Shared Visions and local sustainability: Territory perspectives under Strategic Design lenses

Visões Compartilhadas e sustentabilidade local: perspectivas do território sob a lente do Design Estratégico

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Abstract

This study is part of a model of analysis conceived under Strategic Design lenses on mental images with focus on collaborative natured territories in which internal and *external* actors observed – Aveiro (Portugal) - grouped according to their experiences in the place express their *visions* by means of a participative process. It aims at producing indicators – shared *visions*– for further application in territorial valorization projects' bound to enhance local sustainability. The study main focus is design as a product and metadesign research is treated as an approach for transdisciplinary work.

Key words: shared visions, local sustainability, environmental perception, Strategic Design.

Resumo

Este estudo parte da elaboração, sob a ótica do design, de um modelo de análise de imagens mentais dos territórios de caráter colaborativo, onde atores internos e *externos* ao território estudado – Aveiro (Portugal), agrupados de acordo com suas experiências do lugar, expressam suas *visões* por meio de um processo participativo. O objetivo é a produção de indicadores – *visões* compartilhadas - para aplicação em projetos de valorização territorial visando a sustentabilidade dos locais. O estudo dá grande enfoque ao design como processo e trata a pesquisa metaprojetual em design como abordagem de trabalho transdisciplinar.

Palavras-chave: visões compartilhadas, sustentabilidade local, percepção ambiental, Design Estratégico.

This investigation aims at contributing for the debate on new perspectives for territorial sustainable development that gains more and more strength as environmental, social and economical dimensions prove to be fundamental for both city dwellers and visitors' welfare. In such a context one of the great difficulties faced by entities/institutions involved in territory management has been dealing with relationships' complexity, and many times interest conflicts; thus being relevant the conception of a more creative and participative planning model.

Within such a perspective, it is worth mentioning that every territory has its own heritage which is made up of remaining territories along with their social natural path, values that by themselves must not be understood as territorial resources (i.e., entities are not able to promote development strategies). For that to occur, those resources must be recognized as such, what implies being assimilated by the process actors (Manzini, 2005a).

The territory approach by means of strategic design proposes evidencing territorial resources (local strength), prospecting positive sceneries, and promoting shared visions, identifying strategies and transferring competences from other knowledge areas. In such framework, the designer tends to become an agent within a complex network of actors since he or she helps promoting shared visions, what favors net connection of social actors. In this sense, a visual and mental image study of a conceived territory is proposed as a way to contribute to social development so that different territory actors feel part of the collective project. This study assumes that every physical experience, whether it is related to a territory or not, in line with Ferrara (1999), is not random

since it reveals values, memories, expectations. Being so, the designer intervention occurs in the transition from the image semiotics' level to the urban representation meaning processing.

The main applications of the proposed model are therefore related to territorial and touristic activity management standing out:

- landmark and touristic diagnosis;
- urban space improvement and revitalization;
- cultural and environmental preservation projects;
- territory participative management projects.

Design, local sustainability and shared vision

To be complete, environmental-ecological sustainability must be complemented with social sustainability (Chambers and Conway, 1992). Thus, social sustainability refers not only to humans' autonomy, but also to the way their quality of life can be kept. It is understood that considering culture a development factor, means valuing collective and individual identities, promoting cohesion in communities and taking into account that culture features can be a growth factor in a given territory. This set of actions is the basis of the local sustainability concept defended in this study, that is, sustainability seen under different angles (ecologic-environmental, socio-cultural and economic) that promotes strength cohesion favoring the development of a given territory.

The concept of shared *visions* converges with this reasoning. It is worth pointing out than in any collective enterprise, not everybody agrees as to a given course of action being the best possible solution; and in such a sense the collective action results cannot meet all expectations. A shared *IS* must be understood as a common objective, and must act as a guide to evaluate decision taking and results in a continuum basis (Senge, 2006). Developed with the relevant stakeholders (internal and external to a project or study), a shared vision must be easy to understand, besides being inspiring and challenging in order to strengthen its members energy, enthusiasm and fidelity to the group.

