



DESIGN
RATIO ARCHITECTS

Double act

The relationship between people and buildings is central to the work of Norwegian architect Ratio

Ratio Architects, an architectural practice in Oslo, Norway, has a portfolio consisting of all types of buildings, but the main focus is on public work, mainly cultural and health facilities. At the heart of the design concept for such buildings is the relationship between the buildings and the people who will use them. Currently, the company is working on a new concert hall in the city of Stavanger, in the southwest corner of Norway.

In 2003, Stavanger invited bids for the design of a new concert hall on a harbour-front site, five minutes from the historic city centre. The programme consisted of two complementary halls with roughly the same footprint but fundamentally different in concept and function. One was to be a 1,400-seat shoebox-acoustic hall with a large organ for the city's 75-member symphonic orchestra and other non-amplified music. The second was to be a multipurpose hall for 'everything else' including: electronically amplified music, musical theatre productions, dance shows, rock and jazz concerts, experimental events and conferences. Theatre-style seating capacity was planned to be 800 and, with a flat floor, up to 1,900.

Ratio's proposal won, with a concept that explored the polarity of the two halls, positioning the orchestra hall like an instrument in an empty space, in a solid box and the multipurpose hall as a rough metal box in an open-glass space. The public areas are situated in the glass area facing the harbour and entrance plaza. Back-of-house functions are placed in the solid concrete box. This simple and easily understandable

division has proved very successful throughout the development of the project in collaboration with the client, users, technical consultants and acousticians.

The orchestra hall will be the main space of the building. In partnership with acoustician Eckhard Kahle, the architects have designed a hall with a relatively small parterre and three gallery levels. Apart from catering for larger symphonic pieces, it has also been crucial to offer top-quality sound for soloists and smaller groups. There is a 900m² ceiling that can be moved 5.5m vertically to achieve a 28% reduction in hall volume. For architectural intimacy and acoustic clarity, the two upper-side galleries are 2m away from the sidewalls of the hall. The gap doubles as an artificial skylight on the sidewalls that can be used as part of the performances. Lighting successively the outer, middle and inner surfaces gives rich opportunities for tuning the mood of the hall. The walls are clad with oiled and varnished, 'string-instrument' coloured maple panels in a non-repetitive pattern for diffusion. Balcony fronts are double curved and tilted for reflections to all parts of the audience. The canopy function above the stage is solved by a group of ellipsoid 3D reflectors made of semi-transparent fibreglass and lit from the inside. This will close the space architecturally and soften the appearance of technical equipment suspended from the ceiling.

The multipurpose hall will span intimate club atmosphere, through experimental foyer, to conference hall. It connects to the main foyer through a 4 X 8m opening. Together with the foyer it can accommodate large banquets. The



Rendering of orchestra hall (above); model view of orchestra hall (below)

colour is a deep bluish black, and the balcony fronts are enhanced with lit metal mesh to create a visible clear space. The floor consists of flexible platforms that can carry telescope tribunes. The front platforms can be lowered for orchestra pit and the back scene, and can be raised as a stage at rock concerts with a flat-floor layout. For more festive occasions, candelabras can be mounted and brought into the room to create a central focus, again different from the neutral, flexible space.

In the foyer there will be several spaces for informal concerts and performances. Outside, around the outside entrance plaza, is an amphitheatre with more than 2,500 seats. ■

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Model view from south
west-entrance plaza and
amphitheatre (top); model
view from east showing
proximity to waterfront (above)

RATIO arkitekter AS is a merger of BGO Arkitekter AS and Medplan AS Arkitekter established in 1984/1991. The offices have collaborated over many years on shared projects, especially in the cultural building sector, and have together and independently made an impact in many architectural competitions. The office has wide experience including larger hospital projects, cultural, research and educational establishments both in Norway and abroad.

The merged company has 54 employees and represents an environment with great competence and experience in terms of building types, scales and complexities – and with a highly motivated and skilled workforce. Our projects are developed in teamwork, with processes that bring out the best in every person.

'RATIO' symbolises the focus of our practice: the relationship between people, buildings and the environment. Architecture is the creation of spaces for people – the physical surroundings for our lives, activities and interactions.

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