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# A METHODOLOGICAL APPROACH IN ORDER TO SUPPORT DECISION-MAKERS WHEN DEFINING MOBILITY AND TRANSPORTATION POLITICS

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## ABSTRACT:

This paper provides an innovative approach regarding the provision, at an early stage, of technical support to decision-makers in order to define Mobility and Transportation Policies. The opportunity provided by using adapted SWOT analysis (among others) to identify weakening or potential factors, and how to take advantage of the results, always using a cause and effect approach and a coherent policy in order to obtain high quality and effective studies and politics.

The methodology relies on a two-stage process. In the first stage a summary diagnose is provided, using inputs which are supposed to well characterise the territory's mobility patterns. Afterwards, in a second phase, these are inter-related and evaluated in order to build-up a table of options, where policies are proposed with a careful attention to its qualitative cross impact with the measures and objectives intended to be achieved.

**Keywords:** Mobility; Transportation; Land Planning and Policies; Decision-making Support

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## RESUMO:

Este artigo pretende fornecer uma abordagem inovadora referente ao suporte técnico prestado ao decisor político numa fase preliminar na definição de políticas de Mobilidade e Transportes. A possibilidade de adopção de técnicas do tipo SWOT (entre outras) permite a identificação de pontos de tensão e de janelas de oportunidade, com a qual é possível elaborar propostas concretas com vista a tirar proveito dessas análises, garantindo a análise cruzada dos seu impactes de forma a obter a máxima eficiência quer de estudos quer de políticas que venham a ser implementadas.

A metodologia assenta num processo de duas fases. Numa primeira fase é feito um diagnostico baseado em dados recolhidos com vista a caracterizar os padrões de mobilidade existentes no território. Posteriormente, numa segunda fase, os dados são cruzados entre si e avaliados de forma a construir uma tabela de opções, onde são propostas opções políticas, com especial ênfase no seu impacto cruzado qualitativo nas medidas e objectivos a atingir.

**Palavras-chave:** Mobilidade; Transportes; Políticas de Planeamento Regional; Suporte à Decisão

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## 1. INTRODUCTION

Mobility can be defined by “the need of the human being to participate in different activities”. However, since those activities are often in separated places, there is a need of moving around from place to place in order to participate on those same activities (Santos, 1994).

On the other hand, the alternatives offered by the transportation system (both infra-structures and services) constraint the activities and mobility patterns the citizen might enrol. Therefore, the mobility concept integrates the reasons capable of influencing the individual participation in certain activities, but also, their impact in the transportation system.

In order to act on the individual mobility it is important to understand which elements the citizen is exposed to, and to which extent those elements impact the option for a certain trip, for a certain path, destiny, or for selecting one specific mode of transportation . The variability of reasons for an individual’s own choice is huge. Even if we could find a relationship between choice and social status, or familiar situation(among other reasons), there would still remain much to explain.

If we want to think on the subject of mobility policies, the complexity increases even more. Common mobility issues can be linked with different kinds of actors such as presented on table 1.

These actors have clear individual interests related with their own easy, cheap and safe mobility that usually brings negative aspects like low costs coverage (in case of public transport), a high level of urban space consumption and loss of urban image (private transport abuse, illegal parking), and even environmental damage.

The decision-maker is usually on the other side of the problem. In his mind he feels that he has to attend to the individual problems of those who elected him. But in a global context those individual demands are not only incompatible among them, but also are generally unsustainable from the society point of view (Viegas, 2002)

Still it, is possible to achieve better quality of life by managing mobility issues in a sustainable way.

Transportation and mobility related subjects are the support infra-structure of society. Transportation facilities such as roads, railroads and public transport services, produce cross impacts in other areas of equal social, environmental and economic importance.

In fact, there is a widespread acceptance that integrating decisions policies of land use planning, transportation and environment policy is crucial for

**TABLE 1**  
**Common mobility issues by kind of actors.**

Citizens of all status	Shoppers	Residents	Politicians
Congestion	Proximity Parking	Traffic Noise	All the other issues but with higher pressure
Parking		Residential Parking	
Public Transport			

sustainable development. For instance, the final report of the ECMT-OECD project on Implementing Sustainable Urban Travel Policies states:

“Sustainability requires that policy-making for urban travel be viewed in a holistic sense: that planning for transport, land-use and the environment no longer be undertaken in isolation one from the other... Without adequate policy co-ordination, the effectiveness of the whole package of measures and their objectives is compromised (European Conference of Ministers of Transport, 2001 op. cit. Geerlings and Stead, 2003).

As a consequence, every action, every, decision made in the transportation area has to have a cross impact somewhere in the society.

As a matter of fact, the feeling of the cross impact between transportation policies and other areas are so important that they are being more and more discussed. At European level for instance, there are more and more projects on field to study this plurality between transportation policies and others.

The “Civilising Cities” initiative for instance, aims to demonstrate practical examples of the contribution that the transport sector can make to significantly improve the quality of life in urban areas in conjunction with other sectors (Jones, Lucas and Whittles 2003)

Other important studies in this area besides Civilising Cities are ARTISTS (Arterial streets towards sustainability), DANTE (Designs against the need to travel in Europe), ECMT/OECD (Implementing strategies for sustainable urban travel), ECOCITY (urban development towards appropriate structures for sustainable transport), EST (Environmentally sustainable transport), POSSUM (Policy scenarios for sustainable mobility), PROPOLIS (Planning and research for land use and transport for increasing urban sustainability), PROSPECTS (Procedures

for recommending optimal sustainable planning of european city transport systems), among others.

