



Internal Organisation

The building interior generally stretches between representative spaces for the performing arts and an exhibition hall for the fine arts. The performance halls and conference rooms as more introverted spaces are located at ground floor level, while the main exhibition hall is given the most exposed location at the top of the building, opening with a wide panoramic window and the large roof terrace towards the city skyline.

The mostly process-oriented spaces, such as the workshops, the documentation centre, the National Cinematheque and administration, which are located between these two focal points, will form the heart of the building and are expected to dominate the everyday atmosphere of the House of Arts and Culture.

A broad open staircase leads from street level into the building and onto the central platform above the large concert hall where the restaurant is located. From there, a number of staircases and bridges will lead visitors and users via three paths to various parts of the building.

Organised as a three-dimensional network, the building sections are differentiated according to their uses. The variety of access points incorporated allows separate use and sub-letting.

All areas maintain their reference to one another via visual links and spatial connection, creating a strong sense of unity.

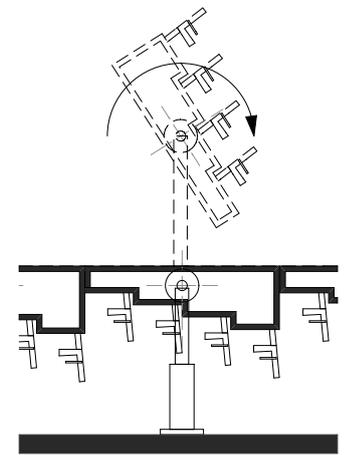
Detailed Information

Performance halls

The two performance halls are linked via one spacious foyer designed to allow simultaneous programs. In order to optimise daylight conditions within the large hall we conceived of a west facing glazed screen. Movable acoustic panels act as darkening devices.

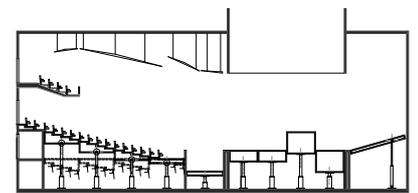
Both halls

- are acoustically flexible and separated from the rest of the building, designed to serve as theatres, concert venues and conference halls.
- include backstage areas with easy street level access;
- have artist changing rooms independently linked to the performance halls which allow simultaneous programs;
- are outfitted with flexible flooring, offering maximum utilisation scenarios and adding value to their potential for subletting.



pivotable seat rows for large hall

large performance hall

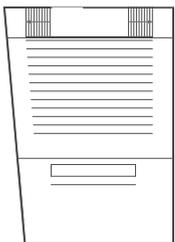


italien style theatre

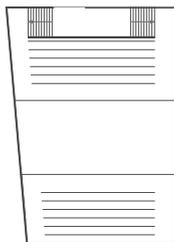


conference

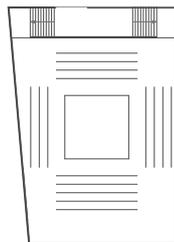
small performance hall (black box)



panel discussion



middle stage



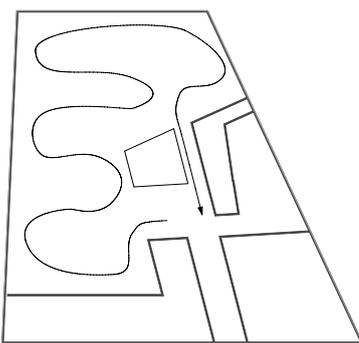
Arena

Exhibition space

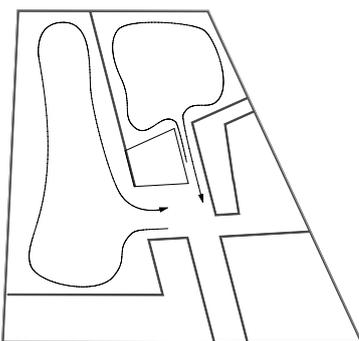
The exhibition hall is accessed via lifts and a staircase in the vertical 'shielding' element towards the Ring Road. A variety of views onto the streets as well as into the urban interior, the voids, and the central platform await visitors on their way up.

The catered roof terrace is linked to the lounge of the exhibition hall, serving as the perfect space for a vernissage or event.

- Indirect daylight in the exhibition space will be offered via north sheds;
- the whole hall can be darkened and is an open space with no columns;
- the staircase to the hall can additionally be used for experimental performances or exhibitions;
- this is designed to also be sublet separately, and
- is accessible via a cargo lift.