Ethnographic research contributions

Ethnography resorts to anthropology theory and practice along with other social sciences such as psychology, sociology and communication being defined as "a methodology used to represent everyday life perspective" (Press and Cooper, 2009). It is an open exploration oriented process aiming to take into account both internal and external observed environmental perspectives of a given social segment, usual ways of life and action for a given period of time. After that period the researcher's challenge consists in the organization of data starting from a wider context until particularities can be generalized (Mattos, 2001). In that sense Magnani (2002) postulates that the nature of explanation via ethnography allows reorganizing spare information, a new arrangement which carries both marks (researcher and object researched). Thus, ethnographic research has been increasingly adopted in design processes in the attempt to provide answers for the complexity which increasingly features scenarios, involving therefore the actors of the process, thus enriching results and diverse ways in search for solutions (brings up learning).

Images of the territory as mental and visual representations

The collective territory city image is an image overlapping conceived by many individuals in which each individual keeps his or her own unique image, but that mirrors the collective, determinant and accepted image (Lynch, 1988). In that sense, environment images are the result of a bilateral process between the observer and the environment, in which the environment suggests distinctions and relations, and the observer – in the light of his or her objectives – selects, organizes and gives sense to everything he or she sees. Such understanding consists in a synthesis of the relation between territory images as mental and visual representations. According to Santaella and Noth (2008) the world of images is divided into two domains; being the first, the domain of images as visual representations: drawings, paintings,
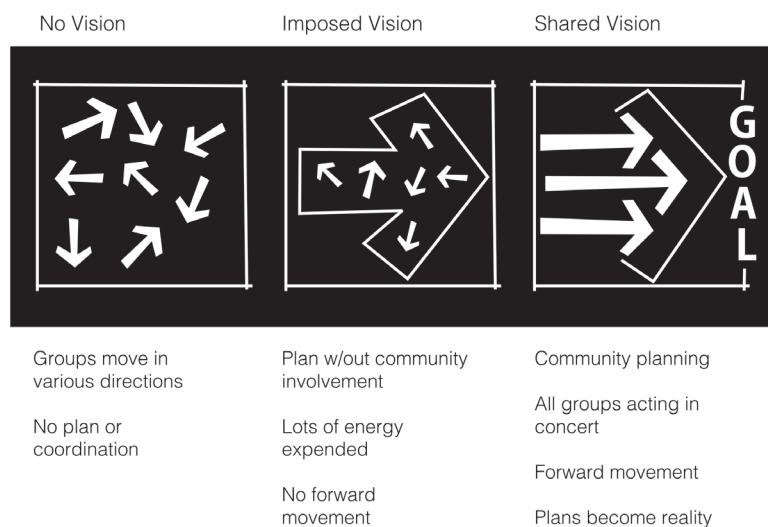

No Vision	Imposed Vision	Shared Vision
Groups move in various directions	Plan w/out community involvement	Community planning
No plan or coordination	Lots of energy expended	All groups acting in concert
	No forward movement	Forward movement
		Plans become reality

Figure 1. A shared vision.
Source: Minnesota Design Team (2010).

photographs, movie and television images belong to that domain. In that sense, images are signs which represent the visual environment. The second domain, is that of mental images in which these are visions, imagination, models or mental representations. Both domains are linked and interdependent and it can be assumed there is not such a thing like visual representations not deriving from mental images in the mind of those who produced them; and likely, that there is not such a thing like mental images that have not sprung up from the visual object concrete world. Thus, the unifying concepts of both image domains are the concepts of sign (semiotics) and of representation (cognitive science).

Visual and mental representations

Within the meaning-construction process, each individual creates and supports his or her image of reality and there may have agreements among members of the same group which derive mainly from shared experience. The city is a representation space, that is, it represents something to somebody, and therefore generates a sign in that person's mind. Representations are signs of a city-object which represent something to somebody called his or her interpreter (Ferrara, 1999). The study of the territory under semiotic vision is nourished from concrete manifestations (actions, uses, habits); images not always visual, on the contrary, are polisensorial, tactile, audio, kinetic, which in turn, are associated to building looks, colors, blends, sounds, and the various objects which inhabit everyday living. Such territory signs are in the social space and designate it.

