STEINEL®
PROFESSIONAL

Building Intelligence

Office & Work Space Management

Efficient use of space through Flex Desk and Meeting Room Management

Flexibility and mobility are the defining factors of modern everyday office life. This calls for innovative office-space concepts that permit the flexible use of rooms and provide meeting and conference areas that can be booked on a one-off basis. Building intelligence from STEINEL uses space with such a level of efficiency that rental and other costs can be reduced on a noticeable scale.

Whether people work or simply spend time in it, they want a space that meets their expectations on comfort and convenience. This is where innovative building automation can help to meet all manner of demands on an environment that is ideal for all parties and comes with the lowest possible energy and maintenance costs.

Using intelligent technologies, all of the factors that determine people's sense of well-being in a room are easily addressed. In addition to this, an intelligent building can also make a contribution to people's safety and health.

With cutting-edge technology, STEINEL permits innovative building automation that makes the way people work, and the spaces they work in, both future-proof and efficient.

Technology is our passion

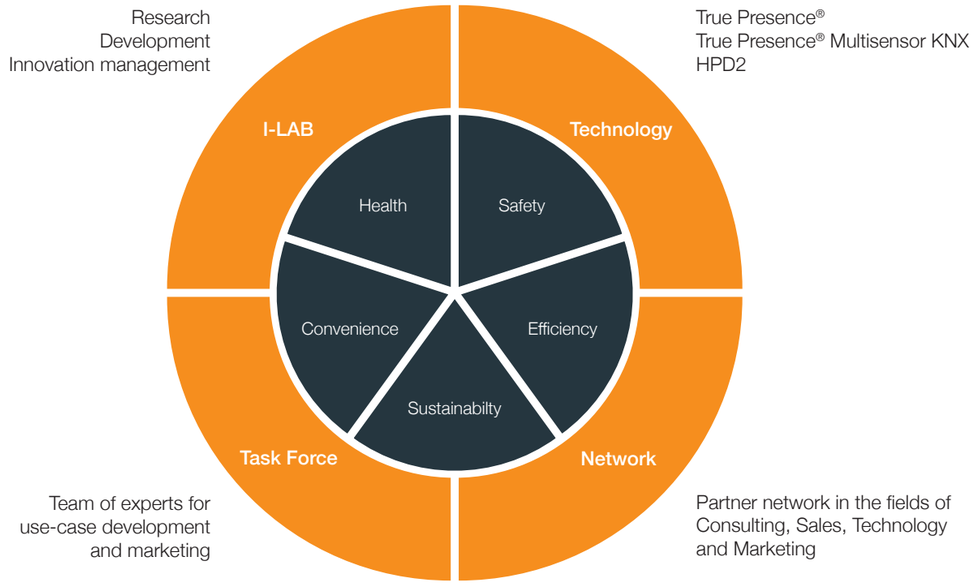
Pioneering spirit and experience for making buildings more intelligent

We have consistently evolved from pioneer to technology and innovation leader in sensor-controlled lighting since 1959. Intelligent products of world renown are created at our own development centres. This is where we set store by innovation and durability.

STEINEL has been developing solutions for the future for more than 70 years. In 1959, Heinrich Wolfgang founded STEINEL in Rheda-Wiedenbrück. With the arrival of Ingo Steinel, who joined the management team in 2004, STEINEL has consistently evolved from pioneer to technology and innovation leader in the sensor-controlled lighting, heat-tool and hot-melt glue applicator markets. STEINEL has been using high-frequency sensor technology for detecting movements in spaces and buildings since 2002. Today, products and solutions are available under the STEINEL brand for DIY enthusiasts and professional users alike. All products are manufactured by company-owned factories in Germany, Switzerland, Romania, Czech Republic and the Republic of Moldova. Made in Europe is STEINEL's formula for success. Partners and subsidiaries sell our products in 62 countries. With more than 1,600 employees, we are a leading global supplier for sensor-controlled LED technology, ensuring that there's always suitable light in any situation.

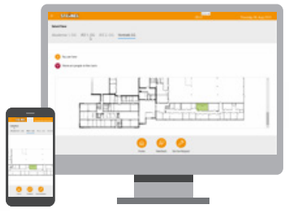
The STEINEL portfolio for Building Intelligence

More and more, intelligent systems are being used for controlling all sorts of building types. Buildings are becoming intelligent. This makes it possible to save energy, automate recurring processes, facilitate the usability and operation of rooms and installations and achieve a completely new dimension of function and flexibility. This is where our new generation of sensors will make a key contribution. They not only control light but also count people and detect true presence. This is STEINEL's vision of building intelligence. In an innovation lab, a task force will continue to work on network solutions, and STEINEL Systems too will help us make buildings more intelligent in the future.



