

2N Elevator System

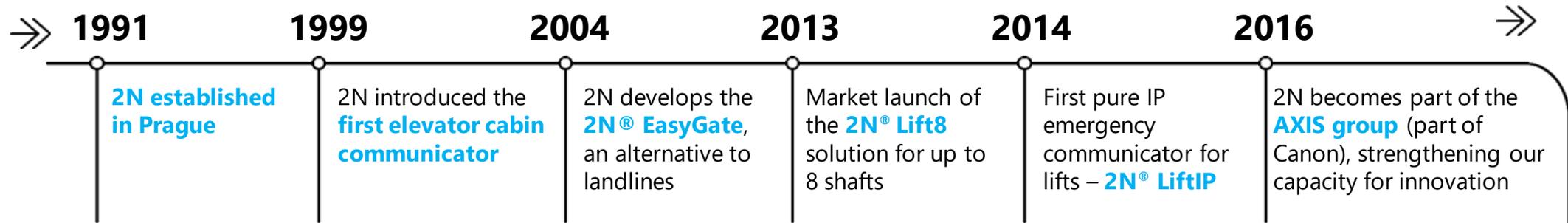
Future-proof emergency communication



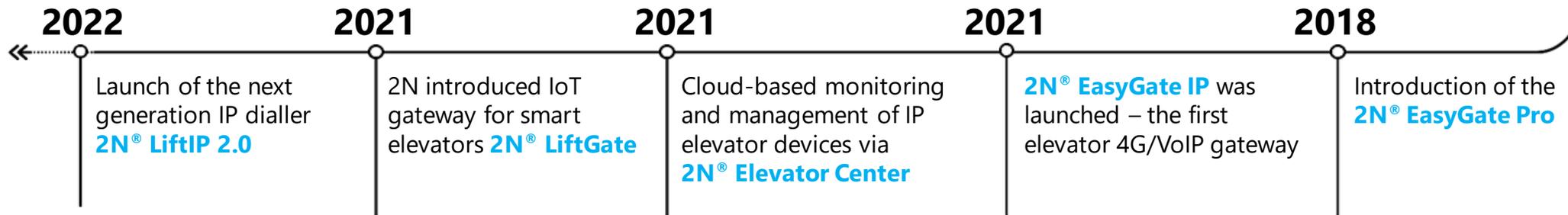
Agenda

1. About 2N
2. Four obstacles in the elevator industry
3. Obstacles as a challenge for us
4. Various solutions we can provide
5. Our products in detail
6. References – success stories

We have been at the vanguard of innovation in our sector for more than 30 years



Innovation remains at the heart of our strategy for future growth



Our profile



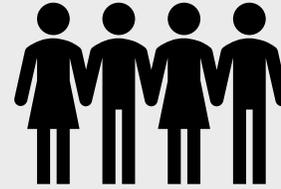
HQ

EU, Czech Republic



Revenue 2022

79 mil. EUR



Employees

450



Part of Axis Group

Axis Group



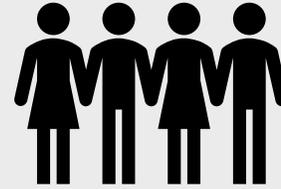
HQ

EU, Sweden



Revenue 2022

1,2 B EUR



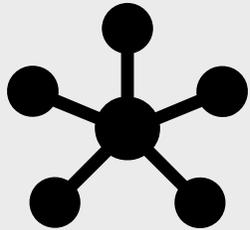
Employees

4170

Canon

**Part
of Canon Group**

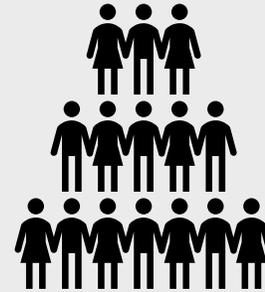
Our success stands on



Extensive
distribution network
throughout the
whole world



Successful projects
completed in more
than 125 countries
worldwide



450 employees



Our vision is to
become part of TOP 3
global elevator
emergency
manufactures!

The four pillars of our success

1



We have become an industry leader in innovation

190 developers

13% of revenue re-invested in R&D

400+ features and improvements in a single year

2



We value long-term, loyal partnerships

Multi-language technical support

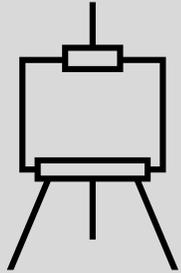
Pre-sales department

Multi-language marketing

3 year warranty

The four pillars of our success

3



We prioritize design – because our customers do

And we have the awards to prove it:



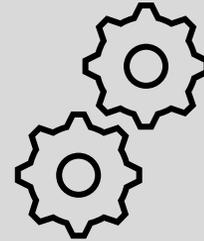
reddot award
winner

2N[®] IP Verso
2N[®] LTE Verso
2N[®] Indoor Touch 2.0



2N[®] Indoor Talk

4



We embrace the power of integrations

Extensive, fully documented API (HTTP API, REST API, 2N[®] Partner API)

