Libraries Accessibility Project:
Realities and Challenges at 15 Lisbon Municipality Libraries

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Abstract: Libraries Accessibility Project was developed between September and December 2012 and used a qualitative approach to identify physical, communicational, equipment and personalized assistance accessibility conditions at 15 libraries in the municipality of Lisbon, Portugal. The main objectives were creating opportunities for improving the built environment; disseminating existing conditions in the libraries; informing the public about the available different accessibility conditions; distinguishing good practices aiming at coordinating efforts for a larger receptiveness towards accessibility. Triangulation of data collected indicates that accessibility conditions in all four domains are still not in place in most of Lisbon municipality libraries visited and analyzed.

1. Introduction
Good accessibility practices should take into account people's diversity that uses libraries, including all those who experience throughout life "changes in their functionality". This includes people with disabilities, with conditioned mobility, communication or orientation [permanent or temporary], or even those that, due to their life course, are temporary conditioned, for example pregnant women, elderly people and the ones carrying babies or little children. Having this in mind, Libraries Accessibility Project focusing on Lisbon Municipality Libraries was developed considering accessibility not only the possibility of enjoyment of a space that can be physical, communicational and of the equipment, but also the experience, know-how and knowledge. Accessibility is a concept that is related to the values of an evolved and fair society.

Planning the environment with accessibility conditions is a prerequisite for equal opportunities that allow participation in economic, social, cultural, leisure and recreational activities, and also access, use and understanding of citizens' diversity environment.

The scope of this project was to identify the conditions of different forms of access and to propose improvements leading to excellence of accessibility to the built and knowledge environment.

Fifteen Lisbon Municipality libraries, belonging to Lisbon Municipal Libraries network, were analysed: Biblioteca Municipal de Belém, Biblioteca Municipal David Mourão-Ferreira, Hemeroteca Municipal, Biblioteca Municipal Maria Keil, Biblioteca Municipal dos Olivais, Biblioteca Municipal da Penha de França, Biblioteca Quiosque Jardim da Estrela, Biblioteca-Museu República e Resistência, Biblioteca Municipal de S. Lázaro, Biblioteca por Timor, Biblioteca Municipal Camões, Biblioteca Municipal dos Coruchéus, Biblioteca Municipal Natália Correia, Biblioteca Municipal Palácio Galveias e Biblioteca Municipal Orlando Ribeiro. Under this project, the last five mentioned libraries were considered as case studies, on which the existing conditions of accessibility were analyzed in more detail and thorough recommendations were done.

This paper focuses on two of these five case study libraries that were considered by the authors as the ones that could better illustrate examples of good practices, Biblioteca Municipal Natália Correia and Biblioteca Municipal Orlando Ribeiro. These two libraries are the only ones that were built and/or remodeled having both the legislation and the accessibility concepts as a basis.

It must be stressed that this project was confined to Lisbon Municipal Libraries' network in what refers to accessibility issues and challenges involving the users that enjoy these spaces in the following situations: access from the outside to the inside [by car or pedestrian] and indoor access to the public spaces of libraries.

Recommendations had as a main objective the articulation between physical, communicational, equipment and personalized assistance accessibility domains and the preservation of the architectural image and identity of buildings. Recommendations made are non-intrusive with the intention of not mischaracterizing the built heritage.

2. Methodology

This project used a qualitative approach and was developed between September and December 2012 following a pre set chronogram. During these four months there were several project team meetings in order to prepare, plan and adjust field and office work.

The collection of data was done through a questionnaire sent by email to all 15 libraries' directors (first week of September), by local observation (from second week of September till second week of October), with an evaluation grid completed while visiting the libraries, and by collecting library user's

opinion about the existing library accessibility conditions (all four weeks of October).

Information gathered from questionnaires, evaluation grids and user's opinion was analysed and triangulated during the whole month of October and the first two weeks of November. The final report with all recommendations regarding physical, communicational, equipment and personalised assistance accessibility criteria was finished by the end of November. During December the project team prepared and publicly presented the final report with findings and main recommendations in order to improve accessibility conditions across Lisbon Municipal Libraries network.

3. Summary of data gathered and recommendations aiming to achieve best practices

3.1 Physical Domain

One of the aims of this project was to evaluate the adequacy of physical conditions of Lisbon Municipal Libraries network taking into account characteristics and needs of its different users.

