage.
- By being the first one to implement the system, Retalis can then outsource to other cities.

Threats:

- High investment needed to implement the service aligned with the economic crisis can make some associates leave the company.
- Traditional working culture can be an obstacle for the new system implementation.
- Advanced age and low education level of associates makes them look to new technologies with distrust and they might also leave the company.
- Competitors can easily have access to a similar system in the market and copy it.

This should be the basis of the class discussion for the adoption or not adoption of the GSM/GPRS system. Even though some opinions may differ, Retalis should adopt the new system not only because it improves the company's performance but also because it creates a source of competitive advantage. Also if Retalis does not move ahead, other competitor might adopt the system and create its own competitive advantage and gain the related benefits. Even if some associates leave the company and consequently the company's revenues go down, in the future and after the learning process, Retalis will rise again in terms of associates and become the most attractive company in the industry to work with for several years.

Regarding the recommendations for the company, it should always try to update it systems in order not to repeat the past mistakes and should also do two different marketing campaigns: one to attract new associates by showing the advantages of the GSM/GPRS system and another to the end-consumer to show the quickness and advantages of using Retalis taxis instead of the competitors and substitutes. Finally, after the GSM/GPRS is completely operational and working closer to the maximum performance, Retalis should try to outsource it to other Portuguese cities. This would not only be beneficial for Retalis in the creation of a new source of revenue but also to the other cities companies, because although

similar systems are easily accessible in the market, Retalis knowledge of the system would accelerate the learning process and the results would appear faster.

j) Understand how the adoption of the new technology can create a source of competitive advantage and assess its sustainability.

There are three main types of strategies that can lead to a company's competitive advantage: cost, differentiation and focus strategy. With the adoption of the GSM/GPRS system Retalis is investing in a new technology that will differentiate and improve the quality and create value for the service provided, when compared to the competition.

By being the first taxi cooperative to adopt and update the technology systems, Retalis would create an impact in the market that would create a recognition and attract to the company more associates and clients. Because the associates would get more services over the radio and consequently their revenues would increase and costs would decrease. Regarding the clients they would have a faster service with lower flaws for the same price. So, being the first company to adopt the new technology would create value to the company, its associates and clients, creating a source of competitive advantage.

However, it is necessary to analyse if the competitive advantage would be sustainable in the future. So it is important to analyze the rarity, immitability and subsitutability of the service provided by the new technology use:

-Rarity: Retalis would be the first company to update the technology systems to a more efficient and effective one, which would create an impact on the way that the market would look to the company. Also they would acquire knowledge in the operations management that the other companies do not have. But it is important to notice that technology is always evolving, and if Retalis wants to keep leading the industry, it is necessary to currently update the systems in order to better satisfy the demand.

-Inimitability: The GSM/GPRS system is available for the other companies in the market; since it was not a product developed by Retalis but from a company specialized in this type of communications. Retalis competitors can, easily, get access to a similar system in the market if they have the necessary budget to invest. But the competitors did not have the same number of associates of Retalis, and it was going to be harder for them to collect the necessary investment. Also there is a transition period from a system to another, and when the competitors are updating its systems (if they decide to), Retalis would already be working with it and creating an impact on the market that would be harder to imitate.

-Substitutability: it is an issue that will continue to threat Retalis. The GSM/GPRS system might improve the service quality and create a competitive advantage when compared to the other taxi cooperatives. But on the other hand the current Portuguese

economic crisis is leading customers to use cheaper means of transportation, which is threatening and stealing customers from the taxi industry. So regarding the substitutability, Retalis service will continue to be threatened by other means of transportation and, in spite of the better service provided, there are a lot of players in the taxi industry that might replace Retalis service.

So as a conclusion, the new technology adoption can create a competitive advantage for Retalis via the service differentiation and it might be sustainable in the next two years if it is well released in the market. But in order to keep the leading position in the industry, Retalis should be continuously updating the technology system in the future in order not to repeat the mistakes of the past (keeping the same system for thirty years) and lose their competitive advantage.

