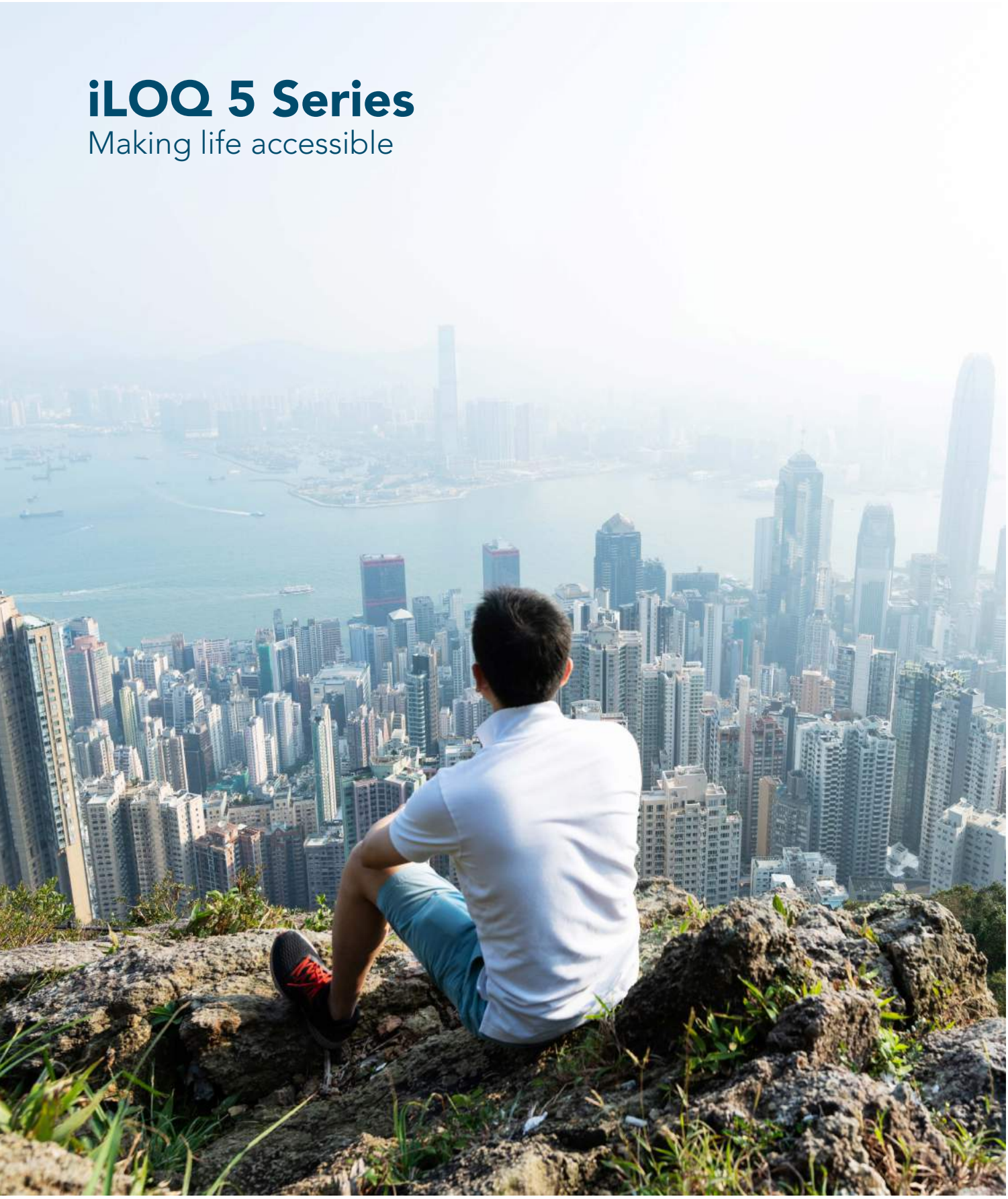
iLOQ
Making life accessible

iLOQ 5 Series

Making life accessible



The world's first self-powered digital locking system

Almost 20 years ago, iLOQ took a great leap forward in the locking industry. We were the first company to steer a path away from mechanical locking and lead the way in developing self-powered digital locking and access management solutions.

