3.10 PORTUGAL

SAL FOR THE EFFECTS OF IMPLEMENTING THE URBANISATION PLAN OF ALTO DO LUMIAR

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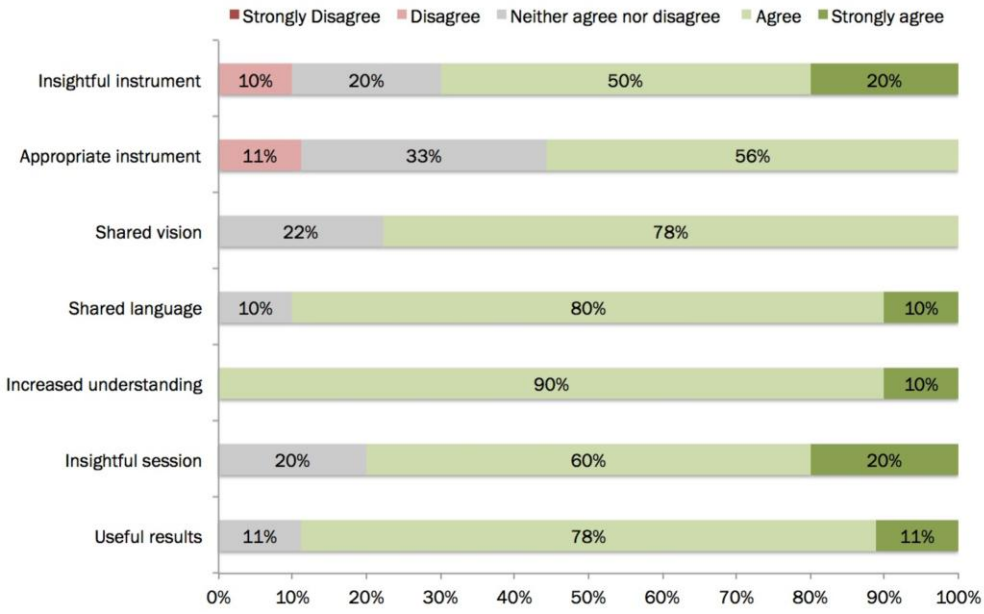
Participants' profile	# Participants: 10
Male | Female	5 | 5
31–45 | >60	4 | 6
Transport planner | Urban planner | Architect	2 | 6 | 2
Public organisation	10

Views about the session and the instrument



Structural Accessibility Layer (SAL)

The SAL tool is a geographical representation of comparative accessibility levels by types of transport modes to different types of opportunities generating travel. It is based on the concept of accessibility, defined as the extent to which the land use and transport systems enable individuals to reach different types of opportunities. More specifically, SAL proposes the concept of 'structural accessibility' for assessing how urban structures constrain travel choices. In other words, it provides foresight on how specific land use and transport policies enable or limit particular choices of the inhabitants.

The main outcomes of the SAL are the diversity of activity index maps for each transport mode and the cluster map (comparing accessibility levels for all transport modes). These maps identify small-scale variations in accessibility conditions across different census tracts of the study area. Diversity of activity maps provide important information on availability and service level and quality of each transport mode across the territory. This information provides insight on the spatial inequalities regarding land use and transport opportunities. Its utilisation potential is strong: in the development of public service standards for public transport; in the identification classification of the hierarchy of urban centralities; or in the definition of priorities for mixed development strategies. The cluster map provides the baseline information on potential mode choices, categorising relative competitiveness of different transport modes and, thereby, identifying areas where inhabitants clearly have no competitive alternative to personal vehicles (see figure below).

