



# CES OMEGA FLEX

More than locking  
and unlocking

Tailored electronic access control systems

# CONTENT

03

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Introduction

04

The benefits of CES  
OMEGA FLEX

06

CES OMEGA FLEX  
system components

08

---

Online, Offline, V-Net

10

CES electronic  
locking cylinders

12

Fittings for internal and  
external doors

14

---

Mechanics + Electronics

16

Sample application:  
Council facility

18

Sample application:  
Branch operation

20

---

Sample application:  
Office building

22

Sample application:  
School

# The key to more security and convenience



## Our motivation: your security

The sense of security, coupled with the reliability that is our forte. And if your requirements extend to more than simple locking and unlocking a door, our high performance OMEGA FLEX access control system will create the perfect starting point for a tailored security programme.

## The next step

The name CES is synonymous with first class access control solutions. This applies to our tried and tested mechanical key systems just as much as for the mechatronic and electronic access control systems that have been part of the CES portfolio for many years. One of these is CES OMEGA FLEX – a rather smart piece of security engineering that will also assist you in your organisational tasks.

## Multi-functionality without compromise

With CES OMEGA FLEX, problems associated with traditional security systems – loss of keys or lack of flexibility regarding access authorisations, are a thing of the past. Moreover, the electronic locking system is installed as quickly and easily as a mechanical locking system. Discover the capabilities of CES OMEGA FLEX, which go far beyond locking and unlocking.



# Compelling security

CES OMEGA FLEX – the benefits

## Combinations

CES is an expert in security engineering, from classic security cylinders through to online controlled locking systems. As such, we are your one-stop resource for any conceivable technical combination of mechanical, mechatronic, or electronic components. The result: tailor-made solutions selected from the widest range of products with maximum flexibility.

## Versatility

With CES OMEGA FLEX, you can swiftly respond to organisational changes such as new or retiring employees, restructuring of your organisation or alteration or expansion of your facility. The system is quickly and easily adapted to the new situation, and extensions are possible at any time.

## Secure flexibility

Keys lost from part of a traditional master-key system leads to a security breach, and potentially in a complete replacement of the system, resulting in a costly reinvestment. With CES OMEGA FLEX, lost keys are no longer an issue: all you have to do is reprogram the locking system.





## CES OMEGA FLEX More than locking and unlocking

### Simple installation

Instead of a conventional locking cylinder, for electronic systems, mechatronical cylinders or electronic handle sets are installed. Installation is simple and negates for additional wiring or drilling, thus reducing installation time and associate costs.

### Flexible integration

CES OMEGA FLEX can be very easily combined with existing LEGIC or MIFARE® based security applications. It is also compatible with OSS Standard Offline. The already existing employee keys and identity cards can then also be used for functions such as access control, time recording or even cashless vending.

### Flexible combinations

Whether you need a highly complex or a very economical access control system – CES OMEGA FLEX will provide you with the right solution. “Online”, “Offline” and “V-Net” are three programming variants developed on the basis of practical applications and can also be used in parallel within one and the same locking system.



# CES OMEGA FLEX system components

## Locking media

All CES media are compatible with the current standards MIFARE® and LEGIC. This applies to shape, type and the usability in new or existing systems.

## Locking components

### Knob cylinders



**Double knob cylinder**

Various standard formats and variants, with optional latching function and also available in an anti-panic version.



**Dual cylinder**

For access from both sides with authorization identification on either side.



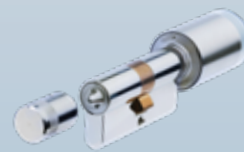
**Half cylinder**

For locks of switching equipment or as a key-operated switch for roll-up doors, roller gates or lifts.



**Dummy cylinder**

Dummy on the inside, for doors that must not be locked without special authorization, with optional anti-panic function.



**Dummy cylinder with locking assistance**

For manual locking from the inside.



**Half cylinder with swing handle**

For use on server cabinets with swing handles.

## Administration/IT

### Access control software CESTronics Suite

The CESTronics Suite software comes with flexibility of use and user-friendly applications from simple small offline systems to complex online systems. The user immediately feels at home in the graphical user interface and can easily map even complex patterns in the locking plan screen.

Thanks to the integrated database and a smart licencing policy, extensions and functions can be adapted at any time with just a few clicks.

ONLINE

OFFLINE

V-NET



## Combinations

The number of system components were selected to cover virtually every situation, so from an engineering perspective, the design freedom is enormous. Individually planned and installed, every CES OMEGA FLEX component will convince the users by its functionality and user friendliness.

## Grow with your requirements

CES OMEGA FLEX is like a mirror of its users: you can start with a single door in an offline arrangement and then add other doors, departments, buildings or branch offices. As the requirements grow, you can easily move on to an online system. And again you will find that with CES OMEGA FLEX, the options are not specified by the system but by the user.

## All from CES

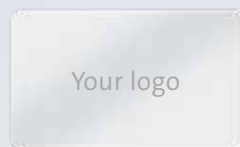
All core components of the CES OMEGA FLEX system are manufactured by CES in Germany. This includes the locking components as well as the development of the software. So when it comes to service and spare parts, you always have a single point of contact. After all, it takes a reliable partner at your side to really feel secure.



CES combination key/CES key fob



SlimLine versions



ID card



MIFARE® DESFire® EV1/EV2  
MIFARE Classic®



LEGIC advant  
LEGIC prime in line with  
ISO 14443 and ISO 15693

### Fittings



Long shields ILS

Weather-resistant design for external doors. Suitable for narrow stile/framed glass doors and solid core doors. Anti-intrusion variant.



ILS-I for internal doors

Outside: electronics and battery. Inside: customer handle set.



Smart shields SIS

Suitable for internal doors, in black, white or grey.



Electr. furniture lock

For changing rooms, safe boxes or cabinet systems with cam or square spindle.

### Wall terminals



Update terminal

For updating access authorizations on locking media (V-NET) with door-opening function.

#### Wall terminal

Compact or separate design (reader outside, controller in protected area). Weather-proof cases. The wall terminals are also offered with cases matching various switch programmes.

### Universal radio module



For integration of third-party systems such as biometrics, PIN entry, alarms and door communication systems.

