REQUALIFICATION of BYRSA ACROPOLIS and
REHABILITATION of the NATIONAL MUSEUM of CARTHAGE

01. PREAMBLE / EXPERIENCING THE TOPOS

In dialogue with its surroundings, notably the Gulf of Tunis, the heights of Gammarth and the City's plains, The Acropolis of Byrsa stands out as one of the most notable historical sites of our Western Culture, a place of culture that must be preserved and highlighted!

Moving across the different scales of this very challenging architectural task– urban, architectural , scenographical – we always came back to the strong belief that the key element that would tie all aspects of the project together would be to allow the visitor to have a strong experience of the PLACE - the TOPOS.

Our overall Urban and Landscape strategy calls for a design that respects the historical aspects of the site yet with bold and clear interventions marks a new era – where the importance of the site and our understanding of history is amplified. The disconnection of the Unesco Square to the Archaeological site and accordingly the dissociation of the Museum in relation to its surroundings need to be overcome through a design that is holistic and integrated. The Unesco Square needs to be emblematic in terms of its function as the preface for the Archaeological Site, inspiring as an urban space and practical in its utilitarian functions. The Archaeological site itself is in less need of interventions as it is of the removal of leftovers of the past. A proper path accessible to all and a system of signage that corresponds to contemporary needs is our major focus of intervention.

On an architectural level , when it comes to the formulation of the Museum we consider of tremendous importance to integrate any new structure in a manner that is respectful and appropriate to its historical neighbors. There is a necessity for a new addition to the Former Seminary to account for the needs of the new Museum – an addition that needs to form a dialogue with the old building, providing it with a strong new identity as it has happened in numerous international examples in the past.

On a Museographical Concept, we wish to highlight the fact that the archaeological site and the Museum site literally share the same ground. It is a ground rich in history – and stepping on to this ground already one is faced with the deep history of the site – one of the most culturally fertile grounds of the Mediterranean basin. Starting with this very thought we decided in our proposal *never to leave the ground*. Instead we envisioned an exhibition space as an extension to the excavation site – with only a slight membrane if possible setting them apart. Being in the museum then means extending

your archaeological walk and vice versa taking the path around the ruins you are already in the Museum. The Museographic approach assumes a primary role and the whole site is organized in an inside out manner so to say.

02 . ARCHITECTURAL CONCEPT / THE NEW MUSEUM

01 / The Grand Hall

Before even starting with formulating the main strategy for the New Museum we acknowledged that there is a great fragmentation of spaces that served until recently in the operation of the museum, in buildings with very different structural and morphological characteristics and in a completely random spatial arrangement- buildings which moreover are obviously not capable of supporting the demands of a complex organization like a contemporary museum. Most of these spaces are thus judged insufficient and are proposed to be demolished.

Following the previous idea of setting all the main museum activity – namely the permanent Exhibition - on the ground, meant naturally expanding the building towards the area that has so far been the patio. The Former Seminary of White Fathers is one of the most important buildings that exist today in the area and has undoubted historical value. We consider very important to allow the Former Seminary Building to keep it's role as the main Entrance to the new Museum. All reception functions of the complex are thus to be found in the ground floor of the Old Building. Naturally following the path towards the former patio one now enters the space of the new Museum – but in a way finds himself again out on the site!

A Grand Hall – a space of vast dimensions elegantly enclosed by a 3dimensional mesh structure becomes the first encounter of the visitor. Within this structure light and shadow cast their presence on the building volumes and on the ground. The South and West facades of the Old Seminary are now part of a large scenography. The sky, the trees on the exterior alley, and the Cathedral on the back complete the backdrop upon which the visit will unfold.

02 / Moving through the Permanent Exhibition

Set within the large volume of the Grand Hall a number of boxes of various dimensions host different parts of the museological program. Major periods of the program such as the Punic Metropolis and the Roman period as well as Trans-chronological Rooms such as the Tophet occupy these rooms while the space in between is also reserved for their transitional periods. One can experience the Exhibition in a formal chronological order as well as a number of other ways and routes. A certain kind of freedom is envisioned. A full range of multimedia in-

teractive interfaces accompany the visitor throughout his/her visit. Through a circular movement one exits the Exhibition to the very same place of the Entrance and is forced back to the Lobby.

(An extensive analysis of the Museological Strategies is analyzed in a further Chapter)

03 / The Former Seminary Building

One might argue that a new building volume on the site of the inner courtyard radically overturns the structure and historical entity of the existing building. The new shell however has no life of its own and is fully dependent on the Old Building to function. The new volume completes rather than opposes the old. In our mind the Old Building is elevated to its new role as a Museum for the 21st century and with that thought it needs to accompany for all the needs of such a contemporary institution. On that note all ground and floor area of the old Building is utilized as reception and lounge areas. (info and ticketing points, the entrance to the exhibition space of the permanent exhibition, the Main Museum's shop (A4), the Museum's Friends office, staircases with escalators and elevators for communication with the rest floors of the building.)