Finally, as it was already recommended in the Class Plan question i), it is important to highlight that although similar systems with similar functionalities could easily be accessible in the market, Retalis should try to outsource the system to other cities. And this action would be advantageous both for Retalis and other cities companies. On one hand Retalis would be creating a new source of revenue and consequently increasing its profits, on the other hand the other cities companies would see results of the adoption faster, because Retalis knowledge would be transmitted to them which would accelerate the learning process.

6. Blackboard plan, suggested teaching methods (role playing, written exercises), suggested time allotment for each major discussion focus

The following blackboard plan is a basic ground for instructors to build their approach to the case. The goal of this plan is to adjust the case analysis to the class themes and topics. Therefore, instructors should use the analysis that suits better their course, allocating the respective time for each question. Teaching notes are living documents that should be changed and built accordingly to the experience from the use of the case in class.

Topic	Theoretical Contents	Literature Review	Extra Topics	Time Allotment
a)	SWOT, Mission and Vision	2.3; 3.1	-	10 min
b)	PESTEL	2.1	-	8 min
c)	Porter Five Forces	2.2	Industry Life Cycle	10 min
d)	Value Chain	6.2	Key success factors	8 min
e)	SWOT, PESTEL, S-curve	2.1; 2.3; 5.1	-	8 min
f)	New Technology adoption drivers	6.1	-	7 min
g)	Value Chain	6.2	VRIO	10 min
h)	Perceived Risk	7.2	-	7 min
i)	S-Curve, Strategy Implementation, SWOT	4; 5.1	Anthony's Pyramid; McFarlan Matrix	15 min
j)	Competitive Advantages, Sustainability	3.2	Strategic Clock	7 min

Topic	Teaching Goal	Teaching Approach
a)	Use the SWOT analysis to understand the company strengths and weaknesses. Highlight the company mission and vision to understand its goals.	Ask the students to make a general overview of the Retalis main goals and then analyze what are the company main strengths and weaknesses.
b)	Describe the external macro-environmental factors that influence the company's business through a PESTEL analysis.	Draw the six components of the PESTEL analysis in the board and ask the students to list for each component the main factors that influence Retalis activity (8 min to make the list).
c)	Use the Porter Five Forces to analyze the company external environment and the industry attractiveness.	Briefly explain the Five Forces analysis goals and ask a student randomly to analyze each point of the framework. Then openly discuss with the class the industry attractiveness and situation (6 min to hear the students and 4 to discuss the industry attractiveness).
d)	Use the value chain to highlight how the company main activities are creating value for the customers.	Draw the four activities in the board and ask the students to describe how Retalis activities are adding value for the associates and customers (5 min to listing the factors and 3 min for evaluation).
e)	Highlight the main threats, opportunities and problems that the company has been facing in the last years. Understand what lead Retalis to that situation.	Openly discuss which were the main problems of Retalis and ask the students to highlight the main reasons that lead to the specific situation.
f)	Explain the main drivers that influence a company for the adoption of a new technology.	Show a slide with the different possible drivers and ask them which one influenced the company (2 min to explain the drivers; 5 for discussion).
g)	Use the value chain to see the impact of the new technology in the company main activities and how it can add value compared to the competitors.	Openly analyze how the new technology has an impact on Retalis value chain and compare it to the previous value added by the company and its competitors (5 min to discuss impact and 8 to do the comparisons).
h)	Highlight the main risks that the company can face after the adoption of a new technology.	Briefly explain the mains risks that can occur after the adoption of a new technology and ask students what represents the major threat in Retalis case (2 min for explanation and 5 for discussion).
i)	Analyze if the company should embrace the new technology adoption or not. Draw a conclusion from the topics previously discussed. Use the S-curve to evaluate the new technology performance.	Show a slide with the S-curve framework and explain it. Draw in the board the pros and cons of the technology adoption and ask the students for their arguments. After that, conclude what is the best option for the company and other possible scenarios. (2 min to explain S-Curve; 8 min for listing factors, 5 min for decision and other scenarios).
j)	Explain how Retalis can create a competitive advantage and sustain it with the adoption of the new technology.	Ask students if the technology adoption will create a source of competitive advantage and if it will be possible to sustain it.