### Access-Point



For the wireless online programming of up to 10 locking devices

### Desktop Reader



For reading and programming locking media

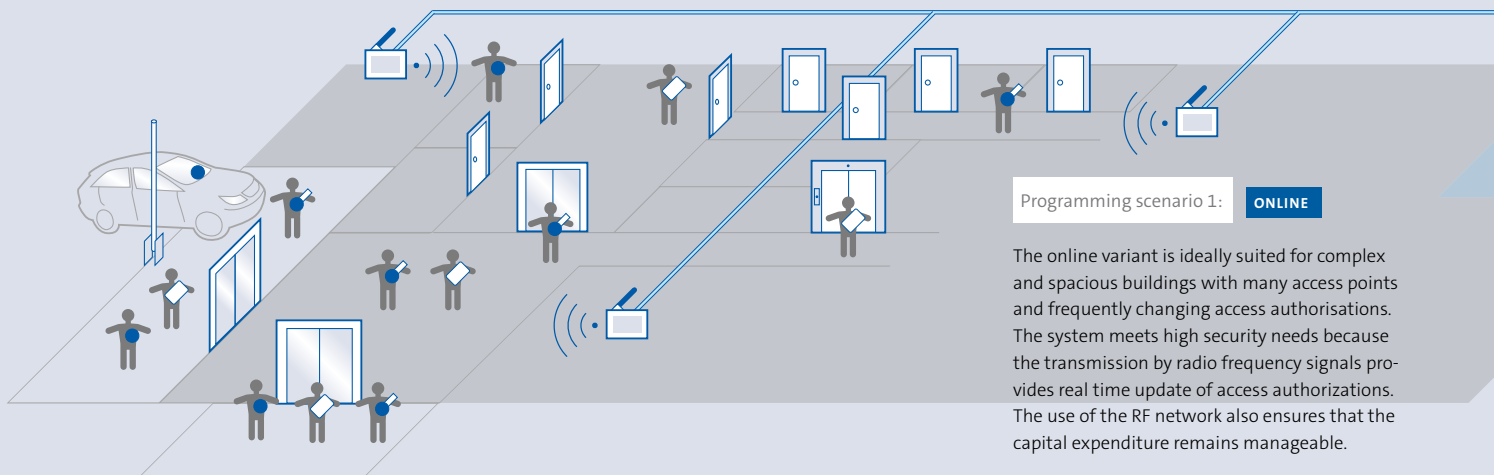
### RF-Stick



For the wireless offline programming of locking devices

# ONLINE, OFFLINE, V-NET

The correct solution for every application



Flexibility and user-friendliness were prime considerations in the development of the CEStronics software by CES. The fact that this software suite is an in-house development provides an important benefit: all extensions, modifications or updates are implemented via a single point of contact with perfect knowledge of all the aspects.

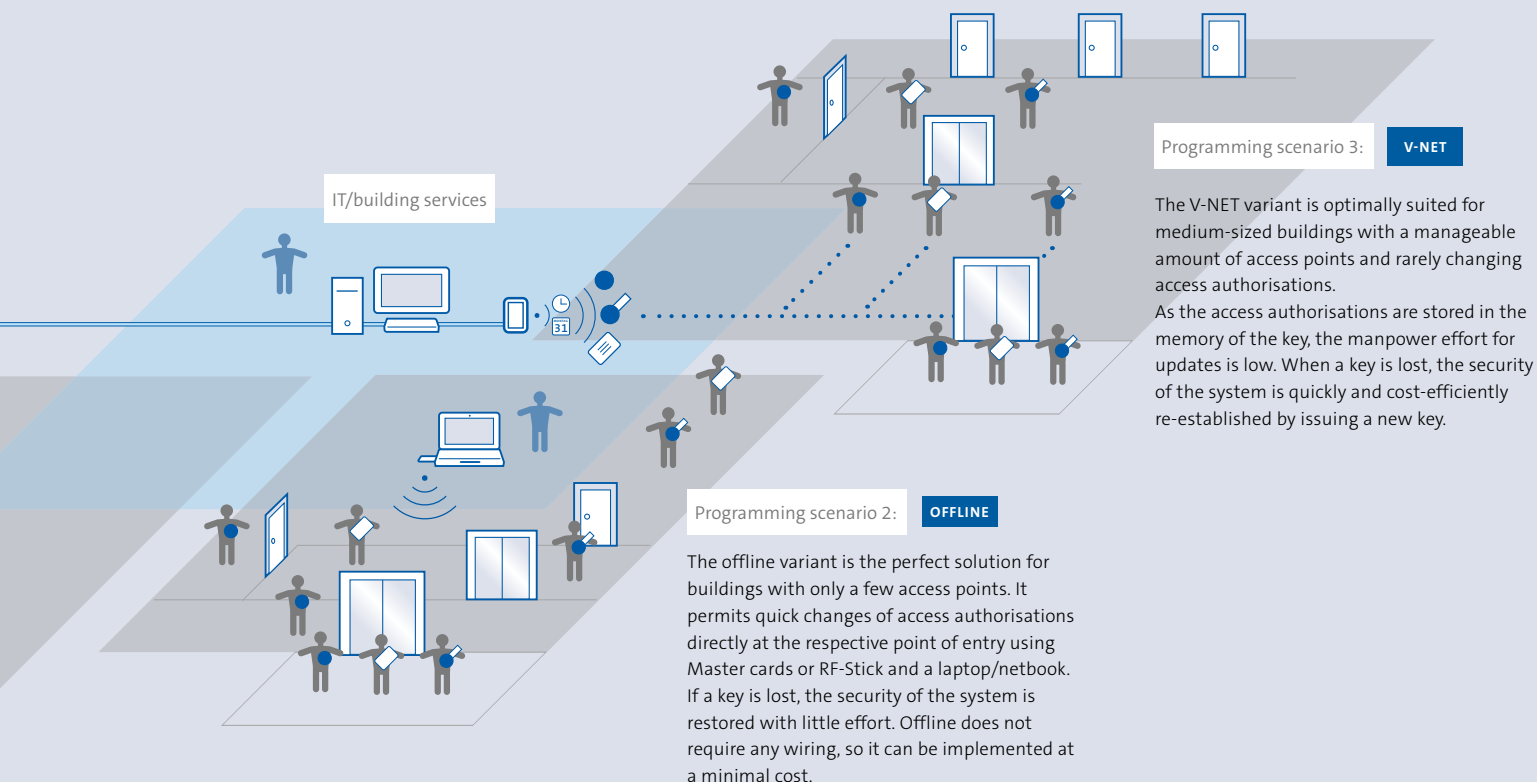
With the straight-forward CEStronics software, even complex arrangements involving several branches or different clients in the same building are readily implemented – no special prior knowledge or training is required.

Getting started is easy: upon delivery, all locking components and locking media are already integrated in the CEStronics database – all you have to do is create the links.

Whether a single-user version or a client/server solution, whether remote or V-LAN: with the CEStronics software, integration is simple.







## System overview:

All systems shown here are compatible with:



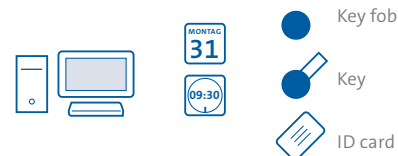
MIFARE® DESFire® EV1/EV2  
MIFARE Classic®



Access-Point



RF-Stick



Key fob

Key

ID card

### Online

**Authorisations stored in the locking device**  
**Programming via RF network with Access Points, also in real time**

- Simple installation
- No wiring at the door
- Quick response to a lost key
- Up to 10 doors per Access Point
- All events visible online

### Offline

**Authorisations stored in the locking device**  
**Programming with Master cards or RF-Stick and netbook**

- Authorizations in the locking components
- Convenient programming via radio
- Use of standard laptop/netbook possible
- Printable programming list for ease of use
- No network required

### V-NET

**Programming of authorisations on the locking media**

- Flexible organisation
- Minimal programming effort
- Simple, centralized key issue
- Low administration costs
- No network required
- With optional Update Terminal for real-time updating of access authorizations

Variants can be combined with each other

# Intelligence built in

Electronic locking solutions from CES

## Cylinder

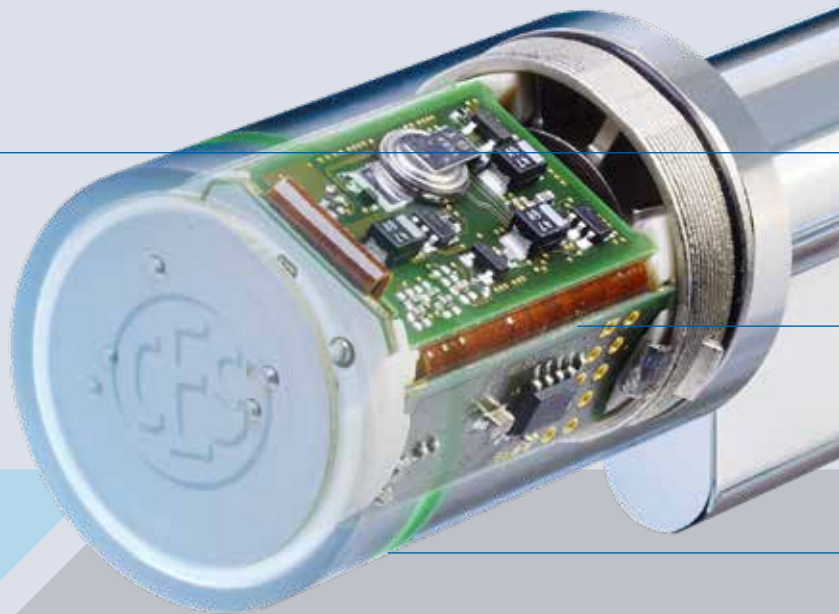
Wear-resistant materials  
Withstands highest stresses, strains and loads  
High-quality construction for a long useful life