On the first floor one finds the restaurant area but also the entrance to the Temporary Exhibition – which is strategically located above the Museographical unit Roman Carthage. Following one's way upwards one ends up on the Terrace where the view of the City ties History back to the Present.

The rest of the Building Spaces are used for covering the requirements in administration, education, research and recreation areas. The architectural proposal ensures the possibility of communication of these units with the warehouse-laboratory unit of the Museum for the needs of immediate research and information.

At the level of the 2nd floor (+9.65) of the northern wing of the Former Seminary of the White Fathers, the Administration and Management (F) spaces are developed with communication possibilities through the service staircases - elevators with all levels of the Museum.

04 / The Warehouse + Workshop Building

On the north-west side of the exhibition area and in direct relation to it, the new warehouse and workshop building of the New Museum is constructed. The spaces are developed on 2 levels. The choice of a new building aims to cover with absolute safety all the structural requirements for storing the archival material. The possibility of direct inter communication with the exhibition space of the permanent exhibition is highlighted, as well as the configuration of the workshops in such positions as to be the object of visual interaction with the exhibition's visitors. Using the same formal language as the exhibition rooms the Warehouse Building is

suggestive of our desire to incorporate the warehouse as yet another part of the Exhibition – which could become literal in the event of an arranged visit.

05 / Other Buildings

Of the existing buildings that are allowed to be demolished, only the H buildings are preserved, which are used for the Technical / logistic support facilities of the New Museum, the M building as an archaeologist's office and a section of the J building as public sanitary areas. On the north-east side of the north wing of the Former Seminary of the White Fathers, the service yard of the New Museum is being developed. In this area, the Service entrance, the access of receiving and sending collections as well as the access to the areas of the Technical / logistical areas & systems (G) unit are configured.

On a general note our basic choice is the concentration of almost all the required spaces in one building complex in order to ensure the inter-connections between the functional units and mainly to ensure high security conditions for both the exhibited and the archival material of the New Museum.

The only exception of the program standing out of this new complex has been the Auditorium – which has deliberately been attached to the Former Cathedral – the two of them envisioned as functioning in a complementary fashion for the hosting of various events. It is pointed out that there are 2 possibilities of direct access to the lobby of the Auditorium either through the central course of the space or through the side corridor in case of parallel events in the 2 areas. A door opposite Auditorium’s entrance can connect Former Cathedral’s inner space to the open areas of the complex Regarding the use of the Former Cathedral space, it is proposed to activate the Concession agreement that was signed in 1992 and expired in 2021 regarding the possibility of converting the area of the Saint-Louis Cathedral of Carthage into a cultural center under the name Acropolium.

03 . UNESCO SQUARE

The area of Unesco Square is essentially the area for the reception and stay of visitors both upon their arrival and upon their departure.

It is also the place that hosts a valuable historical building, the Former Cathedral of Saint-Louis.

The main options are:

- The main vehicular access from the existing road in the South-West corner of the site is maintained.
- The staircase on the Decumanus Maximus axis is used as the main pedestrian access to the space.
- The Mendes France road is used as one way road, in the section that corresponds to the northern limit of the study area for the alternative exit of generally small vehicles.
- The pedestrian path from the Amphitheater road is important as it is directly connected to the area of the square.

The proposed settings concern

- The service and pleasant stay of the guests
- Limiting the movement of vehicles
- Highlighting the historic building

Unesco square landscape design consists on

- The location of the new building entrance to the archaeological site.
- The creation of a disembarkation and boarding zone for passengers - visitors at a close distance and directly related to the new entrance building to the archaeological site
- The delimitation of vehicle movement areas (cars and tourist buses) for the access and departure of visitors, vehicles for the service of the New Museum, the creation of parking spaces for bicycles and motorcycles and the creation of a network of cycle paths.

  These regulations are aimed at prioritizing the movement of pedestrians, while selective elevations of the floor indicate the need for a clear limitation of the speed of vehicle movement.
- The promotion of the Former Cathedral as an important monument in the area by highlighting the Former Cathedral square, creating appropriate green areas and its functional upgrade as the central entrance of the Auditorium.

  By removing all the buildings and structures that are in contact with the building, the original shell of the building is revealed.

  With the creation of raised green zones on either side of the building, at the level of the floor of the interior space, its balanced presence in the area of the square is restored and the preconditions for its functional integration with the other free spaces of the complex are ensured.

