

# **PERCEPTION OF POTENTIAL PARTNERS FOR CAR WITHDRAWAL FROM URBAN TRANSPORT**

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## **INTRODUCTION**

The main focus of this work is based on the concept – presented at the 8<sup>th</sup> Thredbo and published by Elsevier – of transport service quality and social responsibility oriented to coordinate stakeholders' interests in the specific productive chain involving transport-land use in a sustainable manner (that is: encouraging green transport alternatives - collective modes, cycling or walking).

The intention is to introduce two arguments. The first one justifies the adoption of public policies to encourage, at the managerial level, new design and arrangements of corporate citizenship to foster green transport use. The second presents the results of research carried out among the real estate companies and members of the developers' union of Rio de Janeiro, concerning their opinions and expectations with regard to the application of the concept in a proposal for accessibility provision by collective transport alternatives to serve traffic generators.

The central idea that the paper is intended to clarify is that, coherent with the principles of an effective and competitive multimodal policy, traffic generator buildings should absorb the costs of special collective transport services meeting their demand, converting a part of the compulsory parking lots into useful areas for urban enterprises with social and economic activities, justifying in this way the higher densities, without any negative impact on the environmental quality.

The application of this concept to shopping centres, replacing 50% of their parking lots, could produce an increase of up to 20% of their useful area, without any expansion of the total building area, increasing land productivity around 44 times and jobs generation by 76 times. Consulted about their interest in investing in this proposal, the developers expressed their intention to double their investments in social policies, representing nowadays just 1.3% of their revenue, as long as certain criteria are met, regarding which, from their point of view, the proposal developed by the Mobile Group/UFRJ performed very well. The 9<sup>th</sup> Thredbo presents two other papers (Martins et al. and Bodmer et al.) that are complementary reading to this one.

## **CORPORATE CITIZENSHIP: STRATEGIC PARTNERSHIPS**

Towards the end of the twentieth century, a new business attitude could be observed, which led the private sector to begin assuming social and environmental responsibilities. A brief account of the state of the art and practices will help to remind us of the principal occurrences that marked these business endeavors aimed at something more than mere economic concerns.

Large scale business engagement in environmental concerns first emerged in 1976, in the USA, as part of the movement under the banner of "*the crisis of confidence in American Business*", the basic conceptual foundation for which was laid at the Stockholm Conference of 1972, and reached an historic landmark with the United Nations Conference for the Environment and Development, held in Rio de Janeiro in 1992 (Vinha, 2000). Public perception of environmental problems and the drawing up of environmental legislation were the two key reasons for the environment to become an important issue for corporations (Banerjee, 2002).

Many advances came about, such as cleaner technology and reduced gas emissions, from the interface between economics and the environment. These benefits are considered more measurable, in relation to the interaction with society, because, for the companies, the impacts on the local communities are still uncertain (Banerjee, 2002). Popular dissatisfaction led major corporations to make a more serious commitment to society. Companies like Shell and Nike were unprepared, in the 1990's, to take consumer awareness into the boardroom (Holliday *et al.*, 2002). Shell suffered the most virulent attacks, when it declared its intention to scuttle its Brent Spar offshore platform and showed insensitivity to minority rights in its operations in Nigeria (Vinha, 2000). For Elkington *apud* Vinha, 2000, in the Brent Spar case, the public perception of the environmental priorities created a bigger controversy than did the ecological impacts themselves, and marked the beginning of a new era, when business has to focus on the "triple bottom line" of the economy, the environment and society.

The growing public awareness of the social and environmental impacts of economic growth and the development of legislation in the areas of social welfare and environmental protection have led many companies to try and estimate the social and environmental impacts of their business operations. Incidents regularly crop up that focus the attention of the public and companies on this issue, and all multinational corporations nowadays have some form of environmental policy and community relations policy (Banerjee, 2002).

This new style of business management, attentive to environmental and social questions, has been given the names "corporate citizenship" or "corporate social responsibility", because it brings together the companies, civil society and the state, in order to aid the development of society as a whole, through action aimed at eliminating or attenuating the greatest deficiencies (McIntosh *et al.*, 2001; Oliveira, 2001).

