Improving Small Cities Competitiveness through Greenway Planning and Design: Vila-Franca-de-Xira case study, Lisboa Metropolitan Area, Portugal

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Introduction

Greenway concept as a strategy to support landscape planning and design has been addressed in research studies and publications worldwide (Fabos and Ryan, 2006). However, to fully understand the significance of greenways as a mean to improve cities landscape, the analysis of the design and implementation levels are crucial in order to assess its efficiency towards life quality and acceptance by local populations. This paper aims to further research the role of greenways on medium/small cities in Portugal, as a mean to improve their competitiveness.

Through the case study of greenway design and implementation in the city of Vila-Franca-de-Xira (VFX) in the North Region of Lisbon Metropolitan Area (figure 1), where the authors have been involved as designers, it was analyzed how the concept of greenway enables a better coordinate municipal urban planning, government funds capturing and allocation for public space improvement. The outcome here hypothesized is that, beyond greenway's efficiency as a communication tool between planning professionals and politicians, they enable to introduce a positive dynamic towards the improvement of cities environmental and landscape quality. Addressing issues of public health, well-being, resources' protection, and public attraction, greenways may well contribute to increase cities competitiveness in a metropolitan context.

Literature Review

The protection of resources supporting landscape quality, and the improvement of landscape through sustainable strategies that use those resources, have been thoroughly demonstrated through the work and research on landscape architecture (Lewis, 1964; Lyle, 1985; Ribeiro & Barao, 2005). Greenway planning and design corroborate the principles of landscape planning and design, focusing on valuable areas and resources (Fabos, 1995). Research on the applicability to regional and metropolitan levels shows that greenway concept is a mean for better and efficient landscape planning, promoting continuity on ecological structures functioning, recreation facilities continuity, cultural identity strength and improving communities acceptance towards landscape conservation strategies (Dawson, 1995; Fabos 1995). These issues have been studied placing Portugal in the main greenway planning and design tradition (Machado et al., 1995; Ribeiro & Barao, 2005).

Spatial patterns are useful tools in planning supporting the transference of scientific knowledge to planning and society (Nassauer, 2007). By doing so, greenways can be

seen as communication tools as means to use validated knowledge with creativity in landscape planning and design (Ribeiro & Barao, 2007), conveying these findings to professional planners and designers as well as to communities.

Recent research emphasized and explored the correlation between implementation of green infrastructure and public health and well-being (Tzoulas 2007). It has also been defended the positive relationship between urban green space and stress restoration (Grahn & Stigsdotter, 2010). These aspects can be related with urban populations' quality of life, hence with cities' competitiveness. Tzoulas (2007) points out the significance of the relationship between green infrastructure and public and ecosystems health. Epidemiological studies provided evidence of a positive relationship between senior citizens longevity and green space, or that green infrastructure is a significant health factor, with better results if put in place as a spatial continuous entity (Tzoulas, 2007, p.171, 174).

Greenway planning and design includes also strategies for heritage protection fostering cultural identity. These issues have been related throughout literature review as very much related with the quality of life in cities under processes of fast urban change and growth (Tweed, 2007).

Through these findings it is hypothesized in this paper that the set of urban benefits resulting from actions supported by the greenway concept, can strongly contribute to place urban landscape on the way towards quality enhancement, therefore improving the level of attraction of cities for living, hence its competitiveness.

Goals and objectives

The main goal is to show how greenways, being means for better planning and design of public space, and addressing issues related with human health and well-being, constitute significant strategies towards cities competitiveness. The objective is to demonstrate that, through the case study of the network of Vila-Franca-de-Xira public spaces under upgrading, greenway concept contribute to put in place a positive dynamic towards urban landscape qualification therefore to the competitiveness of small cities like VFX in the context of Lisbon Metropolitan area.

Method

To carry out the study, observation was conducted to the set of places in the city of VFX that have been under landscape upgrading strategies, and that as a whole can contribute to a qualified network of public spaces (figure 1). The authors have identified and reflected specifically on design methodologies and processes that led eventually to implementation. Each project, in which the authors have been involved as designers or consultants, was described in its character and design methodology. Also, it has been analysed the processes led to different achievements in each place: design acceptance by municipality, national funds capturing, public interaction,

construction and current situation. Though not all the projects are presently in the same phase, conclusions can be advanced from the analysis of the processes they underwent till now.