- The highlighting of the Decumanus Maximus axis both with the use of the stairs as the main pedestrian access to the area and the appropriate paving of parts of the square up to the steps of the Former Cathedral.
- The unification of the area of the square by creating a single floor of granite slabs resistant to vehicle traffic.
- The enrichment of the area with new plantings, the installation of elements of urban equipment (seats, etc.) for a pleasant and comfortable stay in it and the redesign and organization of the kiosks on the western border of the area.

  Two extensive square's areas, on either side of Decumanus maximus axis, are plant with high Pine trees (Pinus pinea) creating by their dense shadow pleasant and protected from the sun walking and sitting areas.

  A row of Palm trees is developed among vehicles circulation areas ensuring square's main axis. A mixture of pines, acacias, brachychitons, ficus and cypress trees will be plant in the new upraised green areas on either side of Former Cathedral. All trees that must be removed from service yard, like olive trees, citrus, medlar, carob, pomegranate and other existing kind will be replant, if possible, in the new green areas between New Museum and Former Cathedral. Seasonally changing plants offer throughout the square a colorful space mosaic.

  Water declares its presence on the north area of the square through the circular lake with a high jet.

  Sitting and resting places are spread throughout square's area, offering protected and pleasant places to the users of the space.

  It is pointed out that the specific interventions do not affect the existing high green zone around the site, nor the tree units inside square area.

04. OUTDOOR SPACES / ARCHAEOLOGICAL WALK

Interventions are obviously important in areas where buildings are being removed, in areas where new ones are to be built and where it is required mainly for circulations reasons.

The proposed settings concern

- The configuration of new accesses (stairs and ramps) from the entrance to Unesco Square to the entrance of the New Museum and the archaeological sites in general. The configuration of a ramp for the disabled is implemented at the limits of the existing alley within the zone of the archaeological site. This choice is made so as not to disturb the existing tall green in this area.

- The quality upgrade of the existing visitor movement alley, which is realized through its interaction relationship with the exhibition spaces of the New Museum.
- The creation of an integrated route (archaeological walk) for all visitors mainly in the area of the ruins of the Phoenician-Punic period, which aims at a different experiential perception of the place. The archeological walk, realized in the form of a raised wooden walkway, connects the entrance area to the archaeological area with the entrance area of the New Museum. It follows a route consisting of routes and stops at various points of interest. In the section towards the New Museum, the steep height differences are covered mainly by the use of an elevator and elevated walkway (bridge) and alternatively by the use of staircases.
- The promotion of Father Dellatre's room as a museum about life and especially his excavation activity in the specific area.
- Highlighting the central entrance of the New Museum with small-scale interventions (creation of seating areas, replacement of flooring and planting of trees) in the immediate surrounding area.
- The creation of organized zones for outdoor exhibition of objects.
  Existing interesting exhibits are placed on appropriate bases, re-arranged in the spaces and acquire an identity with the aim of effectively informing the visitors.
  Such places can develop dynamically and be placed in positions directly accessible by visitors. The goal is the gradual change of the image of the environmental space from a space for storing objects to a space for knowledge and information.
  As the first zone for the creation of such an open-air museum, the zone parallel to the south-west side of the new exhibition space is proposed.
- The maintenance, restoration and enforcement of green spaces serving as a climatic regulating function to create comfortable spaces.
  The construction of the new buildings of the Museum and the design of the service yard in accordance with the new requirements require the removal of the trees that exist there.
  With the removal of all the buildings and structures that touch the Former Cathedral, an extensive green zone is created around the perimeter, which is proposed to accommodate, among others, the trees that are to be removed from the Museum's service yard.

APPENDIX

AP.01 / MUSEOLOGICAL

A. SMART MUSEUM With a generation born on smart technology and customers with growing expectations, the onus is on museums to provide a more engaging, innovative, and

interactive experience that brings together the intersections of art, history, and science with the wonders of technology.

Across the world, museums are turning to audio visual technologies to bolster their exhibits and reinvent the way that their guests experience art, artifacts, history, the sciences, and more. In this contemporary environment, the central axis of the museography approach that is proposed is not the simple tour of the places and exhibits but the experiential journey of the visitor through space and time. It is both a necessity and a goal for the visitor to experience emotions and tensions created between and beyond the objects. A number of interactive stations are thus programmed throughout the exhibition spaces but also in the common areas of the Museum. **The idea is through the mediation of technology to bolster a more in-depth and layered understanding of history but also try to relate in a more direct manner to the contemporary city and local culture.**

B. DAYLIGHT Transparency is the key to openness, as it proposes a visual relationship between the interior and the exterior space and is fully realized by the semi-transparent shell of the exhibition space. Museum becomes the container of art and daylight openings as perforations of this container, can create a dialogue between the interior and exterior context. The use of daylight is a challenge and should be met carefully at a later stage through appropriate design. As an indication we would like to mention that the installation of a number of motorized shades and blinds can optimize daylight and solar heat gain from openings throughout the day. Also the amount of daylight that comes from the openings in the ceiling of the shell can be absolutely controllable since their number, position and total surface will be determined in absolute relation to the final museographic study.