7. Conclusion

Retalis was created with the ultimate goal of helping, through a radio service, its associates in the search of clients with no need to drive along the city looking for them. At the same time the client would also benefit from the service because it would be easier and faster to get a taxi. As the years went by, the company became the leader in the industry and the technology system used to allocate the services had remained the same for the last thirty years which originated a deeply rooted working culture among the associates. For several years Retalis did not have a strong competition, but after the shift of Autocoope strategy, the scenario had changed and in the beginning of 2008 the market share of the two companies was not that different due to an effective campaign made by Autocoope to attract new associates.

With technology evolution, consumers demand better quality in the products and services that they use. The Retalis radio system was the same since the foundation. It had several flaws and was completely outdated, in a way that it was only possible to allocate one service at a time and it took on average five minutes in the allocation. This originated unsatisfied demand due to the time spent on the phone waiting to know which car was coming to get his/her address and unsatisfied associates that started to resign from Retalis because the amount of radio services performed by car were a very small percentage of the total services.

The company's decision to propose the adoption of the GSM/GPRS system was then caused by the problems related with the dissatisfaction of both associates and customers. This system also represented a change in the company's strategy, because it was not only taking measures to benefit the associate but also adding value to the clients. Despite the notorious performance improvement brought by the new system there were several risks that the company would face, mostly financial, physiological (characteristics of associates with advanced age and low education) and also regarding the performance expectations. The characteristics of the associates, mostly the advanced age and low education level were a barrier for the new system adoption. In fact, they could leave the company if they disagreed with they did not agree with the measure and with that weakness even more Retalis leadership.

However, something must change in the company and the technology improvement was extremely necessary for the future performance. By being the first one to adopt the new system, Retalis would create a source of competitive advantage that could bring advantages and results in the medium future and it could also make possible to expand the business to other Portuguese cities, via outsourcing.

So it can be concluded that Retalis should adopt the GSM/GPRS system in order to improve its position in the market and also gain a competitive advantage over its competitors. But it would only be possible, if the associates cooperate with each other and aligned the measure with an effective marketing campaign to attract new associates and increase awareness in the market. Also in the future, the company should try to outsource the system to other cities in order to get a new source of revenue.

8. What happened

The situation discussed and analyzed during the dissertation took place in 2008. So it may be useful for the instructor to have information on what was the Retalis decision and its main consequences and decide whether to share it with students.

Retalis decided to adopt the GSM/GPRS system in December of 2008. But it was not an unanimous decision, in a way that some associates were against it, claiming that the new system adoption was very expensive and that it was only a way to get money from the associates with no practical results. In fact, a “rebellion” newspaper against the president Eng. Jose Dionisio was created, which showed the intensity of the opposition. By the end of the year, 130 associates left the company, arguing that the new system adoption was a bad decision. This represented a setback for the company, because one of its goals was to increase market share, and with the resigning of these members, it was losing even more share.

The launch of the system took place in June 2009, after some months of studies, preparation of the entire fleet and training for the taxi drivers. The results were not immediate and some of the associates started to complain about it. During this period there were several meetings where it was explained that the results could only be seen in the medium/long term.

Finally, after some months of working with the GSM/GRPS system, it was possible to see some results: the percentage of the new system services over the total services increased (6 out of 20 services); and the diesel costs did not decrease due to the increase of the oil prices, but the consumption did reduce.