As shown throughout this paper, the transport system has a major role in society. All these projects report to a group of measures where very often the transportation policies assume the lead role or at least a supporting role.

The truth is that with increased economic and social relationships, the demand for more mobility will lead to a congestion increase if nothing is done to integrate these different components, and with a more environmental awareness, people demand a more and more sustainable mobility, putting pressure to the decision-maker.

But it is not only welfare that depends on a sustainable transportation police. The importance of a region and her capacity to be a reference in a regional context depends on its transport infrastructures.

All regions have one or more cities that act as major reference nodes. Usually it is in these nodal-cities that the largest investments in transport infra-structures are made. The reason besides the social welfare is to ensure the competitiveness of that centre. To ensure access to that centre activities, economy, culture.

The Portuguese Metropolitan areas are illustrative: Lisbon and Oporto are very strong central cities in their regions. All are served with radial (and circular) transport infrastructures that ensure access to those centres. (Políticas Urbanas. Tendências, Estratégias e Oportunidades, 2003)

Considering Leiria as an emerging municipality, with a strategic importance in a regional context, it is interesting to verify that its recent growth is coincident with the implementation of a strong transport infra-structures like the A1 and A8 freeways which ensure



a fast access to Aveiro, Lisbon and Oporto. These infrastructures grant the possibility of Leiria to be linked to the most important metropolitan centres of Portugal. In this case, transport infra-structures not only answered to the normal growth of the urban area but also had a determinant part in its affirmation as an important urban centre.

As important as the integration of policies and projects, is the monitoring and evaluation of their effectiveness at the transportation and the non-transportation sectors. This management technique ensures that even a weaker policy can be corrected in time, giving a positive result to society (Jones, Lucas and Whittles, 2003).

To ensure the success of these kinds of policies, Geerlings, H. and Stead, D. (2003) suggests that there are eight determinant factors:

- vertical integration policy integration between different levels of government;
- horizontal integration - policy integration between sectors or professions within one organisation (i.e. inter-sectoral);
- inter-territorial integration - policy integration between neighbouring authorities or authorities with some shared interest in infrastructure and/or resources;
- intra-sectoral - policy integration between different sections or professions within one department (integration between different environmental sectors such as air quality and noise or biodiversity, for example, or integration between different transport sectors such as roads, public transport, cycling or walking);
- policy co-operation, at the lowest level, which simply implies dialogue and information;

- policy co-ordination, policy coherence and policy consistency - all quite similar, which imply co-operation plus transparency and some attempt to avoid policy conflicts (but do not necessarily imply the use of similar goals);

- policy integration and joined-up policy - includes dialogue and information (as in policy co-operation), transparency and avoidance of policy conflicts (as in policy co-ordination, policy coherence and policy consistency) but also includes joint working, attempts to create synergies between policies (win-win situations) and the use of the same goals to formulate policy.

The same author also identifies barriers to the use of these policies, such as narrow perspectives, weak or perverse incentives, lack of management mechanisms, professional and departmental culture (adapted from Cabinet Office (2000). Regarding supportive conditions for the success of these policies the author also points out, political commitment, establishment of strategic policy frameworks, existence of coordination capacity, measures to anticipate and solve conflicts and administrative culture that promotes cross-sectoral cooperation.

Another condition, considered as very important for the success of these policies, regards the way these policy measures are implemented. A single policy by itself has low probabilities of success, while a package of coherent measures can be much more effective. (May, Jopson and Matthews, 2003)

In the case study presented in this paper, there will be an effort to prepare a good package of guidelines that are supposed to boost the importance of an average municipality in a high competitive region.

## 2. THE PORTUGUESE CONTEXT ON MOBILITY MANAGEMENT

To better understand the Portuguese context on mobility and transportation policies, it is important to present in a very synthetic way the status of the transportation infra-structure in Portugal.

The road network was somehow poor until the 1980s. It was only by the end of the eighty's and during the ninety's that there was a massive effort to create a freeway network throughout the country, emphasizing the connectivity of the littoral (more densely populated) and then slowly starting to built on the interior.

Today there are still a few major investments to be made (related with the National Road Plan 2000), but most of the road infra-structure is in place.

There is absolutely no doubt how important these projects were to the country. Not only by re-structuring and developing new links to the major urban centres, but also by developing a more cohesive country network that brought the interior closer to the littoral, and therefore partially contributing to solve the problems of social exclusion and desertification recorded at those regions.

The rail network has been lagging behind when compared with the roadway system. The railway plan dates from the 1980s, and a new one is starting to take shape. The high-speed train project has been very much discussed at the present moment as an important transportation element both to Portugal and Spain.

In what concerns the air transport and maritime transport, there are three main airports in Portugal, one in the north (Sá Carneiro Airport) another in the south (Faro Airport) and another in the centre (Portela

Airport or in the future a new complementary one maybe in Ota). The maritime ports will still be mainly the same (Leixões, Lisboa, Sines).

So, its possible to say that in a national perspective, the country starts to be more connected and its transport infrastructure begin to consolidate and contribute to the territorial organization. Therefore, regional and local plans and policies start to be more and more relevant.

The legal instruments available are poor in what concerns mobility and transportation. The DL 380/99 is the main legal instrument to define the spatial structure of the territory. In what concerns to mobility issues, it demands for the definition of the area of intervention of plans (nationally, regionally or locally), requesting the identification of transportation networks, the objectives, means, and actions that should be accomplished, and finally requesting the definition of urban occupation through time.

The existent laws can be the background for what could be the foundations of a far more complete mobility management policy and related instruments. One of the objectives of this paper is to present the need of evolve in the direction of a more coherent and complete legal background on the issues of mobility and transportation.

