ACCESSIBILITY IMPROVEMENT INTERVENTIONS IN BYZANTINE MONUMENTS OF THESSALONIKI IN THE FRAME OF THE "PROSPELASIS" PROJECT

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SUMMARY

This paper concerns the implementation of accessibility improvement interventions in Byzantine Monuments of Thessaloniki in the frame of the PROSPELASIS project. A structured methodology has been elaborated theoretically and then applied to the Byzantine Monuments of Thessaloniki. Appropriate checklists have been developed and next applied to evaluate the accessibility level of 20 Monuments. For each Monument, alternative accessibility improvement solutions have been prepared. 6 Monuments have been selected and the chosen solutions have been further elaborated on final study level and, finally, following the approval of Archaeological Authorities, interventions have been realized. Users have also participated in several stages of the project.

Key words: accessibility; Byzantine Monuments

PURPOSE OF THE STUDY

Access to culture is a fundamental right of people with disabilities [EU Council, 2003; UN 1993]. A visit to an archaeological site or Monument in particular, is an original, unique experience, and constitutes a main attraction in Greece for tourists. Although

there are movable findings from all historical periods of Greece in museums around the world, the main archaeological sites and Monuments can be found only in their original place. A visit to an archaeological site provides direct contact with the area and the Monument, an authentic experience which cannot be substituted by any representation (visual, audio, haptic). The visit entails the use of one's senses allowing the composition of all stimuli in something unique. However, archaeological sites and Monuments, by their nature, do not allow major interventions to their structure. Any interventions to improve accessibility should be made carefully, so as not to alter the Monument's character, or damage it visually or structurally. [Naniopoulos and Marki, 2003; English Heritage, 2004; 2005, NDA, 2011]

The concept of accessibility, as used here, includes:
-        usability and possibility of independent physical access and movement; and
-        perceptibility, referring to the way one perceives, understands the environment
[Fertier,2003]

This paper describes the improvement of accessibility in selected Byzantine Monuments of Thessaloniki using a methodology created in the frame of the "PROSPELASIS" project, financed by a grant from Iceland, Liechtenstein and Norway through the EEA Financial Mechanism 2004 – 2009 (50%) and from the public investments programme of the Hellenic Republic (50%). The project was realized by the cooperation of the Aristotle University of Thessaloniki (project promoter) and the 9th Ephorate of Byzantine Antiquities.

METHODS

A theoretical approach model was defined first for the improvement of accessibility in Monuments. This was elaborated further, by applying it to Byzantine Monuments of Thessaloniki. This approach contains the following steps:
  ➢ Definition of parts of the Monument that can become accessible
  ➢ Evaluation of existing accessibility level and identification of obstacles
  ➢ Definition of alternative solutions at pre-study level
  ➢ Creation of final studies and implementation of accessibility improvement interventions

The ideal aim concerning accessibility of Monuments is that all areas in a Monument should become accessible. If that is not possible, as in the case of castle battlements for a wheelchair user for example, this should be determined from the beginning. Thus, from the first stages of a study, one should determine the parts of a Monument that can be made accessible, as well as those that do not provide this possibility, though only after sufficient vindication. [English Heritage, 2004; 2005]

This is followed by the evaluation of the existing accessibility level. Appropriate checklists were devised which cover both the Monument's physical access as well as its perceptibility and its use (it should be noted that most of the assessed Monuments still host religious activities). To create the lists, first the needs of people with disabilities had to be determined [Tsalis P. et al., 2008]. This lead to the creation of a task model which was constructed through communication with people with

disabilities, associations of people with disabilities, in situ observation of the use of infrastructure, communication with experts specialised in accessibility as well as relevant literature. [DfT, 2002; 2007; RNIB,1995; 2003; TSRG,2005; GMEPW,2003; ADAAG,1992; English Heritage, 2004; 2005, NDA, 2011] The checklists created in the PROSPELASIS project are structured so that the auditor would not have to be specialized in accessibility.