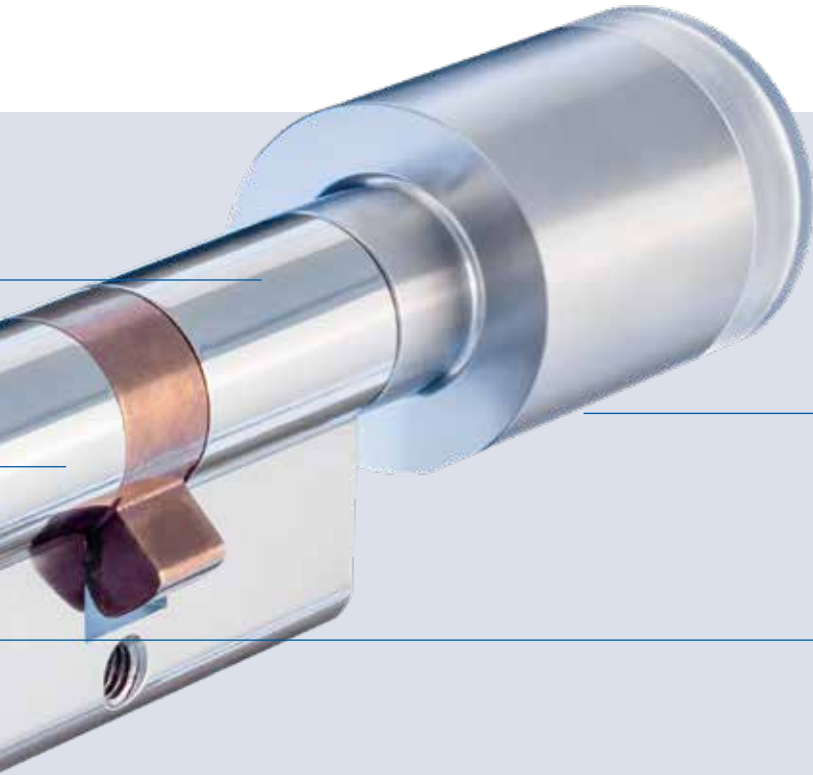
## Security

DIN/EN 15684  
NEN 5089 SKG\*\*\*  
VdS 2156 BZ+  
Fire protection EN 1634-1 (T90)

## Integrated battery

No wiring at the door required  
Thousands of operating cycles  
Simple battery replacement





#### Design

High-quality materials  
Functional  
Optimised surface feel  
Timeless

#### Electronics

In-house development by CES  
State-of-the-art components  
Made in Germany

#### Actuation indication

Visual red/green signal  
Audible sound when activated



# Security in diversity

Fittings for internal and external doors  
with demanding security requirements

## Clear signalling

Unambiguous  
status indication



Neutral: standby



Green: access



Red: no access

## Lever handle options

Various lever handle  
options available

Lever handle options  
for both long and smart  
shields



Additional lever  
handle options  
for long shields



## Installation

Directly onto existing fittings, without  
additional drilling. ILS wide shield, ILS-I  
and smart shield completely mask drill  
holes for rose handle sets on full-leaf  
doors.







### **ILS: weatherproof for external applications**

Can be used on doors in escape and emergency routes in accordance with EN 179 and EN 1125. Can be used on fire doors up to T120 in accordance with DIN 18273 and DIN EN 1634-1

#### **Optional**

Emergency mechanical key over-ride  
Burglar-resistant versions, ES2-L according to DIN 18257, SKG\*\*\* according to BRL3104/NEN 5089

### **ILS-I: an economic solution for internal doors**

Can be used on fire doors up to T30. Compact electronics including battery on outside. Customer handle set inside.

#### **Optional**

Emergency release mechanism via locking cylinder

### **SIS: a simple upgrade**

Can be used in conjunction with existing escutcheons and roses

#### **Optional**

Can be used with interior fire-resistant safety handle set at fire doors with a fire resistance rating of up to T120 according to DIN 18273 and DIN EN 1634-1

# Mechanics + Electronics

Benefit from perfect combinations



## The interaction of mechanics and electronics

A key benefit of CES access control systems is the perfect interaction of mechanics and electronics. This is also reflected in the variety of available keys and the options for combining them. In more ways than one, this flexibility is the key to maximum individuality for a large number of applications. The result is

only determined by your demands, not the technology. And this is complemented by the strengths that are typical for CES: highest reliability, simple fitting and installation and maximum operator convenience.



### Conventional locking systems

The modular family of the DU/TDU key section series satisfies the complex demands of upscale industrial buildings. Lateral pins scanning the contour of the key section and the undercut present an effective protection against unauthorised key copies. Optional features such as the swivelling lever and the spring-loaded anti-drilling and anti-pulling protection multiply the security.

### Vertical reversible key system

The vertical reversible key system WD offers a high level of convenience. The optimized key tip ensures an accurate and convenient insertion of the key. Picking tools do not stand a chance against the multi-paracentric profile. Various active locking elements and the actively scanned double undercut offer an effective technical protection against unauthorized key copying.

