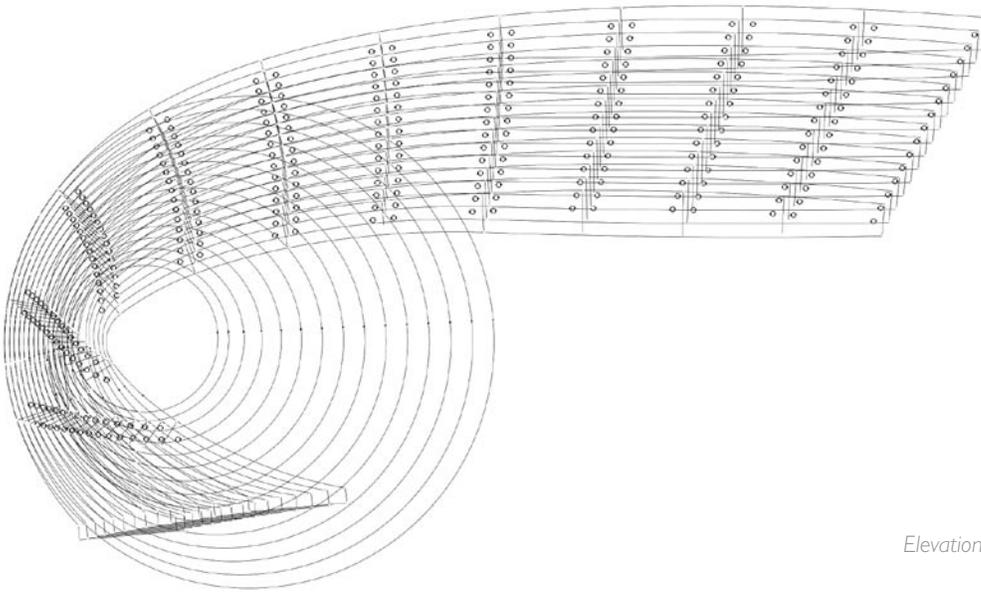


The Glass Office SCL office and showroom in Brisbane, Australia

Martin Riese and Marc Simmons FRONT Inc.



Elevation of Geometrical Skeleton

FRONT is a collaborative of Architects and Engineers based in New York City. Following is a brief description of an example project designed by Front which demonstrates the type of work that the firm is involved in.

The project is an office and showroom adjacent to a glass manufacturing plant in Queensland, Australia. The client required a design vocabulary that would optimally demonstrate the production capabilities of the factory. The resultant design features a 70ft x 130ft continuous enclosure composed of overlapping, curved ribs of toughened, laminated glass. All the panels of the building envelope are composed of multiple layers of glass, fabricated in the adjacent factory, directly from digital shop drawings produced using Gehry Technologies' CATIA/Digital Project.

The design was generated from an elliptical form which was then refined to meet the client's manufacturing capabilities. Working with CATIA/Digital Project, the ellipses were transformed into a

radial geometry that is factory and material-friendly. Further refinement involved an iterative process of re-generation of the rib forms to directly express the inherent structural forces. This resulted in a glass rib form that reflects the bending moment diagram, maximising the efficiency of the structure. The roughly 1200 shop drawings required to fabricate the glass were produced seamlessly from the digital model. This high degree of automation manifests itself in the overall Architectural expression of the finished project. Despite the enclosure's dramatic shape, the glass has no double curves.

Established in 2002, Front is structured as a collaborative with six principals coming together from the offices of Dewhurst Macfarlane & Partners in New York, Renzo Piano Building Workshop in Paris and Lord Norman Foster & Partners in London. Working with architects and engineers, Front focuses on exterior façade and lightweight structures design as well as environmental product and specialist glass design. With expertise in a range of construction materials and transfer technologies the team has earned a reputation for developing new and appropriate design-engineering solutions applied to an array of project types and façade systems. Front includes artistic collaboration with the project team and full technical engagement with trades and industry.

Front recently completed the Seattle Central Library project with Architects OMA/LMN Joint Venture and also the new Prada Beverly Hills Epicenter Store in Los Angeles with OMA and Brand & Allen Architects.