Each culture is defined by the stress it gives to its social relations, in its "exterior" or in its "interior", what presents a close relation with an identity concept. It is visible thanks to features which represent people themselves and things that *also* become distinctive features. It is by means of such traces that things gain form and can be expressed physically and mentally as well. From that point of *view* we can assume image conception is a double process between observer and observed object based on experience. What is seen is based on exterior stimulus, but how that is interpreted and how attention is directed affects, in turn, what is seen. This way, different groups may have different images of the same exterior reality, in that case, starting from the same perceived identity traces. Therefore, it can be said that an image does not necessarily represent a graphical construction of a visual expression, but rather any construction by means of which a given experience can be signified.

If one looks out a window an autumn landscape, listens to music, runs his or her fingers on a metal smooth surface, or even if one reads these words, he or she will be forming images of different sensorial modalities. These are called perceived images. But now stop paying attention to the landscape, the music and deviate thoughts to any other thing. Maybe you are now thinking about your Aunt Mary, Tower Eiffel, or in what I have just said about images. Such thoughts are also made up of images which occur as we evoke memories known as evoked images (Damásio, 1995, p. 112).

In general terms, just like an architectural work, territory are constructions in space operated in great scale (Lynch, 1988), besides being also cultural constructs. The environmental language and the perception other place actors have from it has its existence identified by the observation it captures, registers visual images and associates them, turning them into mental images in a complex interpretation and representation game.

Territory model of analysis

This model aims at making different territory related images visible, each being seen as an element which belongs to an organic set. Considering image not only as a result of external features perceived in the environment, but also the observer's product, the model introduces three looking bases managed by the articulator: the investigator', and those looks external and internal (as to the observed territory).

Researchers are responsible for data collection and a research cycle is attributed to each (see Figure 3). The researcher can be either an internal or an external element in what concerns the territory and participates in the research with his or her point of vision about the observed territory. The articulator's role is managing the researchers' actions and their respective research cycles. Such cycles are then linked and overlapped in the following steps for the sake of analysis and discussion of possible intervention strategies in the territory.

The group named "outer look" presents a superficial and distant living experience in the place and captures information often *trivialized* by everyday experience. Furthermore, it presents a smaller affective relation with space, what reflects an impartial vision. The outer look was analyzed under the space tourists' perspective, nearby area dwellers' and the investigator's himself. On the other hand, the group labeled "inner look" presents intense living in the place and tends to consider isolated parts of the territory. Besides, it presents narrower affective relation with space. In the analysis of the territories investigated the outer look was analyzed according to the space *inhabitants'* perspectives and that of internal investigators.