C. DISPLAY The objects to be displayed are usually small or medium in size. Large or very large objects (architectural members, statues, mosaics and sarcophagi) are found in the sections Carthage, the Punic Metropolis of the West and Carthage during Wartimes and especially in the section Roman Carthage.

The exhibition of small and medium-sized objects will normally take place in free standing or fully integrated into the walls showcases (Free standing, Wall standing, Wall hanging cases and panes tubes) which fully ensure the viewing, protection and safety conditions of the exhibits. Their size and internal organization will obviously depend on the characteristics, the degree of sensitivity and the importance of the exhibits. In any case, it will result from the analytical definitive museographic study.

The large-sized objects, which as a rule are stone and not particularly sensitive, will be usually exhibited individually or in groups in similar-sized basins or hung on walls, with the final choice being made during the phase of the analytical definitive museographic study.

The construction of the windows will ensure general airtightness (AER<0.1), humidity control and safety. Where required, it will be equipped with a multimedia application reproduction system (Smart case system), while the materials that will be used in total must be free of Volatile Organic Compounds (VOC) and certified by international testing laboratories (e.g. Oddy - method).

The extra white glass is commonly used for high optical purity. Using anti-reflective glass will ensure maximum transparency and minimizing reflections, therefore ensuring optimal viewing experience

Lighting is crucial in presenting artefacts and artworks. It offers the opportunity to lift the exhibition to the next level and when executed well, contributes to the visitor's experience as well as helps telling the story of any collection. The basic choice is LED lighting (spot or linear) or optical fiber system placed accordingly on the ceiling or inside the showcases.

The choice of materials and colors (floor, walls, background and surfaces for placing exhibits in the windows, background for highlighting sculptures or other objects, etc.) is generally the subject of the final analytical museographic study

AP.02 / STRUCTURAL CONCEPT

The load-bearing structure of the new shell of the exhibition spaces is formed with flat metal grids. It is based on metal pillars and in certain zones of the Former Seminary where suitable load-bearing structural elements exist.

The interventions at the Former Seminary of the White Fathers concern in the removal of a section of ground floor ceiling for the placement of the new staircases, a corresponding section of the ceiling of the 1st floor to ensure ample natural lighting in the space and small-scale local interventions for the integration of the elevators. These interventions generally follow the static structure of the building and have no problem in their implementation.

The creation of a new warehouse building was done with the main goal of meeting all the loading requirements of the spaces for the storage of the archaeological findings.

In the rest remaining buildings, the interventions concern small internal rearrangements of spaces and local removal of elements without particular static value.

The foundation of the columns for the new shell will be made on piles to minimize the problem with the possible involvement of antiquities in the patio of the existing building. The new warehouse-laboratory building is located in an area from which buildings were removed and no similar problems are expected.

AP.03 / ENVIRONMENTAL APPROACH

A. Passive Sustainable Design The new transparent shell of the exhibition spaces is a generally solar energy benefit cube for the whole building. Located on the south-west side of the existing building, it is generally a space protected from the adverse northern weather conditions during the winter while ensuring significant energy benefits mainly through the extended south facade and its roof. These energy benefits (increased air temperatures) can be utilized during the winter in the rest of the building's areas by suitable transportation systems, while the maintenance of the desired temperature in the exhibition spaces during the summer time is achieved through systems of natural ventilation which are placed on the north side, but mainly on the ceiling of the shell. Special notice is made for smart glass that is a newly developed material that changes its heating capabilities based on the amount of heat and air conditioning present in the space.

B. Active Sustainable Design Architects in co-operation with mechanical and electrical engineers will make the final decision for the implementation of high-efficiency electrical, plumbing, HVAC, and other systems, which are designed to have small environmental footprints.

C. Renewable Energy Systems. Renewable energy systems, including photovoltaic and solar panels are proposed to be installed on the roof of the new shell as well as the roof of the existing building H in order to get maximum benefits of solar energy.

D. Green Building Materials and Finishes. The choice of construction materials will be made under the priority of using steel, lumber, concrete, and finishing materials from companies that use environmentally responsible manufacturing techniques or recycled materials

E. Native Landscaping. The minimization of hard surfaces in the external spaces and the reinforcement of the green zones ensure the easy absorption of rains, the reduction of the temperature, the creation of shadows and protected areas and in general form a pleasant feeling of thermal comfort for the users of the space. By using trees, plants, and grasses that are native to the area, irrigation needs are generally reduced and that makes a big impact in water consumption.