Open standards and proprietary protocols
ONVIF, RTSP/ RTP, SIP

Compatible with more than 200 solutions

Our products are designed to make our customers' lives better, easier and more secure

Modern Solution



Innovative IP technology



Smart features and analytics for enhanced security



Efficient, secure remote management from any location through the cloud



High quality audio and video with post-processing capabilities

Integration



Open protocols allowing the integration with third-party systems



Bluetooth, smartphone and tablet enabled

Quality



High-quality materials – steel, glass and aluminium



Proudly made in the European Union

Reliability



Award-winning design



Protection from cyber attacks



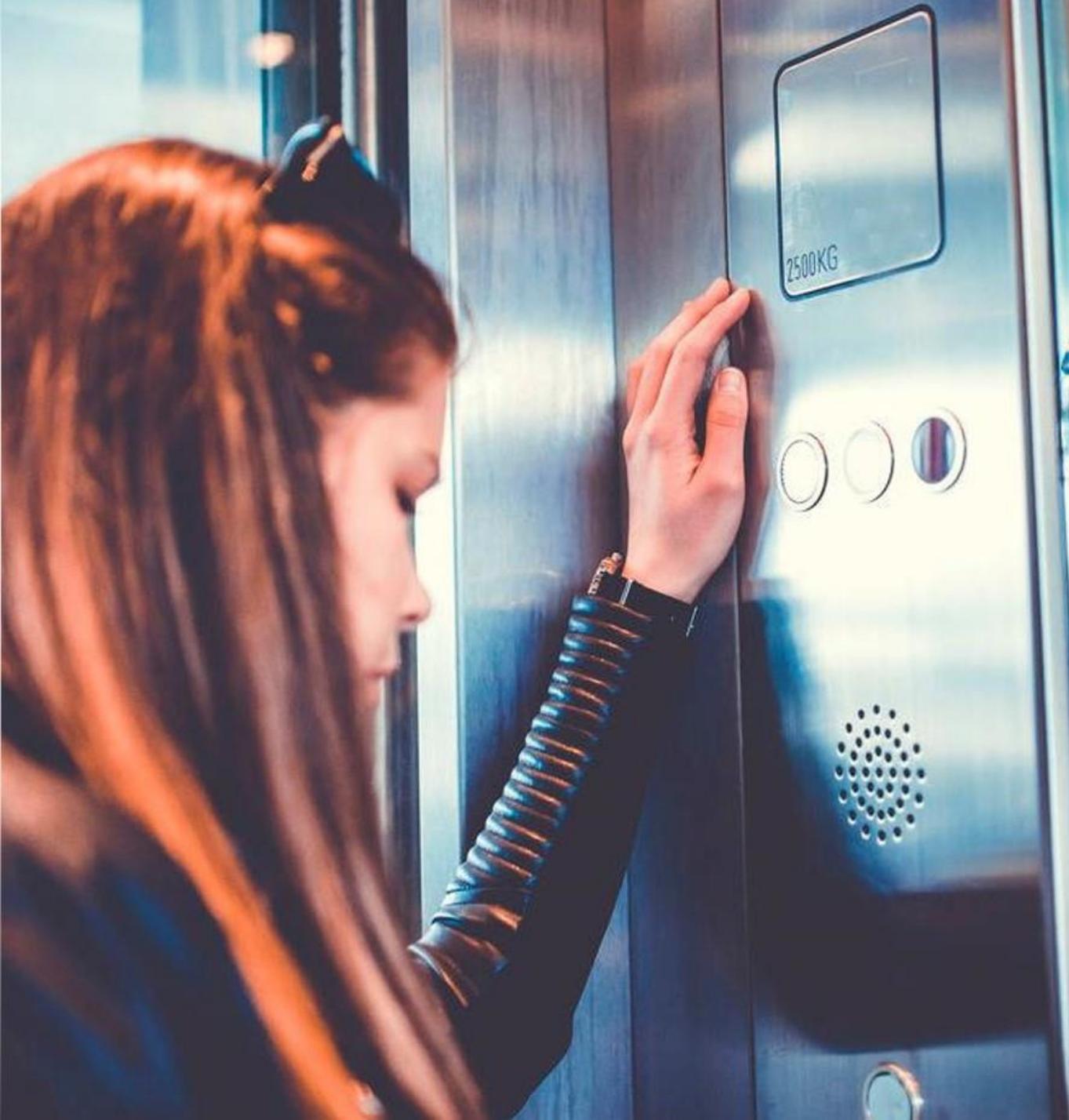
Dust, water and impact resistant



Online monitoring, notifications and immediate troubleshooting

Emergency communication





Contact the outside world to get help

For cases anybody is **trapped in the elevator** and there is no cell signal

Communication **between a cabin and operator center**

Mandatory in most of the countries (and the rest is following quickly)

