



This network of sensors and actuators for street and building lighting is centrally managed and controlled via an internet platform. It enables demand-based, traceable switching of lighting systems while ensuring maximum reliability.

The LUXAROUND sensors record the current measured values, buffer them and regularly transmit them to the platform for storage. The platform continuously monitors the cyclical data input.

At the platform data centre, the data is evaluated and processed according to customer-specific rules. Administration is entirely web-based.

The resulting instructions are sent to the actuators via a secure connection and monitored by means of feedback.



- Device-independent, web-based access to all parameters and system functions via REST API
- Fine-grained user permissions
- Flexible data linking and weighting
- Regional measurement and switching
- Logging, history, analysis, benchmarking and notification system
- Updates during operation
- Energy optimisation through precise switching
- Can be retrofitted into existing systems (manufacturer-independent); switching, dimming and bus-compatible
- High scalability
- Decentralised control

TECHNICAL DATA:



Sensor

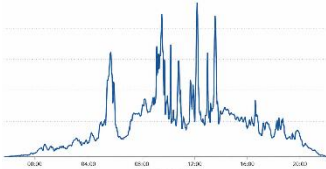


Server
(visualisation)





Actuator (example):



Sensor device:

- Power supply: 230 V AC $\pm 10\%$, 45...63 Hz, 30 VA
- Measuring ranges: K1 = 0...1,000 lx / K2 = 0...150,000 lx (automatic channel switching)
- Wireless connection via radio/mobile network

Server:

- Hosting: Data processing and storage in German data centres (German law applies)
- Services run on separate virtual machines
- Data storage: redundancy concept and archiving
- Load balancing: high system scalability
- High availability and good performance

Actuator (manufacturer-independent):

- Power supply: 230 V AC $\pm 10\%$, 45...63 Hz, 30 VA
- Switching contacts: customer-specific I/O modules available
- Dimming capability: dimming signaloutput available
- Bus capability: Modbus, Ethernet, RS-232/485, MQTT
- Wired or wireless connection possible

SOLUTION APPROACH:

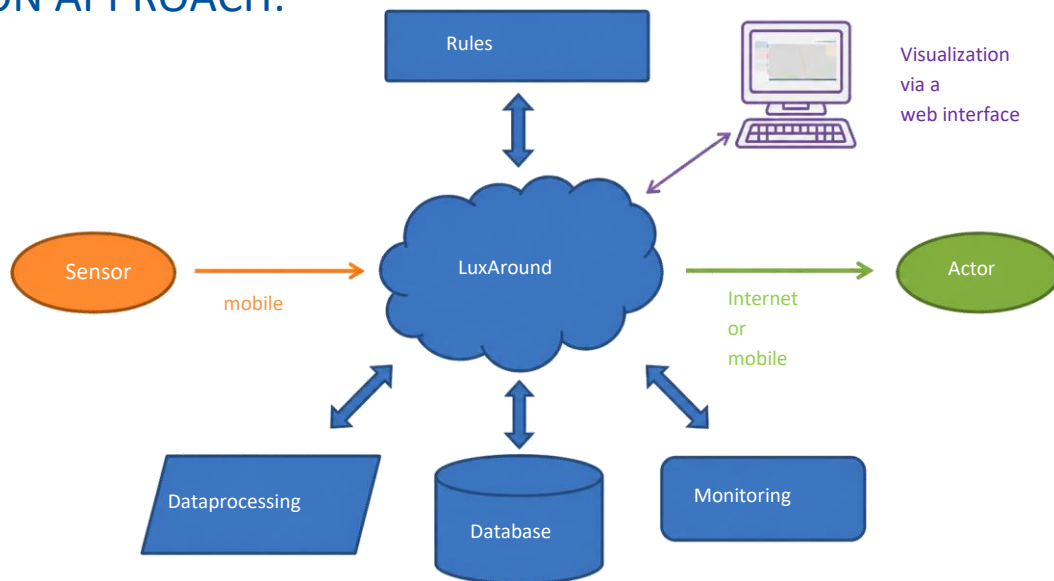


Figure: High-quality sensors record the current illuminance levels, temporarily store the values locally and transmit them wirelessly at cyclical intervals to LuxAround (if a connection problem occurs, missing measurements are subsequently transferred from the buffer once the connection is restored).

LuxAround processes the measured data from all sensors and stores it in the database. At the same time, the system compares the measured data with the customer-specific switching rules and issues the resulting control commands to the relevant actuators.

A monitoring module that users can freely program and extend using the Python programming language can detect irregularities and report them to predefined users or user groups.

The customer can manage the entire system via an intuitive web interface.

PRICING MODEL:

https://www.LuxAround.de	"BASIC" City	"SILVER" Regional centre	"GOLD" Metropolis
Base price	€ 49,-	€ 79,-	€ 140,-
Virtual sensors + actuators (max. quantity)	€ 15,- / pc. (10 pc.)	€ 12,- / pc. (100)	€ 8,- / pc. (1.000)
User accounts (users included)	€ 0,- / pc. (5 pc.)	€ 0,- / pc. (10 pc.)	€ 0,- / pc. (15 pc.)
Additional user surcharge	€ 2,-	€ 2,-	€ 2,-
Backup / Storage add-on *	€ 5,-	€ 29,-	€ 280,-
Import / Export add-on **	€ 5,-	€ 10,-	€ 15,-
Scripting add-on **	On request	On request	On request
REST API	On request	On request	On request

All prices are net per month, **with no** commitment!

* All data records can be accessed and processed online for at least 2 years instead of the standard 48 hours. Older records are archived and, upon request, provided to the customer once a year on a data carrier. They can then no longer be accessed online.

** Note: The "Import / Export" and "Scripting" add-on packages can only be used effectively in combination with the "Backup / Storage" package.

Actuator hardware:

The required actuator hardware is manufactured on a project-specific basis in accordance with customer requirements and charged separately according to the actual work involved. Please contact us to discuss your requirements and scope.