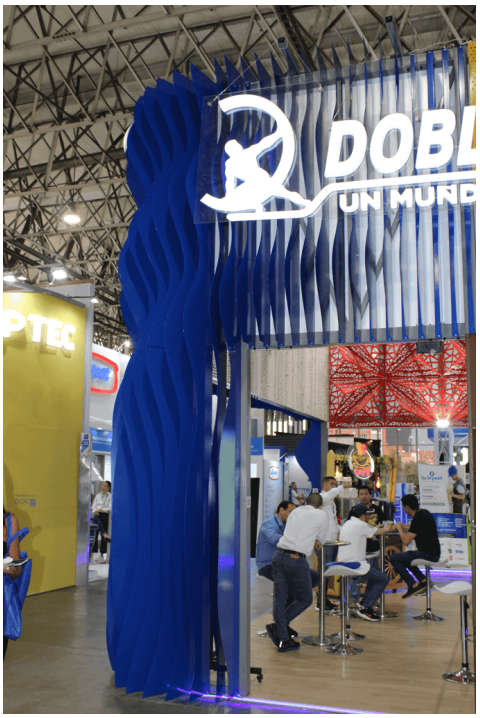
Vortex Facade for ExpoCamacol Medellín 2024



The Vortex project, developed by Doblamos for ExpoCamacol Medellín 2024, show

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surface. This striking visual effect was achieved using metal sheet sections precisely cu

