



# Utrecht City Hall

Making a monumental building smart

2018-2019



### **About Utrecht City Hall**

The beautiful monumental city hall of Utrecht dates from the Middle Ages. It was granted city law in 1122 and was rebuilt around 1826-1830 to a design by the Utrecht city architect Johannes van Embden, in a neoclassical style.

In its lifetime, the building has been completely renovated a number of times. This time, however, the renovation is completely different; Utrecht city hall has now become a smart building due to the installation of Mymesh.

### **The need for innovation**

Sustainability, comfort and culture history were the three main arguments to renovate the city hall in Utrecht. Efficient LED lights and automatic light control, based on motion detection and daylight harvesting, contributed to these goals significantly. Verosol's intelligent roller blinds FourC - which operate on Mymesh too - were included in the renovation to drive up the sustainability even more. This system measures the outside climate and automatically adjusts the position of the blinds for optimal indoor climate and light protection. The effective blinds from Verosol are heat-resistant in the summer and insulating in the winter. Last but not least, the whole Mymesh ecosystem got connected to the building's automation system via I/O interfaces.



### **Obstacles**

The project faced many challenges. Chess had to deal with extremely thick medieval walls that could have disturbed the radio signal. More than 700 heritage lamps also had to be upgraded to keep up with the transition to smart.

Another challenge was system integration. Even though this is not a problem from a technical point of view, there still is the hurdle of many suppliers / installers for whom the Mymesh solution is new.

***“A design in which sustainability, monumental value, functionality and comfort are central.” -Han Bak, CEO Chess -***



### **Why Mymesh?**

Mymesh provides a state of the art wireless solution that is solid, secure and fast. It can measure presence and external light levels and accordingly set the dim level and operate blinds/shading.

***“Wireless and cloud based control systems are preferred.”  
-Wil Kuijer, UVO.-***

### **When future meets history**

The original lights of the Utrecht city hall were all converted to smart alternatives. More than 2000 lamps have been equipped with a Mymesh controller, creating a smart data-infrastructure throughout the entire building. This opened the doors to many innovative features. The lamps in the wedding hall were equipped with RGBW lighting and controlled with Mymesh via Heuvelman’s state-of-the-art audio and visual control panel. This integration was done via the Mymesh REST-API, ensuring that every occasion has its own unique ambience.



For the special decorative lights -that give the building its beautiful character, a special E27 LED Light with integrated Mymesh controller was produced for the unique Miralles wall luminaires. All new TRILUX luminaires were equipped with Mymesh controllers too.



### **Access control**

The Mymesh wireless protocol can be connected and used with almost anything. In the old Utrecht city hall, this feature is used to control both access to the building and to different areas inside the building.

***“We can, thanks to the linking of the lighting system with the audiovisual system, now have 'hybrid' meetings.”***

### **Energy Consumption**

Led drivers are used with the highest possible efficiency. Where possible, the light is dimmable and daylight and presence aware.

The architectural armatures designed by Enric Miralles have been reused and fitted with wireless led drivers without the need for additional cables.

This way, Mymesh wireless lighting contributes to both sustainability and climate goals. The projected savings through light management are 60%. Reusing the Miralles armatures not only adds to the sustainability, but also has great aesthetic value.

# Project Partners



Installation, data communication-infrastructure, security and access control.



Construction company and renovation of historic buildings.



Design, realization, maintenance and management of electrotechnical installations.



Solutions and innovation of audiovisual concepts.



Lighting components and systems.

**“Connecting and integrating different systems in a way that is beneficial for all users was the big challenge. The flexibility of the Mymesh system was the foundation. The willingness of all parties involved to meet this challenge made it possible.”**