Other work currently under construction or in design includes the China Central Television Headquarters (CCTV), Hotel and Performing Arts Facility (TVCC), both in Beijing with OMA; the Pierpont Morgan Library project in Manhattan with Renzo Piano

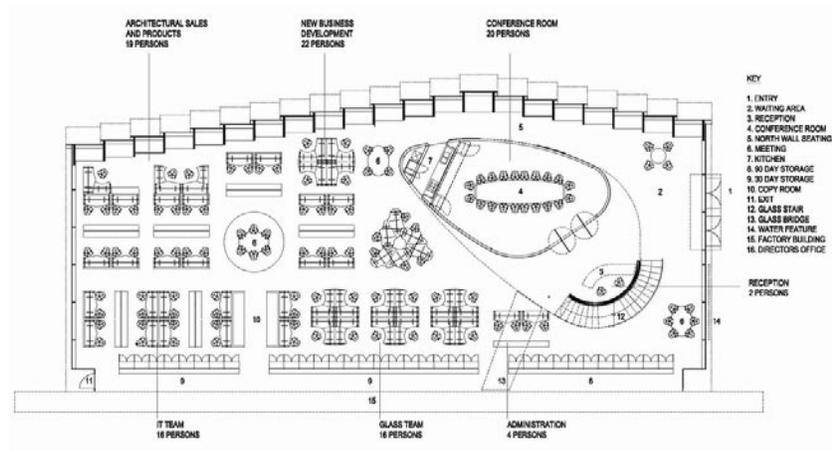


Figure 1. Ground Floor Plan

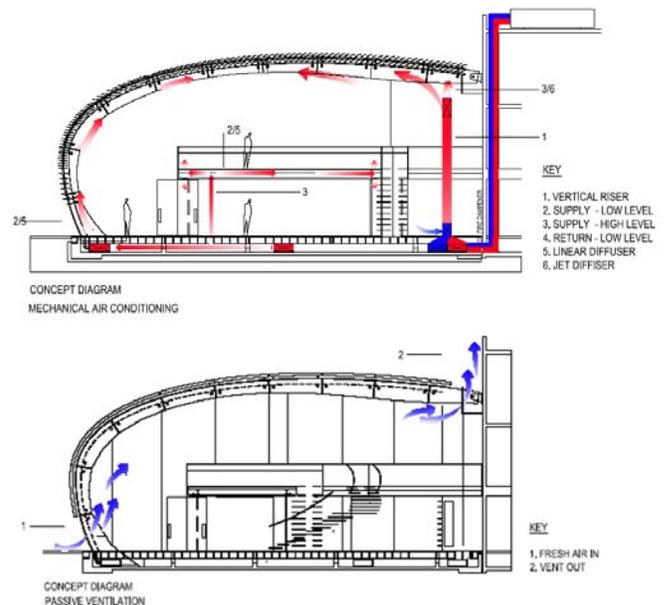


Figure 2. Concept Section diagrams of mechanical passive and active ventilation systems