The implementation of the checklists lead to the construction of reports describing the existing situation for each Monument and, next, to the definition of alternative solutions for the improvement of accessibility. The choice of the preferable solutions (where users have also been involved) was followed by the creation of final studies for the interventions and their implementation. The participation of users during the implementation of interventions is essential to pinpoint and correct any mistakes before the interventions are open to the public. [Naniopoulos et al., 2011b]

After the completion of the improvements, two final very important steps should take place. First of all, the Monuments' users should be informed about the new provisions, thus an information provision system by different modes accessible to all users is essential. Secondly, all involved actors (including Authorities of antiquities, tourist guides, organizations of people with disabilities etc.) should cooperate and their employees should receive some form of training on disability issues. [English Heritage, 2004; 2005; Naniopoulos et al., 2009a;b; NDA,2011]

RESULTS

The methodology created has been applied to the Byzantine Monuments of Thessaloniki. In total 20 Byzantine – UNESCO Monuments were evaluated and solutions for accessibility improvement were completed in pre-study level. [Naniopoulos et al., 2010a;b] In six of these Monuments, which were selected based on their historic significance and interest to the visitor, final studies were made and accessibility improvement interventions, which are presented for each Monument at the following paragraphs, were completed. [Naniopoulos et al., 2011] It should also be noted that, in order to create solutions of high aesthetic quality, two well known artists have been involved in this process, Constantin Xenakis, who was occupied mainly with the signing of a route connecting three Monuments, and Cris Giannakos who contributed in the design of ramps.

1. Acheiropoietos

1.1 Monument's existing situation

The Monument has two entrances to its yard, both of them used by the general public. Staircases bridge the height difference between the yard's entrance and the Monument's entrance, thus making access to wheelchair users impossible. [Naniopoulos et al., 2010a]

1.2 Interventions

At the north side of the Monument there is a non-modulated yard, where 9th Ephorate's archaeologists have archaeological excavations in progress. A lift was installed there, its location ensuring that it causes minimum aesthetic intervention to the Monument. The lift is fixed on a base made out of concrete as well as an existing retaining wall.

Figure 1: The yard at the north side of the Monument, before and after the lift's installation

However, the installation of the lift alone could not solve the problem of achieving access into the main Monument and a series of other interventions was necessary. Thus, it was decided to widen appropriately a gate at the northwest side of the Monument. In order to bridge the existing height difference between the outside of the new door and its surroundings, a metal platform was created. The height difference in the inside of the door was bridged through the creation of a platform with a metal staircase and a small platform lift.

As far as the visitors' information is concerned, a WiFi application was created, focusing in particular to visitors with sensory disabilities. Users retrieve text information about the Monument in Greek, English and Russian. Info is also available in audio format in the three languages mentioned above as well as in Greek and in the International Sign Language and the software used is compatible with screen readers. Information on the Monument is also provided in Braille on an individual basis. A tablet pc is available in situ for those who don't have a WiFi compatible mobile phone.

Figure 2: The WiFi installation inside the Monument. The equipment was placed so that it cannot be seen by visitors.

The Monument is also part of the "Cultural route" connecting three Monuments, i.e. with the Monuments of Hagia Sofia and Rotunda. Each Monument is assigned with a colour code. Pavement plates are coloured using the appropriate Monument's