Single Exhibition



Two Exhibitions

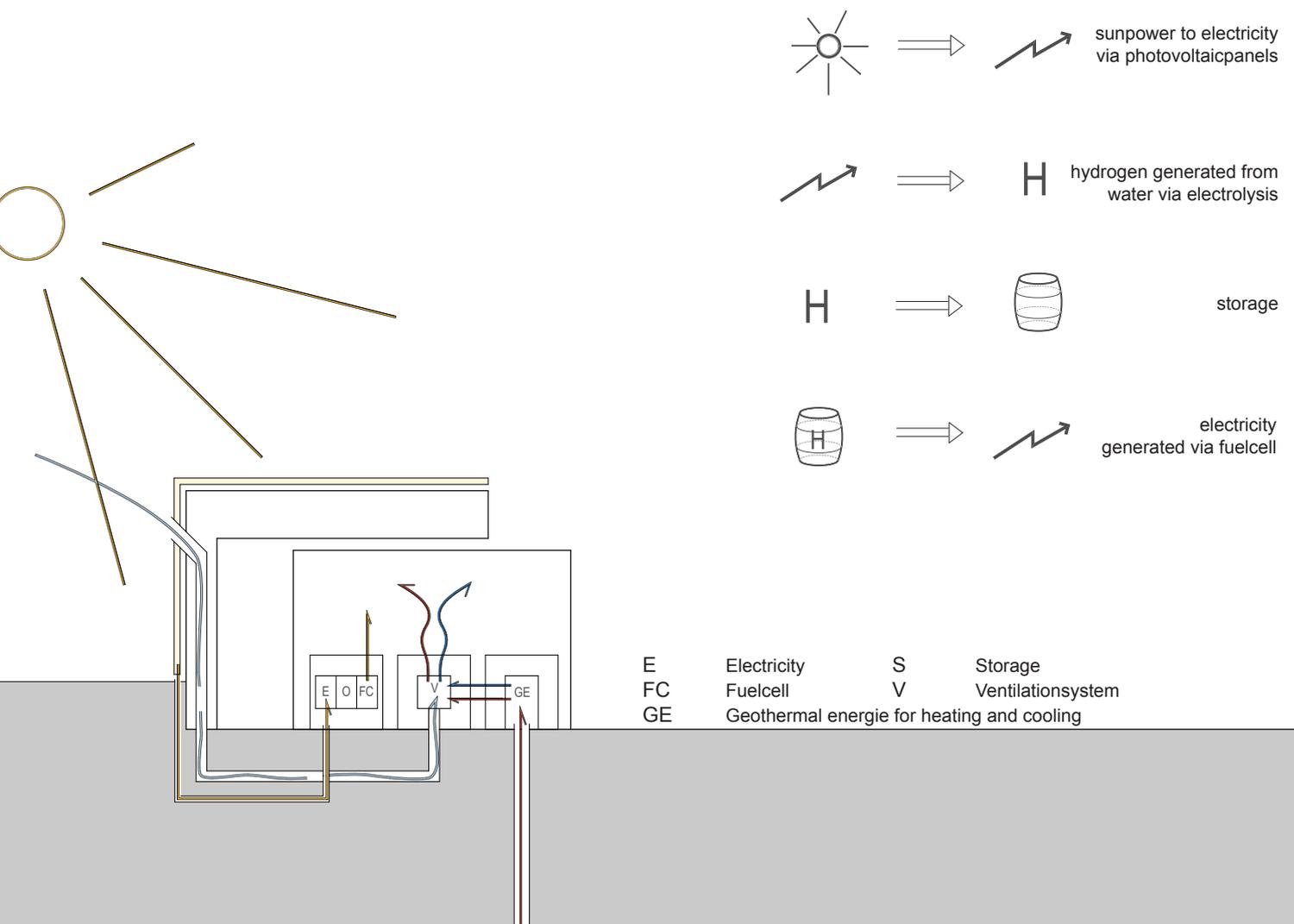
Structural Strategy

Space frames integrated in the external fabric will form the main structure of the cantilevering volumes. Those frames will transfer the load of all platform levels into the structural cores in the footprint of the building, including the fly tower.

The roof structure, spanning over the large, column-free and therefore flexible exhibition hall will also consist of space frames, allowing the possibility of north facing sheds and the excessive use of natural day lighting. Additionally all performance spaces will be constructed acoustically separated, in order to allow a variety of events at the same time within the building, without compromising each other.

Energy Concept

Given limited fossil fuel resources, rising energy costs and the average 300 days of sun per year in Beirut, the proposal includes an energy concept designed to cover most of the building's energy needs solely through renewable resources. Conceived as a dual strategy, all thermal needs of the building, both heating and cooling, will be met using geothermal means, while electricity will be supplied via a fuel cell which burns hydrogen generated from water via electrolysis. In this process the electricity needed to generate the hydrogen will be supplied via the large photovoltaic screen, predominantly during the sunny season. Using hydrogen to store energy makes the building independent from daily and seasonal fluctuations related to solar energy. Hydrogen was chosen for energy storage as losses due to energy conversion cycles are relatively small.



Cladding



cliffs of Beirut rockformation



pigmented pre-cast concrete

The cladding of the structure is focused - as is the House itself - on the future of art and culture in Lebanon. With references to traditional regional materials and architectural elements, the design seeks to present an authentic picture of Lebanese culture and an environmental vision of low impact / low energy design strategies while utilising advanced technology.

In form, abstractions of the dynamic rock formations of the cliffs of Beirut will lead the aesthetic of large scale panels comprised of pigmented pre-cast concrete which mirror the natural sand stone colours of the historic city centre. Crushed rubble from previously destroyed local buildings will be used as aggregates to create lively and tactile façades with varying grains and light contextual colours.

The recessed windows refer to the old townhouses with their attached balconies. Similar to their predecessors, these setbacks will act as shading devices during the hot summers, providing comfortable, passive cooling to the interiors. The south façade and roof surfaces will be fully clad with photovoltaic panels to convert solar into useable electric energy.

In continuation to the panoramic window on the north side a state of the art media facade will act as a bill board towards the Ring Road, showing news, events or may even become another 'exhibition space' on the south side and therefore will offer visual [inter-]actions between the building and the city.