# Council facility

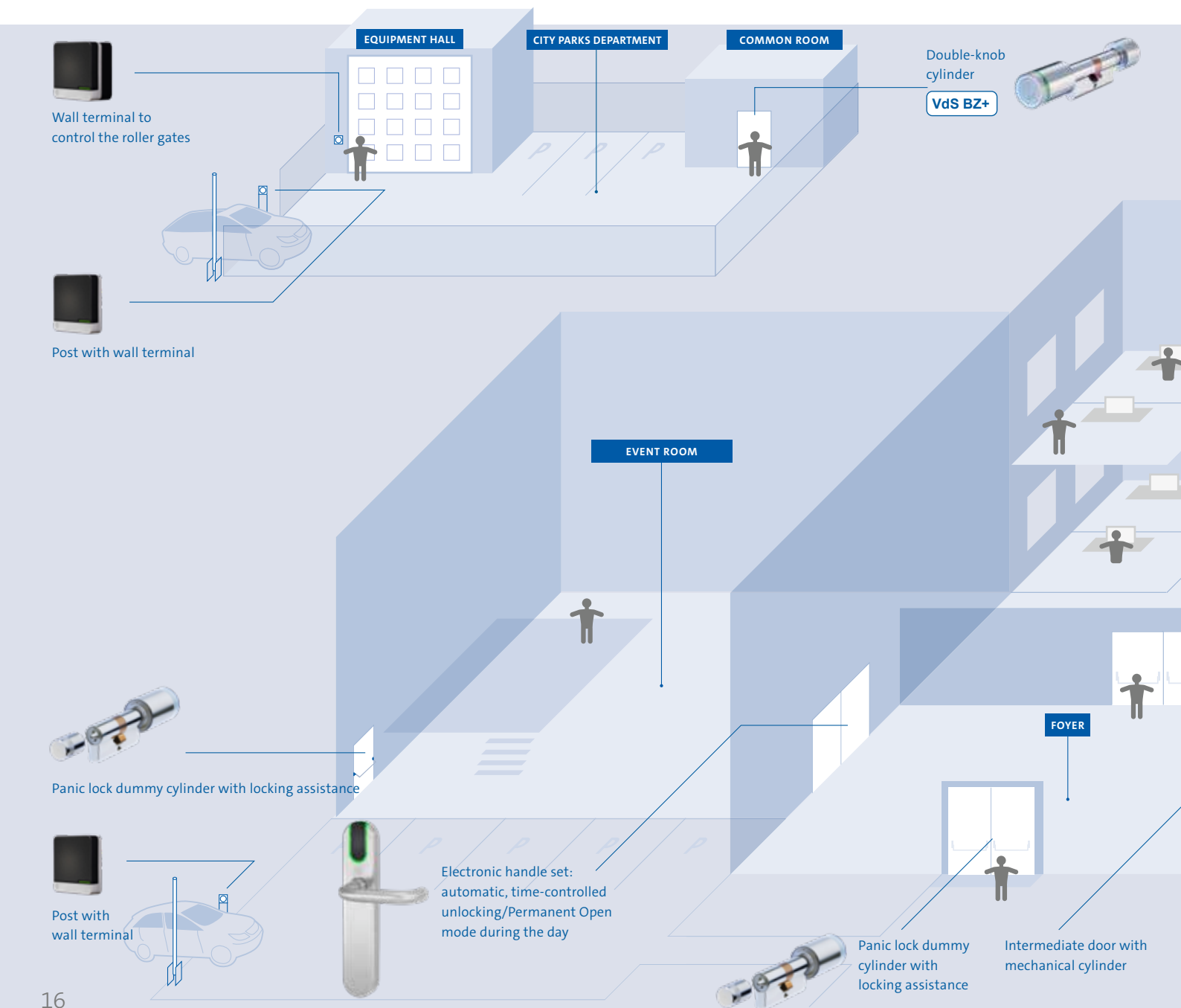
## Town hall, internal and external areas

### The task

About 100 people work in the town hall. The building has various external doors. Certain areas, such as the municipal library and the event room, are publicly accessible during defined times. In addition, external buildings accommodating the city parks department and the power distribution facilities of the municipal utility company must be included.

### The solution: CES OMEGA FLEX Offline

The system is programmed and administered offline by the building services department. The central control computer is located in the central IT department inside the town hall. The facility technicians program the access control system with netbooks and RF-Sticks that are linked to the central control computer via a client/server software.





## Town hall

- External doors are fitted with panic bars (escape routes), therefore equipped with panic lock dummy cylinders with locking assistance
- During the opening hours of the town hall: doors are switched into Permanent Open mode by the facility technicians
- Daytime: dummy cylinders prevent any unauthorised locking from the inside (e.g. by visitors)
- Evening: doors are locked from the inside with the locking assistance

## Car park access drive

- Wall terminal opens barrier to allow authorized persons the access to the car park

## Power distribution facility

- Highest security requirements, therefore it is equipped with electronic cylinder variants with anti-pulling and anti-drilling protection in accordance with VdS 2156 BZ+
- Dummy cylinders prevent unlocking of the cylinders from the inside by persons reaching in or overcoming the outer fence barrier
- Building itself equipped with double-knob cylinders with anti-drilling and anti-pulling protection in accordance with VdS 2156 BZ+

## Plant rooms and offices

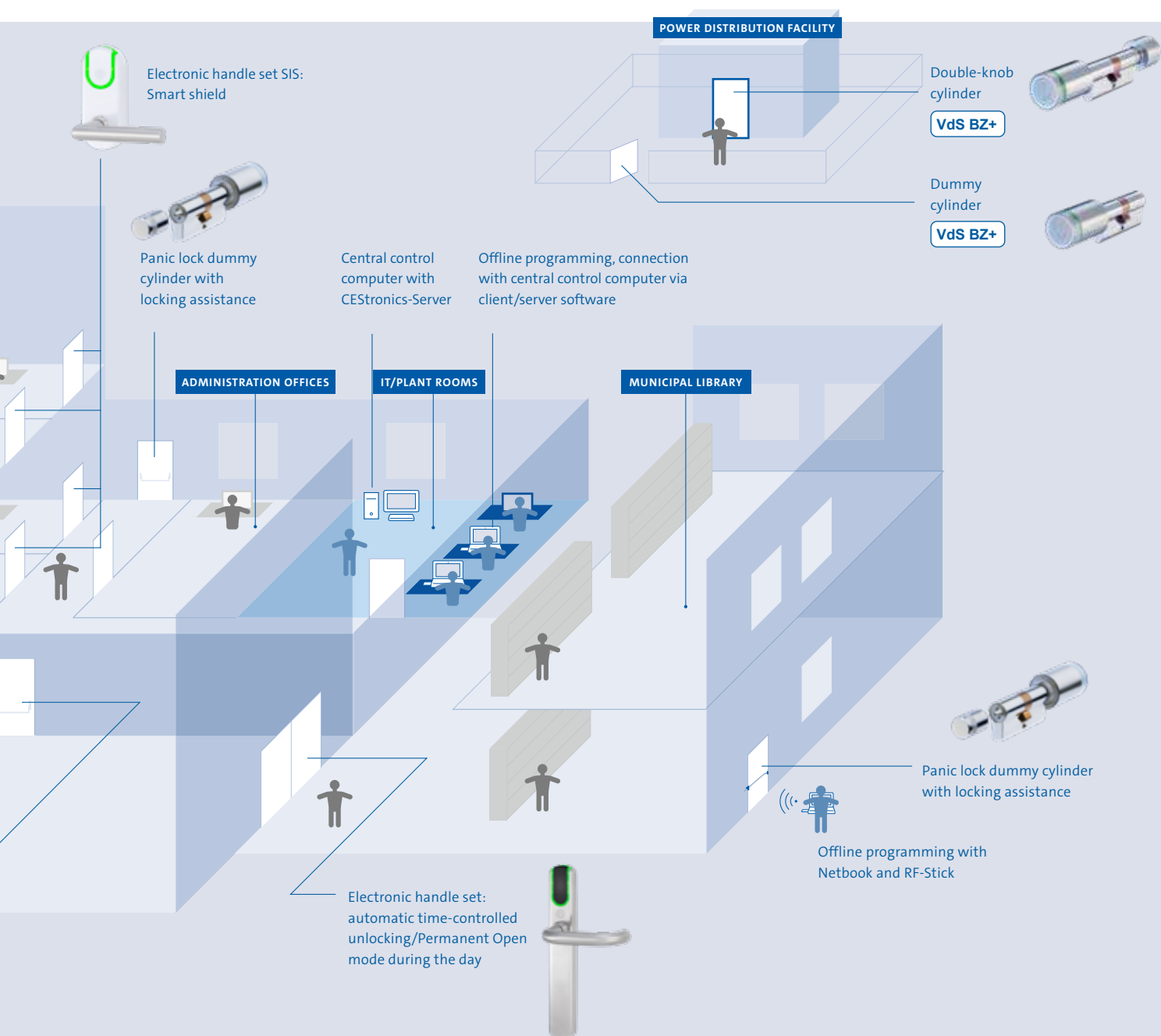
- Electronic smart shields
- Unlocking from the outside by authorised electronic locking media

## Event room and municipal library

- IES electronic fitting with set unlocking time profile
- When open for public business: fully automatic unlocking of the doors
- Access for visitors without locking media: simply by actuating the door handle
- After the opening hours: fittings are automatically switched back into a condition in which only town hall employees having the right key can open the door