Macro-phases and applied strategies

The following strategies were used in the scope of each macro-phase of the research:
- *Preparation:* meeting with the research group members, familiarization of the group with the analysis model and with the territory to be observed, and research strategy elaboration (analysis framework, deadline terms, sampling and involved participants).
- *Collection:* completion of the cycles of analysis with the internal and external researchers, internal and external actors of the territory under study. These cycles are implemented through interviews with the orientation of a questionnaire, and also non-verbal aids such as drawings and photos.
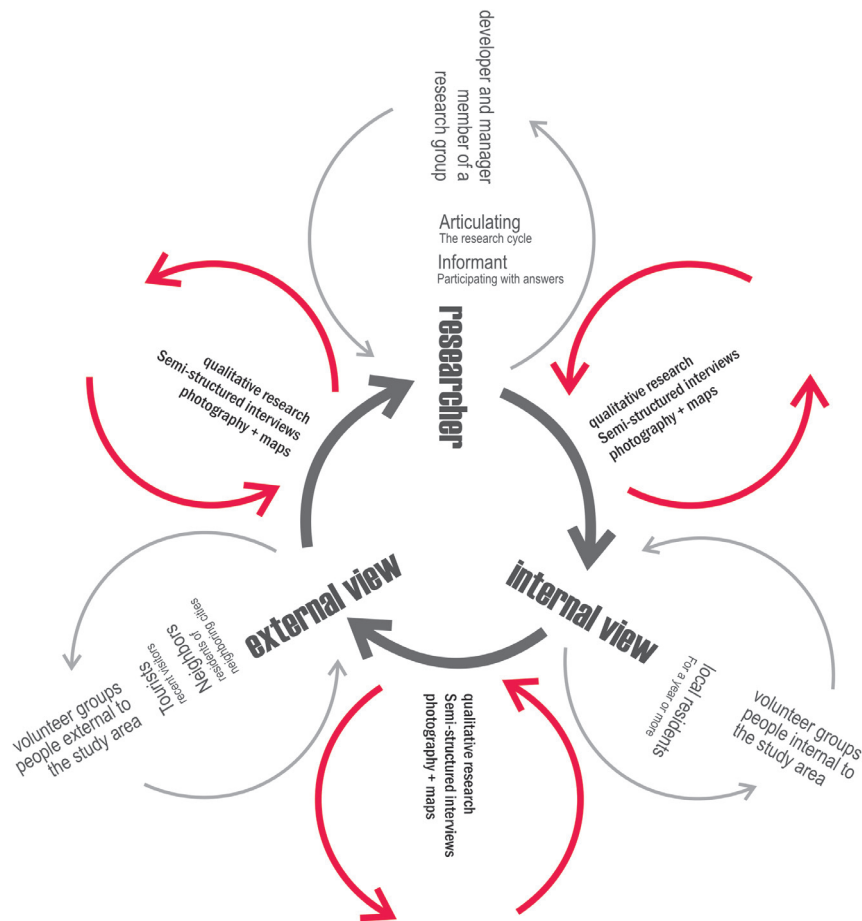- *Analysis:* meeting, analysis and collected data's relation.
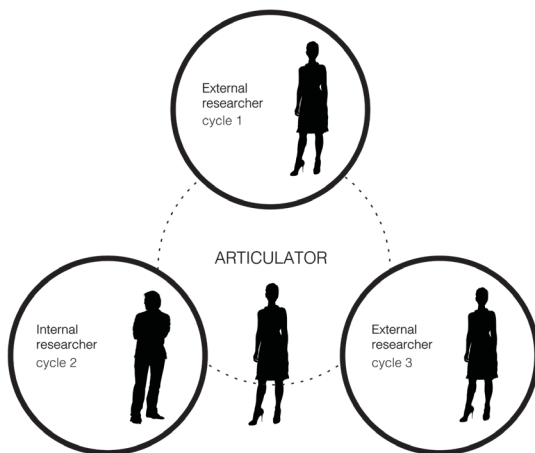
Figure 2. Structure analysis model.

Figure 3. Cycles' Research.

- *Implementation:* finalizing the metadesign phase and making a connection with the Project phase; this macro-phase establishes guidelines for intervention projects in the observed territories.

Interpretative Parameters

As a starting point for data analysis, a complexity scale was established in the questionnaire's layout given to participants. It was based in the cognitive

interpretation levels suggested by Bonfantini (2000) (see Figure 4).

In a scale of complexity questionnaires begin with the identification of immediate and irrational images – sensation. The aim is capturing unconscious information (immediate memories, sensations, colors, materials, flavors, sounds and smells which remind the territory). The second level, on the other hand, that concerning perception, attempts to establish associations according to concepts presented along the study in order to delineate participants' irrational frameworks (features and associations). Finally, on a third level, the study approaches a perceptive judging research, here so labeled, where participants can attribute value to the presented issues. That level intends to identify positive and negative aspects of mental images generated besides contributing for the prospective scenario construction and shared visions. Mental images collected by means of questionnaires – analysis framework – are complemented by visual images captured in the drawings, maps and photographs made and sent by respondents. The contribution of such non-verbal aids research tools consists in their imagery dimension since they are loaded with informational value and represent the perceived object in the real concrete environment.

Aveiro offers touristic resources like: historical centre and buildings *Art Nouveau* styled; a set of pedestrian and bicycle path tours for the BUGAs – Bicycles for Free Use in
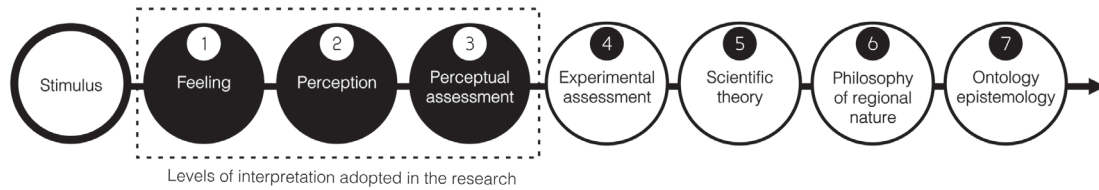
Figure 4. Levels of interpretation adopted in the research.
Source: adapted from Bonfantini (2000).