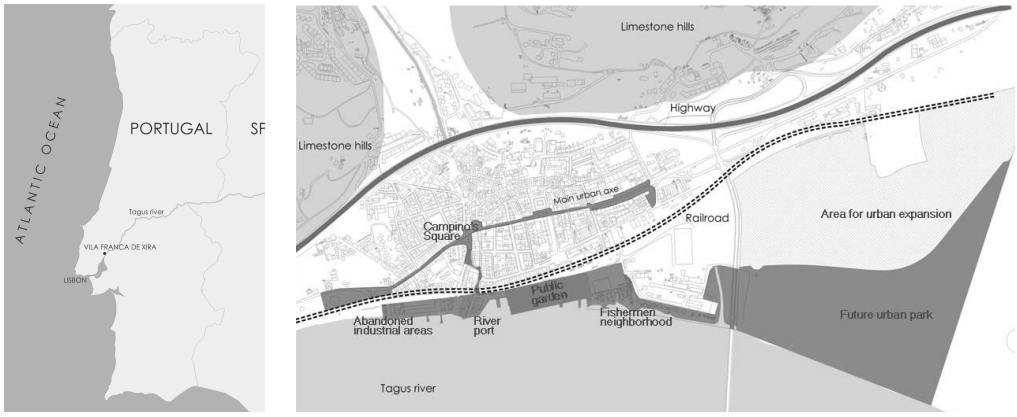

Figure 1. Vila-Franca-de-Xira (location; public spaces network greenway)

Results

The need to improve Landscape Quality of Vila-Franca-de-Xira (VFX)

The city of VFX is one of the smallest cities in LMA. This is partially due to its distance to Lisbon (aprox. 45 Km), but also to its neatness between steep limestone hills, Tagus river banks, and national transportations infrastructures (main national highway and railway to Lisbon). These constrains can also be witnessed along settlements along the Tagus river.

Although close to important transportation infrastructures in the country – highway network and train line – the city growth is limited by the natural context, showing a less qualified urban environment. With the location of the upcoming Lisbon International Airport, an inversion of population decrease is expected. The city has to be prepared to take advantage from this development opportunity.

The municipal planning tools (land use municipal plan) foster the protection of valuable resources such as the Tagus river banks, flood plain soils and steep limestone hills. However these values have been frequently considered as limitations to urban growth and development. On the other hand, communities and political leaders are proud and aware of local cultural identity. This sense of identity is corroborated by local celebrations and feasts. Communities pointed the lack of good outdoor public places, becoming an objective of planners and a promise of political leaders.

Recent works on public space planning and design, showed an assertive attitude by planners and political power. The concept of greenway planning and design seems to

underlie the strategies developed by the city planners for landscape quality improvement. This includes the protection and enhancement of natural/ecosystems and cultural/historical resources, and increasing recreation opportunities. Literature review showed that these strategies are valuable and desirable for cities challenged by recent transformation in the context of faster dynamics of metropolitan areas (Tweed and Sutherland, 2007; Tzoulas et al., 2007). It is widely acknowledged that the strategies for urban renovation should be as different as the specificity of place, should cities develop their own solution (Tung, 2001).

Design, funds and implementation for public spaces improvement

The proximity to the river and other significant resources became understood as a benefit, fostering the enhancement of public spaces, natural areas and cultural elements along the water front, promoting linkages to the urban tissue, namely the main urban axis and associated squares. The significance of the ecological structure defined in official planning tools is recognized and used. Within this framework, municipality offices went through a process of urban renewal of public spaces as well as the design of new ones through the rehabilitation of abandoned industrial areas and farm land therefore expanding of the network of public places. As a result it sets up a dynamic with unavoidable advantages to the competitiveness of the city.

The considered places under this process were: a) Campino´s square; b) Alves Redol Avenue (main urban axis); c) Old docks; d) Public Garden; e) Aveeiros Fishermen neighborhood e) Future urban park; f) Rehabilitation of deactivated industrial areas.

The Campino´s Square is located in the city heart, near significant civic and cultural buildings (figure 2). It celebrates the Campino, the men that manages and raises the bulls for bullfighting, a main local identity symbol and beloved by the community. It is also the place for its annual celebration. The renewal intent to honor the sculpture through the re-design of its surroundings, using noble and long-lasting materials, maintaining everyday function for people meeting and circulation, bringing it together with traffic circulation. With this, significant municipal infrastructures were renovated such as the main sewer pipeline. The result was the increased use and the enthusiastic participation on local festivities.