Mobility plans are becoming a more and more important tool not only to define the physical characteristics of a road together with its road system, but also to explicit their functional objectives (What is their propose? What is the level of service? Which measures can be taken to improve functional operation if necessary? How can the transportation system enhance the region's economic activities?). Another relevant fact in the Portuguese context is



the timing. Right now it has passed 10 years since the first generation of the municipal master plans. As a consequence, they will have to be revised in short term. This brings an excellent opportunity to introduce new policies, and new methodologies of evaluating and organizing the territory; the local plan is increasing its importance as a major municipal management tool.

One of the things that is being put forward at the municipal context is the inclusion of a set of principles. For instance in Lisbon context, it is being proposed the incorporation of principles regarding the right to mobility, the priority to the citizen, the need of managing the system, the need to define clear objectives to be achieved by the system, and finally the need of monitoring the system and to be able of correct it in real time.

The introduction of the prior goals and objectives in master plans brings in a completely fresh vision to the sector, supporting the need to invest more resources in mobility management, more resources in finding the links among transportation sector and other vital sectors of urban area.

As important as the Municipal Master Plans, are the Metropolitan Authorities of Transportation already with a legal framing (DL 268/2003). Until now there are only two metropolitan areas in Portugal which are Lisbon and Oporto, however it is in course a process to create more metropolitan areas, or, in a smaller dimension, regional associations of municipalities.

To form these metropolitan areas, municipalities must get together with their neighbours, and this of course means having a coherent and common policies.

To act as regional entities (metropolis or other regional associations), accessibility among them and with the surroundings is essential. It is important to understand

the flows of people and freight, and manage them. Is important to ensure sustainable policies regarding transportation, which will positively influence the competitiveness of the region, and its social welfare. Therefore, it is possible to point out two major challenges right now: one at a local level and another at a regional level.

An effort should be placed on building a common strategy common to the region by one side (a strategy to be built using diverse themes and one is for sure transportation and mobility), and another at a local level, where the regional interests must be taken into account but, more important, the local interests must be promoted.

### 3. CASE STUDY

The case study main goal was to develop a strategic framework on mobility and customize it accordingly to the municipality of Alcobaça main characteristics and needs. This strategic document is traditionally inexistent in Portugal, and it is very important as a first step that will lead to the elaboration of a mobility plan for the municipality.

The objective was to provide the decision-maker with an instrument of evaluation of strategies to be taken in the municipality, by analysing strengths, weakness and opportunities in the municipality prior to the elaboration of a mobility plan and trying as much as possible to include the recommendations of the municipal master plan (PDM), but at the same time, being an important source of information in what concerns mobility and transportation issues to the PDM. The fact that the Municipal Master Plan is under a process of revision enhances the capacity of interaction and of mutual knowledge.

In order to develop this strategic mobility plan, different sectors of the municipality were analyzed (both the transportation sector and the non-transportation sector), and the cross-links impacts were analysed. The document was organized accordingly to two different chapters: a chapter of diagnosis and another of political options; and a final chapter that should provide to the decision-maker different packages of interventions, pointing out which could be taken, and how each package would affect the results of other options.

The next point will detail the methodology developed as well as its practical implementation, through the development of the “options of mobility to the municipality of Alcobaça”.