colour, leading from one Monument to the others. Arrows escorted by the Monument's name indicate the direction towards each Monument. Approaching the Monument the number of colour plates increases. Furthermore, a vertical sign is installed near the Monument's entrance, which contains information about the Monument in three languages, a plan of the route, and the Monument's lay out. This idea was created with the collaboration of the world famous artist Constantin Xenakis
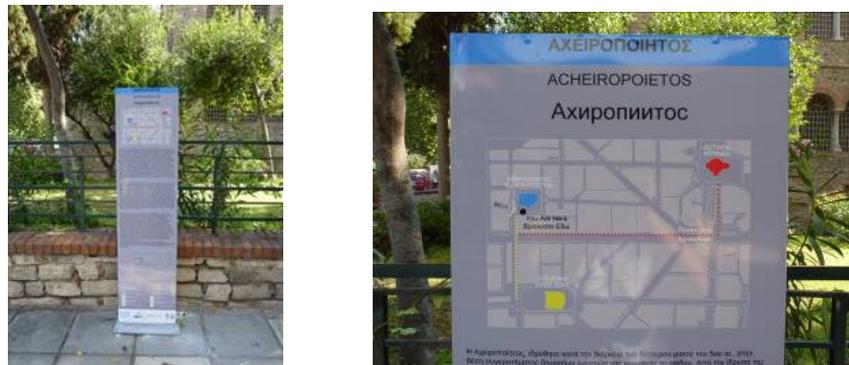

Figure 3: The sign outside the Monument

Along the route the visitor can see appropriately designed resting benches where the visitor can lean to rest. [PROSPELASIS Team, 2012]

Figure 4: Coloured plates and resting bench along the route connecting three Monuments

2. Saint Demetrios (Hagios Dimitrios)

2.1 Interventions

As the entrance to the Monument and horizontal circulation in it did not pose significant problems, the interventions concerning physical accessibility focused on the improvement of access to the Monument's public toilets, which are placed in the Monument's yard. A new toilet was created, its dimensions and equipment ensuring that it can be used by visitors with restricted mobility. The colour contrasting surfaces used facilitate its use by visitors with restricted vision. Furthermore, a new ramp leading to its entrance was created, with a more suitable slope and handrails.

Figure 5: Newly built ramp and toilet for visitors with disabilities

As far as the visitors information is concerned, a WiFi application with characteristics similar to the one installed in Acheiropoietos was created. [PROSPELASIS Team, 2012]

3. Saint Nicholas Orphanos (Hagios Nikolaos Orfanos)

Due to the Monument's very small scale and particular characteristics, it was decided that significant interventions would be required to improve physical access to it which would be at odds with its particular character. Thus, only a portable ramp was purchased and is available upon request. As far as the visitors' information is concerned, a WiFi application with characteristics similar to the one installed in Acheiropoiitos was installed. [PROSPELASIS Team, 2012]

4. Rotunda

Rotunda had significant problems as far as physical accessibility was concerned. The large height difference between the present main entrance of the Monument and its interior made access impossible for wheelchair users. [Naniopoulos et al., 2010a]

As a solution which would not only improve access to the Monument for visitors with restricted mobility but also highlight further its importance, the approach of the Monument from the main "Imperial" gate, opened on the south side of the Monument and not in use, was selected. In order to enable visitors to reach this gate, a bridge over the excavation of the south outbuildings of the Monument, was created. The bridge has a total length of 15.5 m and is constructed from metal truss section. The bridge's surface is constructed from perforated metal, while metal plates on the surface act as tactile signs for pedestrians with sight problems. In general, the interventions are designed so as to have the minimum possible visual impact.

For the construction of the bridge a detailed study of the available data from older excavations was completed in order to ensure that the foundations are over the Early-Byzantine layers and are not in touch with the architectural remains of the south annexes of the early Byzantine phase of the Monument. During the foundation of the southern end of the bridge, two attic-ionian type bases were revealed. Between them, an early Byzantine floor made out of marble plates was located. Next to the base at the eastern end of the bridge, two parts of an unfluted, monolithic column shaft were identified. (Raptis, 2012)

Figure 6: The newly built "bridge" and signage leading to the Monument

In order to bridge the height difference between the entrance and the Monument's floor a new staircase as well as lift were installed inside the Monument. The lift is consistent with the current technical standards. The new staircase was created out of metal, and forms a small platform at its top. This construction, together with the "bridge", creates a single tread for wheelchair users.

