

## GLOW 2016: Construction of a huge intelligent LED Cube starts at the university campus in Eindhoven

Thursday November 3<sup>rd</sup> 2016



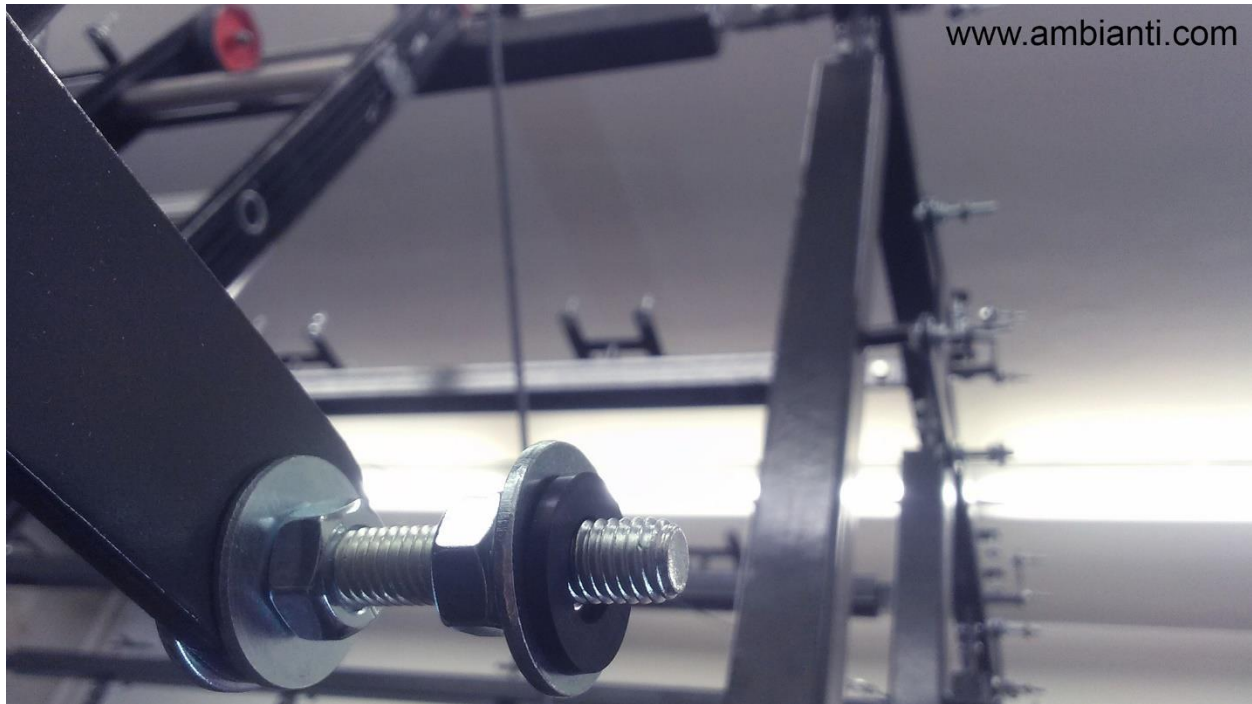
*EINDHOVEN – Coming weekend, the installation of the intelligent LED Cube starts at the TU/e university campus. A massive translucent lighting cube is built purposely for “Photonic modulation of light and space”, a project of a unique cooperation between Eindhoven University of Technology (TU/e), Van Abbemuseum and Ambianti. The installation is part of Glow Science, a special route during the Glow Eindhoven 2016 lighting festival going through the TU/e campus.*

### **Classic art in a digital wrapping**

In this project, the TU/e and Van Abbemuseum aimed to reconstruct the effects of “Licht-Raum Modulator”. This kinetic sculpture of a quintessential avant-garde artist, László Moholy-Nagy, is literally rebuilt at the TU/e campus with a modern digital wrapping. The challenge was to reproduce a complex play of light and shadows that the work of the artist creates in a closed space of a museum room, in an open space.

### **Intelligent technologies**

Especially for this purpose, Ambianti designed and built a custom version of Ambianti Tiles, T2 Glow. Each tile contains its own mini-computer, fully encapsulated in a crystal-clear polymer together with double-sided full-color LEDs. One hundred tiles connect to each other to create the intelligent LED Cube. Based on a digital 3D model of the original sculpture, created by the TU/e, and using its own distributed real-time ray-tracing algorithm, the Cube is making a digital projection of the light and shadow effects and bringing it to all its 20 000 LEDs simultaneously.