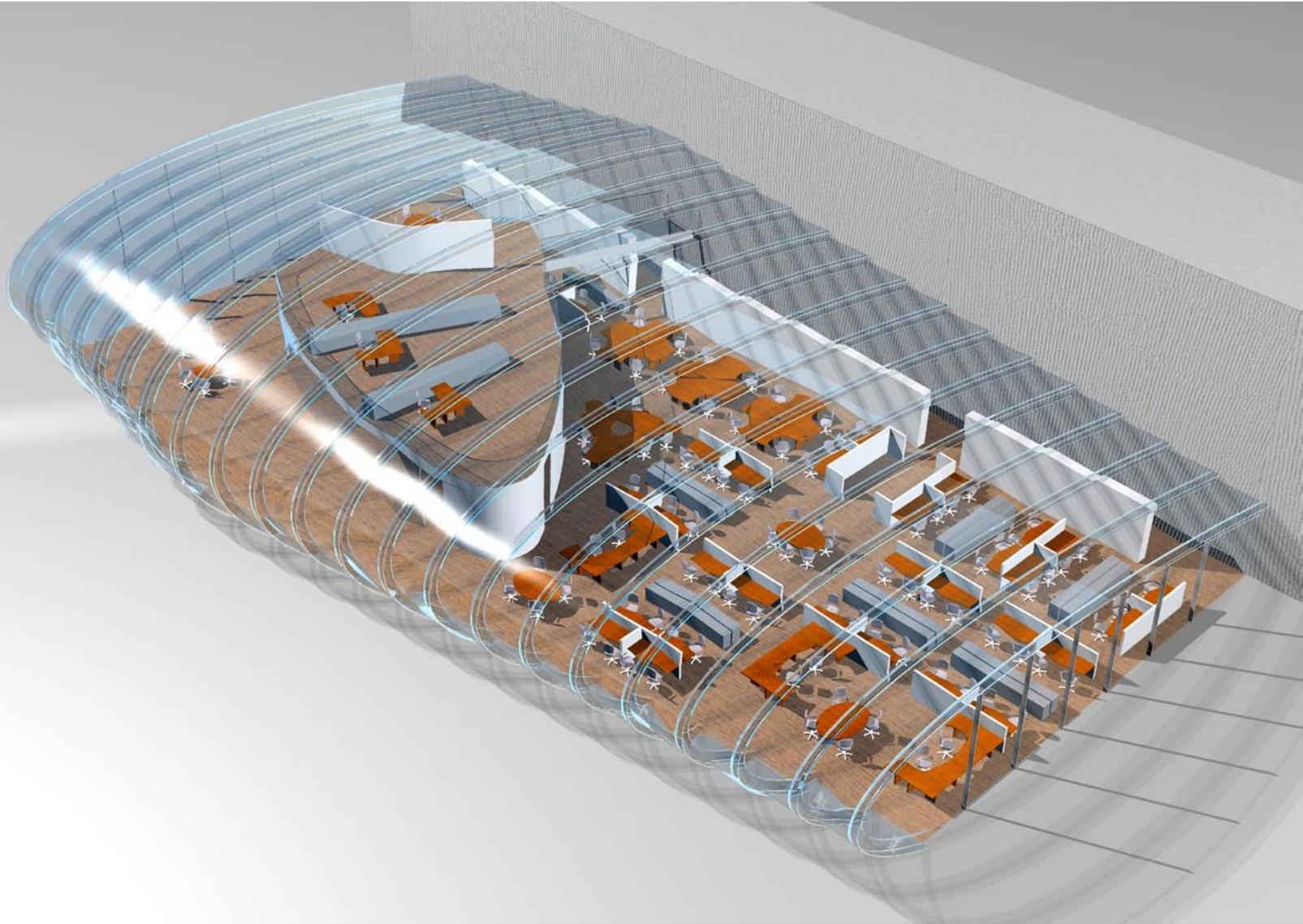


Figure 3. Basic building diagram

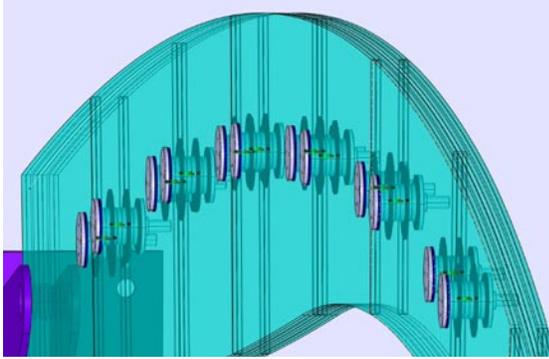


Figure 4. Closeup of rib

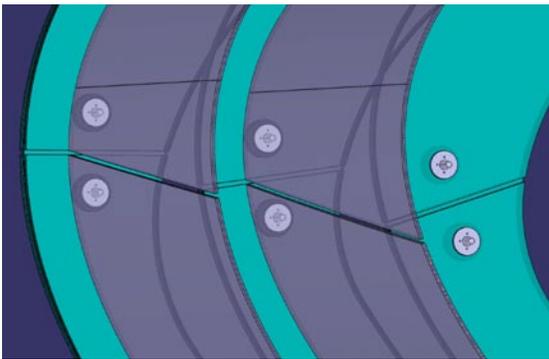
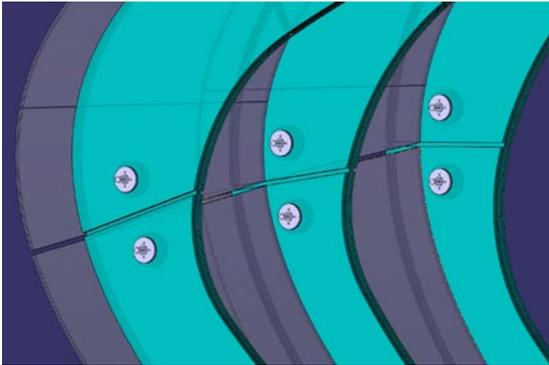