Figure 5. Aveiro urban landscape.

Figure 6. Downtown, "ovos moles" and BUGAS.

Aveiro; São Jacinto beach, and rich gastronomy with basis on fish. Aveiro is known for its sweets being the "ovos moles" the most famous – made of *egg yolk* and sugar and shaped traditionally as fish. The city economy is based in services and in the University of Aveiro which plays a fundamental role. The high *numbers* of students (15,000) come mostly from other regions of Portugal and other countries as well and constitute an important local economy developer.

On the territory under investigation

Aveiro is the capital of the District with the same name, located in the Central Portugal region and is the main city in Baixo Vouga. It has about 73,000 inhabitants (Aveiro City Chamber, 2001) and is known due to its urban sailing channels from the Waters of Aveiro "ria" (kind of coast featured by deep sea entrances). The gondolas typical of Aveiro Coast (Ria) are called "moliceiro" boats.

Figure 7. Aveiro colors.
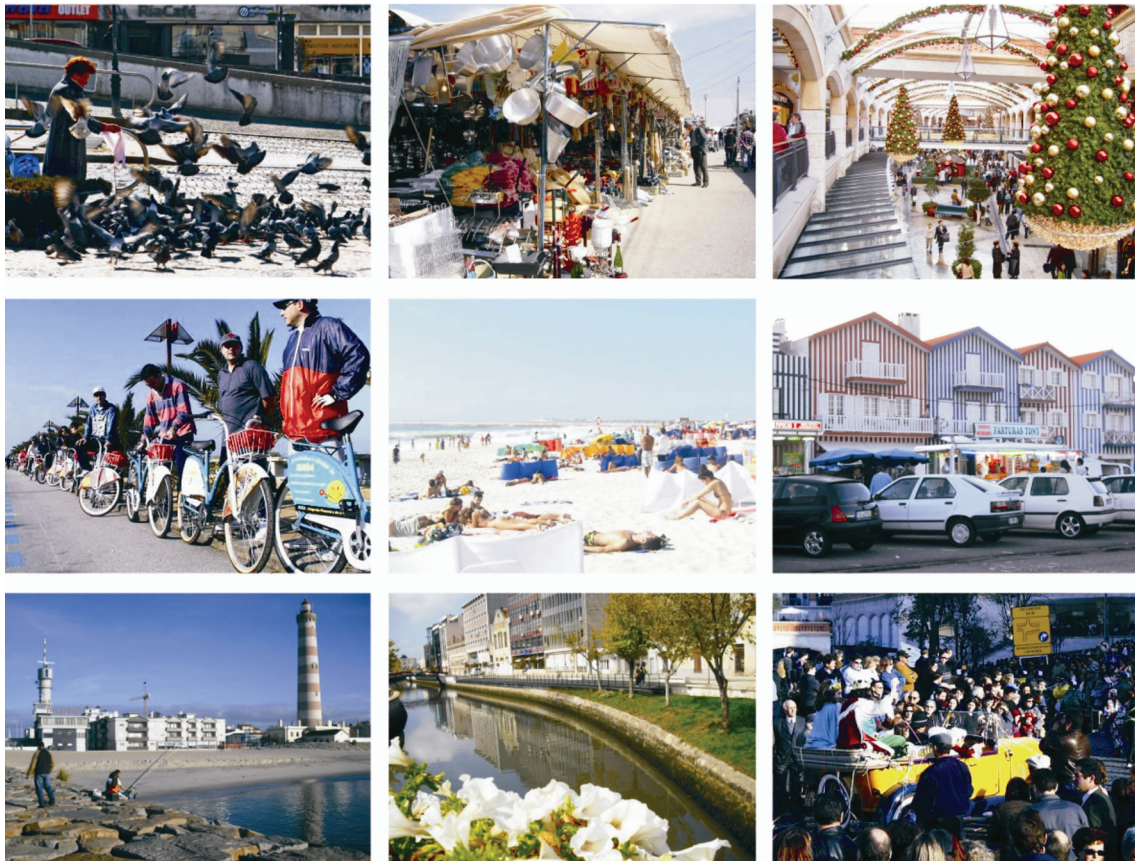Source: Photographs sent by visitors and participants living in Aveiro.

