LEDCity

MANEGG

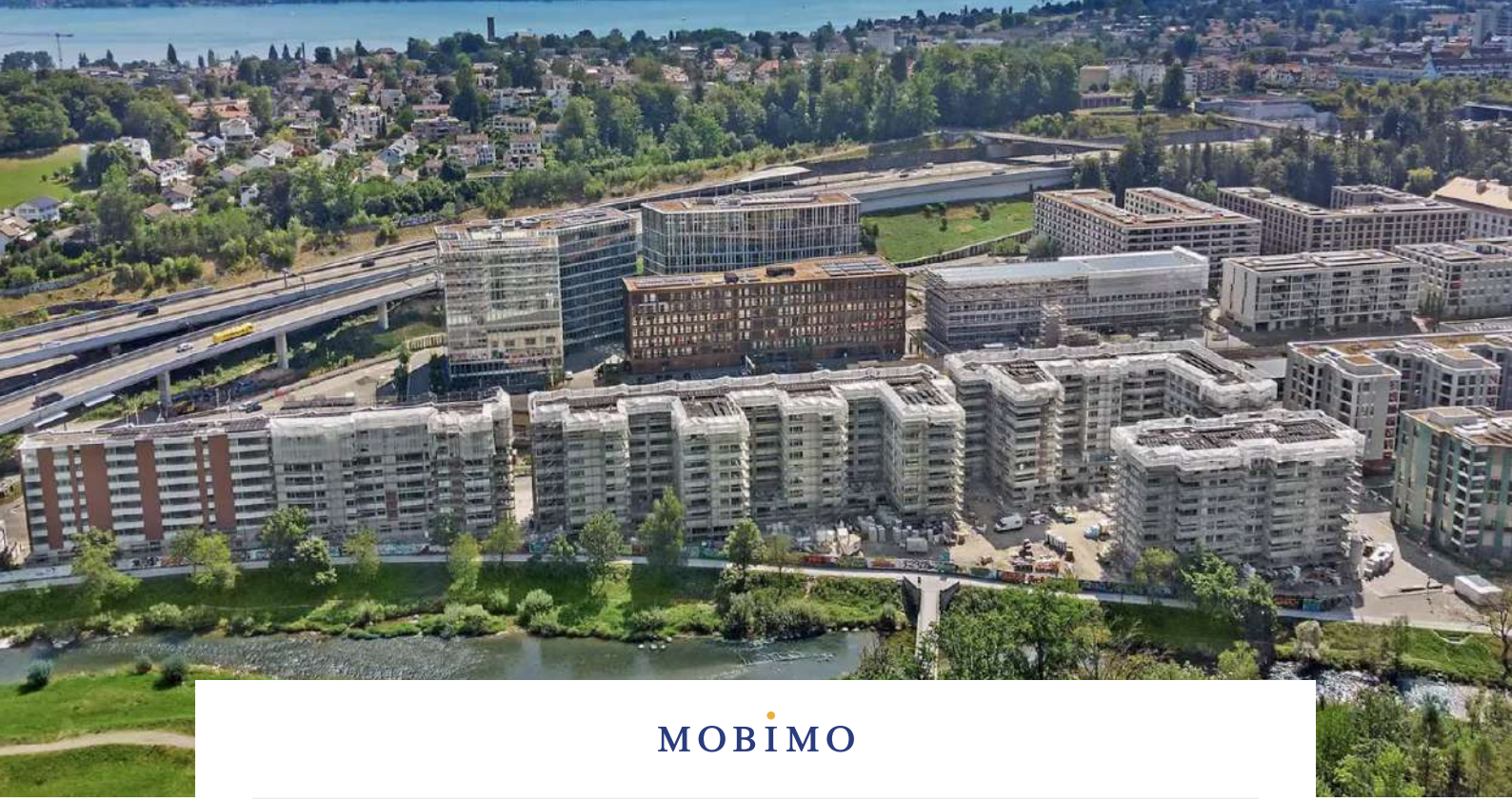
PROJECT REPORT

MOBIMO AG

ALLMENDSTRASSE 8041 ZÜRICH

AUGUST

2023



MOBIMO

INDUSTRY

The client operates in the Real Estate Management industry.

