



AmpliSec overview



Homeland Security
& Policing

Fire & Rescue

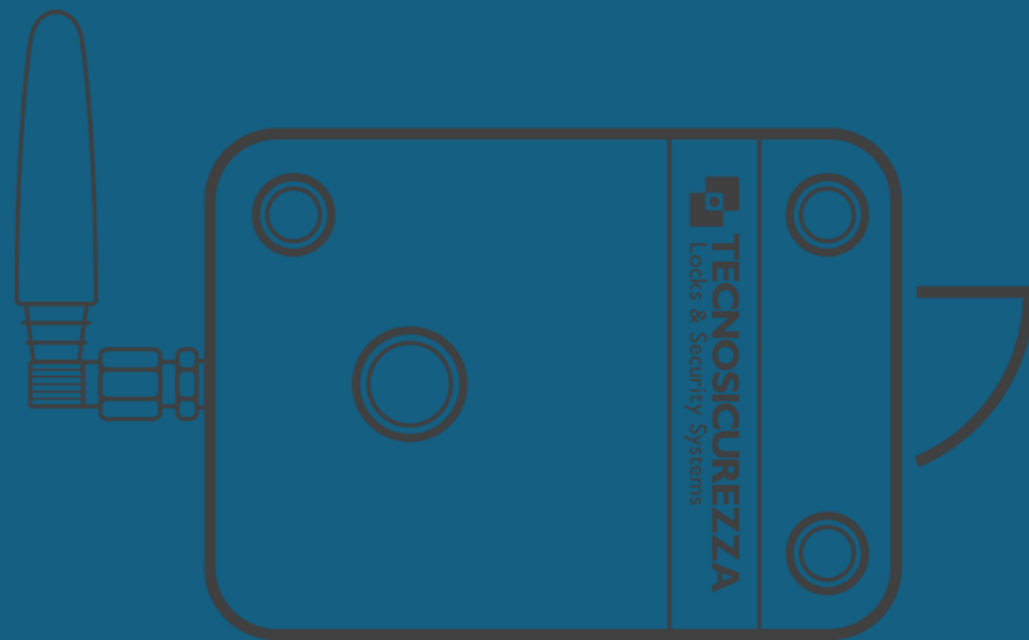
Cyber Security

Commercial &
Perimeter Security

Safety & Health

Tecnosicurezza AmpliSec

- A new era of connected security and inner peace of mind





High security Bluetooth connected electronic locking solution for safes and vault doors to protect valuables for customers in banking, high-end retail and commercial sectors.

AmpliSec key messages



A connected high-security locking system powered by a cloud native server solution. Made to extend existing locking systems for safes, doors and cabinets – AmpliSec provides peace of mind at all times.



The new world-class security solution for your high security locking needs. With full cloud integration and Bluetooth connectivity together with the intuitive mobile app – AmpliSec makes the usage of safe storage solutions accessible, secure and traceable for all users.