Flex Desk Live –
Efficient workstation organisation

As a result of home office, travel, meetings or other periods of absence, some work spaces are not in permanent use which incurs unnecessary costs. Intelligent sensor technology provides information on current work-space occupancy and permits managed space allocation with considerable benefits to efficiency. This way, for example, employees can identify available workstations on their smartphone or on a dashboard in reception.



Dashboard and smartphone
Clear overview of the vacant workstations. Members of staff can choose the places they want to work at and reserve them on a time or usage basis. This way, everyone can get a desk without spending any length of time having to look for one.

Cloud / On Premises

Intelligent sensor technology for innovative room-booking systems
Using HPD2 to analyse work spaces, vacant workstations can be identified at a glance. The information acquired, for example, is relayed directly to the STEINEL Workspace Management system.

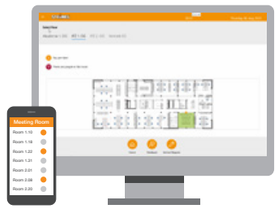
Regulation of air-conditioning and lighting

Smart capacity planning
Analyses of workstation occupancy and usage significantly boost the efficiency with which office floor space is used – providing high potential savings. At the same time, they avoid any unnecessary additions to capacity.

Better indoor climate and lighting boost performance
Good air quality improves the ability to concentrate and increases productivity. VOC, CO_2 and temperature regulation reduce sick leave and makes the indoor climate healthier to work in. The data measured is passed on to the dashboard and controls the air-conditioning system.

Meeting Room Management Live –
Efficient use of space for staff

When meeting rooms are booked, it is not uncommon for cancellations to be made at short notice. Often, the room remains booked, leaving it unavailable for other meetings. Good capacity management is important for optimising the use of meeting rooms. Combining intelligent sensor technology with room booking systems such as Outlook, permits effective, demand-based usage.



Live: Dashboard and smartphone
Quick overview of available meeting rooms and number of places occupied. The level of utilisation is also recorded, making it possible to adjust the set-up if necessary. If a meeting ends sooner, the room is immediately available again. This saves the time-consuming process of searching for a vacant room.

Room planning
Displays in the meeting-room entrance area show current and future meetings. Spontaneous bookings can also be made.

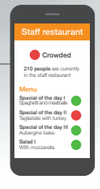
Cloud / On Premises

Intelligent sensor technology
Meeting rooms can be used much more efficiently with "Human Presence Detection". The unique STEINEL HPD2 sensor can detect both the presence as well as the exact number of people present in a room, providing reliable information on room occupancy. The room can also be divided into precise zones. Live and precise!

Communication made easy
The efficient use of chat bots saves valuable employee work time. The chat bot takes care of rebookings, cancellations or meeting room searches. A direct connection with mail systems such as Outlook further simplify and streamline day-to-day operations.

Counting people
Precise analysis and optimisation of available facilities simplifies room management and saves time. It is extremely useful to see how many people are in which room at a given time.

Perfect indoor climate
The Multisensor Air always ensures a pleasant indoor climate in the meeting room. This generally improves the ability to concentrate and is also conducive to good health.



Effective use of breaks
Via an app, the same technology also makes it possible to see how busy the staff restaurant is.

Perfect indoor climate

Comfort and indoor climate in a building play an important role. Tiredness, eye irritations, headaches and dizziness are the consequences of a poor air quality inside rooms. On-demand ventilation prevents SBS (Sick Building Syndrome). True CO_2, humidity, VOC and temperature measurement generate a perfect indoor climate. Illness-related absences and concentration difficulties are reduced.

Is there a seat left in the staff restaurant?

Employees want to know how busy the staff restaurant is so they can organise their breaks effectively. Using live data, a member of staff can see how busy the restaurant is via smartphone or by opening a dashboard on the PC and then decide for themselves when to go and eat. No available seats, queues at the serving counter or long waits during lunch break are a thing of the past.

Smart solutions
A workspace full of benefits

Intelligent technologies not only make it possible to reduce energy and usage costs in the office environment. Many factors influencing the well-being of users can also be optimised with all-embracing solutions. This way, Building Intelligence from STEINEL also helps to ensure that there is always perfect indoor climate by adaptively regulating VOC, CO_2 and temperature, thereby promoting concentration and reducing the number of illness-related absences. Targeted automation with Building Intelligence from STEINEL provides benefits for operators, tenants and employees:

More planning certainty for operators

- Energy saving as a result of perfectly controlled lighting and HVAC
- Significant enhanced efficiency

Greater efficiency for tenants

- Greater efficiency in the use of space for offices and meeting rooms
- Fewer illness-related absences as well as improved ability of staff to concentrate as a result of VOC, CO_2 and temperature regulation

More comfort for staff

- Targeted HVAC and lighting control for a perfect indoor climate
- Less stress for staff in the search for an available meeting room
- Staff can choose their preferred place to work at

STEINEL® *smart*Workspace

Powered by Campana Schott

Smart Workspace System

The STEINEL smartWorkspace system evolved in collaboration with Campana & Schott. Smart connections between STEINEL office applications and programs such as Outlook, Skype or other project management tools simplify day-to-day tasks. The system allows modern offices to become more efficient thanks to improved meeting room and workplace organisation or automatic air conditioning and lighting.