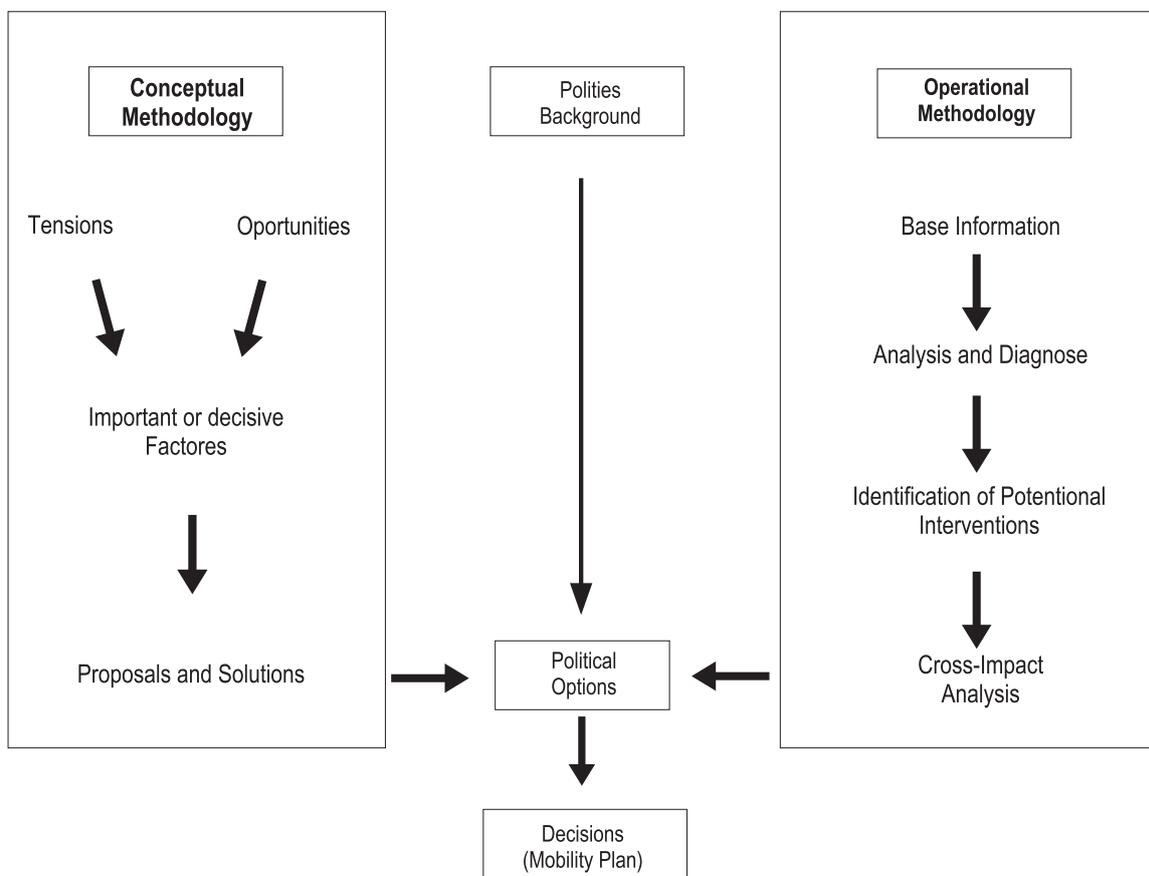
### 3.1 MAIN CONCEPT

The concept developed and now proposed is described schematically bellow.

In order to reach the final goal (decisions on mobility / mobility plan) two different streams of actions need to be taken: 1. develop the conceptual methodology, 2. develop the operational methodology. Both are interrelated, but need to be clearly framed. The technical issues of the conceptual methodology and operational methodology get together into the Political Options since they play an important role in guiding the decision-making process.

FIGURE 1

Conceptual and Operational methodology in order to reach decisions and set up a Mobility Plan (Gaspar, 2003)



The first objective of this strategic document can be pointed as follows: study the available information and collect other required information on the mobility and transportation issues of municipality and its surroundings in order to elaborate a diagnosis of the present situation.

After the diagnosis, it is possible to identify potential interventions, by order of importance, and more important, it will be possible to analyse the cross-impact of the interventions proposed, not only between themselves, but also regarding other sectors of the municipality.

Due to the specific attributes of the municipality, the analysis had to be made both at the municipality scale and the scale of the city of Alcobaça, the main town of the municipality.

There were three main objectives to which the proposals of potential interventions had to be linked

with (for the purpose of this paper, only the municipal scale will be detailed):

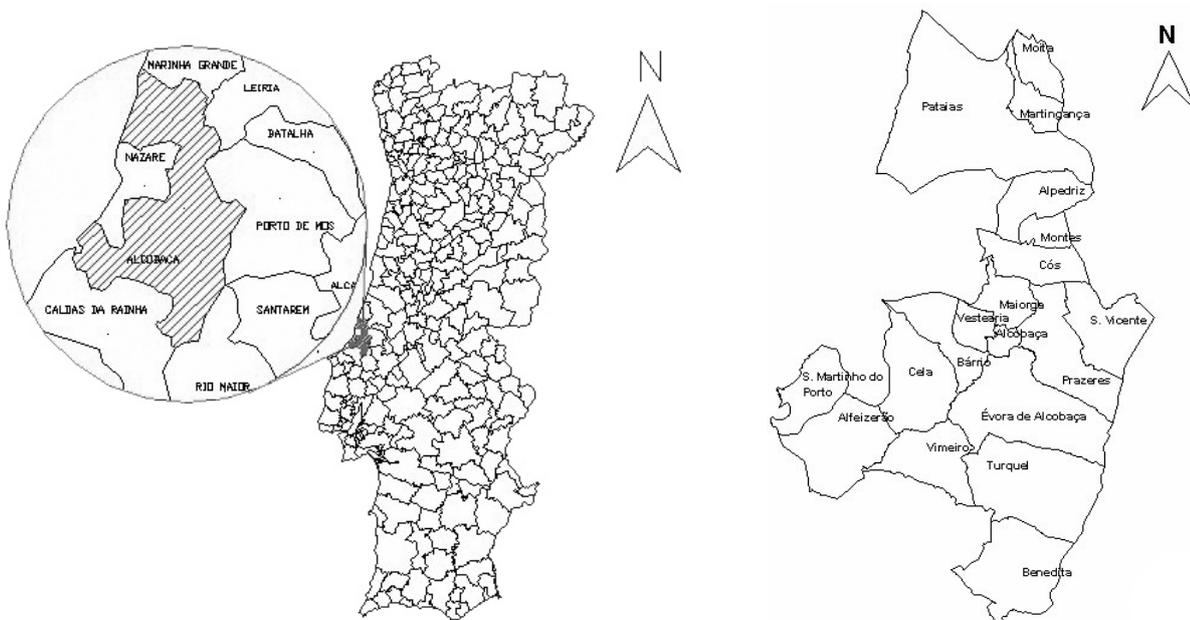
- The Intra Municipality relation
- Urban Parking in Alcobaça
- The territory competitiveness at a regional scale (West Region of Portugal)

### 3.2 SUMMARY CHARACTERIZATION OF THE MUNICIPALITY OF ALCOBAÇA:

Located at 100 km from Lisbon and 30 km of Leiria, it connects to the municipalities of Caldas da Rainha, Leiria, Nazaré (main regional poles of growth in the region). The municipality of Alcobaça is divided in 18 freguesias (the smallest administrative limit of Portugal, the English translation would be parish), it houses 53 000 inhabitants in its area of 409 Km<sup>2</sup>. The four most important parishes are Alcobaça, Benedita, Pataias, and São Martinho do Porto (Figure 2).