In the company's perspective, the results were good but not as good as expected. In its perspective, the service provided was better than the competition and better than the previous one, so they increased the entrance fee from 1000 Euros to 5000 Euros, which meant that some of those who were interested to enter into the company gave up, because they could not afford it. Also the company did not make an effort on the marketing campaign

to the clients, and currently the major part of the population does not know about the Retalis change and improvement.

When the new president Pedro Lopes joined Retalis, the entrance fee was reduced to the 1000 Euros and with that measure, the company was able to attract new associates and reached 700 cars in the end of 2011.

In 2011 Retalis also launched the Ebooking system where individual and business clients that use frequently Retalis service could create a personal account and have in their computers a program that would allow them, with just one click, call for a taxi with no need to use the phone. Finally in 2012 Retalis is planning to introduce the Internet service, where every client, and not the ones that frequently use the company's services, can go Retalis website and ask for a taxi or book it to a certain hour.

The competition felt the need to improve its information systems too, and Autocoope is currently planning to adopt a system similar to the one being used by Retalis.

V. Conclusion

During these six months of working in this dissertation there were several aspects that contributed to the acquisition of knowledge. It was very interesting to understand how a taxi company like Retalis works and all the processes that are behind a taxi service. Most people that call for a taxi and after a couple of minutes have a car at their door, do not have the slightest idea about all the backup processes that made it possible. Also, in this time of crisis it was exciting to understand what Retalis has been doing to fight against it, aware that the taxi service is more expensive than other means of transportation. Instead of cutting costs or other savings, the company invested in the quality of service to attract new associates and create loyal clients. Although this could be nonsense, something had to be done to fight against the decline of the company in the industry.

One of the main challenges during the dissertation was the search for information regarding the company and the industry. There is not that much information available in the Internet and in addition the information provided by the company was contradictory in what some numbers were concerned, especially information from the past and from the competition. But at the same time it was very demanding and interesting to analyze the contradictions and find the most reliable information.

Finally it was interesting to apply frameworks and concepts learned during strategy classes to an industry where they had never been applied or, at least, where there is no literature about it.

Regarding the challenges for the company, it is important to highlight that the adoption of the GSM/GPRS system was important for the company but it did not solve all the problems. Other challenges continued to exist. The economic crisis and the continued increase of oil prices are two problems that kept to affect the industry and that make it less profitable and attractive. The total services per day are decreasing and the costs of the activity are higher than ever, decreasing the profits of the different taxis and consequently the profits of Retalis and other similar companies.

If I had more time, it would have been interesting to analyze how the industry can bypass these problems. It could be important for the industry to develop a marketing campaign, showing that taxi transportation, does not have to be expensive, if people adopt the taxi together, which means, sharing the taxi with friends or neighbors to go to work for example. Also, in the company's perspective it could be attractive to expand or outsource the new system to other cities, in order to increase brand awareness and revenues.

Finally, in a further development of my work it would be interesting to compare the activity of taxis that have a radio system and others that do not, in terms of services and kilometers per day. Also, the comparison of the activity of different cities could be explored, in order to have a general overview of what is happening nationally.

As a general conclusion, it was very interesting to write this dissertation, where I learned and understood how the taxi industry works and applied the concepts and frameworks acquired in class to the analysis of the industry and the decision of adopting the GSM/GPRS system by Retalis.

VI. References

Articles:

Bower, J., & Christensen, C. (1995). "Disruptive technologies: Catching the wave", Harvard Business Review;

Callaham, John (2007) "Patterns of Technological Innovation";

Chandy, R. K., & Tellis, G. J. (2000). "The Incumbent's Curse? Incumbency, Size and Radical Product Innovation", Journal of Marketing, 64, 1-17;

Christensen, C. M. (1997). "The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail", Cambridge: Harvard Business School Press;

Christensen, C. M. (2003). "The innovator's Solution", Boston: Harvard Business School Press;

Hamel, Gary (1996), "Strategy as Revolution", Harvard Business Review, Jul. Aug, 69-82;