Figure 2. Campino´s square (general view; local festivities after design renewal)

The main urban axis (Alves Redol Avenue) develops from north to south, parallel to the water front, being the main traffic way into the city. The presence of significant civic and cultural buildings (Townhall, Court, Museum, Coffe Places, among others) makes it important in the city everyday life and identity (figure 3). Traffic congestion, low landscape quality and community pressure forced municipality action towards renovation. Urban improvement was conducted through a complete new streetscape design considering existing land property rights, pedestrian and traffic flows and existing values. Politic leaders' intents as well as public desires and complains were also addressed. Interaction with neighborhood and economic forces made the design process difficult, though in the end enabling a high acceptance and satisfaction among the public. The new streetscape design enabled the introduction of sustainable strategies, namely: optimized maintenance on vegetation areas, pedestrian comfort and security, optimized public light energy-consuming system, decreasing pollution. An increase of commercial activities, pedestrian leisure, and buildings' facades restoration can be witnessed.

Figure 3. The main urban axis (prior situation; design renewal; new vegetation areas)

The diversified waterfront landscape – abandoned farm areas in the north, fishermen neighborhood, old public park, river port and deactivated industrial areas – provided exceptional opportunities for city improvement and the expansion of a qualified network of public places. The strategies for renewal and landscape design were as diversified as the character of each area and objectives were.

The river port was a former economic and civic center, when the river was the main communication corridor. Its location made it a linkage point between water front and the inner-city, across the railway. The design strategy was based on the preservation of these memories, enhancement of the urban landscape, and creation of a pleasant public place taking advantage of the river proximity where economic activities related with leisure and culture could take place (figure 4). Presently in the process of construction, it will be a vital project, inducing new economic and leisure activities.

Figure 4. The old river port (1920' photo; existing; visual simulation of design renewal)

Towards the north of the river port, the public park renewal went through a landscape design competition. The winner proposal fostered the preservation of the historic character of some areas, together with the introduction of new design enabling the accommodation and diversification of recreational uses (figure 5). The pedestrian access from inner-city and adjacent areas guided the design, enabling the population to enjoy the totality of the river front, a major resource in the proposal.

Figure 5. The old public garden (winner proposal for renovation)

Further north, the abandoned farm land, between urban area expansion and river banks, the construction of an urban park will be supported by developers. The preliminary design included the assessment of the remaining agricultural structures on the land as well as its potential for the reclamation and expansion of wetland ecosystems. The reconciliation of public recreation, nature conservation and environmental quality, is in the core of the design concept. The access to existing and future urban tissue supported the pedestrian circulation network (figure 6).

Figure 6. The new urban park (existing situation; landscape design visual simulation)

The renewal of old industrial areas near the river is under the initiative of private promoter towards new residential areas. The public spaces will be designed and constructed under private and state funds. The physical continuity with surrounding areas under improvement is a major planning mandatory objective.

The Polis Program was promoted by Portuguese Government throughout the last 10 years, aiming to allocate funds for urban renewal and improvement (Programa Polis, 2002). The defined strategy enabled the selection of a set of continuous places – the future urban park, the public space of Aveeiros neighborhood, the public garden and deactivated industrial areas – for renewal and improvement under Polis funds. The existence of a concept for global landscape and environmental improvement, supported by a greenway thought, contributed for the successful selection of these areas for national funds allocation.

Discussion and conclusions

The expansion of qualified public spaces fosters the creation of a continuous greenway network, supported by the municipal ecological network (according to the national ecological reserve), and further developed by a clear and well defined planning strategy. The projects revealed a municipality pro-active attitude based on diversified means: private promoters, national government funds, and municipal budget, therefore being more economic viable and sustainable. In fostering the enhancement of local cultural identity, implementation of ecological network and expanding opportunities for a secure and comfortable use of public places, it certainly contributes to the competitiveness of the city, placing and highlighting it in the AML context.

The projects, though different, reflect the potentialities and character of each place, promoting the municipality under the headlines of a better place to live, work and rest in the AML. Being a small city, the applied strategies and actions became more visible and faster to implement, from plan to works. The scope of the network under study covers most of the existing urban area promoting pedestrian and visual connection with most of the residential areas.

The Municipality of Vila-Franca-de-Xira includes communities with a similar settlement pattern along the river banks towards south. The same can be observed in other municipalities that borders the river in the Lisbon Metropolitan Area. The results and conclusions make the applicability of this strategy and processes to other small places in the municipality area as well as in the MLA recommended, where they may bring similar results.

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