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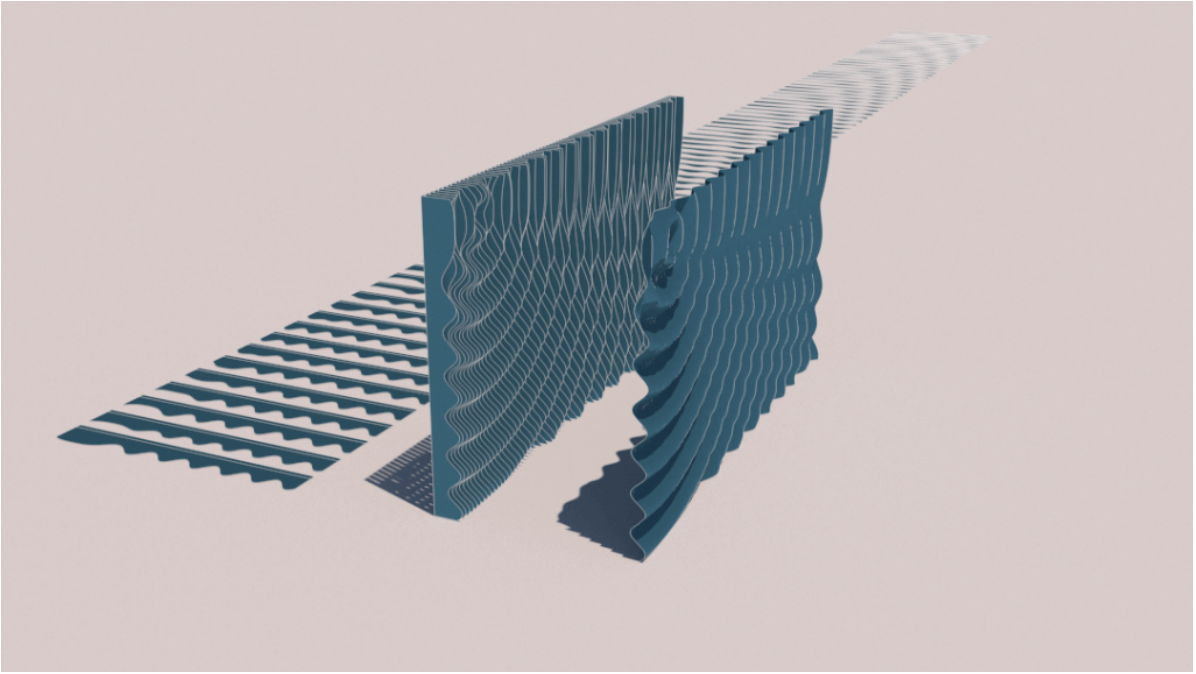
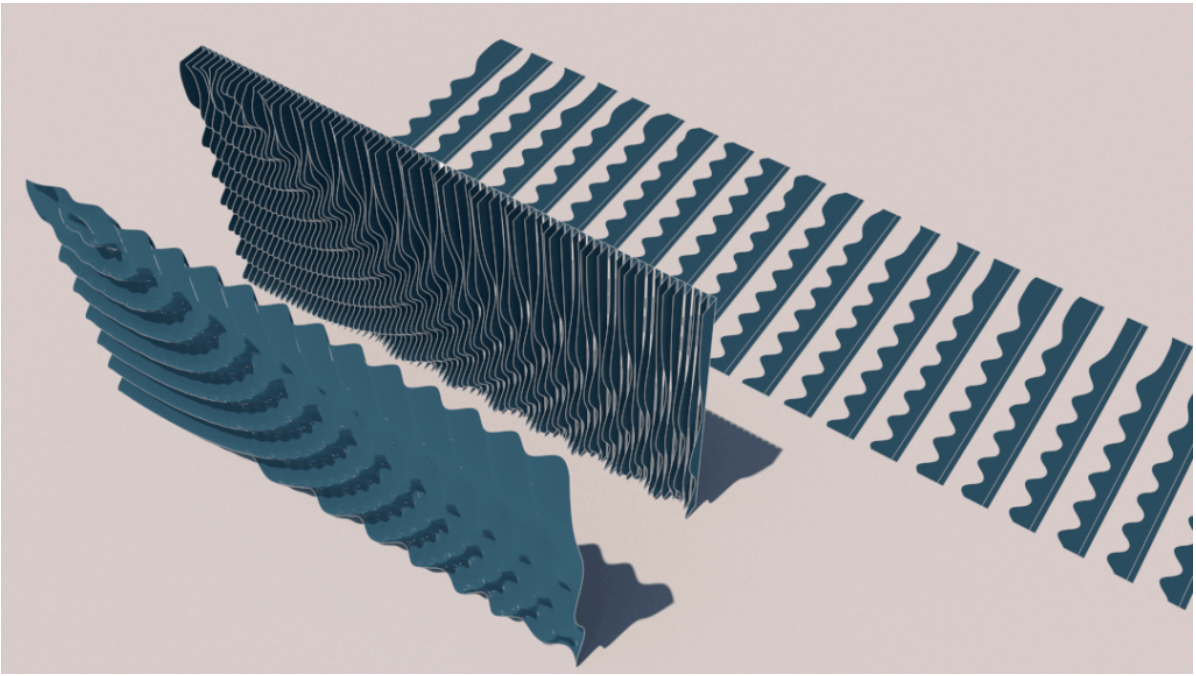
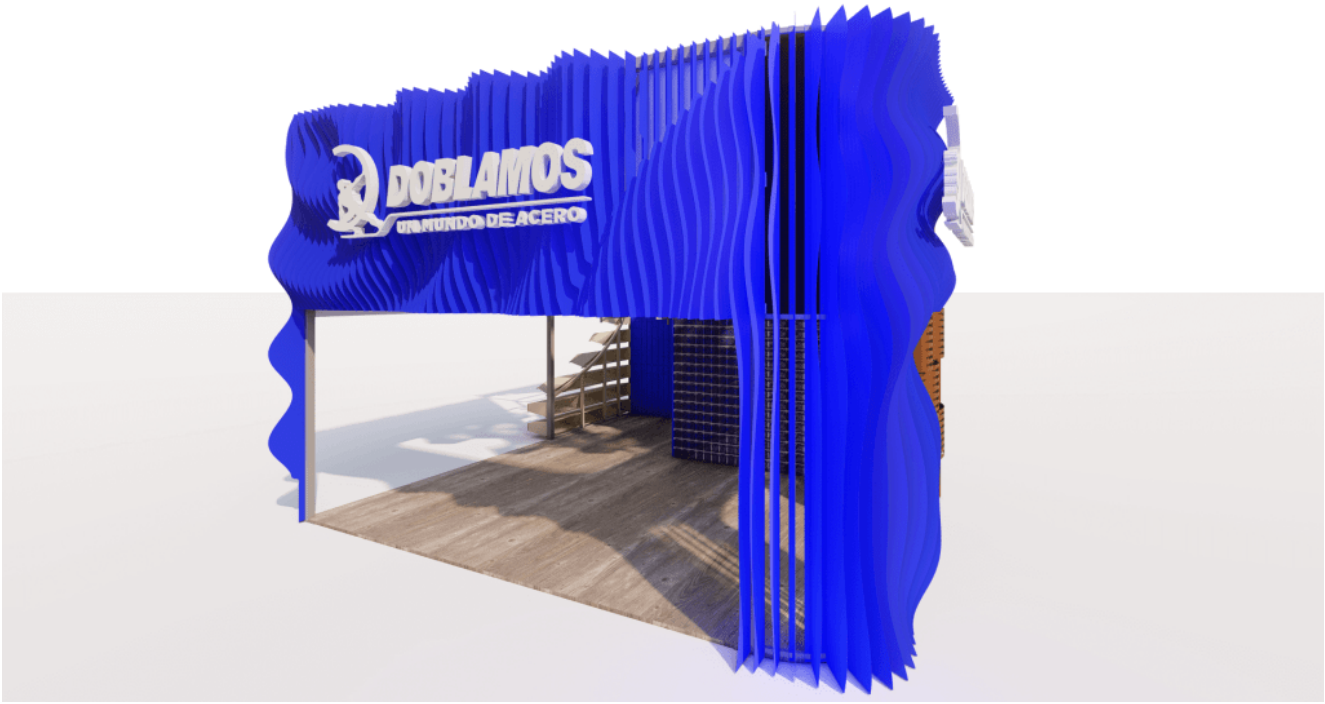
At the heart of this project is a Grasshopper definition that allowed the design team to manipulate various parameters, such as the number and type of waves, their propagation radius, and the arrangement of sections.