## City parks department

- Access to the premises and equipment room fitted with wall terminals
- Opening only possible by employees with the authorized locking media
- Recreation room for staff members with electronic double knob cylinder with anti-drilling and anti-pulling protection in accordance with VdS 2156 BZ+



# Branch operation

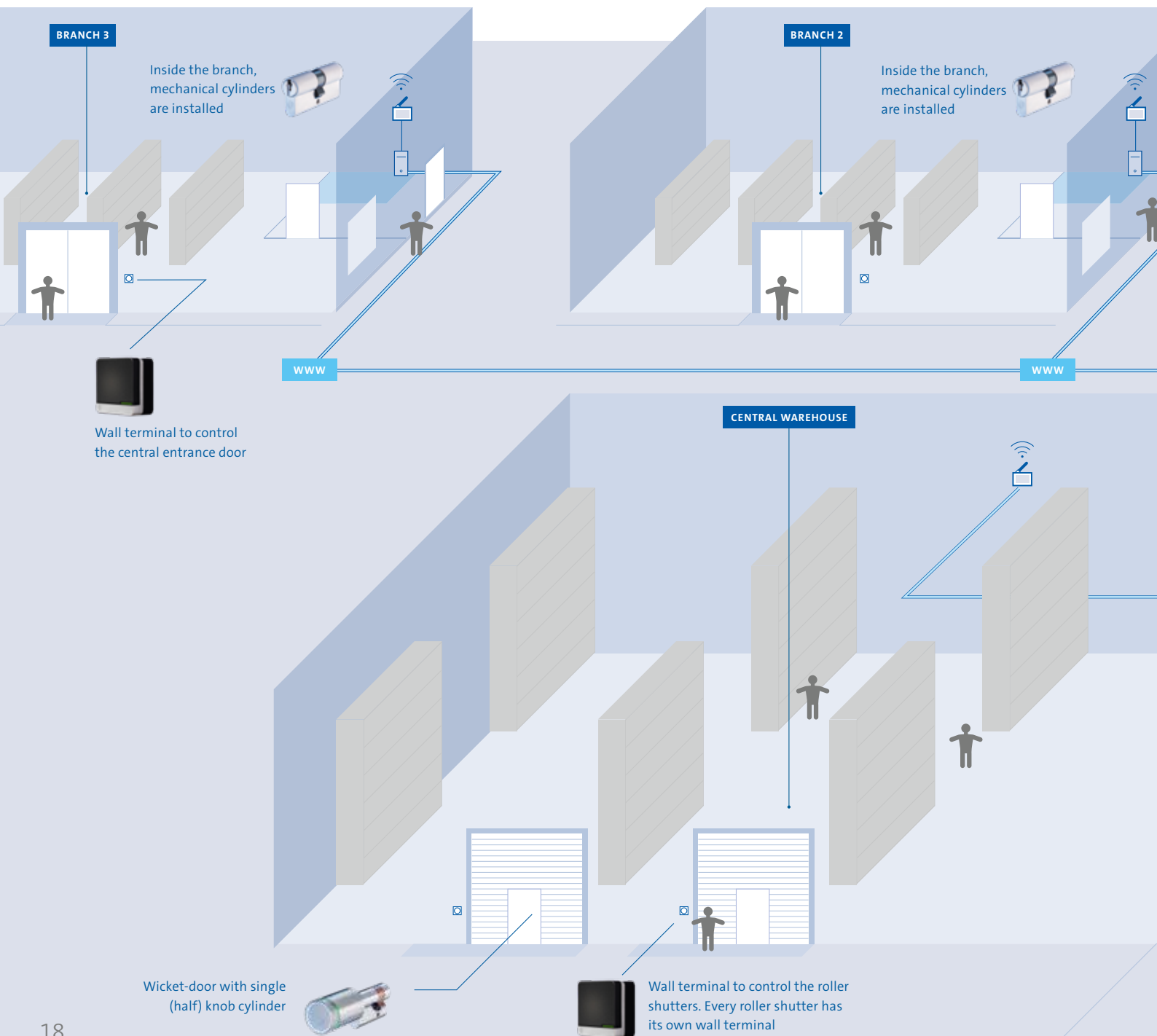
## National DIY chain

### The task

A national distribution chain of 400 do-it-yourself branches with about 5,000 employees wants to manage its access control system centrally from its headquarters. For companies of this size, changes in the access authorizations are a matter of course. One requirement is that a lost key is immediately and effectively blocked – even over a distance of 500 km. New employees in the branches are handed their key in advance but the key will only become operative on their first working day.

### The solution: CES OMEGA FLEX Online

The central control computer with the database is located in the company headquarters. Every branch has an online connection with the headquarters via the internet and Access Points. All locking components of all branches are programmed centrally.



### Headquarters

- Sliding door with wall terminal
- At the start of business hours: door is automatically unlocked under a time profile regime. Access is granted under motion detector control without presenting an ID card
- Before and after business hours: access only with company ID card

### Central warehouse

- Access to the central warehouse with electronic double knob cylinder
- Only warehouse employees have access during the working hours

Access to the central warehouse from the outside:

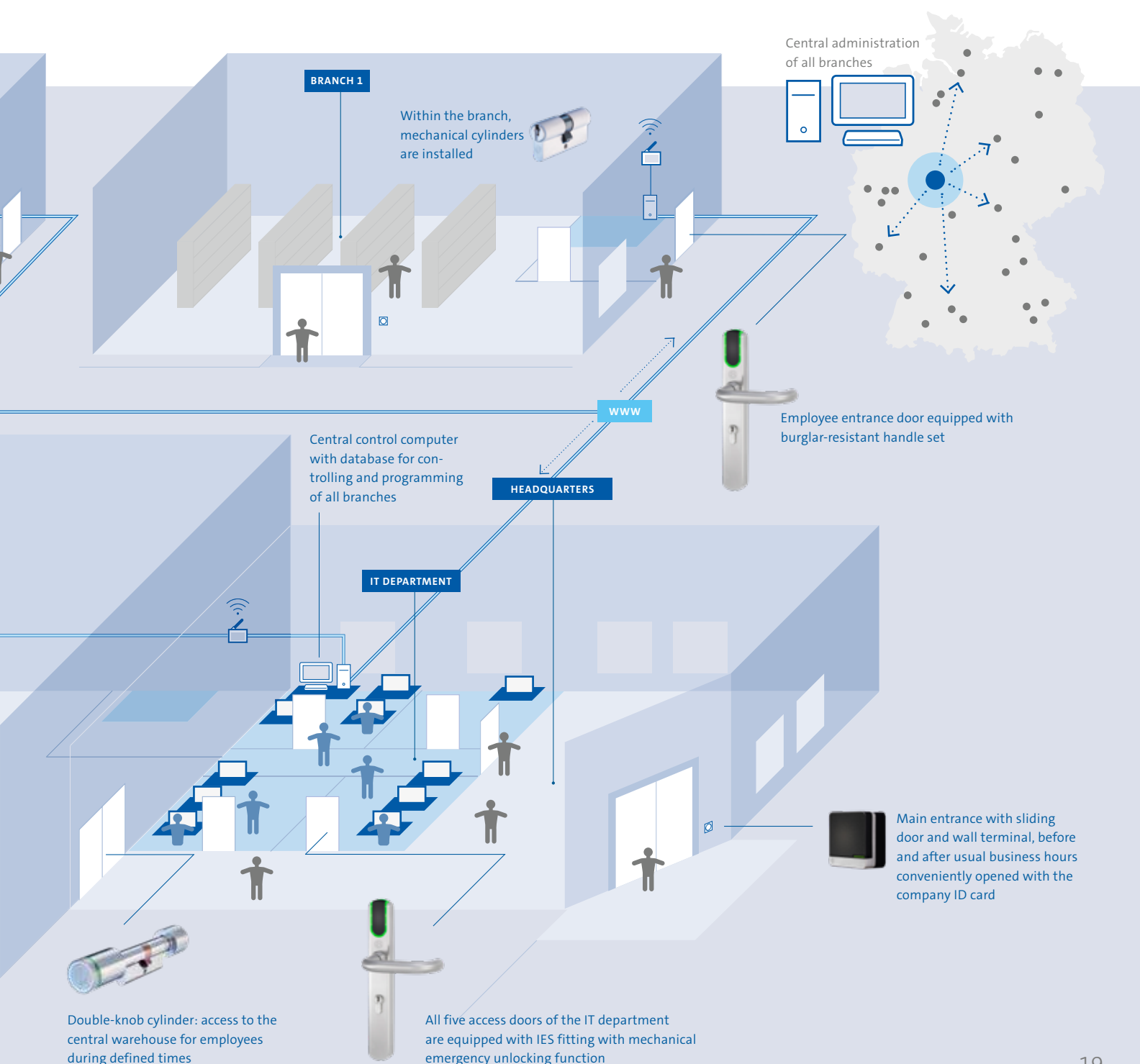
- Wall terminals allow access for fork lift trucks and other vehicles through automatic roller shutters
- Access for pedestrians via electronic half cylinders in the wicket doors. Can be opened only with an authorised locking medium