APPLICATION

The parking, stairways, corridors, and entrances of a residential building complex.

LUMINAIRES

A total of 400 NOMUS luminaires and 200 semi-autonomous tubes were installed.

SAVINGS

Thanks to LEDCity, an estimated 60 percent of total energy can be saved compared to other LED systems.

INTRODUCTION

The former production site of Zurich's Manegg district has undergone a remarkable transformation in recent years. Thanks to the Green City project, it has been transformed into a sustainable and urban neighbourhood. The innovative NOMUS lighting system was used in the ZHil residential development, which is expected to have saved around 60 percent more energy compared to other modern lighting systems - without sacrificing any comfort.

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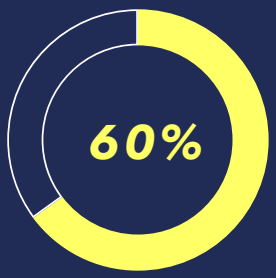
OVERVIEW

89

Tons CO_2 emissions saved



Less energy compared to alternative LED systems

Light sources

400 NOMUS

200 SA

Staircase: Tulux Spin 830 **x133**

Parking: T8 1.5m 840 **x127**

Entrances: Monolicht Lucid Globe 930 **x42**

Bicycle room: T8 1.2m 830 **x25**

Basement: T8 1.2m 840 **x69** Tulux 830 **x2**

Total savings *

143'311 CHF saved

Investment costs

178'024 CHF

Setting	Parking-settings	Staircase-settings
Follow-Up Time Main (100%)	30s	30s
Follow-Up Time Base (20%)	2min	15s
Radius Close Range	15m	4m
Radius Wide Range	30m	6m
Radar Sensitivity	High	Medium

* Calculations based on the following values: 0.24 CHF / kWh, 150g CO2 / kWh, and for the alternative LED-System an operating time of 12 hours per day and 7 operating days per week.

MOBIMO LEDCity

INNOVATIVE LIGHTING SOLUTION FOR "ZHIL" MANEGG

ENERGY EFFICIENCY IN NEW BUILDINGS

In early 2023, almost 600 LEDCity luminaires, including 400 NOMUS luminaires, were installed and commissioned in the car parks, corridors, stairwells, and basement compartments of the building complex. Mobimo opted for this lighting system for a number of reasons. In a sustainable new building, the focus is on energy efficiency. Conventional modern lighting systems usually use central motion detectors, large lighting groups and long follow-up times. As a result, the light is not only switched on in areas that are too large but also, it remains active for longer periods of time, which leads to a higher energy consumption than necessary.

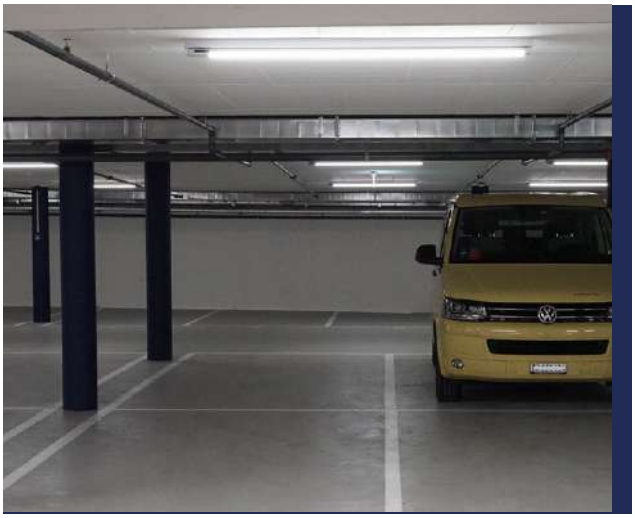
In contrast, NOMUS is characterised by a decentralised, integrated sensor technology and short follow-up times. The light thus only switches on in areas where people or vehicles are moving, which significantly reduces the operating time. This substantial reduction in operating time can achieve energy savings of up to 50-70 percent on average compared to other modern LED lighting systems.