Figure 5. Continuous joints: inner and outer views

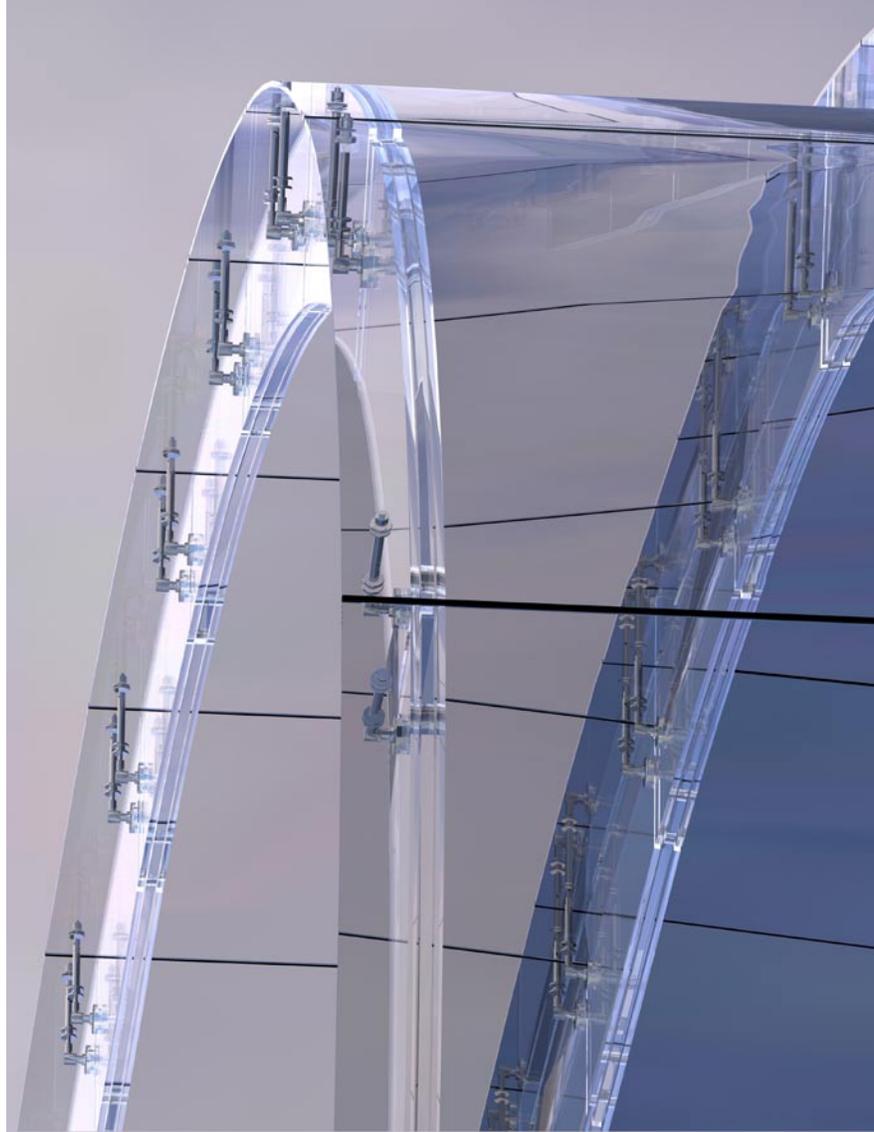


Figure 6. Material design intent

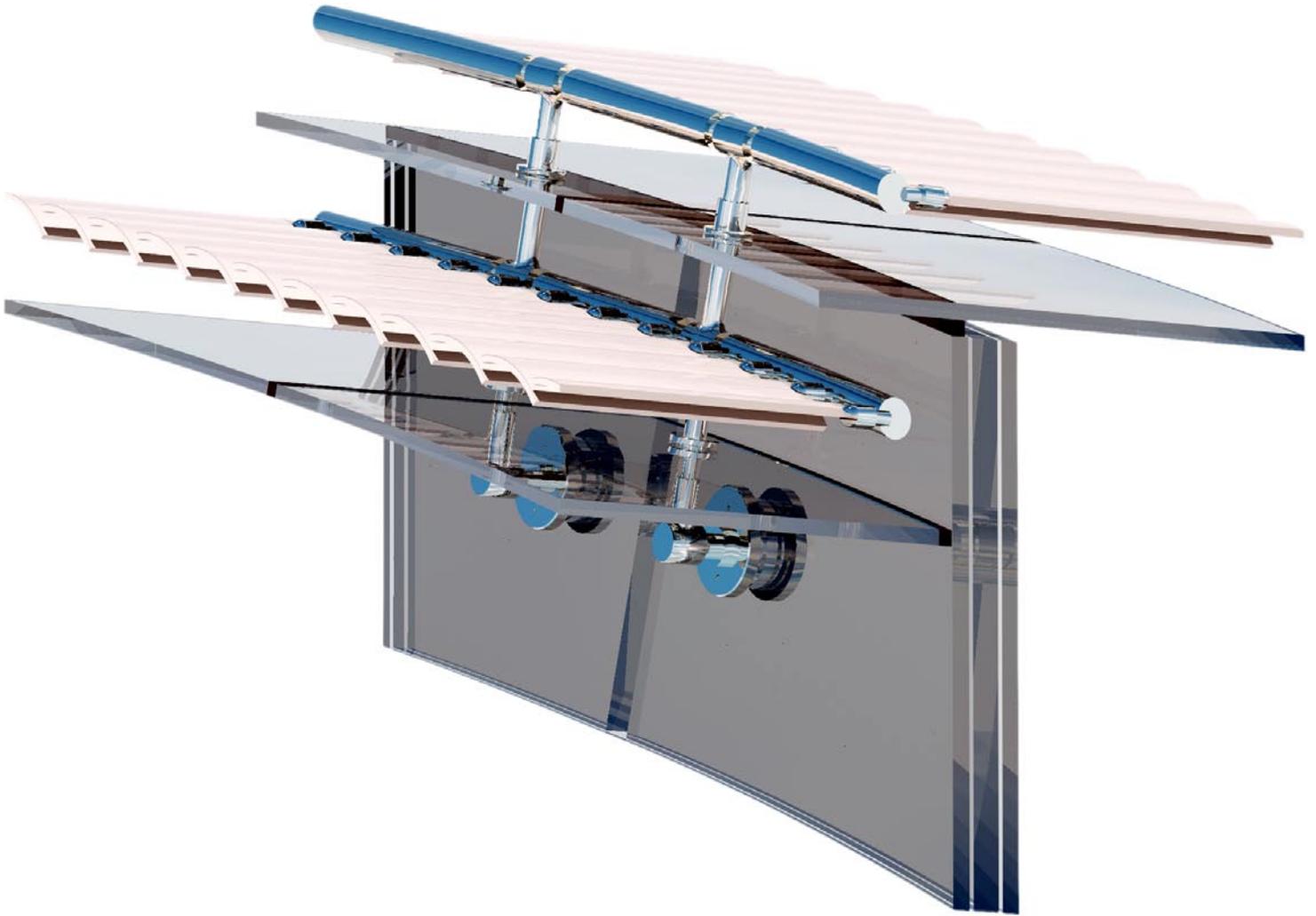


Figure 7. Preliminary sketch detail

Building Workshop; the Walker Art Center in Minneapolis with Herzog & de Meuron Architects; the Baha'i Temple of South America in Santiago, Chile with Hariri Pontarini Architects; the Corcoran Gallery of Art and the Le Clos Jordanne Winery in Niagara, both with Gehry Partners; the Toledo Museum of Art in Ohio, the Novartis Office Building WSJ-157 in Basel, and the New Museum of Contemporary Art in New York, all with Kazuyo Sejima & Ryue Nishizawa Architects.

Marc Simmons is founding partner of Front Inc., a New York City based architectural and structural engineering design practice specializing in façade engineering. Marc has worked in Toronto, Kyoto, Singapore, Paris, Hong Kong and New York City. He is an invited guest lecturer at the Chinese University of Hong Kong, Yale University, Columbia University and the City University of New York in addition to speaking on behalf of the AIA San Francisco Chapter.

Martin Riese, founding partner of FRONT Inc., is an Architect with 18 years experience in professional practice. He was a Project Director at Foster and Partners, where he worked for 10 years. In Hong Kong he completed the new airport and was the Project Architect for a new train station. In London he was the Project Director for two new office buildings. Previous to that he worked with Santiago Calatrava on the Satolas Train Station in Lyon, and the BCE Place Galleria in Toronto. He also worked at Bregman and Hamann and the Zeidler Partnership in Toronto and in Germany. Throughout his career, Martin has been keenly interested in the realization of enhanced Architectural design solutions through the integration of innovative technology, collaboration with other consultancies and working partnerships with industry.