The evaluation of physical accessibility conditions allows, on the one hand, checking out a set of actions and interventions already carried out to overcome physical barriers that existed, and on the other, to recognize those barriers that still limit the full enjoyment of the space. In particular, we point out the impediments identified through existing ramps and stairs, the absence of mechanical lifting equipments or proper adapted WC facilities or even indoor/outdoor mobility conditions. The indoor/outdoor mobility was compromised due to inappropriate floors' coatings and inexistence of parking places for vehicles taking people with compromised functionality. The elimination of these barriers is essential to promote comfort, safety, trust and individual autonomy and respect for human diversity contributing to a greater social cohesion.

The presented recommendations aim at solving detected physical problems and propose interventions intended to meet the demands required by Portuguese law and simultaneously strengthen good practices already implemented, point necessary corrections to interventions already carried out and propose actions that complement existing ones. It was also a concern proposing solutions that could improve accessibility of people with visual impairment, looking for creating mechanisms for guidance in large spaces that would promote autonomy and safety of users. The elaboration of recommendations had always present architectural and landscape value of library buildings belonging to Lisbon Municipal Libraries network, which required a careful and increased attention to ensure maintenance of spatial, constructive and materials characteristics that contribute to unity and simplicity of the solutions.

3.2 Equipment Domain

The project also assessed how people with changes in their functionality could access and use existing equipment in municipal libraries. The evaluation

focused on fixed equipment (toilet sinks, counters, command devices, among others), mobile equipment (automatic attendance machines) and furniture (exhibition furniture, chairs and sofas, among others).

Total accessibility and use of existing furniture and equipment are an important contribution to autonomy, trust and enjoyment of libraries' public spaces by different users. The evaluation done identified situations of imbalance in equipment intended for public use (counters) and reading (tables and chairs) which are not suitable for wheelchair users.

The recommendations aim at suggesting solutions for detected problems but always looking for ways to keep characteristics of the original design of counters, while maintaining the integrity of material and volume set. In the equipment domain it was proposed to combine an accessibility solution with the recommendations done for the physical, communicational and personalized assistance domains.

3.3 Communicational Domain

Accessibility in the communicational domain represents full access to information being it visual, written, sound or tactile. It is a set of good practices aiming at providing the ideal welcoming conditions, ensuring the best and fastest accessibility and fulfilling the objective of not only informing but doing it with accuracy, allowing free intellectual fruition and physical autonomy. A complete graphics system should cover the main strategic functions of communication in a given space: a) identifying the space by name and function; b) guiding and directing, proposing pathways and directions to be taken; and c) having regulations, responsible for informing what is forbidden or allowed to do in a certain space. The survey and analysis of accessibility conditions in Lisbon Municipal Libraries network in the communicational domain, identified lack of accuracy in space orientation and identification of available services, compromising autonomy, safety and free enjoyment of information and knowledge. The absence of Braille, of a tactile path on the floor and of translation into Portuguese sign language, among others, combined with fragile visual communication, do not promote effectiveness of accessibility in the communicational domain. The recommendations aim at building an informational, directional and regulatory visual system complemented by other communication media like audio and tactile.

3.4 Personalized Assistance Domain

Personalized assistance aims at developing a service to support users in an individualized manner, contributing to their participation in various aspects of life, particularly in the cultural scope. Currently, support for people with changes in their functionality is provided by staff at Lisbon Municipal Libraries network. This way, recommendations have the objective of providing qualifications for libraries' human resources in what refers to personalized assistance, teaching them how to provide physical, communicational and guidance support to people with mobility restrictions, with hearing and/or vision impairment. The specialist training is an important strategy for a service

of excellence promoting exercise of citizenship. The existence of an identified area for visitors' information is also essential for success in this domain. With the recommendations, personalized assistance will be organized as a support structure to people with changes in their functionality assuming a key role in their achievement of autonomy.

4. Presentation of the two chosen case studies

4.1 Biblioteca Municipal Natália Correia

Place of study, meeting and leisure, Natália Correia Municipal Library has a cultural and educational mission, in order to achieve a real and effective participation by its community, aiming at boosting reading and encourage the love for books.

4.1.1 Physical Domain (outside)

Analysis of accessibility: there is a parking place reserved for people with changes in their functionality. Access to the entrance door can be done by a leveled path, with only a slight slope and also via stairs. The floor is in Portuguese pavement.

Recommendations for best practices: does not apply because they are implemented.

4.1.2   Physical Domain (inside)

Analysis of accessibility: at the main entrance there is a step with about 0,04m. The door has a clear width of about 0,92m, in compliance with the legislation in force.