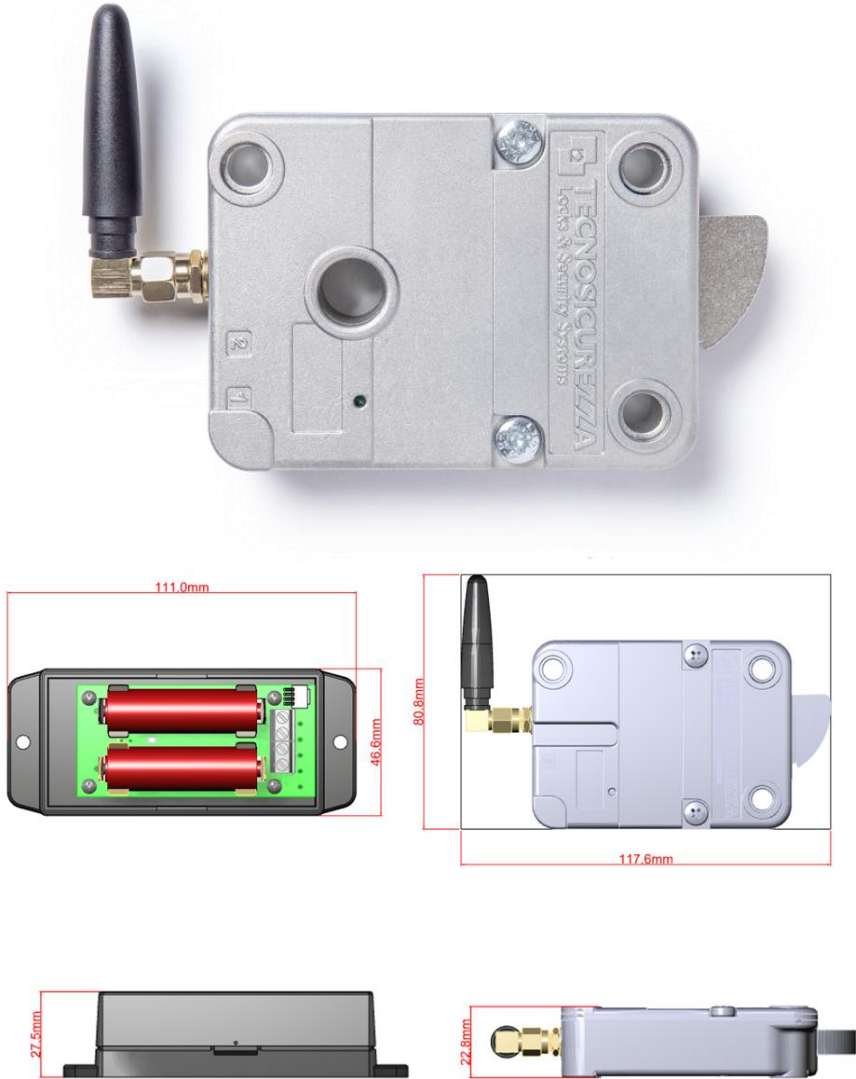


AmpliSec is the cloud-based solution making passive products active. With connectivity, no on-premises servers and proven end-to-end data security, the solution enables convenience, transparency, and less administration for both end users and lock administrators.



Chubb safes

AmpliSec: Functionality Overview



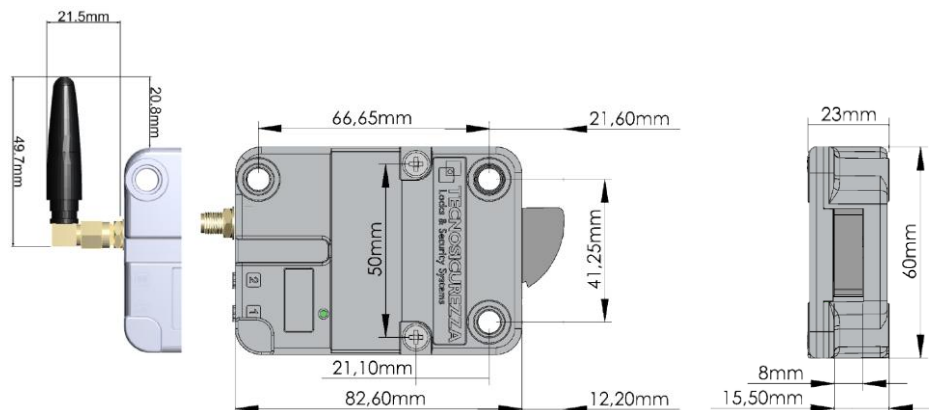
Main functionality

- Connected to Gunnebo iQ via Smart Phone application, for Android and iOS
- User friendly and intuitive lock initialization
- Unlimited* numbers of users
- Downloadable keys for offline (no Internet) scenarios (18 hours)
- Timelock functionality via Gunnebo iQ dynamic work orders
- Silent alarm/Duress via mobile app
- Passcode and/or biometric user verification
- Close confirmation
- Single Opening Access Request
- Automatic summer/winter-time handling
- Audit logs – Unlimited number of events in real-time
- Always stay up to date via wireless firmware update
- Dual Control Mode (4-eyes principle)
- Geolocation based access
- ** Time delay opening windows 0-99 minutes,
- ** Opening windows 1-20 minutes
- ** Multiple or one-time access

** Limitations may apply based on Gunnebo iQ SaaS tier*

*** Feature planned for upcoming releases based on priority*

Non-Redundant Secure Unit



Length	116.3mm
Width	80.8mm
Height	23mm
Bolt (locked)	12.2mm
Antenna length	49.7mm

Operating Conditions

The lock has been designed for fixed installation in metallic safes or safe room door.