Figure 8. *Habits* which are part of Aveiro routine.
Source: Sent by research participants, residents and visitors.

Data Collection and Analysis: findings

Data collected – 84 interviews, 54 photographs and 17 drawings – were gathered for matching information and systematic understanding/interpretation of results. After that general treatment of the information it was concluded that the first conscience level researched – sensation, the image is partly positive with associations with the "ria", main city landscape feature, the "ovos moles" representing the

specialties of local gastronomy, peace and *quiet* in space and the feeling of safety, standing out (see Figures 7 and 8). The negative features highlighted were the bad smell from the cellulose factory installed in Cacia and the noise from cars.

In the second conscience level – perception – the positive aspects predominated and associations with luminosity, tradition and safety stood out. The uniqueness of the city was also a highlight since respondents stated
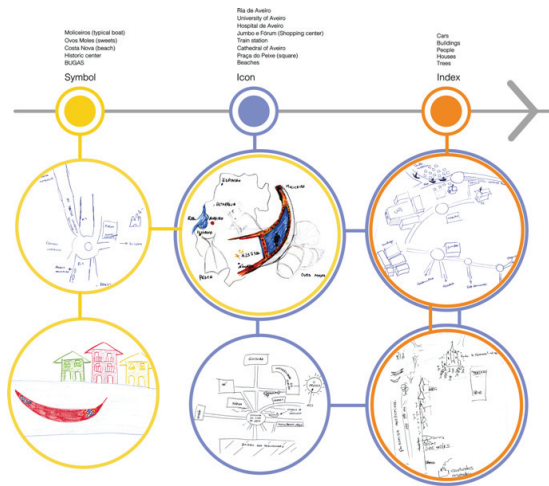
Figure 9. Semiotic analysis of drawings.

the city cannot be compared to any other. Another interesting highlight refers to Aveiro as a human figure (calm, old lady) Norman (2008) labels the attribution of human features to animals and objects; such interpretation brings along empathy and emotional judging.

At the highest conscience level studied – perceptive judging - mobility difficulty, lack of cultural activities, touristic attractions and safety stand out. Aveiro is considered a good place to be with *emphasis* to *the* partly positive evaluation of the population (the fragility pointed out was conservatism and somewhat shy residents' profile).

The perception as a busy city by people who do not know the city can be analyzed and matched with the initial feeling of calmness from respondents who know the territory. Such notes show that even if that feature is not experienced most of the time by inhabitants and visitors, having city features in mind, is part of the imaginary that involves the actors' city external image. Such association is understood to derive from the University of Aveiro's dynamic city image externalization.

Figure 9 shows the semiotic analysis carried out having the drawings received as basis where the three types of signs pointed by Pierce can be observed (Bonfantini, 2000): icon, index and symbol. This analysis aimed at detecting the way people represent the space under investigation, complementing data obtained by means of questionnaires and illustrated with the aid of photographs.

In that sense, the symbol pointed in most drawings was the "moliceiro" (boat) also reminded as immediate city image by respondents. Other represented symbols were: "ovos moles" (sweet eggs), *Art Noveau* houses in Aveiro historical downtown, the BUGAS (bycicles for free rides), Costa Nova (beach) houses, Barra beach lighhouse; the two latter curiously belonging to Ílhavo Council. Among the represented icons, the central channels of Aveiro's Ria (river) stand out in most drawings featuring one of the city "limits" or "marked points" (Lynch, 1988). Regions of the city are pointed in the drawings; in some, specific features of each region are illustrated with the aid of indexes (high buildings and automobiles in more urbanized zones; people in busy ones; churches and modest houses in residential zones).

The sample of 17 drawings reinforced the association between Aveiro and Ílhavo beaches detected in the analysis of photographs sent by participants as well as in the responses obtained by means of interviews. It can also be said that residents represent wider city zones, while visitors who, for concentrating their visit in a small part of town, tend to classify the city as small.