FIGURE 2

Location map of the Municipality of Alcobaça



### 3.3 METHODOLOGY, ANALYSIS, AND DIAGNOSE

At a municipal scale, analyses were made to achieve the following objectives:

- Understand the motives for intra and inter municipal trips;
- Identify the needs of Alcobaça citizens that made them go out of their municipality;
- Identify the main attracting poles of Alcobaça regarding visitors;
- Evaluate available transportation network, and what are its weakness and potentials.

At the scale of the City of Alcobaça, the analyses were made to understand the following:

- Identify the main attractores of the city regarding visitors (both at a regional and local scale);
- What motivates inhabitants of Alcobaça to look for other cities in other municipalities;
- How good is the road network and the public transport service in Alcobaça;
- What is the present state of the parking system in Alcobaça.

To achieve the objectives of the first part of the study (done at the Municipal scale) several techniques were used. In order to understand the main attractors and trip generators of the municipality, field trips were made, there were also done interviews with the

municipality's technicians, had been interviewed other information was retrieved from existing GIS databases of the municipality services, and from statistical data and, maybe the most interesting technique, was an analysis made to the CESAP inquiries.

CESAP inquiries are made by request of Instituto Nacional de Estatística (National Statistics Institute of Portugal), and present the list of several services and equipments, that may or may not exist in the parish. In case they do not exist, it must be indicated the natural choice where people go to look for them.

One of the first results of these analyses highlighted the attractive capacity of Alcobaça but also of Caldas da Rainha (Figure 3).

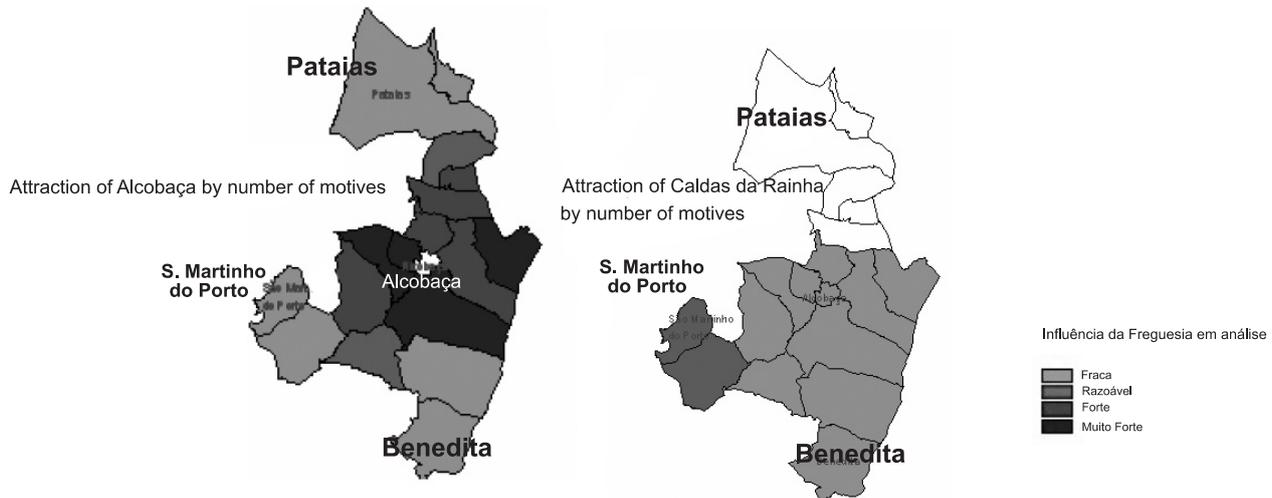
Due to its regional context Alcobaça is clearly divided into three sections: One in the North, with a close relationship with Marinha Grande and Leiria, another in the centre where the main attractor is the City of Alcobaça and finally another in the South with a clear relationship with Caldas da Rainha.

This highlights the fact that Alcobaça is under great pressure, and if measures are not taken in the short/middle term, there is a possibility of losing parishes to neighbouring municipalities. In fact that has occurred in the last years with the village of Martingança that used to be part of Alcobaça, and today is part of the municipality of Marinha Grande.



**FIGURE 3**

**Attraction of Alcobaça and its neighbouring municipalities**



The economic wealth of the municipality was also briefly analysed. It was possible to conclude that there was an interesting potential for industrial location and flourishing of existent one in the north and at the south region of the municipality. Once again, these analyses allowed assessing a clear distinction/fracture of the municipality between the north and the south of the municipality, even though the northern industry is slightly different from the south.

The tourism potentialities along the coast are a very important opportunity: São Martinho do Porto a beach with a tourism infra-structure implemented for some time and under a process of revitalization; as well as some areas at the northern area, which are still mainly untouched, and where it is possible to create a new points of interest. These are good examples of elements that play an important role at the municipalities' daily life.

Still on the topic of tourism, there is an ancient monastery in Alcobaça (located right in the centre of the city of Alcobaça), which is in fact the principal point of reference to the municipality. Right now there is a process undergoing to start an important revitalization of the monastery's surroundings.

These first analyses were still complemented with statistical data analysis regarding house to work/school movements, available from "Instituto Nacional de Estatística" (INE-National Statistical Survey Centre). The analysis returned similar conclusions, making clear the existent centrality of Alcobaça in the centre, and Marinha Grande/Leira and Caldas da Rainha in the south of the municipality.