Reduced costs
with intelligent solutions from STEINEL

The prices charged to rent office space are a significant cost factor in cities. We will be pleased to advise you in person on how to save costs by using intelligent sensor technology. It provides you with reliable data on room capacity utilisation, resulting in efficient use of space and lower costs for you.

Example calculations

Flex Desk Live

Number of workstations	400
Average size of a work space	10 m^2
Rental costs per m^2 (example: Berlin*)	€ 23.50
Annual rental costs for all workstations	**€ 1,128,000.00**
Additional usable space thanks to Flex Desk Live**	10 %
Potential saving after 5 years (room cost potential)	**€ 564,000.00**
Return on Investment (ROI)	after approx. 1 year

Reasons for the space saved

- As a result of home office, travel, meetings or other periods of absence, some work spaces are not in permanent use.
- Employees spend a large part of their work time in meetings

Meeting Room Management Live

Number of meeting rooms	20
Average size of a meeting room	30 m^2
Rental costs per m^2 (example: Berlin*)	€ 23.50
Annual rental costs for all meeting rooms	**€ 169,200.00**
Additional usable space thanks to Meeting Room Management Live**	10 %
Potential saving after 5 years (room cost potential)	**€ 84,600.00**
Return on Investment (ROI)	after approx. 3 years

Reasons for the space saved

- No rooms blocked as a result of regular meetings not taking place
- Meetings called off are cancelled automatically because the room remains unoccupied
- Evaluation of meeting-room occupancy involving a small number of persons
- Shorter meetings do not block room availability unnecessarily
- Evaluation/identification of meeting rooms rarely used

* http://www.manager-magazin.de/finanzen/artikel/immobilien-boom-am-bueromarkt-erreicht-historische-phase-a-1134719.html
** Validated by studies of current solutions within Meeting Room and Flex Desk

The STEINEL
Service portfolio

- Intelligent sensor technology
- Planning, consultancy and concept definition
- Integration into existing building automation or existing room-booking systems
- Creation of customised dashboards to suit specific customer wishes
- Accessories for setting up the infrastructure
- Analysis of data recorded over prolonged periods through connection to cloud
- Installation, commissioning and servicing
- Acceptance inspection of the finished solution

True Presence®
Exact presence detection with unmatched sensor technology

True Presence® from STEINEL provides a new dimension in the reliability of the exact presence detection. Using this unmatched sensor technology, data can be obtained in the quality that is essential for effective and efficient building management.

True Presence® is based on high-frequency detection within the surrounding environment. It involves the use of a new sensor system with extremely high resolution. This provides the capability of reliably detecting the presence of a person in a room, regardless of activity or movement. True Presence® indicates the presence of a person when micro-movements resulting from the vital functions are detected in the form of three-dimensional breathing patterns. In conjunction with unique sensor software, this detects a person with 100% precision. A microprocessor evaluates the sensor data and makes any stay-ON time unnecessary. The data exchange between different systems is possible via IP interfaces (e.g. BACnet, MQTT and REST API).

True Presence® can detect temperature, humidity, CO_2, volatile organic compounds (VOC) and light level in one product, making the building "truly intelligent".

Human Presence Detection
Counting persons in a new dimension – thanks to high-end sensor technology

The HPD2 optical presence detector is not only capable of reliably sensing the presence of people sitting or standing but can also count them in defined zones. In real time and with absolute precision, this unique technology makes it possible to detect both the presence and exact number of people in a room.

Optical sensor HPD2

At the heart of the human presence detector is a high-precision optical system combined with a complex mathematical neural algorithm. Integrated image analysis delivers the relevant data in real time. The image processed directly in the sensor delivers information on the number and position of persons – it does not provide any images of actual people.

The HPD2 also comes with integrated temperature and humidity sensors. Together with the information on the number of persons present, this provides a way of controlling lighting, heating and air-conditioning even more closely in line with needs.

Presence detection

To detect human presence, various zones can be defined in any way within a radius of 10-15 metres around a single HPD2 and also changed at any time. For each of these individual detection zones, it is possible to specify the particular number of persons present via KNX or IP. This exact data is essential for using buildings efficiently, providing many benefits for operators, tenants and employees.

The sensors

True Presence® Sensor
It is the first detector for identifying human presence. Reliably detects presence and absence of people in an area of 64 m², the "True Presence". At a previously unattainable 177 m², it has even been possible to triple its total presence detection zone over conventional presence detectors.

True Presence® Multisensor
True Presence® technology with enhanced senses for brightness, room temperature, humidity, radial object distance, approaching and moving away, CO_2, volatile organic compounds (VOC) and air pressure. It misses absolutely nothing.

www.steinel-professional.de

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