The core of our digital locking system is the digital key. The power needed for granting access rights is generated by the motion of inserting this key into the lock – **no batteries or cables are needed.**

Access rights are easily controlled using iLOQ's software, so that administrators can view **up-to-date** information on the keys, locks and access rights within the system at all times. And the **highest levels of security** are maintained because the access rights of any lost, stolen or unreturned key can be quickly and easily cancelled.

> Based on almost 20 years **of experience**

The world's first NFC-powered mobile access sharing system

Utilizing near field communication (NFC)-enabled mobile access technology and secure cloud-based access sharing, iLOQ developed the **first lock cylinder on the planet to harvest energy for unlocking from a smartphone.** A smartphone acts as both a key and a power source.

This mobile locking solution enables the **consolidation of multiple (and remote) sites, numerous personnel and huge numbers of keys into one easy-to-use software solution.**

iLOQ S50 has always been available for Android phone users. But, with Apple opening its NFC capabilities to third-party vendors in its iOS 13 and from iPhone 7 onwards, the potential for even further development in terms of truly device-independent access management is now virtually unrestricted.

iLOQ 5 Series

One step forward – another step ahead

Thanks to new opportunities offered by digitalization and the internet of things, it is now possible to manage our unique key-based locking system and ground-breaking mobile-phone-based locking solution from the same, easy-to-use software platform.

The unique benefits of the iLOQ 5 Series

1 Multiple access possibilities

Choose your way of access:

- iLOQ S5 key
- iLOQ S50 NFC phone key
- iLOQ S50 key fob
- PIN code
- RFID tag

2 Smarter, more simple administration

- One flexible, scalable, easy-to-use platform
- Device-to-device communication – data remotely updated and shared between smartphones, readers, keys and locks before the door is opened

3 State-of-the-art security

- Access rights always up to date
- Access rights of lost, stolen or unreturned keys easily blocked
- Expired keys have no access without administrative actions
- AES-256 encryption through all system components

4 Streamlined operations

Standard, open application programming interface (API) allows integration with:

- modern information-sharing systems
- booking systems
- customer personal databases

One highly intelligent software solution for multiple locking systems

Maintaining the highest levels of security while reducing administration tasks and keeping costs low has been a headache for locking system administrators using mechanical locking systems. Today's locking systems offer some advantages, but they may not be the most flexible, comprehensive solution.

The ability to manage both key-based and mobile-phone-based locking solutions from one platform maximizes security while minimizing administration and lifecycle costs.

And the unique features and functionality in the iLOQ 5 Series fulfill the access management needs for all types of properties and user environments.

Top-class **security**

10,000+ systems already administrated with iLOQ Manager

The decentralized iLOQ 5 Series is part of the digital ecosystem. It has many features that make key programming and other security-related operations efficient and secure:

Data security

- Customer databases are located on an ISO27001:2013-certified cloud server
- The client software installed on the customer's PC that manages the system requires a login (separate encryption of data)
- Each customer has their own, isolated SQL Server database, which is completely separate from other databases and isolated from the internet (communications through web server)

Distributed security

- A physical programming token is required for security-critical programming tasks – this is connected to the customer PC's USB port

Phone security

- Device identity ensured by strong PKI-based (Public Key Infrastructure) authentication
- Mutual authentication between key and lock (AES-256 encrypted)
- State-of-the-art app protection from malware and misuse