Hayes, R.H., Garvin, D.A. (1982), "Managing as if Tomorrow Mattered", Harvard Business Review, May. June, 70-79;

Hoffman, A. J. (1999), "Institutional Evolution and Change: Environmentalism and the U.S";

Kaplan R.S., Norton, D.P. (1996), "Using the Balanced Scorecard as a Strategic Management System", Harvard Business Review, 75-85;

Kaplan, R.S., Norton, D.P (1996), "Linking the Balanced Scorecard to Strategy", California Management Review pp 53-79;

Kaplan, R.S., Norton, D.P. (2000), "Having Trouble with Your Strategy? Then Map It", Harvard Business Review, 167 -176;

Mintzberg, H. (1987). "The Strategy Concept I: Fives Ps for Strategy", California Management Review, 30 (1), 11-24;

Mintzberg, Henry (1994), "The Fall and Rise of Strategic Planning", Harvard Business Review, 72, 107-115;

Porter, M. E. (1985). "Competitive Advantage: Creating and Sustaining Superior Performance", New York: Free Press;

Porter, M. E. (1996). "What is Strategy?", Harvard Business Review, 61-78;

Rogers, E. M. (1995). "Diffusion of Innovations", New York: Free Press;

Stone, R. N., & Grønhaug, K. (1993). "Perceived Risk: Further considerations for the marketing discipline", European Journal of Marketing (27), 39-50;

Utterback, J. M. (1994). "Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change", Cambridge: Harvard Business School Press;

Books:

Drucker, Peter F. (2000), *Desafios da Gestão para o Século XXI*, Editora Civilização;

Porter, Michael E. (1980), *Competitive strategy: Techniques for analyzing industries and competitors*, The Free Press, N.Y;

Richard N. Foster, *Innovation: The Attacker's Advantage* (Summit Books, 1986), 316 pages: Chapter 4, "The S-Curve: A New Forecasting Tool";

Wheelen. L., & Hunger, D. L. (2006). *Strategic Management and Business Policy: Concepts and Cases*, Pearson.

Websites: Webgraphy

- **Camara Municipal de Lisboa** – "Lisboa: O desafio da Mobilidade":
<http://cidadania1xmob.tripod.com/mobilidade.pdf>, Consulted on 10/12/2011
- **Fórum Auto**, "Estatística Número Carros a Circular em Lisboa":
<http://forum.autohoje.com/forum-geral/46799-estatistica-numero-de-carros-circular.html>, Consulted on 05/10/2011
- **Auto-Inforna**, "Estatísticas":
<http://www.autoinforma.pt/estatisticas/estatisticas.html?MIT=36458>, Consulted on 05/10/2011
- **Carris**, "Indicadores de Actividade":
<http://www.carris.pt/pt/indicadores-de-actividade/>, Consulted on 06/10/2011

- **IMTT, “Centro de Documentação”:**
http://www.imtt.pt/sites/IMTT/Portugues/CentroDocumentacao/RepertorioIMTTanteriora2008/Estudos/Documents/IMTT_TaxisEstudo2006.pdf, Consulted on 10/10/2011
- **INE, “População residente (N.º) por Local de residência, Sexo e Grupo Etário”:**
http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&indOcorrCod=000611&contexto=pi&selTab=tab0, Consulted on 05/10/2011
- **Metro Lisboa, “Procura de Transportes Públicos”:**
<http://www.metrolisboa.pt/Default.aspx?tabid=114&SY=2002&EY=2008>, Consulted on 06/10/2011
- **Metro Lisboa, “Procura do Metro”:**
<http://www.metrolisboa.pt/Default.aspx?tabid=115&SY=2002&EY=2008>, Consulted on 06/10/2011
- **MongaBay, "Crude oil, avg, spot price chart”:**
http://www.mongabay.com/images/commodities/charts/crude_oil.html, Consulted on 05/10/2011