

Geluid In Zicht makes space tangible

The Geluid In Zicht Foundation (GiZ) makes public buildings more accessible for people with visual impairments. The foundation does this with sound models: tactile scale models supplemented with an auditory layer. Thanks to this combination, users can orient themselves and experience a spatial sense of the building. In many buildings, independent orientation remains a challenge for people with visual impairments. Designers and managers often fail to take their specific needs into account. GiZ offers a concrete solution in which touch and listening are central.

Establishment and vision

The foundation was initiated by Hannes Wallrafen, a former photographer. After becoming blind more than twenty years ago, he searched for new ways of perceiving. This led to the idea of scale models that engage multiple senses simultaneously. The combination of touch and sound enables people to understand, experience, and remember a space.

A team of professionals has been assembled around this idea, jointly responsible for the development and realization of the models.

From concept to realization

Each sound model is developed in consultation with the client. Together, the preconditions are determined: should the model be placed on a table? Or should it be movable? GiZ encourages users to actually touch the models – “Please touch” is the guiding principle. This requires sturdy and durable materials. For accurate perception and visualization, the user remains in the same position. This determines the maximum dimensions of the model. The design of the table also takes wheelchair accessibility into account.

Drawings are translated by an architect into three-dimensional models. During the testing phase, aspects such as tactility and contrast are evaluated. Only after careful assessment are the final choices made. The auditory layer also requires customization. Sound points are linked to tangible elements in the model. GiZ consults a sounding board group of experts by experience regarding the number, content, and distribution of these audio points. A combination of voice-over and ambient sounds is used, allowing even the acoustics of a space to be experienced.

GiZ combines various construction techniques (such as laser and 3D printing) and materials (such as steel, plexiglass, MDF, plastic, and wood). With proprietary hardware and software, multiple users can simultaneously listen to different audio points via headphones.

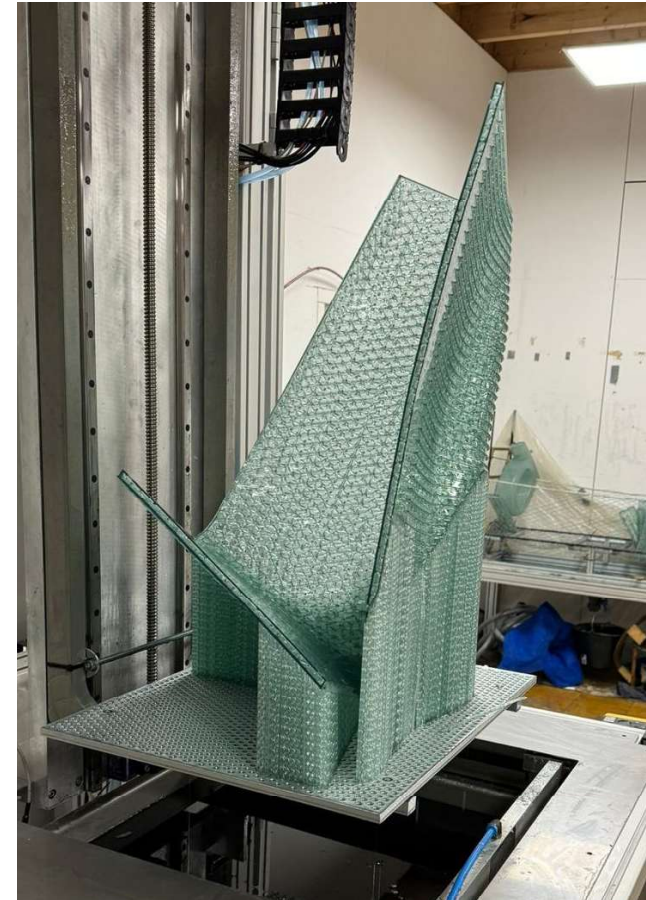
Completed projects

In 2014, the first audio model was created for the House of Representatives. When the parliament moved temporarily to the B67 building, GiZ developed a new model for that location.

That same year, a tactile environmental model of the Binnenhof was created, located in the visitors’ area of ProDemos – House for Democracy and the Rule of Law.

In recent years, three more projects followed:

- 2023 – The Rembrandt House Museum, Amsterdam
- 2024 – ARCAM – Amsterdam Architecture Centre
- 2024 – The Rijksmuseum, Amsterdam



House of Representatives Binnenhof The Hague

- **Type:** Audio model on pedestal
- **Scale:** 1:50
- **Dimensions:** 1120 x 1390 mm
- **Audio:** Two headphones with audio points in the form of figurines and objects
- **Delivery date:** 2014
- **Client:** House of Representatives
- **Funding:** Various funds including the Bartiméus Fund
- **Realization:** NOV'82 Architects - Robert Bosch Audio Technology - GiZ
- **Photography:** M. Wijnbergh - B. Leupen



House of Representatives Binnenhof The Hague

- **Type:** Environmental model
- **Scale:** 1:300
- **Dimensions:** 1220 x 750 mm
- **Audio:** None
- **Delivery date:** 2014
- **Client:** ProDemos
- **Funding:** ProDemos
- **Realization:** NOV'82 Architects – GiZ
- **Photography:** L. Ubachs



House of Representatives B67 The Hague

- **Type:** Audio model on fixed table with cane holders
- **Scale:** Part of the Plenary Hall 1:75, part of Statenpassage 1:500
- **Dimensions:** 900 x 1400 mm
- **Audio:** Two headphones with audio points in the form of figurines
- **Delivery date:** 2022
- **Client:** House of Representatives
- **Funding:** House of Representatives
- **Realization:** Laura Ubachs Equinox Architects – Robert Bosch Audio Technology - GiZ - Robert Reinders Furniture Maker
- **Photography:** M. Wijnbergh



Museum Rembrandt House Amsterdam

- **Type:** Audio model on fixed table with cane holders
- **Scale:** 1:25
- **Dimensions:** table 800 x 1000 mm, height 800 mm. The model is approximately the same size including the edge
- **Audio:** Two headphones with audio points in the form of arrows
- **Delivery date:** 2023
- **Client:** Rembrandt House
- **Funding:** Various funds
- **Realization:** NOV'82 Architects - Laura Ubachs Equinox Architects - Robert Bosch Audio Technology - GiZ
- **Photography:** R. Gerritsen



Arcam (Amsterdam Architecture Centre)

- **Type:** Volume model and environmental model on movable table with cane holder
- **Scale:** Volume model 1:40 - Environmental model 1:1000
- **Dimensions:** 1400 x 600 mm
- **Audio:** Two headphones with audio points in the form of figurines and arrows
- **Delivery date:** 2024
- **Client:** Arcam (Amsterdam Architecture Centre)
- **Funding:** Bartiméus Fund
- **Realization:** Laura Ubachs Equinox Architects - Kaita Shinagawa Studio KU+ - Robert Bosch Audio Technology - GiZ
- **Photography:** R. Gerritsen - K. Shinagawa



Rijksmuseum Amsterdam

- **Type:** Audio model, portable
- **Scale:** 1:280
- **Dimensions:** 500 x 320 mm
- **Audio:** Two headphones with audio points in the form of hemispheres and arrows
- **Delivery date:** 2024
- **Client:** Rijksmuseum
- **Funding:** Bartiméus Fund
- **Realization:** Laura Ubachs Equinox Architects - Kaita Shinagawa Studio KU+ - Robert Bosch Audio Technology - GiZ
- **Photography:** R. Gerritsen - J. Rikanek



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