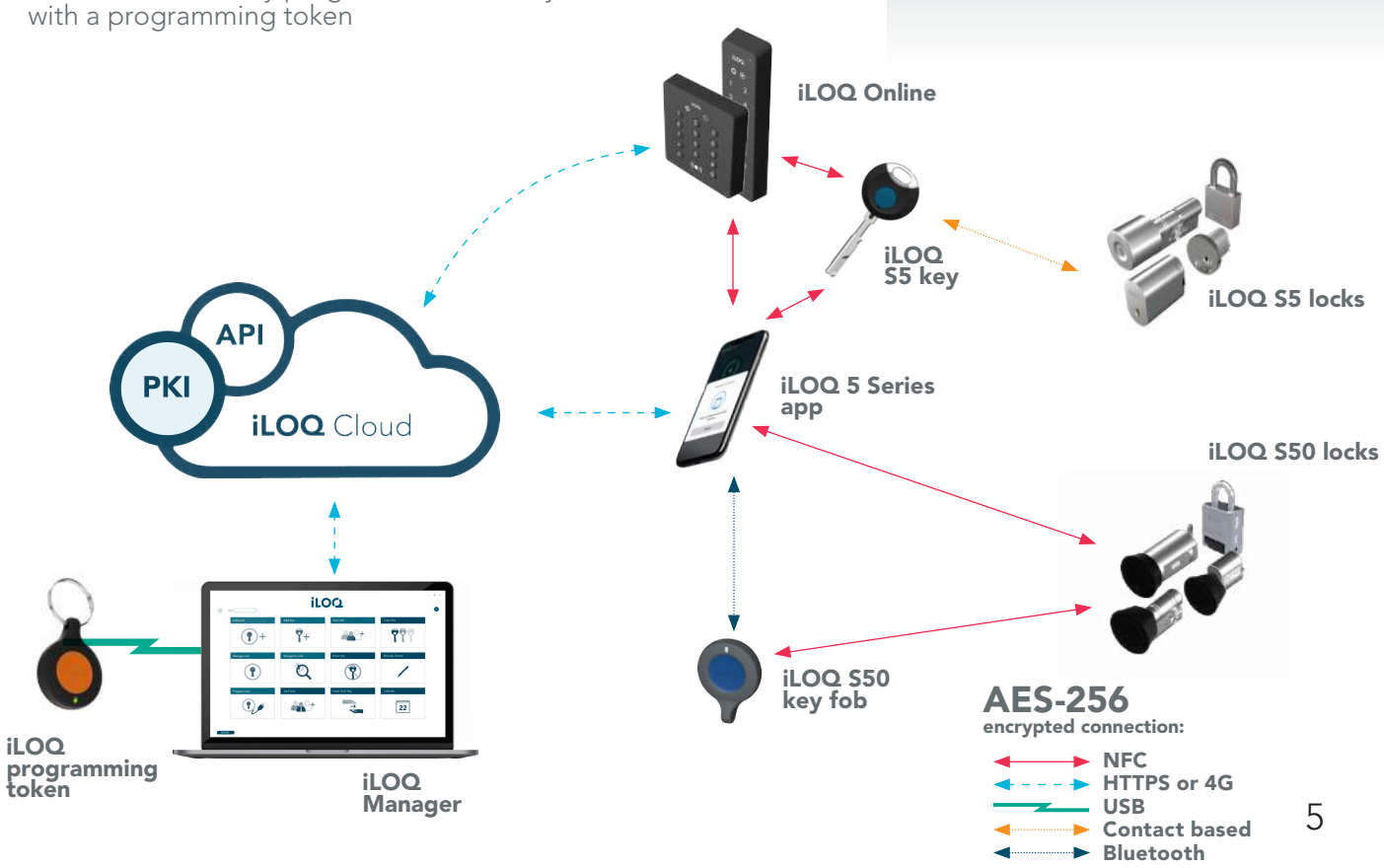
Boost the value of your properties

- Maximize security
- Minimize administration and life-cycle costs
- Reduce consumption of resources and impact on the environment

Secure system architecture

All communications are protected with AES-256 encryption.

Devices are securely programmed to the system with a programming token



Fast and easy access management: Cloud-based iLOQ Manager software provides real-time, 24/7 administrative rights for the entire locking system.

Multiple access possibilities: Frequently used doors can easily be opened using iLOQ 5 Series digital keys, key fobs, smartphones (iOS or Android) and PIN codes (alone or in combination).

A reader is also an updater: A reader acts as a communication channel with iLOQ 5 Series digital keys by updating accesses, lists of blocked keys, time limitations, latest time and audit trails.

A digital key embedded with NFC: This robust, fully programmable key is used as a tag with readers or as a traditional key with cylinders, padlocks and key tube cylinders – no batteries are needed.

Locks are powered by the motion of inserting a digital key: Cylinders, padlocks and key tube cylinders harvest the needed power for unlocking by the kinetic energy of the key being inserted – no batteries or cables are needed.