Temperature: -10 °C – +55 °C

Relative Humidity: should not exceed 75%

Supply Voltage: 2x3.6V (14500) battery,

Battery: Battery lifetime ~2.5 years

Connectivity: Bluetooth v5, using proprietary BLE protocol

Main functionality

Mechanics: Based on Tecnosicurezza SwingBolt Class B

- Magic module with standard footprint

Installation: No visible components on the outside of the secure area

Bluetooth: nRF52840 (Nordic Bluetooth MCU)

- Bluetooth v5
- Proprietary protocol over BLE

RTC: Real-time clock to ensure accurate time in the device.

Audit log: All logs including time stamp will be automatically uploaded to Gunnebo iQ on every app/lock interaction.

Battery specifications

SAFT LS14500, [web site](#)



- Size: AA
- Nominal Voltage: 3.6 V
- Nominal Capacity: 2.6 Ah
- Nominal energy 9.36 Wh
- Chemistry: Primary Li-SOCl₂ cell

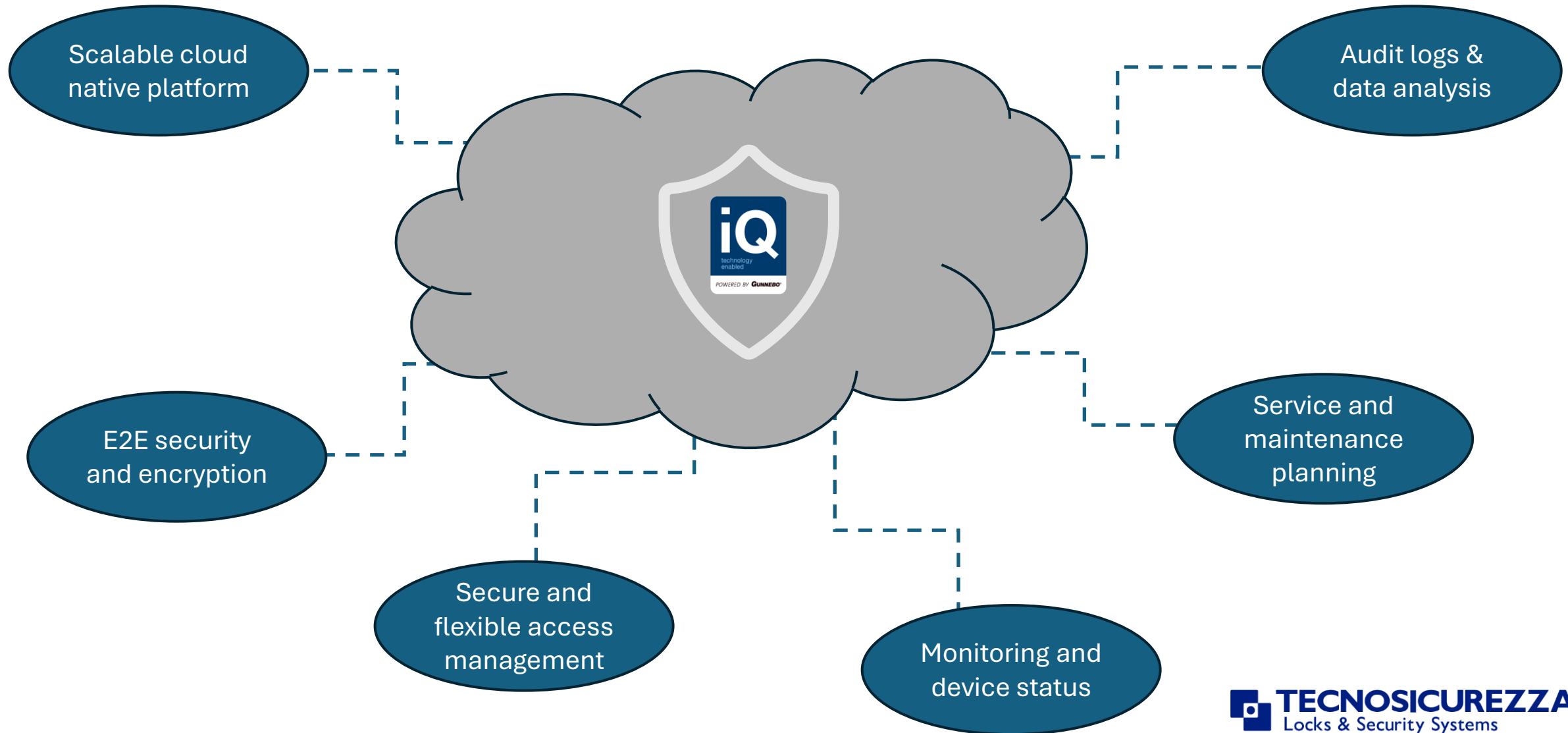
Operating Conditions

- Wide operating temperature range (-60°C/+85°C)
- Low self-discharge rate (less than 1 % after 1 year of storage at +20°C)
- Superior resistance to atmospheric corrosion
- Pulse capability: Typically up to 250 mA