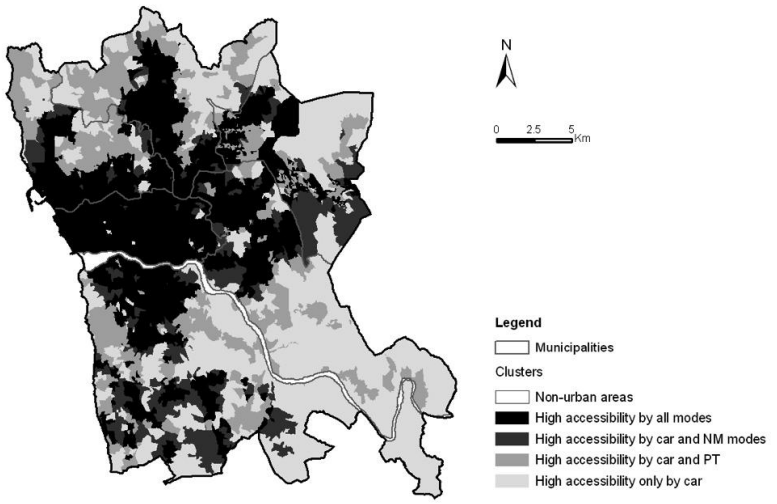


Figure 3.25: Clusters of accessibility in Greater Oporto

SAL was built with usability and the 'rigour–relevance' dilemma in mind. An important choice within the rigour–relevance dilemma is the use of a simple accessibility measures (contour measures), a tool that is easy to communicate and understand. This choice is balanced with the high disaggregation level of analysis, which enhances the understanding of the urban structure conditions but at the same time limits the simplicity of the tool. In turn, the complexity introduced by the high disaggregation level is reduced through the introduction of an aggregate measure that synthetises much of the dispersed information and provides a framework to facilitate the development of objectives and the testing of different scenarios. Finally, SAL is highly adaptable to local conditions since it leaves a large number of issues to be defined and fine-tuned locally, during the calibration of the case specific SAL. However, this adaptability and the disaggregation level of the tool are highly dependent on the availability of data, which may limit its use.

Setting the scene

The workshop was developed in the Municipality of Lisbon. The invited participants came from different departments of the respective city council. Different participants attended the two meeting. The second was attended by four staff from the Urban Rehabilitation Department; four staff from the Land Use Planning Department; and two staff from the Transportation Department. Apart from one participant, who was the head of a sub-division of the Land Use Planning Department, all the remaining attendees were approximately at the same hierarchical level, mainly working on technical planning tasks.

Among the diverse backgrounds of the ten attendees, only a few participants had previous experience with the presented accessibility perspective. The exception was the limited experience with mobility patterns concepts, especially by the Transportation Department members.

Description of the workshop

Step 1

The first step of the workshop was distributed between the first and second meetings. Due to some context-dependent restraints, the meeting's scope and planning problem as well its solution were introduced by the moderator during the first meeting. The planning issue revolved around the impact of the implementation of the Urbanisation Plan of Alto do Lumiar. The second meeting started with the presentation of the accessibility instrument and its planning problem–related features.

Many participants were also part of the team that developed the Urbanisation Plan; thus the researchers' intention was to test the individual and collective thinking on a specific accessibility perspective that was not addressed in the development of this project. This thought-provoking perspective proposed a comparison between the two scenarios, no implementation of the Urbanisation Plan vs. its full execution.

The results of two opposing scenarios were shown to the participants. On the one hand, SAL was carried out on the current situation in Lisbon. The application of SAL in this baseline scenario was particularly focused on the Lumiar parish along with its surrounding parishes. On the other hand, SAL was applied in the scenario of full implementation of the Urbanisation Plan of Alto do Lumiar. In this regard, both scales were analysed (the results at city scale and at the Lumiar-centred parish framework), with a particular focus on the latter. Numeric values were also presented, representing the gain/loss of accessibility in both scales.

The indicators presented included both sectoral and holistic approaches. The prior included the diversity of activity index by non-motorised modes; diversity of activity index by public transportation; and the diversity of activity index by car. The latter contained the accessibility clusters including non-motorised, public transportation and car. All these indicators tackled a wide range of activities/opportunities within a defined time period: 10 minutes for walking, 20 minutes for public transport and 20 minutes for car (the time limits were selected considering reasonable travel times within the inner city illustrative of local/neighbourhood accessibility levels). They were divided into six groups, including schools, leisure/entertainment, shopping, health, employment and other activities.