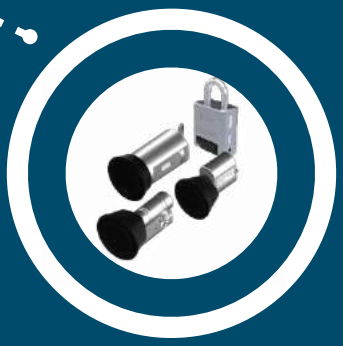
Keys and locks learn from each other: Keys and locks share the latest data – accesses, lists of blocked keys, time limitations, latest time and audit trails – before a door is unlocked.

iLOQ 5 Series system
overview

A smartphone is the key: An NFC-enabled smartphone (Android or iOS) acts as a key and a power source for the locks. Access rights are instantly and remotely received by the iLOQ app.

A smartphone is also an updater: A smartphone acts as a communication channel with iLOQ 5 Series digital keys by updating accesses, lists of blocked keys, time limitations, latest time and audit trails.

A digital key fob embedded with NFC: This fully programmable key fob is used as a tag for readers and locks.



Locks are powered by a smartphone: Cylinders, padlocks and key tube cylinders harvest the needed power for unlocking from a smartphone held close to them – no batteries are needed.

Connections

iLOQ 5 Series 'in action'

The iLOQ 5 Series is a highly scalable and expandable locking system. Its features and functionality fulfill the access management needs for all properties. Replacing mechanical locks is easy and economical.

iLOQ S5 cylinders

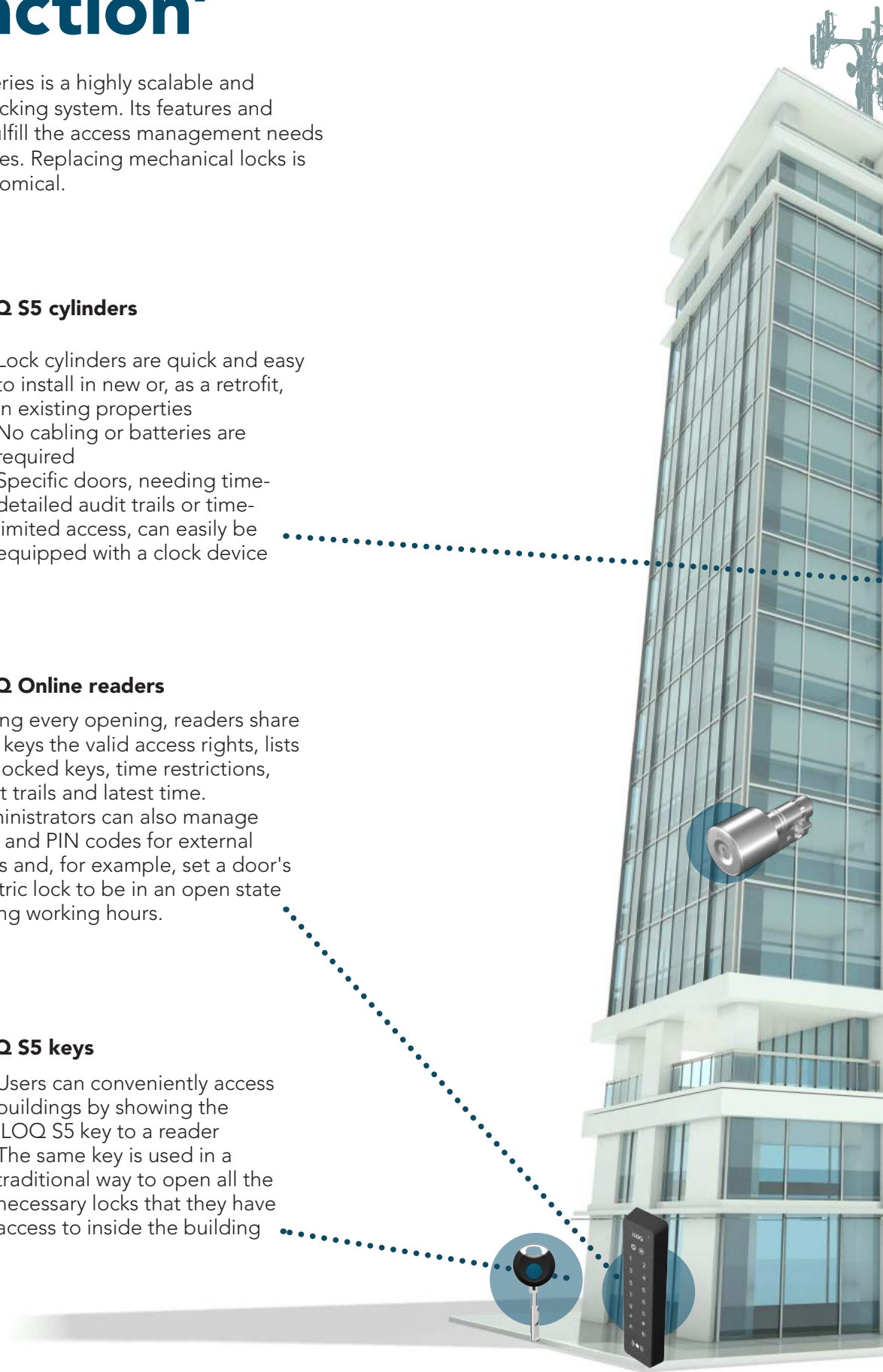
- Lock cylinders are quick and easy to install in new or, as a retrofit, in existing properties
- No cabling or batteries are required
- Specific doors, needing time-detailed audit trails or time-limited access, can easily be equipped with a clock device