Three visions were devised for illustrating possible interventions in the territory with basis on data collected along the investigation (Table 2).

Conclusion

The developed model for analysis applied in the territory of Aveiro demonstrated to be efficient in the different points of view. The three cognitive levels postulated by Bonfantini (2000) made possible to capture

Table 1. Synthesis of research findings.

Sensation		
	Immediate memory: river/stream, *sweet eggs* ("*ovos moles*"), *calm*, *safety*. Colors associated to diversity: several colors – highlight for blue Materials: wood (rustic), ceramic (tradition) and glass (recent, new) Traditional flavors: *sweet* eggs, codfish Sounds of talking (soft), cars and wind (strong feature) Smell: cellulose plant, sea	
Perception		
	If it were a person: a woman, old and calm Associated to brightness, tradition and safety Seen as a unique city (it does not match categories) People who do not know the city: beautiful, average sized and busy	
Perceptive Judgement		
	Considered a good place to be, landscape, gastronomy Lack of cultural activities: museums, libraries, touristic attractions. Improvement: mobility (transportation), safety and green areas. Proud, kind, conservative, shy people	

Table 2. Visions, proposals, interventions and motivations

Environmental Sustainability Model	Sustainable Tourism	Cultural Centres
Bicycles as means for transportation Construction of bicycle paths and BUGA Program revitalization. *Motivations:* mobility difficulty, tourism development, environmental sustainability promotion.	**Strategic Alliances** Formalization of vicinity alliances to integrate each territory strengths and regional tourism. *Motivations:* strengthen tourism, lack of cultural activities, different territory aspects' exploration.	***Art Nouveau* Museum** Reproduces *Art Nouveau* styled houses in Aveiro historical downtown. *Motivations:* development of touristic attractions, incentive and culture.
Technological Museum of Environmental Education Creation of an interactive museum supported by the university with the aim of disseminating sustainable local natural resource awareness, entertainment and education inhabitants and visitors. *Motivations*: promotion of environmental sustainability, pollution as a menace, cultural incentives.	**Guide Citizen Program** Identification and education of elderly residents for acting as guides in Aveiro's historical downtown. It benefits tourists (diverse tourism) and the inhabitants (occupation and city proud empowerment). *Motivations*: promotion of culture, tourism's strengthen, population of one of the city forces, explore different territory aspects.	**Youth Arena** Opening of a space for shows, exhibits, sports for young audiences. *Motivations:* few happenings (youngsters), few cultural activities, exploration of different territory areas.

interviewees' overall impressions in what concerns the territory under observation. In that sense the incorporation of participated iconographic images (photographs and drawings made by participants) assume even greater importance since the power of such "personal images" is found in the capacity of transporting the observer back in time towards events relevant for him or her.

Another strength of the study was the analysis of memories of sounds, colors, flavors, materials and smells, that in turn, richly capture and construct the emotional scenery thus complementing information/data obtained by means of objective questions and analysis of the images.

In the same sense, the environmental perception research showed to be efficient for featuring territory problems, considering their complexity. In that scenario of complex problems and a high number of people involved, design can contribute by introducing the metaproject design for the elaboration of strategic research that helps the promotion of "shared views" in the territory's scope.

Due to contemporary challenges faced by territories, such as cultural, economic and environmental sustainability, new approaches and a convergence of knowledge reveal to be important. The shared views were detected starting from the identification of "territorial resources" (Manzini, 2005b) and the knowledge on design were applied in the research strategic conception, data collection and analysis and in the elaboration of the project proposals.

In what concerns the interventions proposed, their illustrative character stands out since the research focus is not bound to results but rather to the conception process and image analysis model application featured by the metaproject profile (focus on design as "a process").

Until that models like this are implemented we believe a long way has to be tracked; notwithstanding, small steps can be taken on "still very irregular terrain". If that is considered, design approaches like this are feasible and applicable although depending from integrated collective efforts and actions. Finally, it must be pointed

out that the "the other's" vision of the project consists in an act of respect to diversity and different conditions, what only makes both, the project process and exchange of experience even greater. Besides that, design active participation along the data collection process together with participants allows a wider and richer vision to be applied in the project for eventual territory interventions.

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