Recent business engagement has reexamined the relationship and come down in favor of the social benefit and environmental conservation and has earned the companies the valuable support and approval of consumers and workers (Pinto, 2003). This change of stance has exposed an existing conflict, whereby the adoption of an 'engaged' posture precludes the other 'economic' one, as if profit orientation and social performance were mutually exclusive (Pinto, 2003). The concept of corporate citizenship is often interpreted as encouragement to "do good" and to reward the stakeholders with the satisfaction of being moral, ethical and responsible, rather than with economic and competitive value.

In Peliano, 2001, according to business people, the reach of many of the activities is not sufficient to bring about changes in the general state of inequality of certain groups, leaving them forever dependent. Whatever the extent of the private sector contributions and social projects, it is wrong to create the expectation that this could take the place of the public authorities in providing social welfare. Take an extreme case; that of a state of siege or war. With regard to the social and environmental demands, the company may perform better than its competitors if it is able to absorb the costs of these negative external effects in a strategic manner.

Some authors, such as Halal, 2000, *apud* Pinto, 2003, and Hillman *et al.*, 2001, interpret the concept allowing the possibility of satisfying the two aims, that of profit and that of social performance, by involving all its primary stakeholders: capital suppliers (shareholders), employees, customers, suppliers, community residents and environment. The relationship between the company and its stakeholders then becomes a partnership, which can be economically productive, because value is created through the collaboration. This partnership can employ the abilities of the various participants to the mutual benefit of all, with activities carried out not with the purpose of being socially responsible, but to ensure that each stakeholder remains a wealth and valuable part of the productive chain and, consequently, to distinguish it from the competition.

The social responsibility activities focused on the primary stakeholders are aimed at adding economic value to the company and consolidating permanent ties. These are more effective, both for the beneficiary group and for the company itself, for instead of being identified as a company that "does good", it is identified as a company that knows how to get the most out of its productive chain and share the benefits with its stakeholders.

In trying to implement management models that are mindful of these social and environmental issues, many municipalities, through their administrative bodies, implement ISO 14001, the environmental management standard that applies to the environmental factors that an organization controls and influences. The city of New York, in the USA, uses the standard in order to meet the regulations regarding natural resources, community problems and building air quality (Krut *et al.*, 2000). The city of Hamilton-Wentworth, in Canada, uses the standard for the treatment and collection of water, the distribution of the services, waste management and regional planning. City authorities in New Zealand, the United Kingdom and Australia have also adopted the standard for their procedures (Bekkering *et al.*, 2000).

## **REAL ESTATE CORPORATE PARTNERSHIP TO ENHANCE URBAN MOBILITY**

Various undertakings with regard to managing urban mobility have been tried in a number of countries. These are frequently aimed at the employees in large traffic generating hubs. However, it is often noted that, without incentives or an adequate legal basis, it is impossible to sustain these initiatives or achieve a commitment to them.

Maxime, 2004, criticized<sup>1</sup> the fact that the management of employee mobility is not specifically addressed in ISO 14001. The criticism is pertinent, because it raises questions as to the very interpretation and application of the standard. Unfortunately, at present, all understanding of the management of environmental impacts is at the discretion of the companies themselves, with no legal obligations applying.

Many European companies have already attempted to implement, or have implemented de mobility plans for their employees (*green commuter plan* or *green transport plan*). Their reasons for taking such steps range from the need to minimize environmental impacts, saving energy and avoiding congestion, to the question of image, ensuring the continuity of their ISO 14001 certification and benefits to the internal and external atmospheres, leading to improved relations with the employees and with society in general.

Case studies in Spain and Scotland reveal similarities among a variety of activities, ranging from factories to hospitals. In the case of Hewlett Packard, in Edinburgh, Scotland, the expansion of its industrial plants and an increase in the number of employees brought a need for more parking spaces (Rye *et al.*, 2000 and Lopez-Lambas, 2004). Due to its corporate culture, the company created a working group to look into the question of mobility. This group liaised with other interested parties to introduce improvements to the factory's accessibility, which led to improvements in the level of service provided by alternatives to the automobile and changed the perceptions of the users. Information about the transport services was also kept up-to-date. The management expected to reduce the number of automobiles by 10% over 3 years, but when the program had been implemented, they were already expecting a reduction of 15%. If a corporate culture can be an advantage, the lack of one represents a barrier, because the suitable conditions are not created (Rye *et al.*, 2000).