Physical characteristics

- Diameter (max) 14.55 mm (0.57 in)
- Height (max) 50.3 mm (1.98 in)
- Typical weight 16.7 g (~ 0.6 oz)
- Li metal content approx. 0.7 g

Gunnebo iQ overview



User Management Software Platform – Gunnebo iQ



Organization management:
Set up locks, sites and user groups

Lock management:
Duress & Passcodes

Work Orders:
Easy access management, select sites and users
Set start & end validity time and select functionality

Create Work Orders from 1-time use or
multiple long-term access

Lock audit log always available in web

Add work order

General

Name of work order: Demo work order

Time zone: Europe/Stockholm (+02:00)

Days: Monday, Tuesday, Wednesday, Thursday, Friday

Start hour: 08:00, End hour: 17:00

Start Date: 29/07/24, End Date: 29/11/24

Type of work order: Access

Groups

Selected Groups: FOREST GROUP, MALMO TEST

Operative Users

NAME	TYPE	SITE
Forest Door	Indigo	Malmö, Sweden
Forresto	Indigo	Malmö, Sweden
Indigo PCB9	Indigo	Nordenskiöldsgatan 11, Malmö, Sweden, Scania

Type Configuration

Outlocks Permissions

Key Validity: [Field], Validity (Minutes): 10 Minutes

SafeControl IQ Permissions

Geofencing in meters: 0

☐ 4-Eyes Principle

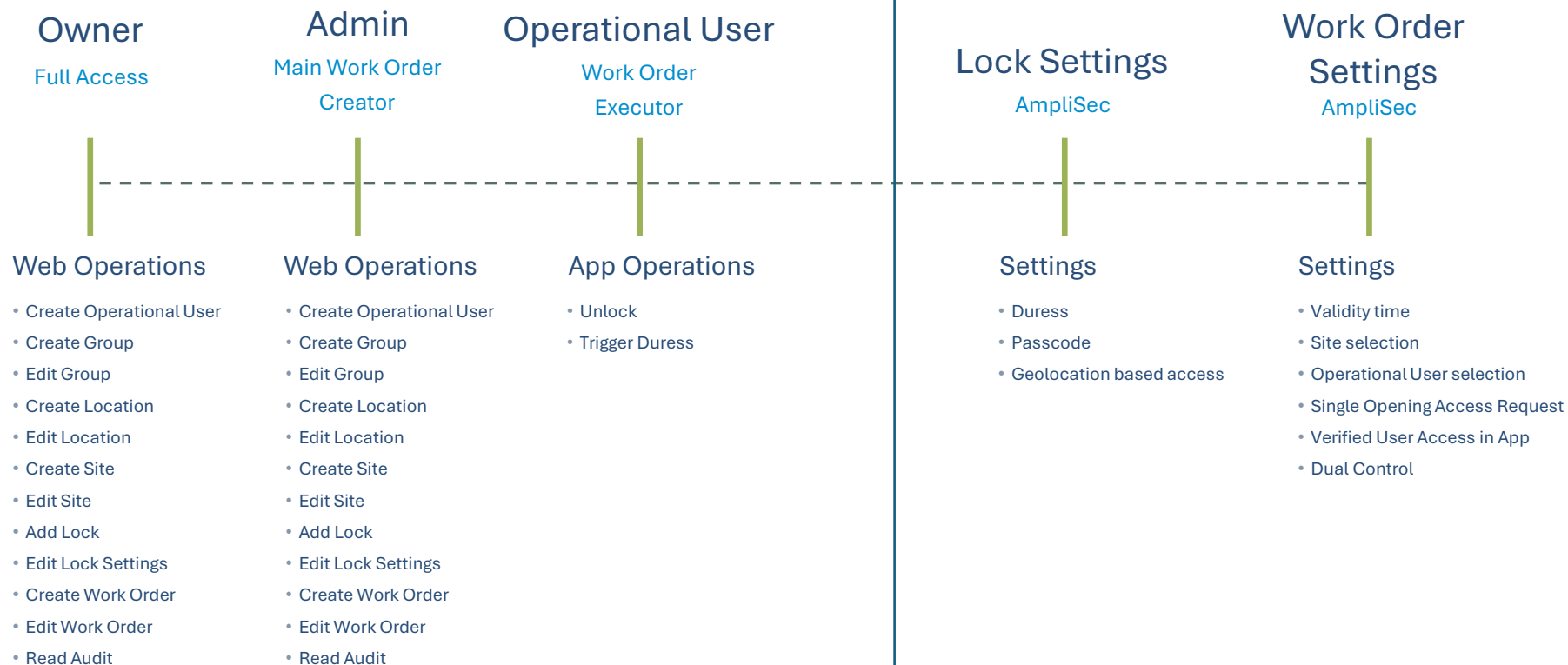
☒ Biometric unlock

☐ Limits unlocks

☐ Manual Single Opening Access Request generation

SAVE **CANCEL**

Gunnebo iQ User groups – Configuration overview



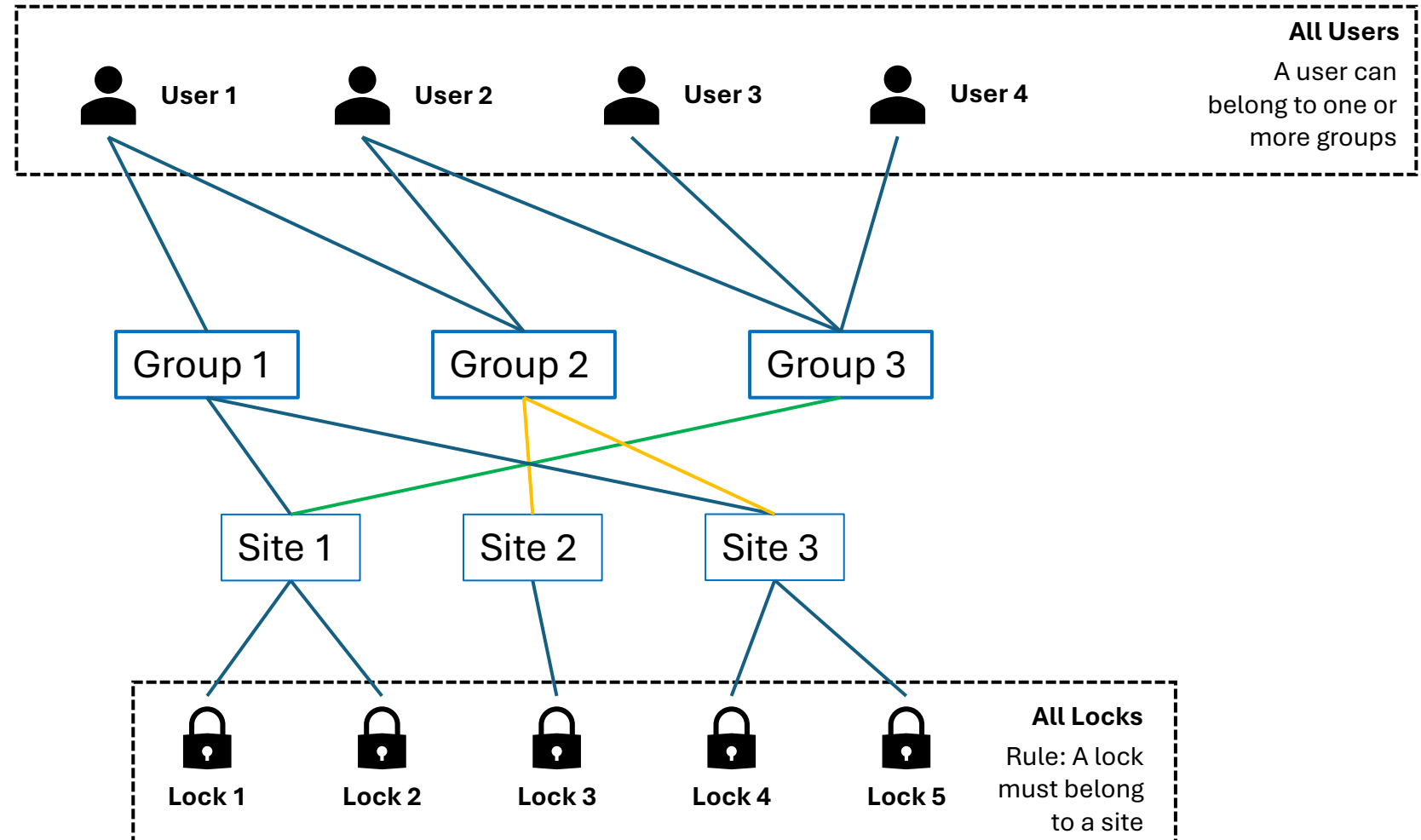
Gunnebo iQ – Work Order Definition

Definitions

The work order consists of combination of:

