

64 proposals (39 Portuguese and 23 International)

14 countries competing (UK was the country with more entries besides Portugal)

6 prizes all together

Cross-Wind Bridge

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The **Cross-Wind Bridge** promotes the notion of a multipurpose envelope which is engineered to capture the wind power from a network of 2,188 light-weight rotating panels. Drivers who pass below the bridge contribute to its ecosystem by increasing the wind velocity by up to 20%, and thus optimizing the rotation of the panels.

The induction power system exchanges wind energy through an electromagnetic band located on each panel. The result is a power source that is used to light the bridge at night. During this cycle, a driver plays the role of an active, generative agent. In return, the bridge acts as a responsive "urban chandelier" visualizing the productive elements that produce its inner light.

The oblique angles of the bridge's path are oriented towards and optimized for the predominant wind direction. They combine with a surgical urban approach to funnel pedestrians and bikers onto its 40 meter diagonal span over the *Segunda Circular Highway*.

The selected Southwest / Northeast direction is also a consequence of reconnecting and making accessible the remaining paths of Maria Droste Vila split by the *Segunda Circular highway* and engulfed by Telheira's residential park. In this context, the bridge will play a formative role in magnetizing sustainable development and turning rural fragments into sources for public green space.

The Northwest pedestrian stairs are aligned with an existent boulevard from the Maria Droste Vila and deploys to the future roundabout, located on the Southwest, just next to Galp Energia Headquarters.

The cycling arm of the **Cross-Wind Bridge** is structurally balanced above and below the pedestrian bridge. It forms a 'Z' shape, suggesting the motif of an energetic bike path that links Monsanto in the Southwest side of the city with Campo-Grande in the Northeast side of the city.

35% of the punctured membrane forming bridge cladding is made of recycled steel from the auto industry. The structure is based on a truss system, reinforced at the edges, and balanced by concrete stairs and footings.