By controlling these aspects, the team was able to create a visually engaging surface that responds to the surrounding environment.

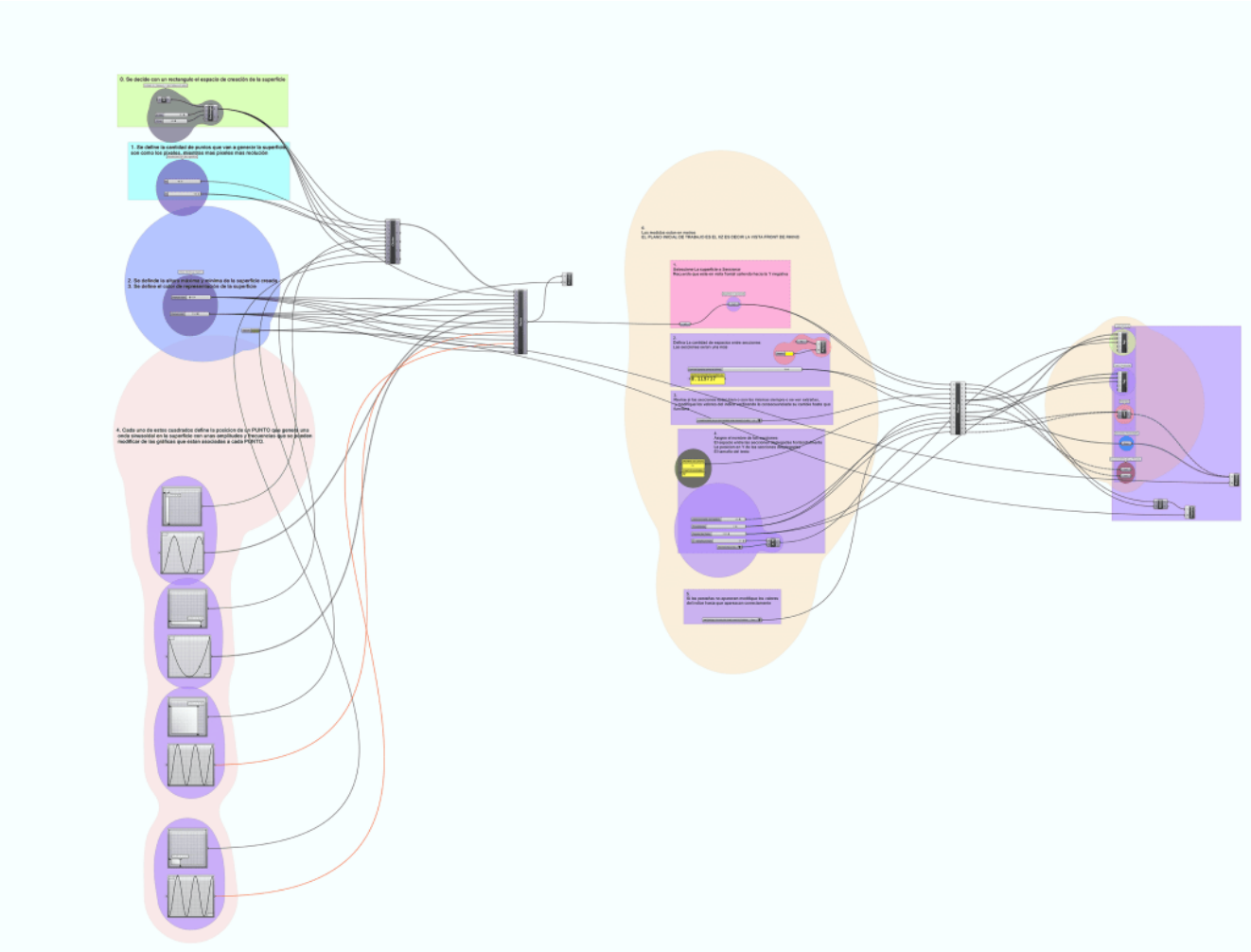
The primary design approach involved creating a 3D surface on the X, Y, and Z planes, where attractor points of different proportions, frequencies, and positions were strategically placed.