### IT department (25 workplaces)

- Access-Point establishes an online connection for all IT doors. Electronic inside fittings on all five access doors, with mechanical emergency operation
- In case of a low battery: operation of the IES fitting is with mechanical key

### Branch

- Staff entrances with weather-proof electronic wide shields with mechanical emergency opening and break-in resistance
- Nationwide, all doors can always be unlocked under remote control from the headquarters
- All access events are recorded and transmitted online to the headquarters
- Spare keys without locking function are stored in a local safe; they can be authorised at any time from the headquarters
- The sliding door is switched by an employee into Permanent Open mode via a wall terminal. During the day, the sliding door operates under motion detector control. In the evening (after the customers have left the store), the employee switches the door again into Locked position; the door remains closed



# Office building

## Joint occupancy, dual use of main entrance and underground carpark

### The task

An office building is shared by an advertising agency and a law firm which both use the main entrance and the underground car park. The office rooms are used and managed by the two tenants independently from one another.

### The solution:

#### CES OMEGA FLEX V-NET virtual online

The system is programmed by a professional CES partner. The two tenants neither need any programming devices nor any network. Using a read-write device with appropriate software, the authorisations are written on the locking media, in this case ID cards.

New employee ID cards are activated by the tenants via mouse click and can be used immediately. If an ID card is lost, a new ID card is created. With the first use of this new ID card, the previously lost ID card is immediately deleted.

#### Main entrance (ground floor)

- Wall terminal as a module of the intercom
- Main entrance protected with an automatic door opener during the day
- Employees unlock the door with their authorised ID card
- For visitors, the door is unlocked via the intercom
- In the evening, the mechanical locking cylinder is locked manually

#### Advertising agency (ground floor)

##### Entrance

- Electronic double knob cylinder with handle set in accordance with VdS BZ+ and break-in resistance
- Unlocking from the outside only with an authorised electronic locking medium
- Unlocking from the inside with mechanical inside knob
- Door is unlocked in the morning and stays unlocked for visitors all day (can be seen from the reception desk)

##### Server room

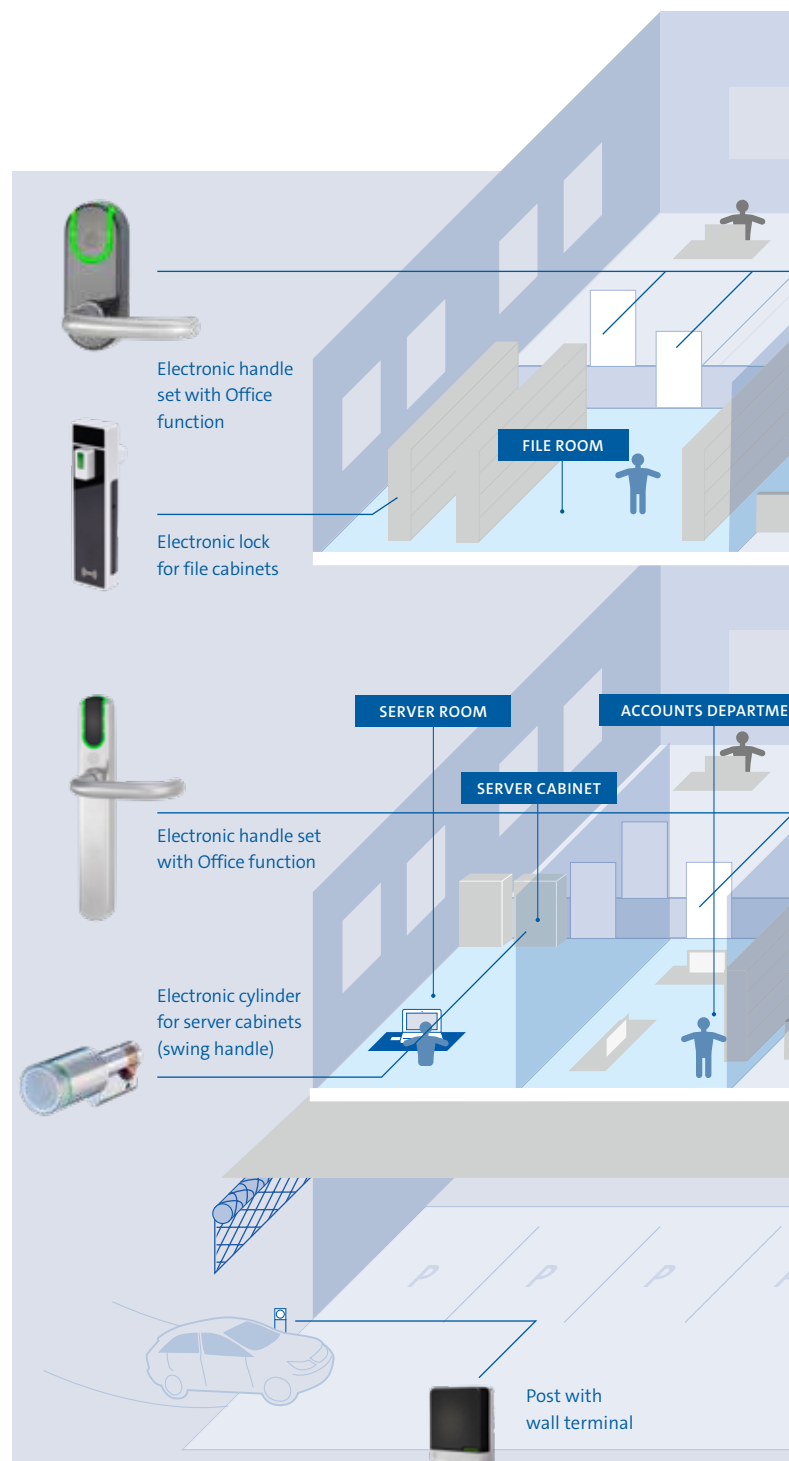
- Electronic cylinder for server cabinets (swing handle)
- Permanent recording of events

##### Accounts department

- IES fitting with Office function
- Start of work: the first employee to arrive switches the door into Permanent Open mode using his or her ID card. Subsequently arriving employees can enter the room without using their ID card during the working hours
- End of work: the last employee to leave locks the door again, which can now only be opened again with an authorised ID card