- Groups
- Sites: A group of Locks
- Users

Work Orders are determined by setup of Group, Sites & Users



Gunnebo iQ – Work Order Definition

Definitions

Lock Options

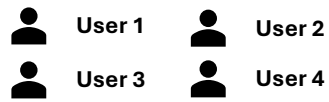
- Delayed opening  Option 1
- 4-eye principle  Option 2
- Etc.

Schedules

- Valid from-to date  Schedule 1
- Valid days of week  Schedule 2
- Valid from-to hour

All Users

A user can belong to one or more groups



The work order consists of combination of:

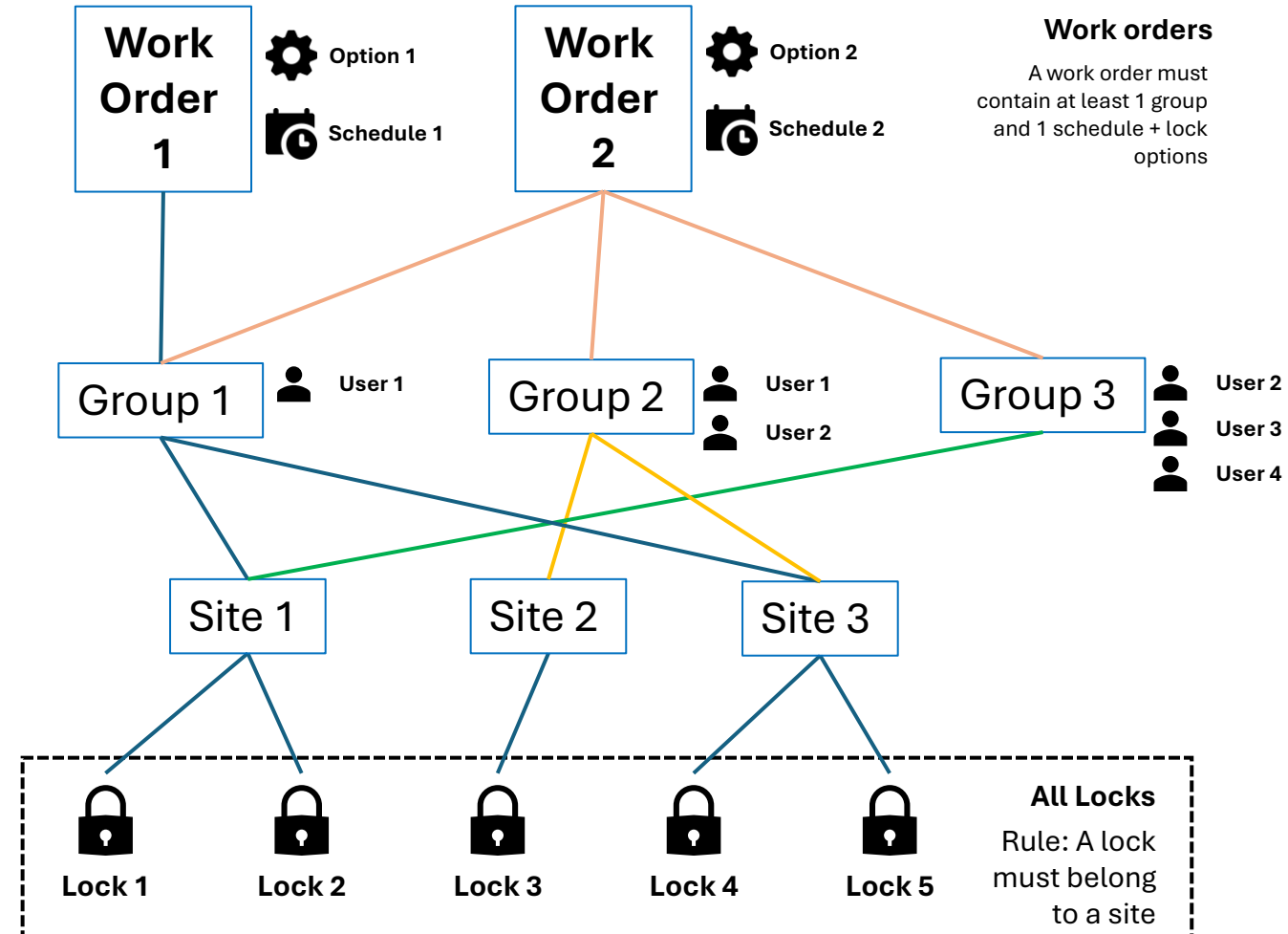
- Groups
- Sites: A group of Locks
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Work Orders are determined by setup of Group, Sites & Users