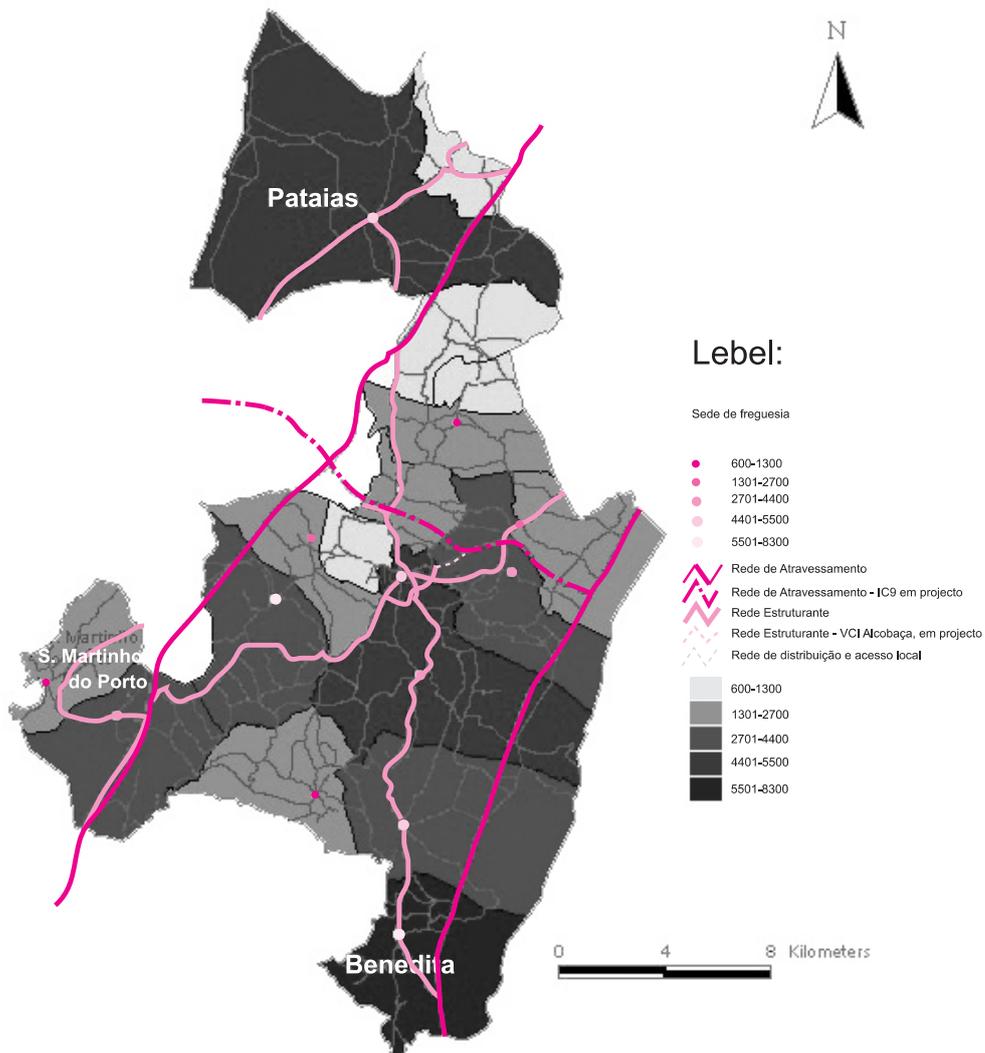
However the same analysis also shows that Pataias on the North and Benedita on the south are important secondary urban areas at the municipality's scale.

The analysis made to the transportation network, was structured in three different tasks: the road network, the public transport, and finally the railroad (Figure 4).

GIS was used in order to perform some of the road network analysis (field trips, survey data and other cartographic information were at the basis of these analysis). The first results suggested a hierarchical

organization of the network that was revealing of two major alignments (A8 and N1) mainly focused on regional circulation. At finer grain, a star shaped structure of National Roads, centralized in Alcobaca, was clearly playing a structural role road to the main city and to the municipality, connecting almost all parishes *via* Alcobaca.

**FIGURE 4**  
The Road Network Hierarchy





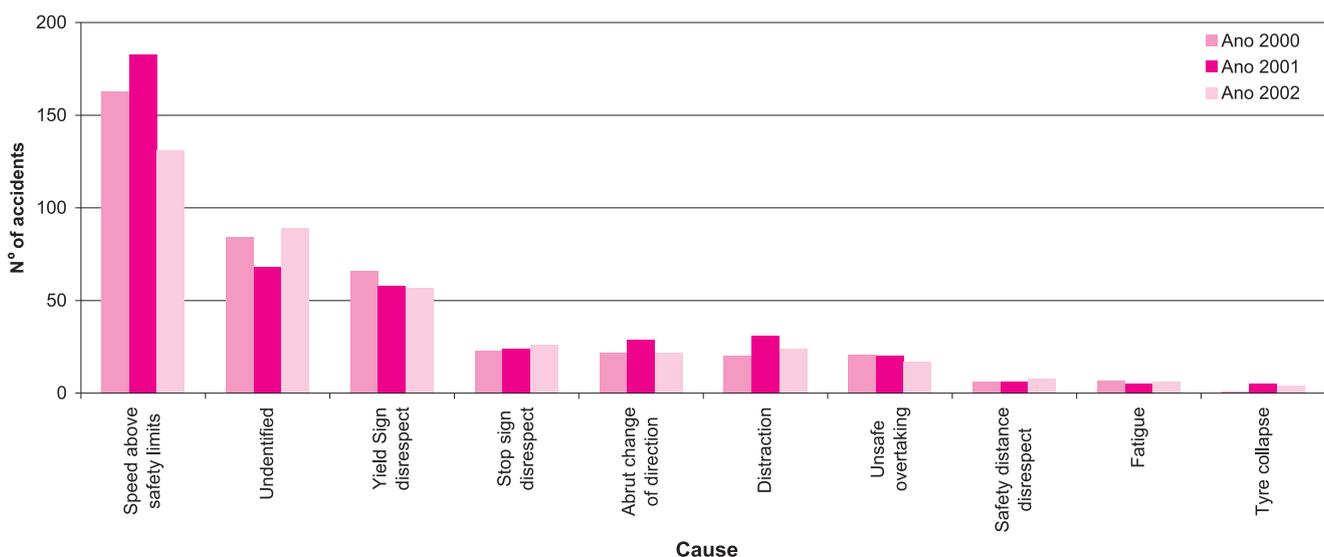
The A8 freeway is one of the most important structures of the region. Before its opening a few years ago, the accessibility of this region and the municipality was poor, in part because of the mountain terrain, and also because of the aging network. With this freeway, the parishes of São Martinho do Porto, Alcobaça and Pataias, get much more closer of Lisbon (not much more than an hour) and closer to the nearby municipality of Leiria (just a few minutes distance).