##### Offices

- Smart shields available in various colours





## Law firm (upper floor)

### Lift

- Lift request from ground floor and underground car park via wall terminal (integrated in the panel)
- Lift can only be requested by law firm staff
- For visitors, the lift is sent down to the ground floor by the receptionist

### Offices

- Smart shields, can only be unlocked with authorised ID card
- If required, Permanent Open mode possible (via Office function)

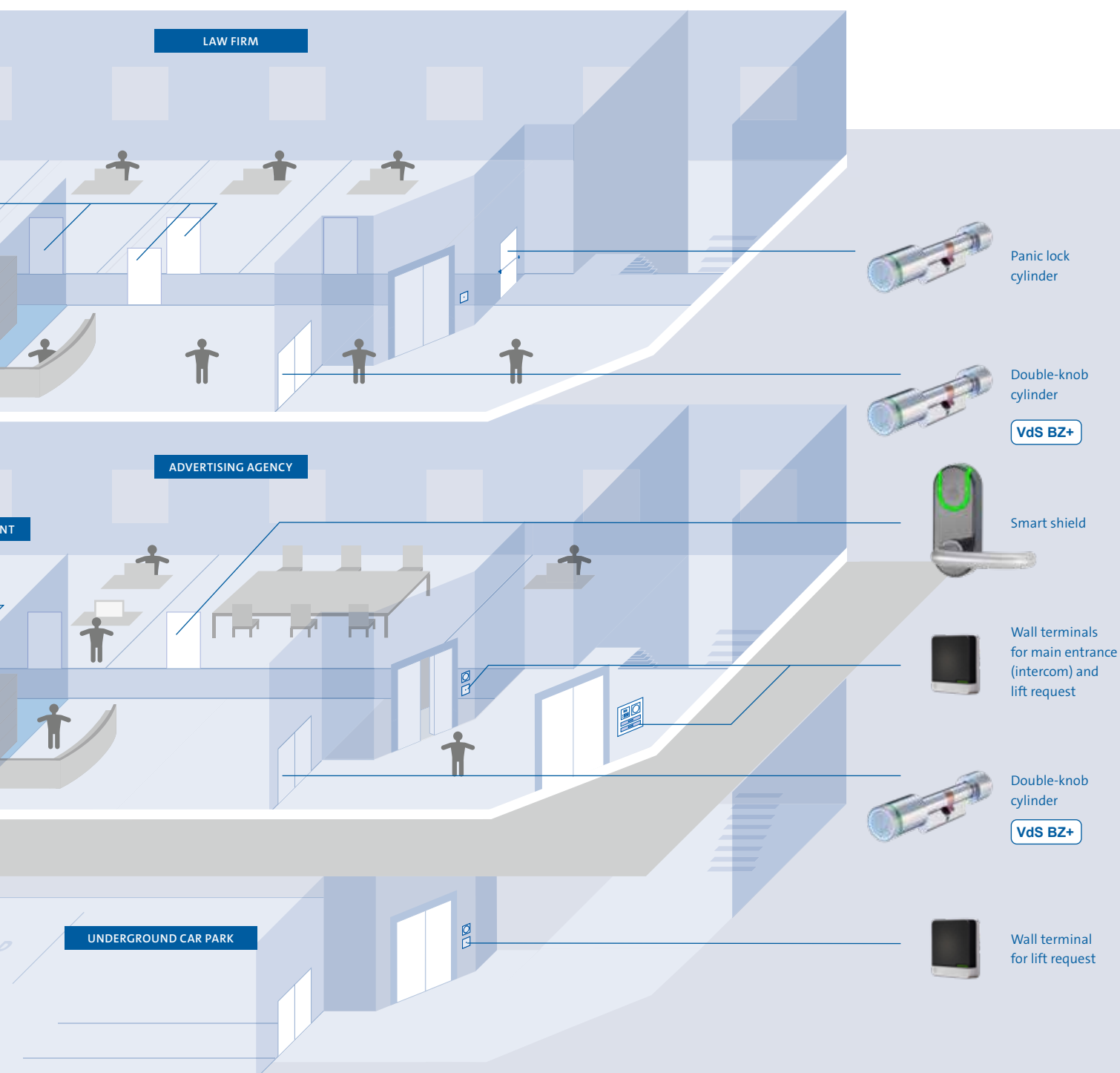
### File room

- Smart shields, can only be unlocked with authorised ID card
- Electronic furniture locks on three filing cabinets, can only be opened using authorized pass
- Permanent recording of events
- Cabinet use can be logged by downloading from the cylinder

## Underground car park

### Basement doors and underground car park

- Wall terminal integrated in post
- Roller shutter can only be opened by employees of the two tenants presenting their ID card at the wall terminal
- Lift can only be requested by authorised staff using their ID card



# School

with school hall and gym

## The task

A school places a variety of demands on an access control system: safeguard against risks from lost keys, multiple use of the school hall and the gym, prevention of pupils locking themselves in and violence in the classrooms.

## The solution: CES OMEGA FLEX Offline / motor cylinder online

The system is programmed and managed offline by the caretaker. The central control computer is located in the caretaker's office. The caretaker programs the locking system with netbook and RF-Stick. Both the caretaker's office and the caretaker's private accommodation are connected with the central control computer via a client/server software.

### Administration area

- Entrance: weather-resistant handle set with emergency mechanical key over-ride
- Unlocking in the morning: by the caretaker with a mechanical key. During the school hours, the handle set is programmed to be unlocked – anyone can open the door using the lever handle. At the end of the school hours, the handle set automatically locks the door – now only authorised persons can unlock the door with an electronic key.  
In the evening the caretaker locks the door with the mechanical key for additional security
- Access to rooms with confidential data (teachers' room, secretariat): protected by smart shields, only authorised access possible
- First aid room locked mechanically, can be unlocked at any time by a teacher or the caretaker with the appropriate key
- Janitor's office: secured by an electronic double knob cylinder, can be opened solely by the janitor or his/her deputy