As far as the visitors' information is concerned, a WiFi application similar to the one at Acheiropoietos was installed. To further assist visitors with restricted vision, a tactile model of the Monument was installed near the newly opened entrance, with an audible description of the model available through the Wi-Fi system.

Figure 7: The tactile model of the Monument

The Monument is also part of the "Cultural route" connecting it with Hagia Sofia and Acheiropoietos. To highlight this, a triangular sign, comprised of three different signs depicting the Monuments that are connected through the cultural route, is strategically placed at the middle of the route, near the Arch of Galerius which is an important Monument of the city. [PROSPELASIS Team, 2012]

5. Hagia Sofia

There are no particular problems concerning the Monument's physical accessibility. Thus, the only intervention deemed necessary for the improvement of physical accessibility was the creation of a small ramp that would bridge a small height difference of 11cm at the Monument's entrance threshold.

As far as the visitors' information is concerned, a WiFi application was created, focusing in particular to visitors with sensory disabilities. The Monument is also part of the "Cultural route" connecting it with Acheropoietos and Rotunda.

6. Heptapyrgion Fortress

The Monument has two entrances to its yard, only one of them being used by the general public. The staircase in front of the Monument's main entrance makes access to it by wheelchair users impossible. [Naniopoulos et al., 2010]D4

The main entrance leads to a corridor inside the Monument, where the Ephorate of Byzantine Antiquities' offices are located and to a second entrance with a staircase in front of it. Thus, even if the visitor negotiates the main entrance, further access to the Monument is prohibited for wheelchair users and difficult for users with restricted mobility. A secondary entrance, which was closed, appeared to be a better solution for a visitor with restricted mobility to access the Monument. This led directly to the Monument's main area. It should be noted, however, that this entrance had a height difference with its surroundings. In order to bridge the height difference between the entrance and the surroundings' ground the construction of a ramp was deemed necessary. The ramp was constructed from sheet metal grid with a length of 8.00m and 5% slope, to allow the unhindered movement of wheelchair users.

Figure 8: Ramp constructed at the Heptapyrgion fortress

As far as the visitors' information is concerned, a WiFi similar to the one at the Acheiropoietos Monument was installed.

To further assist visitors with restricted vision, a tactile model of the Monument was created and installed near the newly opened entrance. This will give visitors the chance to get familiar with the Monument, understand its dimensions and characteristics. An audible description of the tactile model is also available through the Wi-Fi system installed. [PROSPELASIS Team, 2012]

Figure 9: Blind visitor examining the Monument's tactile model

DISCUSSION

The devised methodology creates a structured process assisting engineers in improving Monuments' and archaeological spaces' accessibility level. However, it should be noted that each Monument has its own particular characteristics which might render any efforts for improving its accessibility impossible without contradicting with its character. That was the case with the church of Hagios Nicholaos Orphanos during the PROSPELASIS project where it was decided that no improvement on the Monument's physical accessibility could be made.

CONCLUSIONS

The methodology developed, through its successful implementation in six Byzantine Monuments of Thessaloniki, proved its validity and aspires to provide a tool that could be applied to Monuments at a wider level.

It should be noted that the approval of the proposed interventions proved to be a time consuming process due to the difficult procedures required and the number of involved actors (General Directorate of Ministry of Culture, Directorate for restoration, Ephorates of Antiquities, Central Archaeological Council). In any case, close cooperation is required between the team responsible for accessibility improvement interventions and the archaeologists of the Ephorates responsible for the specific Monuments.

The concluded interventions are expected to considerably improve the Monuments' accessibility as well as markedly raise the number of visitors with disability. The realization of these interventions, as well as the training seminars realized during the "PROSPELASIS" project, have provided invaluable experience for all involved actors (including Authorities of antiquities, tourist guides, organizations of people with disabilities etc.). The project participants aspire that this experience can lead to further actions that will improve Monuments' and Archaeological sites' accessibility at national level.

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