Another relevant point to be made is the centralization of the network in Alcobaça. That is positive from the point of view of the accessibility of/to the city, however, it brings difficulties to other connections and problems to the city itself, since like many other urban areas in Portugal the main roads crisscross the main urban/dense nucleus of the city causing unnecessary congestion problems.

In short term there will be two new roads, one is the VCI that creates a bypass around Alcobaça, solving partially of the problem previously pointed out and another is road to be built is the IC9, which will bring a new concept of accessibility, since it is an important East/West structure, making much easier some of the actual connections, specially at the Regional level. Other attributes of the network were analysed such as flows and accidents, making possible to identify some of the black spots of the network and the main accident causes (Figure 5).

An analysis to the charts of figure 5 allows identifying that excessive speed and yielding disrespect as main causes for accidents. However, excessive speed may result from driver abuse, while accidents caused by yield disrespect, may be as well caused by driver abuse or may be due to road conditions. In fact, interceptions without the minimum visibility distance are common in Alcobaça.

**FIGURE 5**  
**Main causes of road accidents**  
**10 Principal Causes of accident in Alcobaça Municipality**



Finally connectivity analyses were made to the network, resulting that all the main connections could be fulfilled, except one. The Benedita parish did not have any reasonable connection at a regional level, for instance a connection to A8. Since is one of the most important parishes of the region, with a strong economy, this in an important gap at the network.

The public transport analysis were made with close contact to the responsible of public transport operator and analysed at two different scales, one intra-municipality and other at a regional context.

Inside the municipality, the main users of public transport are students or elderly people. Being a relatively rural environment, there is an important spread of urban areas. This linked with low

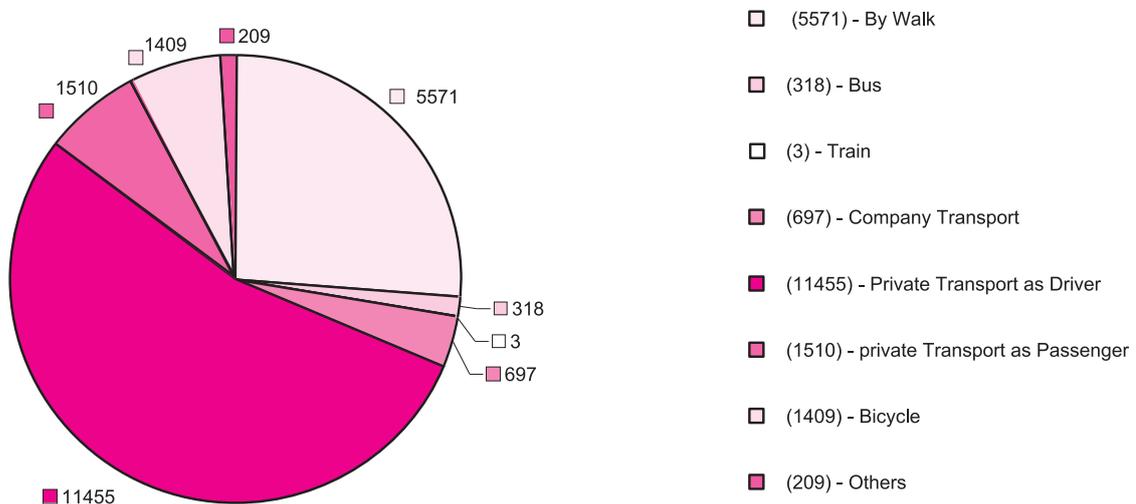
densification levels, brings natural problems to public transport. Also, predominance for the use of private transport, and an absence of parking policies, makes public transport assuming a secondary role, in the mobility patterns of the municipality (Figure 6).

At a regional level, there is still a good network of mid and long-distance public services, especially near the coast. The service offered at a municipal scale is reasonable, lacking however some frequency and better times of journeys to the services offered in the city of Alcobaça. In fact, the parish of São Martinho

FIGURE 6

Modal Split in the Alcobaça Municipality

Modal split for home to work trips of workers that work and live in Alcobaça Municipality





do Porto has better services than Alcobaça since it belongs to a different set of services offered by *RedeExpressos* the public transport operator in the municipality.

The rail network with a train-station near Alcobaça (“Linha do Oeste”) is an old railroad, with old vehicles. The central government already stated that by 2006 it will decide on the future of this railway. Right now, the service offered is poor and the role it actually has in the mobility system of the municipality is by now marginal. However, since there are stations in the centre of Caldas da Rainha and São Martinho do Porto, and because it seems possible to improve the connections to Alcobaça and Leiria, there is still some development potential associated to this infrastructure.