iLOQ Online readers

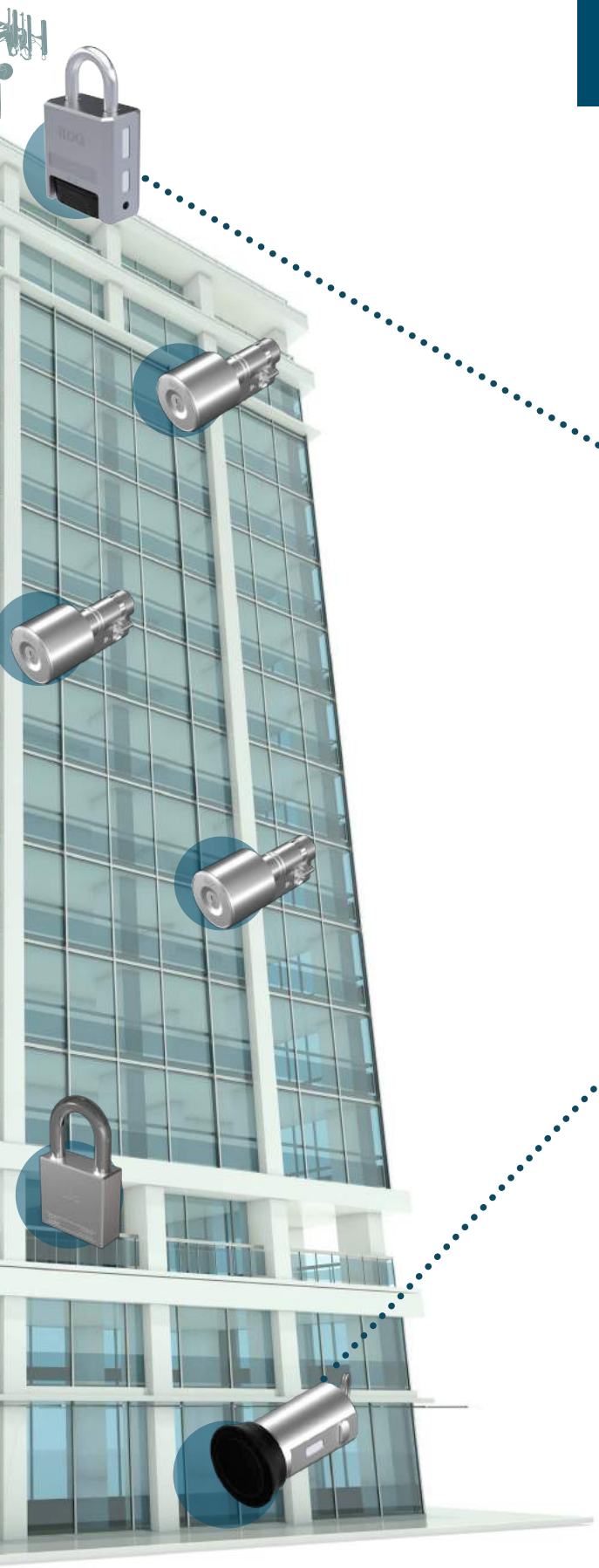
During every opening, readers share with keys the valid access rights, lists of blocked keys, time restrictions, audit trails and latest time. Administrators can also manage tags and PIN codes for external users and, for example, set a door's electric lock to be in an open state during working hours.