Assign Lock Options

Assign Schedule

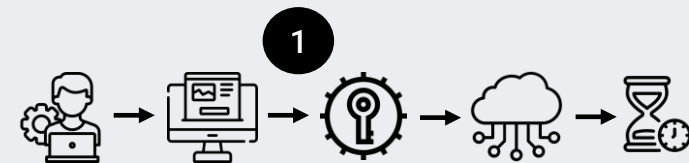
Assign Groups



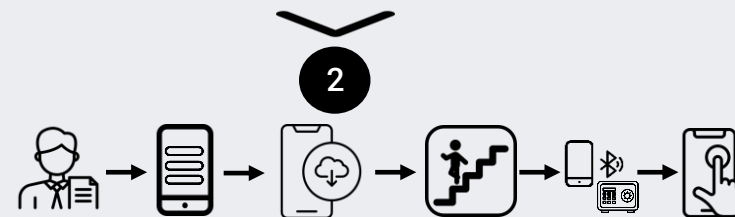
Bank clerk customer journey



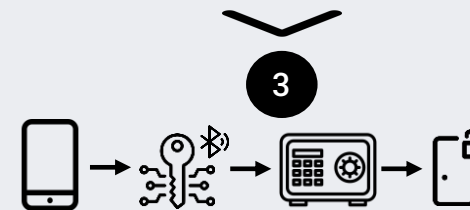
A bank clerk is requested to fetch sensitive documents from a safe in the bank basement where there is no internet connection.



The bank admin logs in to the iQ portal, creates the multiple-time-access work order for the clerk, including offline access and specific safe lock settings (time delay, dual control etc.). The work order is saved in Gunnebo iQ.



The clerk logs in to Gunnebo iQ mobile app while at his desk. He sees the active work order, navigates to the lock and downloads the credential. He walks down to the basement where there is no internet. When he approaches the safe, the app connects via BLE to the safe. He presses 'Unlock'.

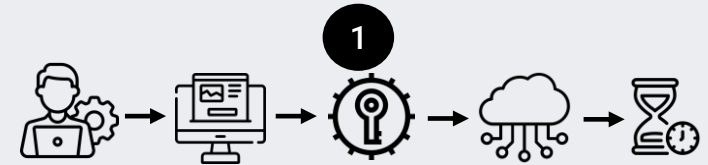


The app sends the digital credential, the lock verifies it and unlocks. An audit log is sent back to Gunnebo iQ via the app. The work order is ready to be used again the next time the clerk needs to fetch something from the safe.

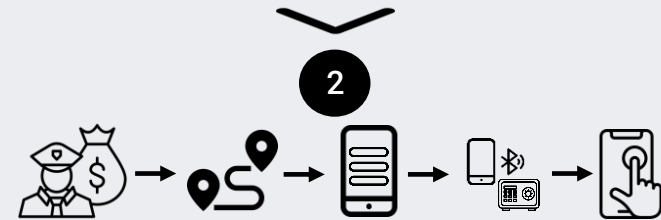
CIT custodian customer journey



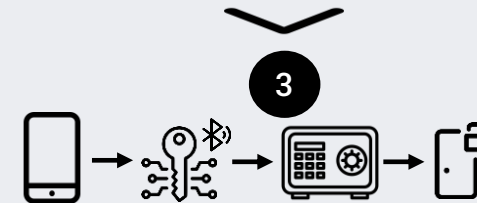
A CIT custodian is requested to replenish an ATM safe



The CIT admin logs in to the iQ portal, creates the one-time-access work order for the custodian, including time duration and specific safe lock settings (time delay, dual control etc.). The work order is saved in Gunnebo iQ.



The custodian receives a daily route for replenishment. He logs in to Gunnebo iQ mobile app when he arrives at the site and sees a list of active work orders. He navigates to the relevant lock and the app connects via BLE to the safe. He then presses 'Unlock'.



The app sends the credential to the lock. The lock verifies the credentials and unlocks. An audit log is sent back to Gunnebo iQ via the app. The work order is now obsolete as it was set to one-time access.