Recommendations for best practices: all accesses to the different spaces must be free of obstacles and gaps should be eliminated through ramps whenever they are greater than 0,02m.

4.1.3   Equipment Domain

Analysis of accessibility: in the reception area, the information desk is about 0,83m height without a lower part. In the exhibitions' area, both the existing exhibition shelves and the wall panels have a high height. In the lending and multimedia areas, the shelves are more than 1,25m height. Free space underneath of tables is 0,76m height which allows the use by people in wheelchairs. In children's area tables are 0,58m height with a free space underneath which can pose problems if used by children in wheelchairs. WC facilities in children's activities area has a bench with a sink 0,67m height but without a free space underneath. Women's WC facility offers adequate door width with a washbasin providing 0,66m height of free space underneath it. The toilet is in an isolated area accessible through a sliding door but which dimensions are reduced for wheelchairs users going in and moving around.

Recommendations for best practices: it is recommended that the height of the shelves does not exceed 1,25m in order to provide access, with autonomy, to the top shelf. Sanitary facilities for people with changes in their functionality must be at least 2,20m x 2,20m (inside dimensions) with a door width of 0,80m when opened. It is recommended that the door handle is horizontal and that the lavatory does not have an underneath column.

4.1.4   Communicational Domain

Analysis of accessibility**:** there is an information system with thematic areas having appropriate letter body but with a reduced contrast. There is no information in Braille or audiovisual information neither a tactile floor route.

Recommendations for best practices**:** it is recommended the use of a graphic and information signaling system being it aesthetic coherent with chromatic harmony and uniformity of materials used. There should also be Braille and audiovisual support information. It is also recommended the implementation of a tactile floor following the suggested route to the outside. The implementation of a tactile floor should be considered in conjunction with the existing Portuguese pavement in the outside.

4.1.5   Personalized Assistance Domain

Analysis of accessibility: in Natália Correia Municipal Library, staff provides support to users who need to overcome barriers in the physical, communication or equipment domains.

Recommendations for best practices**:** human resources qualification is a strategic element for the certification of competences, which, in the case of libraries, would provide a more specialized and personalized service. It is recommended the implementation of training to all staff who deal with the users, in the personalized assistance domain including mobility (questions related to the functionality and with specific physical aid), orientation (support to people with vision impairment) and communication (knowledge of Portuguese sign language).

4.2   Biblioteca Municipal Orlando Ribeiro

This library offers contemporary architectural solutions and a new library service model, where the timeliness of the collection and use of information and communication technologies transform it in a privileged discovery, cultural and gathering place.

4.2.1   Physical Domain (outside)

Analysis of accessibility**:** there are no parking spaces for disabled people but there is a parking area nearby. The entry is leveled and has a sidewalk. The pavement of the sidewalk and main entrance is on Portuguese pavement and granite slab. There are access ramps at the main entrance doors.

Recommendations for best practices**:** implementation, in the outside and nearer the library main entrance, of parking places reserved for people with changes in their functionality.

4.2.2   Physical Domain (inside)

Analysis of accessibility**:** the existence of lifts, ramps and elevating platforms, being these in full operation, guarantees access to all citizens to the upper floors of the library. However, at this library the elevating platform was out of order. There are also three toilets for people with changes in their functionality. The one on the children's area is also adapted and has a baby's changing table. The ground floor toilet is adapted with folding bars and a sink without column underneath but without an alarm system ready to be used in

case of emergency. The access to the multipurpose room is done through two steps and the access to the upper floor is made by two moves of stairs or elevator. On the building where the Auditorium is, there is a Bar with tables and chairs. The Bar counter does not have a lower area suitable for wheelchair users. The Auditorium has 146 seats, two of which are reserved for people with disability and are located at the top of the room.

Recommendations for best practices**:** to fix the breakdown of the elevating platform and establish a periodical maintenance plan for it.

4.2.3 Equipment Domain

Analysis of accessibility**:** the reception desk is very high and does not provide a lowered zone. The exhibition stand at the reception is very high and the lower shelf has about 1,30m height. There are tables, chairs and armchairs, in all the rooms, suited to the diversity of users with the exception of some bookcases that exceed the desirable height.

Recommendations for best practices**:** it is recommended that desks have such a height that allows comfortable access to it for every library user. This equipment must have the following dimensions: between 0,75m and 0,85m height, not less than 0,80m width and lower free space underneath with a minimum of 0,65m height. It is recommended that the height of the shelves do not exceed 1,25m in order for everyone to have access to top shelves with autonomy.

