A key project is run through the Design Evolution process to verify and illustrate the functioning of the method and the use of the biomimetic map. The aim is to design an innovative facade, able to maximize the collection of the potential energy in the turbulent air movements surrounding buildings by using the dynamic instability of static structures in a fluid flow to turn the kinetic energy into output through a series of engines

Artificial Cloud Concept

Type 3

Articulated Cloud

Type 4

Evolved from Type 3, following new design conditions

Biomorphic Evolution

To maximize the triggering frequency, the body plan Type 4 is chosen for further development:

- The material is substituted with a high iron plate.
- The size and thickness of the plate is reduced to give a better instability to the surface.
- The orientation of the plate is modified to have a low attack angle to the airflow.
- The pivot system is changed to a lever system to modify venge to allow triggering frequencies.

The evolution of the facade is driven by the use of an artificial cloud designed by artist Nad Farhan.