Advantages compared to traditional High Security Locks



Area	Traditional HSL	AmpliSec
Scalability, installation	Each individual lock needs to be set-up manually, which means duplication of effort.	No need for physical set-up on individual locks. All configuration is done in Gunnebo iQ. Time saving when installing multiple locks.
Scalability, access changes	Each lock needs to be updated with all changes, which takes time and opens up for human error.	Changes of users doesn't require physical access to any lock, all done via web portal and is instantly updated for all locks.
Scalability, functionality changes	Changes in schedules or functionality requires changes in all involved individual locks.	No physical access needed, a change in a current work order or creating a new one instantly gets all involved locks ready.
Temporary access, day-pass	A temp worker still needs to get user access on each lock, and then removed when the access not needed any longer.	Just add the user to Gunnebo iQ, add the user to the correct group and he will have the correct access until removed from group or system.
Group management	Profiles are used for time lock and other lock features, where 1 user is tied to a specific profile.	Users are 100% disconnected from profiles, and as such a user can have different access features connected to them via different work orders.
Number of app-enabled users	There is always a limit of the number of users that fits on the lock.	Since all business logic is handled by Gunnebo iQ, there is no practical limit of the number of users that can be used in the organization and for the locks.
Passcodes	PIN codes are manually inserted on the lock, which could mean that more than 1 person has knowledge of the code.	Passcode is handled by the user in the app, and never shown anywhere for anyone.
Monitoring, Real-time access logs	Specific action is needed to fetch log from each lock.	All logs are uploaded to Gunnebo iQ as they happen, via the app .
Monitoring, Duress Alert	User can only trigger duress if they have access to a lock at that specific time.	Any employee can trigger a silent alarm as long as they have access to the app and is enrolled as an operative user.
Fast security updates	If a security vulnerability is found in a traditional lock, if FW update is possible each one needs to be connected to a laptop with special rights.	Improving security gaps requires only a few minutes. The user using the application does not need to be informed what the fix is about. This is an additional security measure.



What is the AmpliSec's main difference from a conventional High Security Lock?

- *AmpliSec is connected to Gunnebo iQ, where all the business logic resides. No setup on the physical lock is needed, everything is set up in iQ and transferred to the lock via the app over a secure Bluetooth connection. This means less administrative work for Fleet Management, and no need to go to the lock if any changes in lock configuration needs to be done.
Also, since Gunnebo iQ is a true cloud platform, there is no need for internal IT services. Access is always there, from wherever you are and whenever you need.*

Why should I get AmpliSec locks for my organization?

- *AmpliSec is developed with retrofitting in mind. The main lock body is a SwingBolt with a standard footprint, i.e. a Magic Module. By exchanging a keylock with AmpliSec or adding AmpliSec as an extra lock, your safe will get the latest technology without the need to buy a new safe or drill in the existing one.*

Is AmpliSec EN 1300 certified?

- *No, as of now the EN 1300 certification does not recognize Bluetooth as a valid medium for lock communication. However, the lock body is based on the Tecnosicurezza SwingBolt which is EN 1300 certified.
We have then added Bluetooth as part of the electronic board. The lock is Bluetooth SIG certified to ensure full compatibility with all major mobile phone manufacturers.
We are working with multiple international expert organizations making sure that all aspects of the end-to-end solution is at least as secure as conventional non-connected High Security Locks.*

Will really the Bluetooth signal strength be enough to connect to phones outside of the safe?

- *We have developed AmpliSec with the latest Bluetooth technology to ensure good connection with mainstream mobile phones. Our internal tests shows that the signal strength is more than good enough.*

How do you make sure the solution is secure?

- *We are working with multiple international expert organizations making sure that all aspects of the end-to-end solution is at least as secure as conventional non-connected High Security Locks.*

Will AmpliSec's firmware be possible to update in the field?

- *Yes, the firmware will be possible to update. The lock administrator decides when a lock should be updated via Gunnebo iQ, and a trusted user performs the update via the mobile app. The firmware is securely sent to the lock via Bluetooth.*

What kind of batteries are used?

- *We use 2 Lithium non-rechargeable 3.6V batteries per lock, the type is called 14505. Our customers are allowed to buy and change the batteries themselves, and they are also welcome to contact Gunnebo service to source and exchange them.*

What is the expected battery lifetime?

- *The expected battery lifetime is 2.5 years based on an average of 10 lock cycles per day.*