



smartengine | **wtec**

smartengine: The technology for Smart Buildings

Fine mesh sensor network delivering data in real-time for user-oriented applications – making buildings smart, future-proof and flexible!

**Easy, centralized and
secure infrastructure**



**40% lower
energy consumption
and CO2 emissions**



**More satisfied and
productive users**



**A sustainable and
value-stable building**



smartengine solves current and future challenges

We make buildings smart

Imagine a building that is as intelligent as man himself. It perceives what is going on, reacts and adapts to its users. It learns and constantly improves. It does not remain at the same level as when it was born, but provides the basis for new skills and new knowledge. In our understanding, this is a digital intelligent building. smartengine technology unites these characteristics and gives buildings sensory organs and a nervous system as well as applications for its users.

We increase employee satisfaction, optimize space utilization and reduce operating costs.

Smart Buildings go beyond optimizing operation and improving the work space environment. Modern and flexible work spaces as well as the growing importance of employee satisfaction, present companies with new challenges. Buildings today are measured depending on productivity-enhancing and inspiring environment. At the same time, they should be economical and flexible.

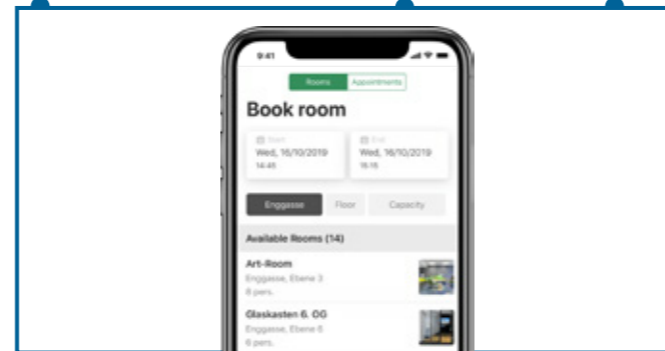


Our Solutions



Optimize building operation

The accurate data from smartengine-sensors on presence, brightness, temperature and other values can be used to influence multiple systems in the building. By integrating the data into the building management system (BMS), operating costs can be reduced by up to 40 percent. This is made possible by user or presence-based control of lighting, ventilation, heating and air conditioning.



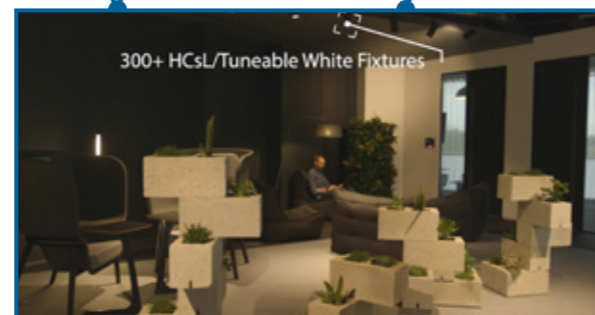
Increase employee productivity

Easy to find meeting rooms or workplaces, increase the performance and motivation of employees in their daily work. With the help of real-time motion data from the smartengine solution, employees can search and book free workstations and meeting rooms. With this data, search times can be significantly reduced. This effect can also be improved by applications such as indoor navigation, asset tracking and people finding. Our sensors with Bluetooth beacons make this possible.



Optimize space utilization

Many companies have little or no information about how employees, customers and other users utilize "space". A visualization of the real-time occupancy, as well as the analysis of historical data are available through smartengine's software solutions. Based on the collected data, both the current allocation and use of space and the planning of future requirements, can be optimized.