Both in Spain, which shows great potential for the development of plans to manage mobility, and in Scotland, the need was noted for the municipal authorities to create suitable conditions for their implementation, by improving the public transport and planning the land use. It has already been perceived that the expansion of industrial areas with abundant highway accessibility but limited public transport is compromised, due to the saturation of the access roads and the lack of available land to use for parking space (Rye *et al.*, 2000 and Lopez-Lambas, 2004).

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<sup>1</sup> "Standard ISO 14001 should be completed by the need to incorporate personal mobility, including that of employees, in actions to control environmental impacts".

The problems caused by the need for car parking space in order for the functioning of corporate activities to become viable are not limited to Europe. In Brazil, many civil inquiries and lawsuits have arisen in the city of Rio de Janeiro owing to problems of mobility, particularly since 1997. The city's leading construction and real-estate companies have encountered difficulties in getting approval for, and in the functioning of large-scale urban undertakings, particularly in relation to the urban communities of the city's Southern Zone, a region of great density of traffic generating hubs, because of the saturation of the existing road infrastructure that would result or results. The enterprises in question are generally shopping centers, hospitals, luxury residential condominiums, leisure complexes, etc.

Beaumont et al., 2002, in the TDM Encyclopedia, 2004, also note that many communities in the United States choose to prohibit large-scale commercial undertakings, because of their negative effects. They see them as attracting automobiles, having large areas of parking space, occupying the arterial roads of the urban periphery and, in the case of the super-stores, taking away business from the traditional local commerce. As defined by McMahan (apud Beaumont, 2002), "*People love what's inside super-stores. They hate what's on outside.*"

## **THE CONTEXT OF UNSUSTAINABLE MOBILITY**

The urbanistic problem of unsustainable mobility calls for the promotion of strategic partnerships in transport-land use.

Within the current Brazilian urban environment, the legislation heightens the possibility of conflict between companies, principally real-estate developers, and the urban communities, above all with regard to mobility. The urban legislation, after all, induces exclusive dependence on highways, with emphasis on the automobile. In Brazilian towns and cities, one is not permitted to build without incorporating parking spaces within the area of the building. Thus, the concept of ecological efficiency<sup>2</sup>, as it relates to environmental carrying capacity, though already applied in various productive sectors, has still not been assimilated in urban development. In providing garage space, every new building further stimulates the attraction of the automobile (as it effectively generates value for users of this means of transport).

According to the legislation governing the use and occupation of land in Brazil, the responsibility imposed on the entrepreneurs to minimize these negative impacts is limited to the construction of parking spaces, taking into consideration only the static capacity (the space required to store the vehicles attracted). There is no obligation on the part of the entrepreneur regarding the dynamic capacity, which is the road space requirement in order to

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<sup>2</sup> Eco-efficiency is being achieved by the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life cycle, to a level at least in line with the Earth's estimated carrying capacity (WBCSD, 2005).

handle the number of vehicles predicted for the undertaking, which is considered to be the responsibility of the public authorities (Silva *et al.*, 2004).

This situation restricts the entrepreneur's production capacity, while compromising the quality of the environment around any large-scale undertaking. In the case of *shopping centers* in the metropolis of Rio de Janeiro, for example, the area necessary to store all the automobiles is equivalent to almost 50% of the total built up area. In addition to the direct and indirect impacts of the requirement to provide garage space, there is also the very low return generated by this kind of land use. Every square meter used for parking space earns a monthly return of US\$ 4.00 and the job creation rate is 0.000843; when utilized for store space, the monthly return is US\$ 175.00 and the job creation rate is 0.0645 (US\$ 1.00  $\approx$  R\$ 2.50, in May/2005). In other words, every square meter used as parking space yields 44 times less income and creates 76 times fewer jobs than does the commercial use of the same space (Lentino, 2005).

## **TRANSPORT-LAND USE INTEGRATION WITH CORPORATE CITIZENSHIP**

The UFRJ (Federal University of Rio de Janeiro) Mobile Research Group has, with the support of the CNPq (National Council for Scientific and Technological Research and Development), developed a proposal for the integrated production and management of transport and land use that will render the minimization of the problems of storage space that so affect business expansion, and the implementation of new urban undertakings that meet the principles of ecological efficiency and of the "triple bottom line".

