The Elbphilharmonie stands prominently on a 1963 warehouse facing directly to the Elbe river. The design keyword of the Grosser Saal is "intimacy". Because of the size of the Grosser Saal, the question of how to make the audience feel "not distant" from the performers became the most important theme of the design work. When Nagata Acoustics joined the design team, the project had already decided that the basic shape of the Grosser Saal would no be the "shoebox" configuration, but instead would use the so-called "vineyard" configuration to seat the audience as close to the stage as possible. In order to achieve acoustical intimacy, the design solution involved creating small groups of audience seats and designing effective, sound-reflecting wall surfaces for every group of audience seating.

The architect favored the seashell motif microshaping for the diffusing surface pattern, which were usually expected to create soft sound reflections. They were also used to eliminate the long path echoes. The depth of microshaping at each portion of wall and ceiling was defined through the acoustical test with a 1/10-scale physical model.

**BUILDING DETAILS**

**Location**  
Platz der Deutschen Einheit 4  20457  
Hamburg Germany

**Seating Capacity**: 2,100  
**Room Volume**: 23,000 m³

**Finish Materials**

- **Ceiling**: HGF, milled MS (Mass 125kg/m²)
- **Walls**: HGF, milled MS (Mass 125kg/m²)
- **Aud. Floor**: Wood flooring on HGF
- **Stage Floor**: Oregon pine 50 mm supported with wooden joists and sleepers
- **Canopy**: HGF, milled MS (Mass 125kg/m²)
- **Seat**: Upholstered
- **Pipe Organ**: 4-manual, 65 stops  
  Johannes Klais Orgelbau Bonn

HGF: High-density gypsum fibreboard panels  
MS: Micro-shaping

**ACOUSTICAL DATA**

- **Reverberation Time, T30 in seconds**
  - Unoccupied: 2.4
  - Occupied: 2.3
- **Sound strength, G, in decibels**: 5.4
- **Early decay time (EDT) in seconds**: 2.3
- **Clarity, C80, in decibels**: 0.3
- **Centre time, TS, in milliseconds**: 135
Clockwise from Top
- View from Balcony
- Facility Cut-Model
  (Elbphilharmonie Web)
- Micro-shaping detail
- Building View from East