### **Giant grid computer**

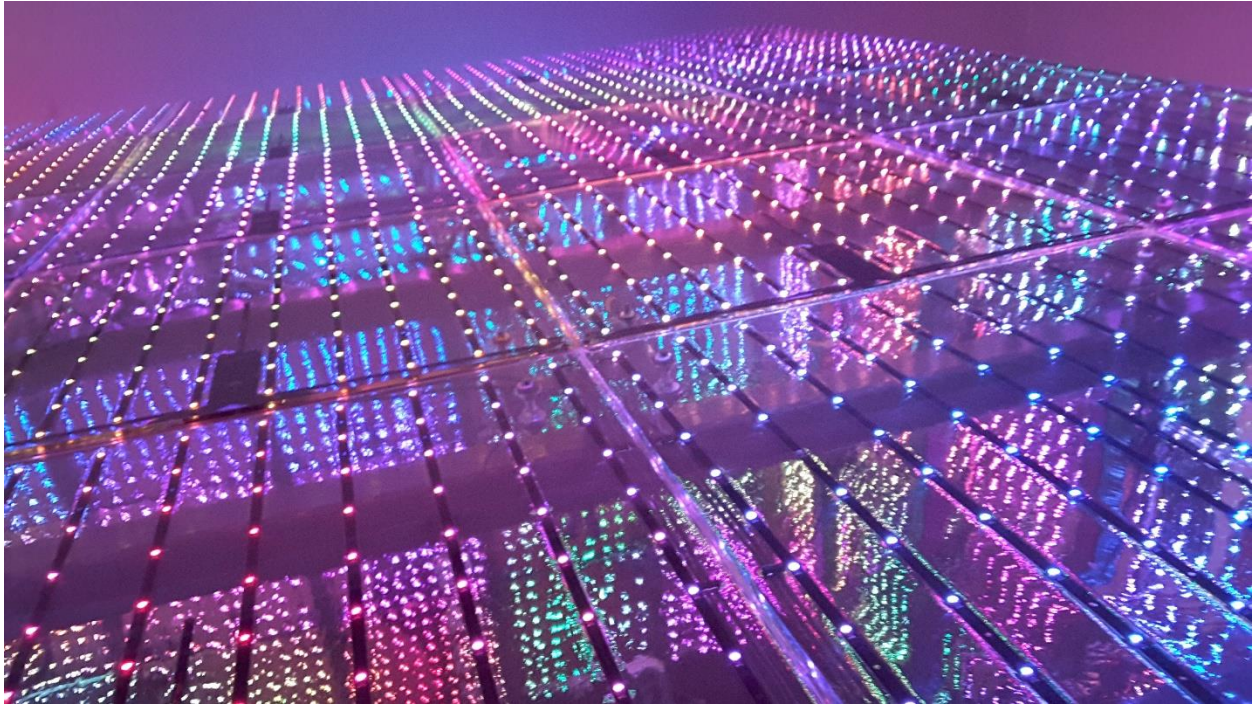
The Cube is nothing else than a giant grid computer that produces a mesmerizing play of lights and shadows to deliver a fascinating experience to the visitors of the Glow Science route. To support the Cube, an 800-kg steel frame will be mounted in a pond next to the main building on the University campus the days before the festival. The placement on top of the water will allow the effect of the Cube to be enhanced by reflections. Despite its size, the installation consumes very little power due to energy saving properties of LEDs.

### **About the project**

“Photonic modulation of light and space” is a unique cooperation between Van Abbemuseum, Ambianti and TU/e for GLOW Eindhoven 2016.

### **About Ambianti**

Ambianti is founded in 2012 in Eindhoven, the Netherlands, by an international team of engineers, scientists and experts who share the same passion: to make ambient technologies part of everyday life. The company designs and develops high-tech building materials, combining cutting-edge digital intelligence, inventive minimalism and the flexibility of conventional building construction. Ambianti Tiles are intelligent LED tiles based on patented technology, which comprise a powerful distributed computing system when connected to each other.



## Contact

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## More about the project:

- <http://ambianti.com/glow>
- <http://www.gloweindhoven.nl/nl/glow-projecten/glow-next/photonic-modulation-of-light-and-space>