This proposal, applied in a study engaged by the Brazilian Development Bank (BNDES) (Martins *et al.*, 2002), provides entrepreneurs with large-scale urban undertakings the possibility of networking with the other stakeholders in the production and consumption chain, for the provision of special urban logistics services, instead of having the obligation to just provide parking spaces (Martins *et al.*, 2000; Martins *et al.*, 2002 and Bodmer *et al.*, 2005a). This proposal will allow urban undertakings to increase the percentage of the building area utilized, by converting part of the space allocated to storing automobiles to other uses, and offering means of access to the undertaking other than the automobile.

The strategic importance of the concept developed at the UFRJ lies in the fact that, in liaising with the other stakeholders (the local community and complementary enterprises within the network, i.e.: the complementary mix of land uses within the undertaking's area of influence), an urban undertaking expands its relations with the city and its potential customers, thereby fulfilling a function that is of public interest; that of accessibility. As a result, instead of the image presently associated with a traffic generating hub (an environmental polluter), the undertaking that becomes part of a network assumes the effective role of a public transport station or terminal, turning itself into a traffic structuring center, and is thus perceived as a socially responsible enterprise.

The Mobile Concept is, therefore, a relationship marketing strategy to make the local community loyal to their partnering establishments (Bodmer *et al.*, 2005a).

Adoption of the concept promotes the effective participation of indirect beneficiaries (real-estate capital) in financing urban transport. The yield on the real-estate capital, from the offer of accessibility and the constructive potential defined in the Master Plan and in the laws governing land use and occupation, is partially returned to the community when, in compliance with its corporate citizenship, the real-estate developer makes the commitment to bind sustainable public transport accessibility into the overall undertaking, thereby serving the community within its area of influence or market area. The parties who could work in synergy with the transport-land use logistics chain have already been identified in various works by Martins and Bodmer (2000, 2002, 2005a, among others), wherein the authors highlight the interaction between the citizens-customers, transport providers and real-estate capital representatives.

Thus, a useful partnership is established between the stakeholders: the transport companies provide their services; the entrepreneurs can convert part of their garage space to better use when they offer alternative transport services, as well as mitigating the environmental impact and thereby gaining a better image; the public authorities put the services out to tender; and the urban communities get exclusive transport services and improved quality in the environment and in the transport. The model keeps coordination of the network in the hands of the public authorities and ensures the continual realignment of the transport services to the amount of built up area, since it is the responsibility of the entrepreneur, when the project is approved, to take on the commitment of converting part of the mandatory parking space to commercial use, as long as there is the proportional provision of public transport services (for equivalence parameters, see: Bodmer *et al.*, 2005a).

The incorporation of mobility management into large-scale urban undertakings will meet the need for business expansion, because it is not restricted to the provision of transport services by the state and can also stimulate new areas of its own interest by promoting accessibility. This links the network's enterprises and the stakeholders with the image of the corporate citizen, avoids conflicts (because it identifies and seeks to deal with potential conflicts before they become critical), spreads the costs and the responsibility by playing a more prominent role in society, improves the quality of the environment, by minimizing the highway traffic impact, and creates ties with the customers-citizens, among other advantages. Stakeholder Dialogue is a methodological prerequisite for integrating partners in the urban productive chain, taking into consideration transport and land use producers and consumers, making sure that each stakeholder is a sound component that can distribute benefits to the others.

The application of this concept to shopping centers, replacing 50% of parking lots, could produce an increase up to 20% of their useful area without any expansion of the total building area, increasing land productivity around 44 times and job generation by 76 times. Further information can be found in two other papers from the 9th Thredbo (Martins *et al.*, 2005; Bodmer *et al.*, 2005b).

## **BUSINESS EVALUATION OF THE MOBILE CONCEPT**

### **Research methodology**

To verify receptivity to the proposal, as a business strategy for corporate citizenship, the Mobile Group carried out a survey within the construction sector in metropolitan Rio de Janeiro (Silva, 2005 and Lentino, 2005). Among other information sought in the first stage of this two-part survey, a structured questionnaire was used to identify the existing level of socio-environmental investment and the criteria (with their respective weightings) that would justify increasing it (and to what point). The second stage of the survey involved consulting the construction sector, using another structured questionnaire that included open-ended and opinionative questions to evaluate the performance of the Mobile Concept, in comparison with the present method of addressing urban mobility, based exclusively on the provision of parking spaces, taking into consideration criteria and weightings defined by the sector itself.