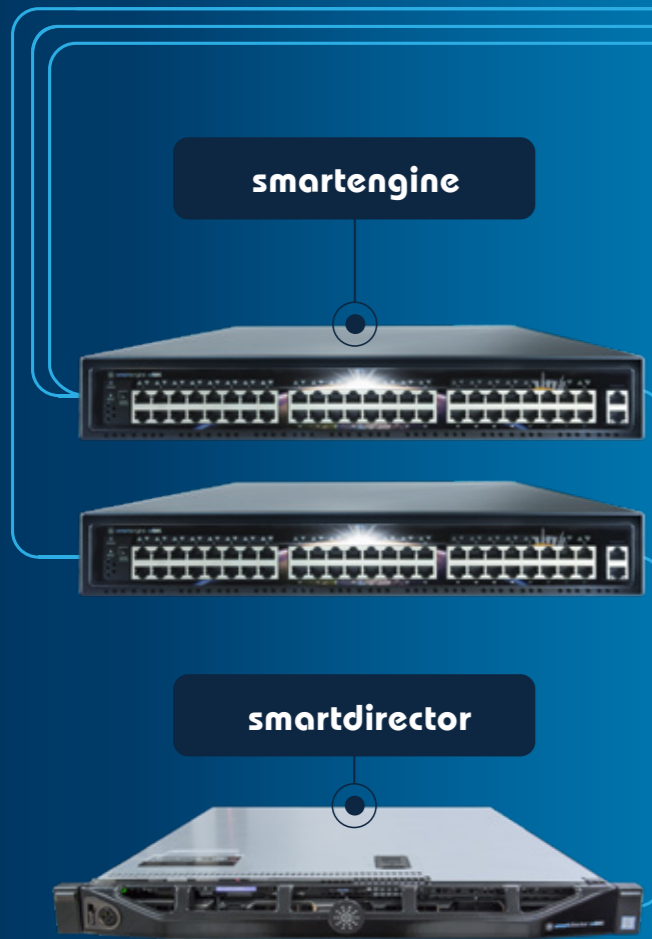
Human Centric smart Lighting

The natural daily rhythm with biodynamic light, the so-called Human Centric Lighting (HCL) has proven to improve employee efficiency. With smartengine we call it Human Centric smart Lighting (HCSL), due to its use of daylight harvesting, which leads to a significant reduction in energy consumption. HCSL is also suitable for the optimal presentation of goods in retail.

Network Powered Lighting – Beyond PoE

smartengine is a building intelligence and lighting control platform designed to power lights and sensors over an IT network infrastructure backbone. Sensors are deployed throughout a space and communicated with in real time to deliver advanced insights throughout the entire built environment. The technology replaces conventional power infrastructure and complex BUS systems, controls and associated wiring / wireless relays, and networking equipment that is required to communicate between devices and to measure and monitor data. In its place, smartengine utilizes network cable infrastructure to deliver power, control and communication over one set of wires. This approach greatly reduces design complexity and installation cost, while at the same time providing a communication backbone for the entire building. Sensors on each luminaire detect motion, brightness, temperature and per fixture power consumption – and deliver this data to the smartengine in real time. The networking of rooms and buildings via sensors makes it possible to quickly obtain a detailed understanding of how spaces are being used, all the while delivering best in class lighting energy savings, often measured between 0.1-0.3 W/ft².

Our Technology



Basic Installation

Main benefits

- Reduce energy consumption for light by 70% (= 0,02 \$/ft²/month)
- usage-based HVAC controls reduces cost by another 0,02 \$/ft²/month
- positive effect on LEED and DGNB sustainability certification
- Data via open API and BACnet/IP
- IoT readiness / Smart Building

Quick amortization



Additional modules

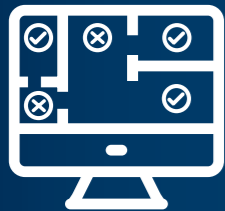
Health Check Service
& Maintenance



Floor Plan Editor &
Viewer



Room & Desk
Availability



Space Analytics



Navigation &
Localization



Light Control + Room
Availability App



Smart Building
Complete



Our product range

smartengine - installed and approved worldwide

Various industries benefit from our technology

With over 500 completed projects and more than 15 million square feet of space, we have equipped buildings from various industries since 2012. Our technology delivers user centric, efficient and sustainable buildings with benefits for its owners, tenants and users.