- 
- 

These attractor points played a key role in shaping the final steel sheet and allowed the creators to produce a striking and fluid appearance.

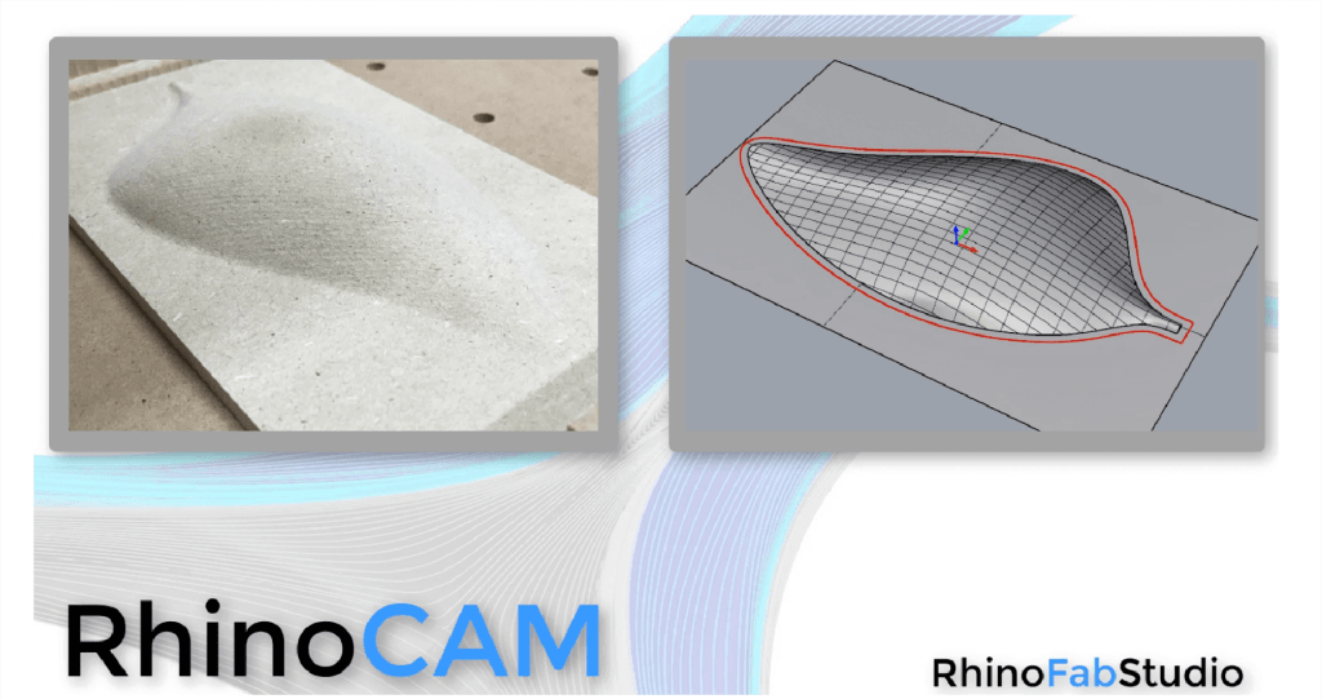


Rhino and Grasshopper were instrumental in bringing this concept to life. The software provided precise control over the separation, depth, and curvature of the attractor points, ensuring that each element was positioned accurately for CNC laser cutting.



This meticulous process ensured that the final steel sheets perfectly mirrored the digital model.

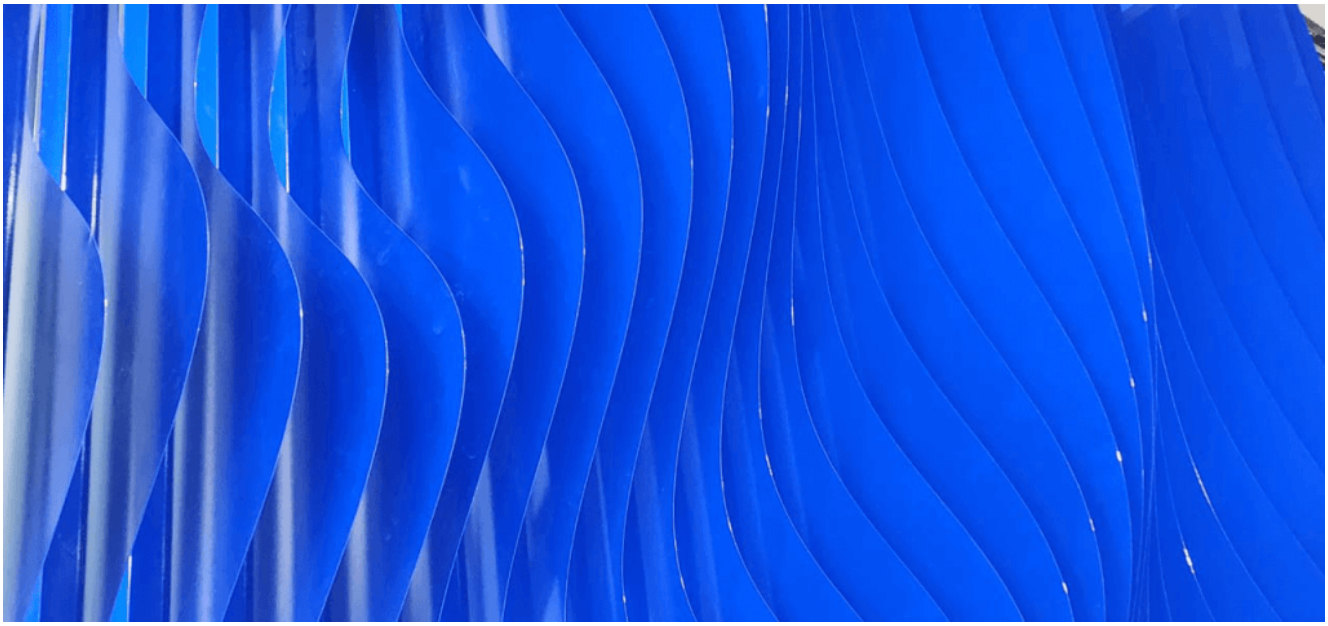
One of the main challenges the design team faced was preventing the attractor points from overlapping, which could create visual noise and disrupt the overall effect. By refining the Grasshopper definition, the team successfully avoided interference between the waves, resulting in a more natural and coherent appearance.



See Also

RHINOCAM 2-1/2 & 3 AXES

The Vortex facade stands as a testament to the power of computational design, demonstrating how digital tools can be harnessed to create complex and visually captivating architectural elements.



CREDITS

Grasshopper definition design: Arq. David E. Vanegas H

Stand design: Vortex design team – Doblamos (Juan Camilo Suárez and

Laura Uribe Arango)

Production: Vortex team – Doblamos