

Product Name

Smart Highway – smart roads of tomorrow

Designer

Daan Roosegaarde

Company Name

Studio Roosegaarde

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Description of innovation social values

- product category
- formal and functional features
- problems solved by innovation
 - user
- field of application

Smart Highway is an innovative concept for smart roads of tomorrow. A programme of innovation that links a different way of looking at things with innovative ideas that apply the opportunities offered by new technologies in smart ways. Smart Highway is the result of intensive collaboration between builder and developer Heijmans and designer Daan Roosegaarde. The themes sustainability, safety and perception are key to the concept and are manifested in the form of the newest technologies in the area of energy and light.

Studio Roosegaarde tackled this issue on a large scale by innovating the road deck with designs such as 'Glow-in-the-dark Lining', 'Dynamic Paint', 'Interactive Light' and 'Electric Priority Lane'. Together they want to make the road sustainable and interactive through means of smart lighting, harvesting energy, and traffic signs that adapt to the road situation.

Description of technical features

- operations
- technology

We are currently working on the product development and testing of the 'Glowing Lines' and 'Dynamic Paint' technology. Two working prototypes have been developed from this and the materials have been successfully tested in our laboratory. Over the coming months the materials will be tested on the laboratory's premises under Dutch weather conditions. Special attention will thereby be given to weather resistance and durability, as well as to the light output and the lighting duration of the glow-in-the-dark lining, which lasts more than eight hours.

2012-2015. Smart paints, energy harvesting, sensors and other media. Concept and Design at Studio Roosegaarde with the engineers from Heijmans.

Dimensions

Applicable to all roads around the world. Meters and kilometers.

Materials

All materials in this project are produced and self commissioned by Studio Roosegaarde and Heijmans. The materials are high end developed and have special characteristics.

Certifications

Accenture Innovation Award, winner of index award and people's choice award,

Benefits for environment

The goal is to make roads which are more sustainable and interactive by using light, energy harvesting and road signs that automatically adapt to the traffic situation. We create tactile high-tech environments in which viewer and space become one. This connection, established between ideology and technology, results in what Roosegaarde calls 'techno-poetry'.

Benefits for human being

The studio creates interactive designs that explore the dynamic relation between people, technology and space. Smart Highway connects people to public space, adding extra values and a more specific relation between humans and their environment.