Office



Retail



Hotel



Logistics



Data Center



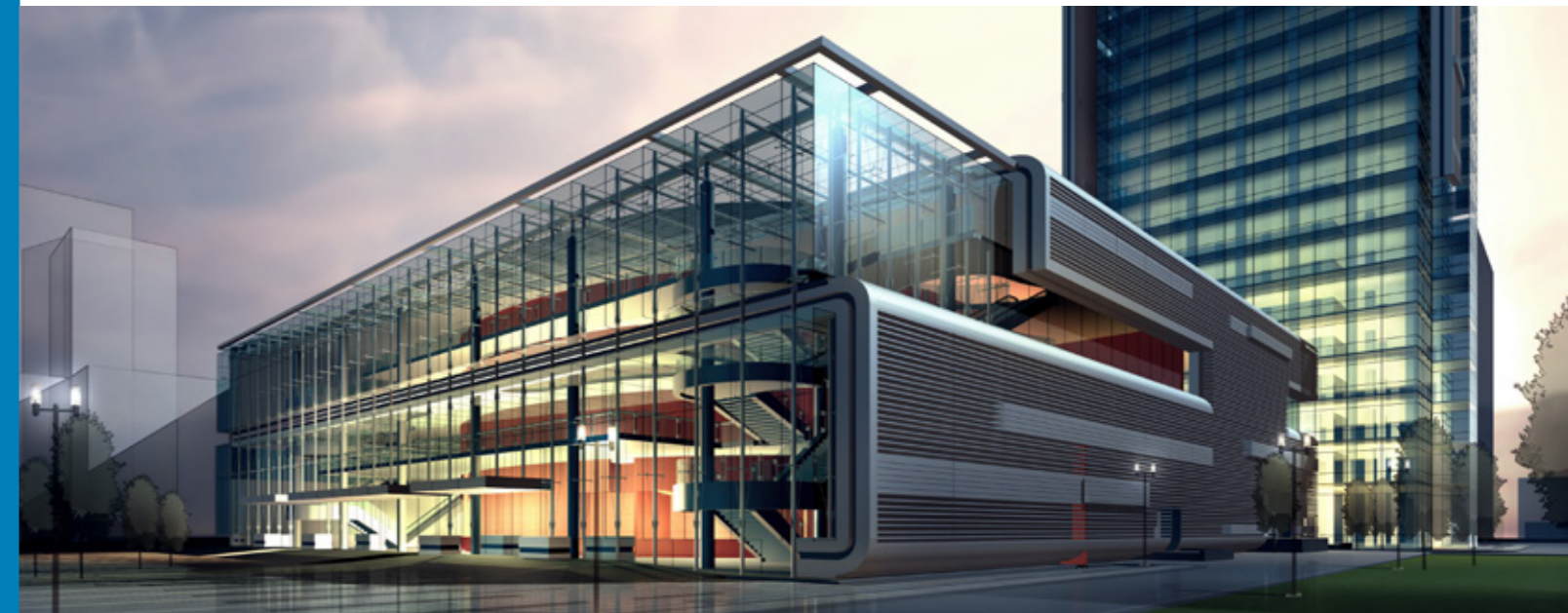
Industry



Airports



Education



Who we are

wtec creates technological solutions for smart and efficient buildings. We optimize buildings using software and hardware solutions, and develop systems based around simplicity, efficiency, user friendliness and reliability. The building of the future, in our vision, is one that is extremely efficient and interactive – that provides value and ease of use for the tenant, the operator and the owner. Developers in Frankfurt and Silicon Valley are consistently working on innovative products and solutions, employed worldwide by leading blue chip companies. Over the last decade, the smartengine technology is running in over 20 countries, with around 500 completed projects worldwide totaling to 15 million square feet.

References



FLEMING'S



GYMSHARK



REWE
Bernd Kaffenberger

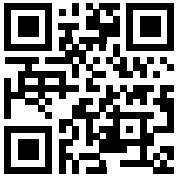


ROM
Technik für Mensch & Umwelt

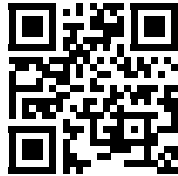
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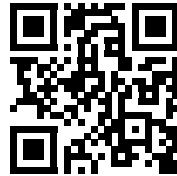
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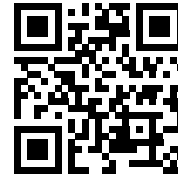
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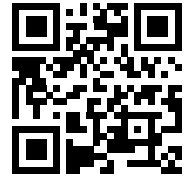
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