### Main access to the teaching room wing

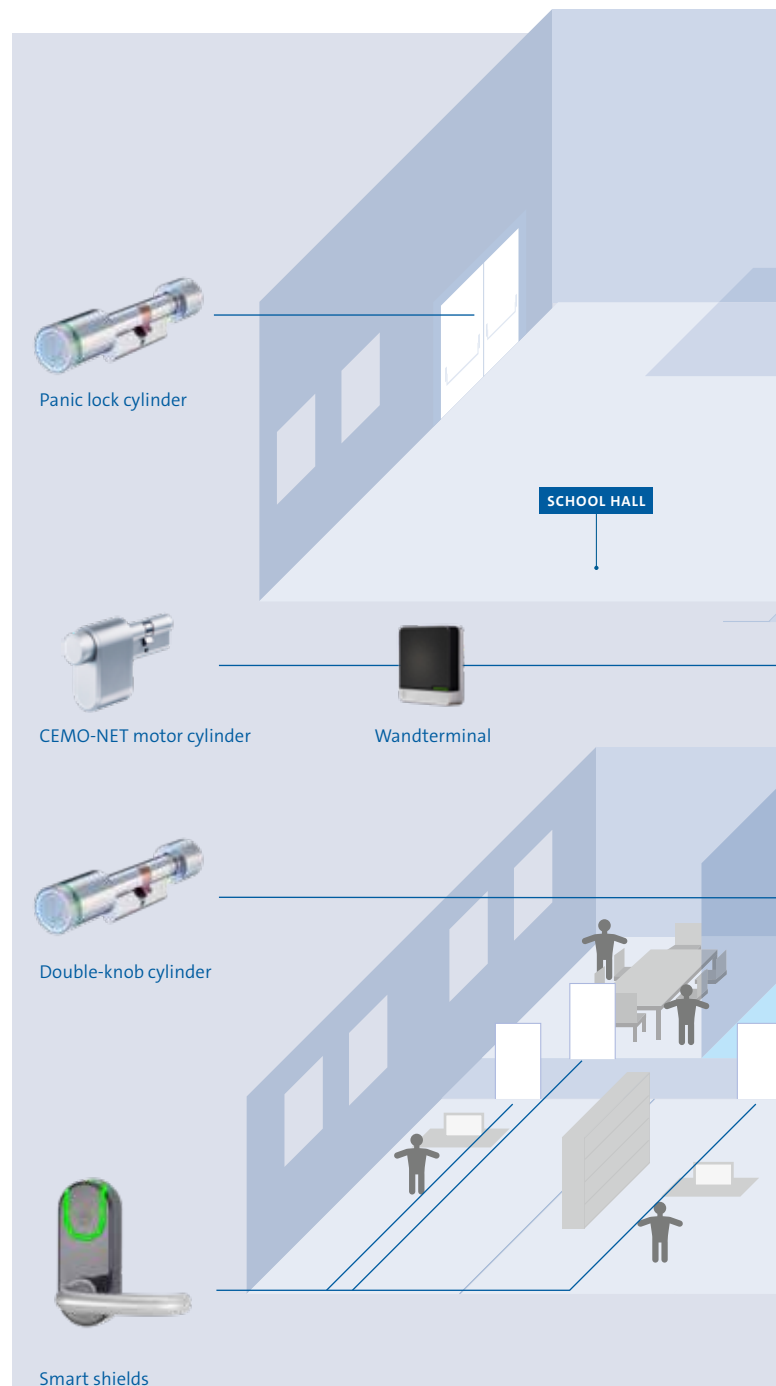
- Protected by dummy cylinder with locking assistance
- Unlocking in the morning: by caretaker or authorised teacher for the duration of the school hours
- Locking from inside: only possible with locking assistance, abuse excluded

### Classrooms

- Classroom door: protected by mechanical "classroom function" knob cylinder
- Unlocking from the outside: only possible with mechanical key; door remains unlocked during classes
- Alarm situation (danger on the school premises): by a simple rotation of the cylinder knob, the door can be locked from the inside without a key; door can only be opened again from the outside with an appropriate key
- Protection against abuse (student wanting to keep the door locked from the inside): thanks to a special coupling in the cylinder, a teacher or the caretaker can disable the knob function with a key at anytime and open the door from the outside

### Chemicals storage and chemistry classroom

- Connecting doors: protected by dual cylinders, can only be locked/unlocked on either side with electronic authorisation. All access events are logged, use of hazardous substances only possible for authorised persons or under their supervision
- Classroom: protection of the door with mechanical "classroom function" knob cylinder (like the other classrooms)
- Double-knob cylinder protects chemistry storage room from the corridor side

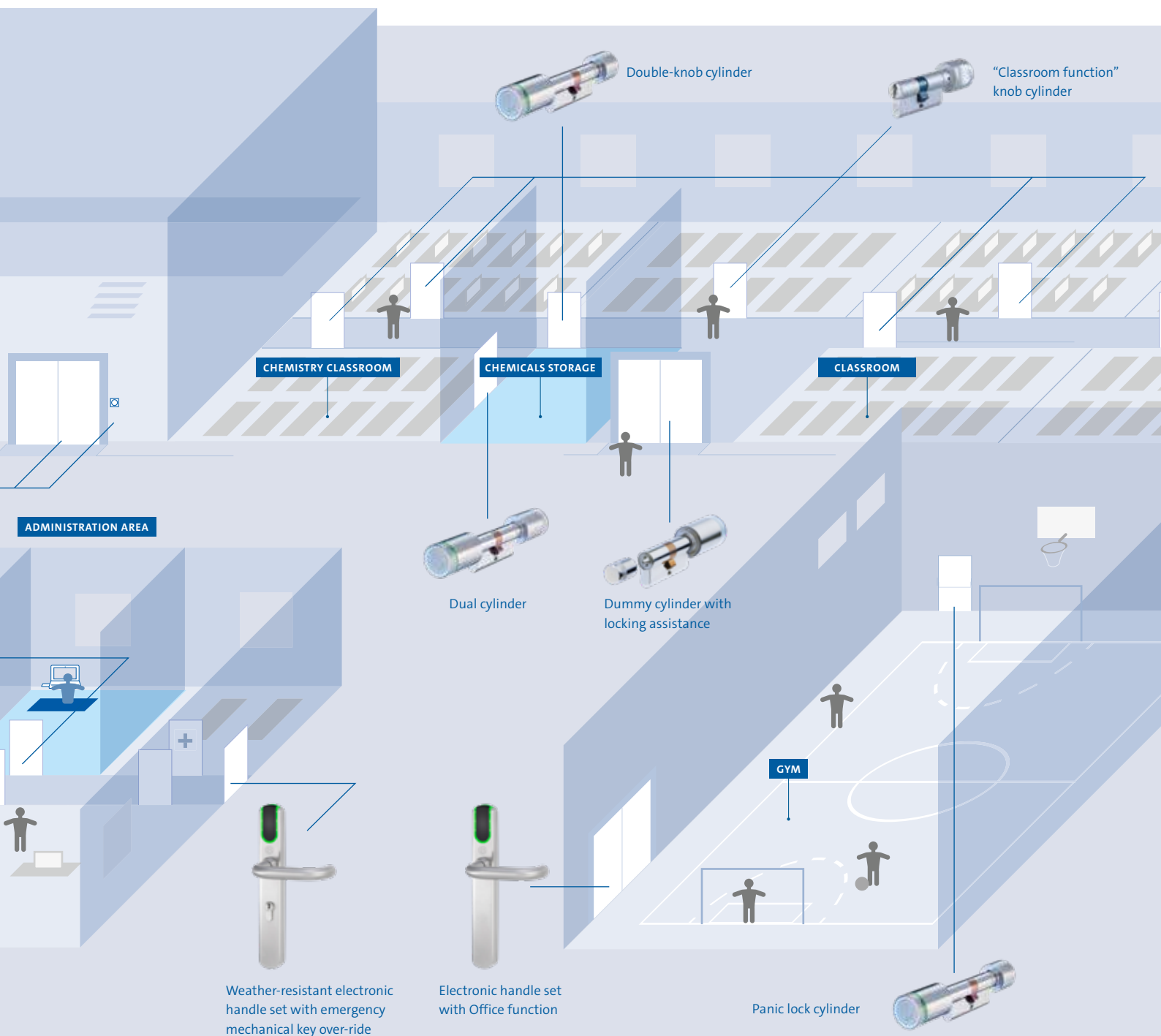


## Gym

- Access: local clubs are provided with electronic ID cards with access authorization for defined times and defined locations according to the occupancy schedule
- Protection of the door by a weather-resistant handle set with Office function; unlocking for certain periods
- Trainer function: trainers have an ID card authorization that additionally comprises an Office function; this permits a one-time unlocking of the door at the beginning of the training period, door can be opened by anybody for a period of e.g. 30 minutes, and then is locked again so that no access from the outside is possible
- Emergency function according to EN 1125 supported by panic lock cylinder; door can always be opened from the inside

## School hall/event room

- Entrance: protection by CEMO motor cylinder, locking/unlocking is authorized via wall terminal or remote controlled from the caretaker's office or private accommodation
- Locked/Unlocked status can be verified online at any time
- Emergency exit: protection by panic lock cylinder for an emergency exit door according to EN 1125; door can be opened from the inside at any time, from the outside only with an authorized locking medium





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