Step 2

The output chosen for the discussion (in the form of maps) included the diversity of activity index by non-motorised modes and the diversity of activity index by public transportation. Most participants were not familiar with this approach, except with the accessibility notions associated with mobility patterns. Indeed, methodologies of this kind were scarcely used before by the departments represented in the meetings. Hence, the presented measures were challenging for the participants to comprehend and internalise. However, after a questions and answers session, the first group discussions denoted an initial understanding of the main concepts, with some of the more informed participants clarifying the map interpretations to the others. This process continued throughout the meeting.

Steps 3 & 4

With the single workshop format, steps 3 & 4 were simplified. The participants were directly shown the expected effects of the existing Urbanisation Plan of Alto do Lumiar on accessibility levels (resorting to SAL and comparing accessibility levels before and after the interventions proposed by the plan) and asked to discuss the expected accessibility improvements brought by the plan based on the SAL results. Thus, the strategies evaluated were not developed based on the input provided by SAL (analysing the baseline situation regarding local/neighbourhood accessibility levels in Lisbon) but had been developed prior for the referred Urbanisation Plan. The sectorial analyses of the diversity of activity index by walking (within 10 minutes) and by public transportation (within 20 minutes) were the main backdrop for the debate.

Given the context of the meeting and the simplification of some of the steps in the workshop process—most notably considering that the planning problem had not been chosen by the participants and that the strategy, although chosen by them, had been defined without prior knowledge of the accessibility evaluation of the SAL—some participants were sceptical about certain issues of the walking and public transport accessibility. In fact, various methodological issues were repeatedly addressed during the meeting. In this regard, some participants questioned the assumptions of the accessibility instrument, as they did not match the main concerns of the practitioners' group (for instance, the time necessary to reach the city centre's activities with periphery parishes as the point of origin, or the frequency of public transportation). With the help of the moderator, the discussion was briefly focused on these issues, which were often clarified among the participants themselves, without intervention by the moderator.

Another interesting observation revealed that the scenarios shown through the lens of accessibility were not considered during the conceptualisation of the project in discussion. Due to this premise, the acceptance of these new ideas was severely impeded. However, as the dialogue between the participants intensified, intrinsic ideas became more permeable and the internalisation of different concepts became easier. While in the beginning of the meeting, the accessibility perspective was nearly unknown to the majority of the group, the discussions during the latter part of the meeting demonstrated a considerable shift towards understanding such notions. Furthermore, the accessibility changes based on the direct comparison between the two scenarios were debated and progressively being better understood.

Lessons on usability

Although there was an evident effort to make presentations and ideas comprehensible to the whole group (and the debate among the participants denoted an increasing understanding of the accessibility notions), there was a noticeable variation in terms of acceptance of the accessibility instrument between the participants. While the attendees with a mobility background were more willing to accept the methodologies in the scenario analysis, the remaining participants (mainly with a land use background) showed strong resistance towards the application of SAL. This disparity may be explained by the evident segregation between the departments and their respective concerns. In fact, during the focus group discussion, various participants acknowledged the lack of integration between divisions.

Accordingly, while a sizeable range of participants seemed interested in using the accessibility instrument in other projects—most notably when focusing the scenario analysis processes on the small scale and even referring the potential of the instrument as a connector between the different departments' concerns and aims—only a few participants would be actually able to use it. At the technical level, only the Mobility Department participants would have the required computational skills for an adequate implementation of SAL. In a broader perspective, the fact that the participants' concerns did not match the accessibility instrument's aim and the divergence in expressed concerns of the different parties would be the main impediment for an integrated use of the accessibility instrument. Still, it is worth stressing that the partial implementation of the protocol (namely, the distribution of step 1 between the first and second meetings, the *a priori* definition of the planning problem and solution, and the merging of steps 3 and 4) may have biased some of the standpoints, shifting the debate at times from the usability of the instrument to certain methodological issues and potentially distorting the results of the workshop.

Regarding the usability of SAL, a significant improvement would be the reduction of the processing time. Taking into account the context in study, a shorter processing period would allow for a more interactive debate and, consequently, an easier comprehension of the approached concepts. At the formal level, the major improvement of this accessibility instrument would be the development of a more user-friendly platform for its application. By avoiding the use of specific extensions of ArcGIS, a much wider range of users can be reached. At the conceptual level, a more resilient character that allows for a plainer approach may be useful for audiences with weaker knowledge of accessibility concepts.