

## Smog Eating Billboard by UDEM University Mexico & professor Daan Roosegaarde

UDEM students worked in collaboration with visiting professor Daan Roosegaarde on the Smog Eating Billboard, inspired by the Smog Free Project. The project already successfully launched Smog Free Towers in China, South Korea, Poland and the Netherlands to provide clean air parks. The project takes advantage of existing city panoramic structures to clean up polluting particles through an intelligent coating process that involves sunlight and wind. Daan Roosegaarde was invited as professor at UDEM University to work with the students during one year for the new Environmental Design course.

There are more than 9000 billboards in the city of Monterrey, Mexico, a city which is heavily polluted. The importance of clean air pushed new ideas to reality. The first smog eating billboard gives clean air of 30 trees every 6 hours and can function for five years. The smog eating billboard gives clean air for 104.000 people each day. The smog eating billboard consists of a coated surface with a chemical that attracts the particles of contamination, and then purifies them, in a process called photocatalysis.

The project will have a large impact on the city scale of Monterrey where there is little space for trees and pollution is trapped in the valley surrounded by mountains.

Daan Roosegaarde: "It was great to work with the students and take a problem and transform it into a potential. I am really proud to see them go from academic research to a real project. I do not believe in utopia, a perfect solution, but protopia, step by step improving reality". Other projects focussed on transforming sound pollution in nature sounds and capturing light pollution to see the stars again.

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URL: <https://www.studioroosegaarde.net/project/smog-free-tower>

URL2: <https://www.notimerica.com/comunicados/comunicae/alumnos-udem-crean-proyectos-aliviar-contaminacion-monterrey-344455.html>

longer text:

- Impact: Seeks to fulfill the function of cleaning the air, as 30 trees would for 6 hours.

Pollu-Mesh: This project proposes to take advantage of existing city panoramic structures to clean up polluting particles through an intelligent coating process that involves sunlight and wind. It consists of offering an additional alternative solution to mitigate air pollution and generate a real impact.

Monterrey is currently affected by two problems, air pollution and visual pollution, occupying the first places not only nationally, but also in Latin America. Pollu-mesh aims to im-

prove air quality, as well as create awareness in people and generate a response with a real impact?

“This project proposes to take advantage of the existing structures of the city panoramas to clean the polluting particles through an intelligent coating process in which sunlight and wind are involved. It consists of offering an additional alternative solution to mitigate air pollution and generate a real impact. ”

Pollu-Mesh is the result of a year of effort and work, which was developed by Dutch artist and architect Daan Roosegaarde and an interdisciplinary team of four students from the University of Monterrey. The team consists of two industrial designers, the students Frida Fernanda Leal and Karen Tellez, by Ana María Peñúñuri, Engineer in Sustainable Innovation and Energy and finally by the student, architecture student, Ana Cecilia Álvarez.

A panoramic was designed with the measures of 12.70 by 7.20 meters, being a total area of 92 m<sup>2</sup>, which has an intelligent coating that cleans air pollution. The covering covers an area of almost 100 square meters, which is equivalent to the oxygen that about 30 trees can provide for 6 hours. And, if we take into account that in Monterrey there are currently 9,760 panoramic structures, the same air that 292,800 trees would do in 6 hours would be being cleaned.

An article that was not designed to help the environment, in this case, the panoramic, serves as a tool to create a positive impact on the city. The commercials are located in strategic places of great vehicular flow, where the pollution emitted by cars is concentrated. This is why its location is ideal for the implementation of our project.

The panoramic has a graphic that shows the iconic hill of the chair with the purpose of generating identity in the citizen and motivating the Regiomontane to be part and to get involved in projects that they see in their city. The project is accompanied by a phrase that says "This panoramic is now cleaning the polluted air."

Monterrey/ Rotterdam, November 2019