After the diagnosis, a SWOT based analysis was performed. All the main conclusions and facts taken from each area analysed were listed in a table, the columns of the table represented the most important municipalities namely of Alcobaça, Benedita, Pataias, São Martinho do Porto, the municipality scale, the region, the inter municipality links, and the municipality competitiveness (Table 1).

After that was done, most of the cells were filled up with special character-symbols that represented each fact/conclusion listed as a tension, opportunity, or subjects to be followed with close attention in a near future (it was still an indeterminate fact in what regards its impact). An extract of the table follows:

**TABLE 2**  
**Key factors and their corresponding impacts**

Key Factors	Alcobaça	Benedita	Pataias	S.Martinho	Concelho	Region	Intra Municipal Bounds	Competitivity
Generation and Attraction Potential								
<b>Municipality Analysis</b>								
There are three main atractores in the municipality: Alcobaça, Benedita, Pataias	■	■	■		■	●	●	●
Alcobaça, Benedita and Pataias manifest a strong influence to the other urban areas surrounding	▲	■	■		■	▲	■	▲
<b>Regional Analysis:</b>								
The city of Alcobaça as a weak capability of attraction	▲				▲	▲	▲	▲
There is a "cleavage" in the municipality. There are three main areas, one in the south with a strong relation to Caldas da Rainha, another in the North with a close relationship to Leiria, and finally a last one in the centre with a strong relation to Alcobaça.	▲	▲	▲		▲	▲	▲	▲

- ▲ Tensions
- Opportunities
- To be taken into account

With this technique, it was possible to evaluate the importance of tensions or opportunities in each analysed sector, and it was possible to identify aggregated conclusions. From there it was possible to determine the main tensions and opportunities.

A small sample of the results achieved follows:

- There were few urban areas determinant in order to achieve municipal cohesion, serving as anchor points to the remaining ones. However at a regional scale, their importance becomes diminished;
- The economic sector contains a group of opportunities, with high impact on the region. Both the industrial sector as well as the tourism sector are the ones with more potentialities;
- The new infrastructures of the road network (A8 and IC9) represent opportunities for the municipality. The quality of the access offered should be taken into account.
- The bad services offered by the railroad tend to diminish the opportunities such as station locations and low connection times.

### 3.4 TABLE OF OPTIONS

The table of options was set to structure and present very clearly the short, middle, and long-term actions that were proposed. An effort was made to have proposals to all the all the sectors analysed, and all trying to achieve one of the three objectives defined at the beginning of the study:

- The Intra Municipality relation
- Urban Parking in Alcobaça
- The territory competitiveness at a regional scale (West Region)

One of the objectives to fulfil with this table was to have a synthetic and easy to read tool that could be easily perceived by the decision-maker. The diagnosis report, also included at this study, was important but mainly directed to municipality technicians. The options report by the contrary had to be as specific as possible in order to be interesting to the decision-maker (and this was a main reason why this table of options need to be as clear as possible). The strengths of the solution were listed and fragilities taken into account with the proposal of complimentary systems (Table 3 presents an extract of the original table).

This table intended to issue two main subjects: 1 Municipality Intra-Relationship; 2. Territorial Competivity at a regional Scale; by using the most important subjects and cataloguing its short, middle, and long term Measures-Objectives-Desires.

As pointed at Table 3, in order to compile the most important information in a short and clear way to the decision-maker it was important to structure the interventions also using colour information. The result is a very clear and plain synthesis table, and this is a very powerful planning instrument when negotiating or transmitting this information.

Besides the table of options, a brief justification of the measure proposed and the cross effects it would provoke (positive and negative ones) composed the entire study. For instance regarding public transport, there was a brief explanation about the measures that should be taken to make public transport more attractive to different users.



**TABLE 3**  
**Table of options**

Subject	Short Term	Middle Term	Long Term
	(Measures/Objectives)	(Objectives/Desires)	(Desires)
Municipality analysis – Generation and Attraction Potential – Industry			
Tensions related to municipality fragmentation in the North and South		Strengthen Alcobaça Position	Grant Municipality cohesion
Industrial development and strengthening	- Pataias: Completion and valorisation of the present infra-structures	- Promotion of northern industrial capability based on excellent locations and accessibility	
	- Benedita: Economical analysis of the proposed business park	- Benedita connection to A8	
Municipality analysis – Generation and Attraction Potential – Tourism			
Under exploitation of the natural resources of the Littoral: São Martinho do Porto e Pataias	- Territorial Plan for São Martinho do Porto and Pataias - Interaction with the regional plan POOC	Development of two high quality tourism spots in Pataias and São Martinho	
Reinvent Tourism in Alcobaça Municipality	- Increased participation of the municipality of Alcobaça at the Tourism region of Leiria-Fatima.	- Expand the offer of tourism packages	Promote the municipality of Alcobaça and its potentiality in regional Plans
	- Increase the Internet portal of the Tourism-Region in order to make the municipality more appealing to the entire region	- Hotels and tourism equipments development	

Municipality Intra-Relationship  
 Territorial Competitivity at a regional Scale

## CONCLUSIONS

This paper aimed to expose the importance of mobility plans in regional and local policies. Being a fundamental element to the well-being of society and its citizens, the transportation system has cross impacts in many other sectors of society.

Simultaneously it was proposed a methodology was proposed to structure the analysis and proposals that will serve as guide lines to the technicians as well as their own modus operandi on how to communicate and interact with the different actors involved in setting up a mobility plan.

Those cross impacts are sometimes complex enough to be clearly perceived by the decision-maker. Therefore an auxiliary instrument is hereby proposed to support decisions even before plans are made.

With this methodology it is possible to help building a coherent policy with minor errors and with larger gains regarding the investments to be made.

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