First of all, the list of criteria was taken from a work by Pinto (2003), in which he identified three kinds of “*resources generated by companies when investing in social projects*”: economic, political and knowledge. The criteria relating to the internal environment were not included, as the Mobile Concept deals with the stakeholders in the external environment. Having identified a real-estate developer’s principal stakeholders, the resources, or factors considered by Pinto (2003) were redefined. In addition to the factors in the sphere of the “company” (“Productive Efficiency” Factor) and of the “market” (“Market” Factor), in other words, in addition to those aspects directly linked to the production and the competitive environment in which the company is situated, respectively, the “Social” (in the sphere of the community/society) and “Legal-Bureaucratic” (in the sphere of the public authorities) factors were also taken into consideration. **Figure 1**, on the following page, shows the four social performance decision factors, with their respective criteria, that were presented in the questionnaire to the entrepreneurs.

In the approach to the companies, the Union of Construction Companies for the State of Rio de Janeiro (Sinducon-Rio), provided invaluable assistance, in supplying data about the companies, in the contacts with their managers, in handing out the questionnaires during work commission meetings and, principally, in their invitation for the Mobile/UFRJ researchers to participate in the union meetings, as this allowed the researchers to get closer to the interviewees, thereby building trust and gaining their effective participation in the survey.

The significance level of the survey was 95%, with a standard error of 5%, for the 31 questionnaires completed. A stratified sample was defined that considered large, medium-sized and small companies. The process for the first questionnaire, which identified the social investment potential, took two months to complete, between February and April 2004. No significant difference was observed in the averages of the three groups of companies.



**Figure 1 – Target-groups for socio-environmental responsibility investment**

<b>Productive Efficiency</b>	<b>Market</b>	<b>Social</b>	<b>Legal-Bureaucratic</b>
1. Cost of implementation	1. Company image	1. Philanthropy	1. Legal incentives (counterpart)
2. Cost of operation / maintenance	2. Customer satisfaction	2. Jobs	2. Government body flexibility and control
3. Productivity	3. Value added for the customer	3. Quality of life	3. Taxes
4. Performance of the productive chain	4. Consumer qualifications / education	4. Identification with the community	4. Environmental and social performance report
5. Easiness to sell or lease	5. Technological innovation	5. Urban development	
	6. Product differentiation	6. Fines and lawsuits	
	7. Generation of new business		
	8. Share value appreciation		
	9. Financial credit		
	10. Product value enhancement		
	11. Market leadership		

The second questionnaire verified the sector’s receptivity regarding the concept and was limited to those companies that had participated in the first part of the survey. During a period of one month, of the 31 companies that received the second questionnaire, 11 replied, representing a 35% rate of response.

This second questionnaire presented the case of a legal demand for garage space that was very similar to a real situation, together with an alternative offered by applying the "Mobile Concept" to minimize the potential negative impacts. The case presented a hypothetical project for a shopping center linked to a business center and a leisure complex, with a total leasable area of 45,000 m<sup>2</sup> and 37,500 m<sup>2</sup> of parking area, with space for 1,500 vehicles, located in the district of Lagoa, a high-value, densely occupied area in the Southern Zone of Rio de Janeiro where traffic flows are largely saturated. The developer is given the option of converting part of the mandatory garage space to other uses, in exchange for providing special transport services, which would result in 56,100 m<sup>2</sup> of useable area and 21,875 m<sup>2</sup> of parking space, with 875 places, plus 12,000 mass transport seats (20 minibuses operating on 4 routes of up to 40 minutes round-trip travel time, at 5 minutes intervals, for 12 hours a day).