4.2.4 Communicational Domain

Analysis of accessibility**:** there is orientation communication inside but it does not include people with impaired vision. The signage that is placed at the back of the doors compromises its visibility.

Recommendations for best practices**:** it is recommended the application of tactile floor and Braille signage adding to the existing one. It is also suggested placing the existing signage opposite the opening of doors and designing and producing an information leaflet containing existing good practices (printed, Braille, large print and online) so that visitors can be aware of the available accessibility conditions.

4.2.5 Personalized Assistance Domain

Analysis of accessibility: in Orlando Ribeiro Municipal Library, staff provides support to users who need to overcome barriers in the physical, communication or equipment domains.

Recommendations for best practices: it is recommended the qualification of human resources as a strategic element for the certification of competences, conferring a more specialized and personalized service.

5. Conclusions

Recommendations referred to in the physical domain aim to meet the demands required by Portuguese Decree-Law No. 163/2006 of 8 August that approves the scheme of accessibility to buildings and establishments receiving the public, public roads and houses. It should be noted, however, that architectural value of a significant part of the equipment of Lisbon Municipal Libraries

network, requires a careful assessment so as to ensure the maintenance of its spatial, constructive and materials' characteristics, which contribute to the unity and simplicity of the solution.

The comparison between the Decree-Law requirements and the conditions of accessibility that currently libraries have allows identifying some gaps and mismatches on the physical domain. It should be stressed in particular the absence, in most cases, of WC facilities adapted to wheelchair users and lifts or elevators. The weak conditions of mobility, both outside and inside, are the result of floor coverings, namely on the sidewalk (outside) and on carpet (inside), as well as the presence of bumps and pavement irregularities. There is almost no parking places intended for vehicles belonging to people with changes in their functionality.

The presented recommendations are, whenever possible, related to the physical resolution of detected problems of accessibility, ensuring that proposed interventions do not change libraries spatiality and materiality. In situations where intervention is expected to perform changes on the identity of space, these should be combined with the communicational and personalized assistance recommendations.

In the recommendations and in addition to the regulatory issues, there are also proposed solutions that could improve accessibility of people with visual impairment, looking for creating mechanisms for guidance in open spaces (floor and tactile surfaces), which would promote independence and safety of the user.

Regarding the given suggestions it is proposed a set of actions that, taken together, would complement good practices already implemented and recommendations done.

It is also recommended the marking of walking routes in different kinds of pavements and the creation of a greater number of seats for people with changes in their functionality across different libraries' spaces.

The communicational domain has an undeniable supportive role for the promotion of autonomy in space circulation and exploitation. A complete communication system that carries out its tasks of identifying, guiding and regulating its use, in the community, with harmony, tolerance and respect for diversity, is a clear contribution to a pedagogical and intellectual enjoyment of leisure and culture as is the case of Lisbon Municipal Libraries network. However, the efficiency of space orientation and identification of services rendered is often compromised by incorrect exposure, positioning and size of information, or the absence of alternative means of communication. The implementation of a communicational strategy should be based on the information location taking into account routes and needs of every library user, by placing public information in accordance with the proximity or remoteness of the reader aiming at optimizing transmission and reception of information conditions being it visual, auditory or tactile. Lighting is another element that should be considered in the context of this domain. Its proper implementation is fundamental for good information readability, prevention of glare, reflection

or darkness. Lighting, if used at various spaces and floors in accordance with appropriate materials, is a defining characteristic element of a more or less private space helping to visualize the intended message.

The evaluation done in the equipment domain identified situations of imbalance. The heights of different desks for public information do not allow its use by people with impaired mobility and the heights of bookshelves do not also provide access to a significant number of users. Tables and chairs size and shape are sometimes inappropriate to the diversity of library users.

The recommendations referred to in equipment domain look for meeting the needs required by Portuguese Decree-Law No. 163/2006 of 8 August which approves accessibility to buildings and establishments receiving the public, public roads and houses. Recommendations presented aim at solving problems related to furniture, looking for the solution to be implemented while keeping the characteristics of the original design and maintaining material integrity.

The personalized assistance domain is, in this context, an individualized support service. One can say that autonomy is the ability to make decisions and manage owns life and independence and the ability to play the greatest possible number of everyday activities without the help of others. The qualification of professionals who provide this kind of support, related to diversity and human functionality, is a priority for a desired service of excellence. Training of professionals will provide a greater understanding of human diversity and their condition of functionality, improving the use and enjoyment at spaces and activities belonging to Lisbon Municipal Libraries network, thereby contributing to their greater participation in cultural life.

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