iLOQ S5 keys

- Users can conveniently access buildings by showing the iLOQ S5 key to a reader
- The same key is used in a traditional way to open all the necessary locks that they have access to inside the building



iLOQ's standard open application programming interface (API) enables integration with state-of-the-art data-sharing and reservation systems as well as customers' personal databases. Collaboration with industry leaders, such as KONE, and the interplay of iLOQ's and KONE's technologies and APIs create added value in access control.



iLOQ S50 padlocks

Maintenance- and battery-free digital padlocks without keyways are the ideal choice, for example, for utility providers and especially when locks are located in remote locations.

iLOQ S50 key tube cylinders

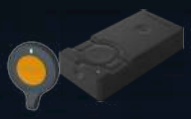
- Building keys are stored in secure wall-mounted key tube cylinders that can be opened with a smartphone
- No need for facilities companies to spend time picking up and returning keys
- Instant access to keys for external service providers in emergency situations and for maintenance staff to ensure the living environment stays at the highest possible level

iLOQ 5 Series app

The iLOQ 5 Series app (Android and iOS) receives access rights instantly and remotely. A smartphone can be used for opening iLOQ S50 locks and iLOQ Online readers and for updating of iLOQ 5 Series digital keys

iLOQ 5 Series
programming applications

iLOQ Manager software

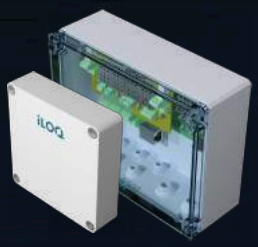


iLOQ programming equipment

iLOQ 5 Series app (available 2020)

iLOQ 5 Series
Online products

iLOQ Door Module with 4G connectivity



iLOQ Net Bridge and Door Module for wired connectivity

iLOQ Online readers

iLOQ S5
product portfolio

iLOQ S5 key

iLOQ cylinders

iLOQ key tube cylinders

iLOQ padlocks

iLOQ cam locks

iLOQ S50
product portfolio

iLOQ S50 keys

iLOQ cylinders

iLOQ key tube cylinders

iLOQ padlocks

iLOQ cam locks


Tested in the harshest arctic conditions for **long-lasting and reliable performance**
KIMI RÄIKKÖNEN
OFFICIAL PARTNER

Powerful and intelligent

digital locking solutions for all your properties

iLOQ has the clear goal of making life accessible by providing people with easy, efficient and secure access to everyday living and working spaces around the world. To date, we have delivered over 2 million digital keys and over 1 million digital locking cylinders. Our solutions can currently be seen throughout Europe, from the smallest apartment buildings to some of the largest and most complex utility sites.

Student housing

In student housing, residents constantly change and keys are frequently lost. Due to high turnover rates and complicated key logistics, the management of access rights with traditional systems is difficult and expensive. The iLOQ 5 Series is the perfect solution for the challenges faced by student housing management and staff.

Offices

The iLOQ 5 Series is a locking system based on strong digital authentication – a perfect solution for offices with a heavy flow of people and multiple layers of security. The solution improves the efficiency of access control in offices that have previously used mechanical-based locking and access control systems. Additionally, the system is easily expandable to a remotely controlled, lightweight and practical access management system capable of handling large amounts of access rights under one user-friendly platform.

Hospitals

Hospitals present a particular challenge for locking systems as numerous members of staff with varying responsibilities are all trying to work efficiently in premises that are usually large and widespread. The level of security must remain high at all times even when staff need to have the right of entry into many different areas in the building. The iLOQ 5 Series meets the strict requirements of hospitals while helping to ensure that everyday operations run smoothly.