In order to evaluate the case, the entrepreneurs adopted the criteria that were most commonly mentioned in the first questionnaire (up to the 80th percentile). Assessment of the "Mobile Concept", in comparison with the legal requirement for garage space, was carried out by comparing the relative performance for each criterion (the weight, or importance of which had also been defined in the first part of the survey, based on the frequency distribution). The

participants were to give a rating to the "Mobile Concept" option, while a rating of 5 was adopted for the legal requirement for parking space, so as to serve as an effective reference or parameter for the comparison. By giving a rating within each criterion, the company would provide an effective comparison between the two alternatives. We also sought to ascertain each company's degree of certainty with regard to each criterion, using three levels: low, medium and high, and the opinions of the entrepreneurs, using the following open-ended questions: "What positive and negative features stand out in the proposal?", "What aspects could make the proposal unviable?", "What do you suggest should be gone into more deeply in a feasibility study?" and "Do you have any other pertinent comments to make".

### The Results of the Survey

According to the companies, they already make an investment in social practices of around 1.3% of turnover, and that this could go up to 2.7%. The criteria for this social investment (1st stage) and the evaluation of the "Mobile Concept" performance in comparison with the obligation to build garage space (2nd stage) in the case presented, as carried out by the construction companies can be seen in **Table 1**.

**Table 1 – Mobile Concept according to social performance criteria**

SOCIAL RESPONSIBILITY CRITERIA	1st STAGE	2nd STAGE						
	WEIGHT (%)	RATING				LEVEL OF CERTAINTY		
		AV.	STAN. DEV.	MIN.	MAX.	LOW %	MEDIUM %	HIGH %
Company image	8.39	6.27	1.19	5	8	10	30	60
Customer satisfaction	8.39	5.55	1.29	4	7	20	10	70
Operating / maintenance costs	7.30	3.55	2.58	0	8	30	30	40
Quality of life	6.93	6.18	2.04	3	10	13	25	62
Implementation cost	6.57	3.64	2.20	0	7	10	50	40
Product differentiation	6.57	6.36	1.21	5	8	10	80	10
Product value appreciation	6.20	5.64	1.50	3	8	30	60	10
Value added for the customer	5.84	5.27	2.33	0	8	30	40	30
Technological innovation	4.74	6.82	1.83	4	10	20	40	40
Productivity	4.38	6.45	2.25	3	9	40	20	40
Legal incentives	4.38	6.73	1.95	3	10	30	40	30
Generating new business	4.38	7.50	1.84	5	10	22	45	33
Easiness to sell / lease	3.65	5.36	2.16	3	10	30	40	30

From these results, it was possible to perceive what was consensual, the internal divergence within the sector, and the perceptions as to the differentials of the Mobile Concept, compared to the traditional proposal based on providing parking spaces. Analysis of the replies to the open-ended questions helped to corroborate the interviewees' perceptions.

To analyze the relative performance of the two alternatives (garage space versus Mobile Concept) according to the previously defined criteria, the rating, degree of certainty and standard deviation were all taken into consideration. For the rating and the standard deviation, the difference between the highest and lowest values was calculated and the results were distributed on three-level scales. The scales can be seen in **Table 2**. For the degree of certainty, we looked at where the greatest concentration of interviewee responses was to be found in the results of the questionnaire.

**Table 2: Scales for the analysis of the socio-environmental responsibility criteria results**

<b>PERFORMANCE (ratings)</b>	<b>LEVEL OF CERTAINTY</b>	<b>DISPARITY (standard deviation)</b>
WORSE (3.55 to 4.04)	LOW	GREAT (2.12 to 2.58)
SIMILAR (4.05 to 5.73)	MEDIUM	LITTLE (1.65 to 2.11)
BETTER (5.74 to 7.50)	HIGH	CONSENSUS (1.19 to 1.65)

In their evaluation of the Mobile Concept, the building entrepreneurs were receptive, recognizing it as being innovative, as was their assessment of the positive impacts: an option to mitigate the problems of traffic circulation that allows an increase in the gross leasable area and the provision of transport services for the public one wishes to attract. These observations were based on the proposal's good performance in relation to the traditional parking space option, particularly under the criteria "company image", "quality of life", "product differentiation" and "technological innovation".

However, the sector is aware that, due to ingrained habits in relation to automobile use, the consumers for their new undertakings may not display recognition of the transport services as a valid option to the provision of parking spaces. In other words, they might not identify competitive advantages that could induce a change in their mode of transport. For this reason, in the evaluation regarding to "customer satisfaction" the performance tends to be similar for both the alternatives. Hence, at best, in terms of acceptance, the sector is aware that the customer would retain the option of going by automobile or using the transport service, but is doubtful that there would be an effective change of transport mode.