COMFORT & SAFETY

Another reason for using NOMUS is the comfort and sense of security for the residents as well as a reduced workload for the maintenance staff.

Thanks to the true swarm intelligence of NOMUS, the building's residents enjoy an optimal lighting experience. The wireless luminaires communicate with each other and automatically adjust the light intensity and duration to individual needs using intelligent algorithms and integrated "computers". This achieves precise lighting that saves energy while providing sufficient and pleasant lighting conditions.

Furthermore, the wireless approach of the NOMUS system means that the complex wiring of switches, motion sensors or other devices was not necessary. Instead, the required intelligence is integrated into each individual light source, providing a seamless and efficient lighting solution.



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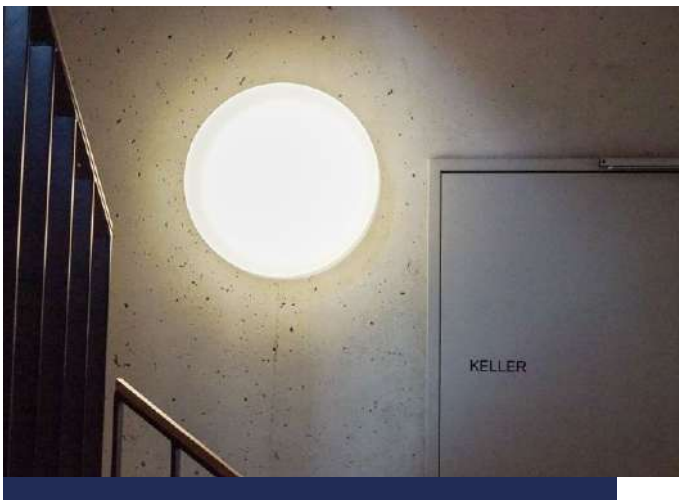
FLEXIBLE AND HOLISTIC



To ensure that NOMUS could be used effectively in the Manegg residential building, it was crucial that the system was flexible enough to adapt to the different parts of the building as well as to the needs of the residents. The table at the bottom of page 3 *(overview)*, compares the settings of two different applications to illustrate the versatility of the system.

For the parking area, a larger radius was chosen to ensure that the light is dimmed up early enough in case vehicles are driving at high speed. In contrast, the radius for the stairwell was kept rather small, so that only one floor above and below the current location is illuminated at a time.

Since residents are constantly moving in the stairwell, a longer follow-up time is not necessary. The selected follow-up time is sufficient to open the doors without the light going out immediately. The follow-up time for the parking is significantly longer at two minutes to ensure that the light does not dim down if someone remains in the car for a short time.

These are just a few of the settings that can be made during commissioning and can also be easily and quickly adjusted or even expanded afterwards via remote access. For example, the daylight function could be activated for the outdoor luminaires afterwards. The luminaires detect natural light and adjust their brightness to daylight. Due to the dimmed state during the day, even more energy can be saved in addition to the shortened burning time.

LIGHTING SOLUTION FOR ALL SCENARIOS

In addition to the adaptability to different needs, NOMUS' Sensor Node offers the possibility to use different luminaire designs without compromising smooth functionality and communication. Thanks to the cooperation with the two luminaire manufacturers Tulux and Monolicht, LEDCity's sensor technology and intelligence can be used in a new variety of lamps. Whether modern circular luminaires, elegant pendant luminaires or classic tubes, NOMUS enables a holistic lighting system in in the residential building Manegg that meets the diverse requirements and applications a residential building presents.

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