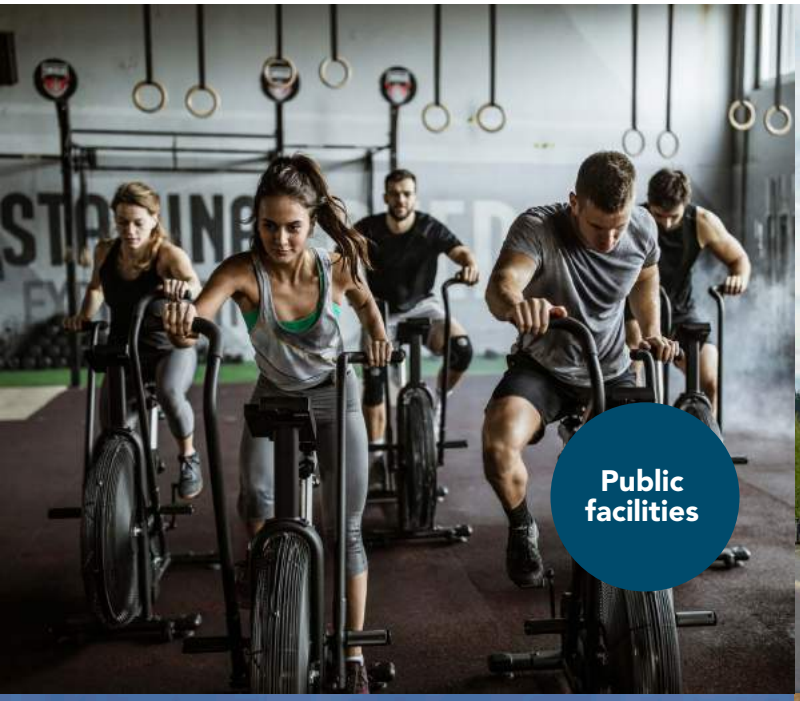
Residential properties

The iLOQ 5 Series ensures that the lock security of apartments, staircases and other common areas is continuously maintained at the highest possible level. The system is easy to install and manage, and inexpensive to maintain. iLOQ solves issues caused by lost keys, unauthorized copying of keys, expiration of patents and the misuse of common areas.

Integration with 3rd-party solutions makes the building even smarter and life more convenient. For example, bookings of communal spaces can be updated using touchscreens in the premises or on mobile apps and shared with the iLOQ S5 key. No additional wiring to the door of the booked communal space is needed, and your key opens the door during the selected time.

Schools and public facilities

In properties that need high levels of security, such as schools, museums and other public facilities, mechanical locking systems must be supplemented with an expensive access control system. The iLOQ 5 Series minimizes costs more than ever before by providing both digital locking and a remotely controlled access management system conveniently in one package. The solution can easily be expanded to cover many different types of entry points without heavy modifications to the existing infrastructure.



Utilities

Utilities

A functioning, reliable utilities industry is essential for a smoothly running modern society. Utility providers regularly face the challenge of managing numerous sites and a vast number of locks and personnel. This has traditionally meant that a huge number of keys are in constant circulation. iLOQ S5 Series has eliminated the need for physical keys and battery-powered lock cylinders. Only a smartphone is needed to open any lock in the system. Access to all property locks can be shared and managed easily with the iLOQ 5 Series cloud-based software. Daily operations are easier, the highest levels of security are maintained, and valuable time, resources and lifecycle cost savings are achieved across the organization.

Challenges with other locking systems	**Solutions with** iLOQ 5 Series
Rekeying limitations	Fully programmable system
High lost-key cost	Access rights to lost keys easily removed and new keys reprogrammed
Risk of copying keys	Electronic copy protection and system user administration levels
Complicated management/administration	Easy-to-use cloud software and D2D communication
Many systems	One system
High life-time costs	The more keys/locks, the higher the savings
Batteries and/or cables	Battery-free, self-powered systems
Travel-related time and costs	Access rights updated over the air
Many physical keys	One digital key/smartphone holds all access rights
Complicated access-rights updates	Online readers and smartphones update access rights of digital keys

The greenest and most sustainable solution, ever

The iLOQ 5 Series is iLOQ's most sustainable locking system to date. In accordance with our environmental program, we aim to conserve natural resources and the environment. For example, our battery-free solutions save 28,000 kg of battery waste and 7,000 kg of metal waste reducing use of vital resources and ecological consequences. And with little or no maintenance and the ability to program access rights remotely, the iLOQ 5 Series reduces travel-related impact on the environment.

We maximize the usability of our products, favor recyclable packaging and invest in the recycling of used products.

All our locks and keys are fully re-programmable; they can be returned to their factory settings and reused in another system. Most of our packaging materials can be recycled. Lock cylinders, keys, fittings, installation materials and thumb turns can also be recycled as metal waste.

28,000 kg
of saved battery waste per year

iLOQ
Making life accessible

www.iloq.com