The criteria that start to raise doubts, with good ratings (despite little disparity) and a balance between the three level of certainty, are "legal incentives" and "generating new business". The entrepreneurs believe that the transport services could open up the possibility of partnerships (with the public authorities, other undertakings, transport operators and suppliers), but they are not sure if they would effectively come about, because a dialogue would first have to be established in order to identify common interests.

Moreover, they perceive certain risks regarding the proposal, such as the identification and involvement in this new type of undertaking on the part of certain stakeholders: retailers, the target population (the local community) and the public authorities. This explains the poor

performance of the Mobile Concept and the doubts regarding the criteria of "product value appreciation", "value added for the customer" and "easiness to sell or lease". Such risks could be minimized by the urban developers getting closer to the community, so that both can see the positive impact of adopting the transport services. Upon applying the Mobile Concept, undertakings that tend to have a greater impact on their surroundings are more likely to be considered positive by the community that will benefit from the dedicated services and, consequently, they will tend to develop loyalty towards the range of activities on offer.

The most controversial criterion is "productivity". The evaluations show a high level of disparity, high ratings with a high standard deviation, and the level of certainty also varies considerably. It is possible that the omission of cost from the questionnaire compromised their level of conviction with regard to this criterion. After all, in addition to the cost of providing the transport services that they would incur, the entrepreneurs are also aware that there would be a reduction in parking revenues. It must be emphasized that the business of the Mobile Concept is something beyond the original scope of the construction companies.

The "operating / maintenance cost" and the "implementation cost" are the criteria showing the worst results in the evaluation of the Mobile Concept. Many doubts remain, not only regarding the cost, but also about the difficulty of maintaining a quality service. It was suggested that economic feasibility studies be carried out. It was expected that the criteria involving costs and productivity would reflect a relatively poor performance, because this information was deliberately not given to the entrepreneurs. In another paper presented at the 9<sup>th</sup> Thredbo, Martins *et al.* (2005) demonstrate the economic-financial feasibility of the option (Mobile Concept), set against the provision of parking spaces.

It has been suggested that the adoption of the Mobile Concept be offered as an alternative to the provision of parking space for entrepreneurs planning new undertakings, with the possibility of a gradual adoption of the Concept and the progressive expansion of the gross leasable area in the place of garage space, given the novelty of the proposal and the need to diminish the risks of these undertakings.

## **CONCLUSIONS**

It was concluded that, although the construction sector is still not taking advantage of the generation of value provided by their social performance, there is a potential there, through the application of the Mobile Concept, as long as the uncertainties can be minimized, both in regard to public authority intervention and to the receptivity of the local community. In other words: the construction sector entrepreneurs are aware that the potential effectiveness of the Mobile Concept, in terms of inducing the substitution of the automobile by mass transport modes, depends to a large extent on the capacity of the final customer to perceive the competitive advantages of the proposal, and that public authority action is fundamental to this end. Indeed, without priority on the roads for the mass transport modes, it will be hard to

perceive the competitive advantages of the services connected to the networks of activities within the community space (microaccessibility).

The sector is calling out for public coordination or, principally, public commitment, regarding the definition of policies for both transport and urbanization. The public authorities need to foster partnerships among the stakeholders and reinforce the rules reducing the dependency of urban undertakings on stocks of automobile parking spaces, so that they can effectively exercise their corporate citizenship, by providing facilities for their employees and customers, and environmental responsibility, by minimizing traffic congestion.

With initiatives from the public authorities, the construction sector would be willing to double the amount it already invests in socio-environmental responsibility, from 1.3% to 2.7% of its turnover, with the gradual adoption of the Mobile Concept, which would, at first, be applied strategically by the sector in expanding existing undertakings, redefining their lifecycles and their re-insertion into the chain of activities of the potential demand in their areas of influence.

Finally, the construction sector is also waiting for the economic-financial feasibility of the proposal to be demonstrated, which has been done in another paper from the 9<sup>th</sup>. Thredbo (Martins *et al.*, 2005).

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