

Bicycle and the City Landscape

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The implementation of a cycling mobility system in a medium-sized city, involves the adaptation of urban space for such a system to work in safety, legibility and continuity. That is, to have safe streets and roads for the use of bicycles, the cycling network is considered in detail, either in the main pathways with more demand, or in other areas of the city, making the whole system adapted both in infrastructure technical features and in support equipment. In turn, this network must encourage people to use bicycles, and to ensure cyclists to have a safe behavior.

A central aspect in the design and implementation of this network is the study of the urban environment to be intervened, the type of positive and negative spaces and the use of these spaces. Therefore, each intervention should be tailored to the specific characteristics of each street. In such a system, the urban form converted to receive the cyclist, must act as an incentive to increase the number of cyclists and affects not only their future behavior but also improves urban space quality.

This experience is felt both in movement and in parking for all modes of transport. That is, each mode of transportation has specific characteristics and needs both in terms of movement and parking. Similarly, each transport mode take advantage of urban space differently. Thus, in a car, the serial view of urban space by the user, while in motion, is given by the quick passage of the succession of spaces, from the standpoint of the track. Parking requires a specific space. The pedestrian can cross every accessible corner of public urban space, if desired, and can 'create' different views between different serial points from origin to destination. The quality of this experience is usually symptomatic of the quality of urban space, including the succession of different spaces, streets and squares, the relationship between buildings and public space. In cycling mode, the serial view is different from the previous two, because although the speed approaches that of the motorized vehicle in an urban environment, the enjoyment of urban space as a whole is similar to the one felt by a pedestrian. Moreover, this type of transport mode implementation can act as a tool for urban space qualification. Its relationship with other modes transport is also essential and must be done within safety limits and urban qualification. Therefore, public space urban design must be changed or modified or upgraded to cope with these needs.

Thus, while the urban space needs to be adapted to bicycle (movement plus parking), providing user with a specific view of the city, it is also important to guarantee the esthetical and functional

quality of that design. A qualified and safe bicycle trip, with the possibility of connecting the important areas of a city, is neither the pedestrian nor the motorized vehicle view and it can act as a determining factor of public space ownership both by residents and visitors. In addition, the possibility of connecting points with remarkable continuity and efficiency, implies the existence of an urban network with a basic level of connectivity.

An effective way to understand how the current city form provides connectivity for a particular mode of transport is the methodology 'Space syntax'. This methodology consists of a theory and a set of analytical techniques capable of quantitatively describe complex patterns of spatial organization, such as buildings or cities. The ongoing research aims to define, in terms of objectives, which are the elements that must be changed to increase the connectivity (or sectioned it) and thus optimize the quality of urban space. Revealing the causal relationships between the form of architectural space and their patterns of use and occupancy, allows intervention on urban areas to act more effectively and assertively.

This article aims to apply this methodology to the network connectivity of urban spaces, from the bicycle mode perspective. Having previously determined the potential of bicycle use in each of the network sections, the area regarded as the prior intervention with maximum potential (see Figure 1) is studied in detail using this methodology.

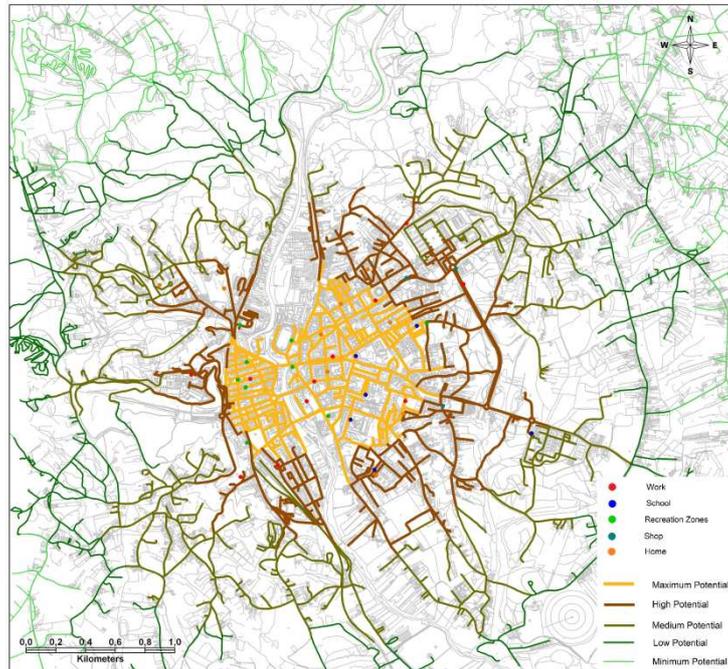


Figure 1. Cycling potential of roads and public spaces in Tomar

This methodology reveals that in a first stage only a few roads can be adapted in order to have a pilot experience.

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