Four obstacles in the elevator industry



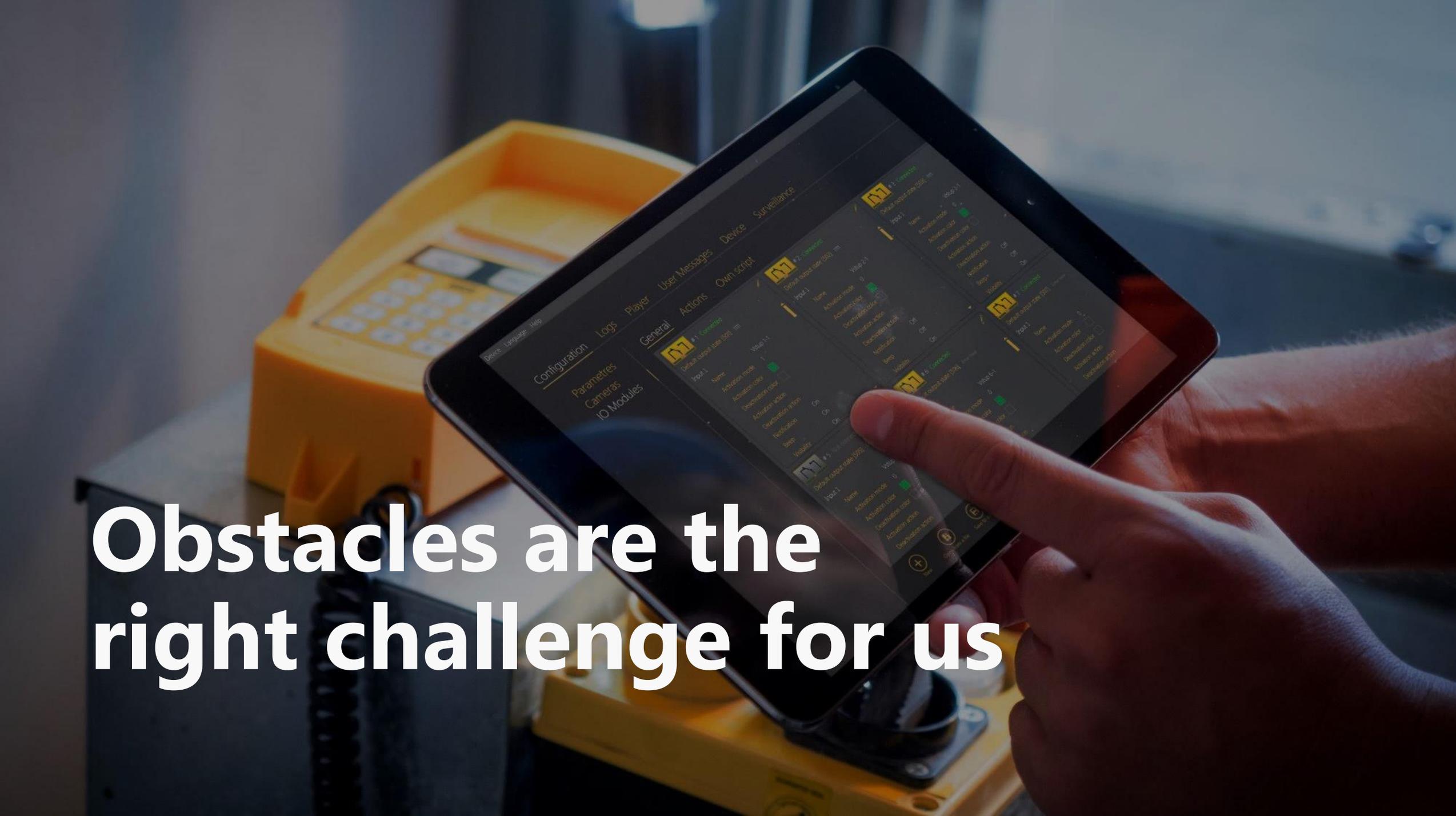
1. **PSTN** (fix lines) are **too expensive** and become unavailable

2. **Shutdown of 2G (GSM) and 3G (UMTS)** networks all around the world

3. **DTMF distortion** – DTMF transmission is more and more unreliable

4. **Request for online monitoring**, video surveillance, remote maintenance, etc.





**Obstacles are the
right challenge for us**



LTE

4G

3G

2G

Reliable connectivity for alarm calling

PSTN was the most wide spread type of connection in last decades

Today, it is discontinued or very expensive

2G and 3G networks are shutting down

The right move forward is to get ready for 4G (LTE) networks

Transition to 4G (LTE) network

2G, 3G and even 4G (VoLTE) networks frequently **distort the DTMF signal**

DTMF is essential for lift identification and also for configuration of the lift devices

Only **VoIP technology** using a **SIP protocol** guarantees reliable transmission of DTMF





Data connection up to the cabin

Transform a regular lift into a **smart, connected IP solution** allowing remote maintenance and monitoring

So far, it was expensive and difficult:

- Combination of different certified products
- Extra cable or many wires in the travelling cable
- Communication must work even during power cuts

With 2N you will get the **IP connectivity** right to the cabin **over 2-wire**

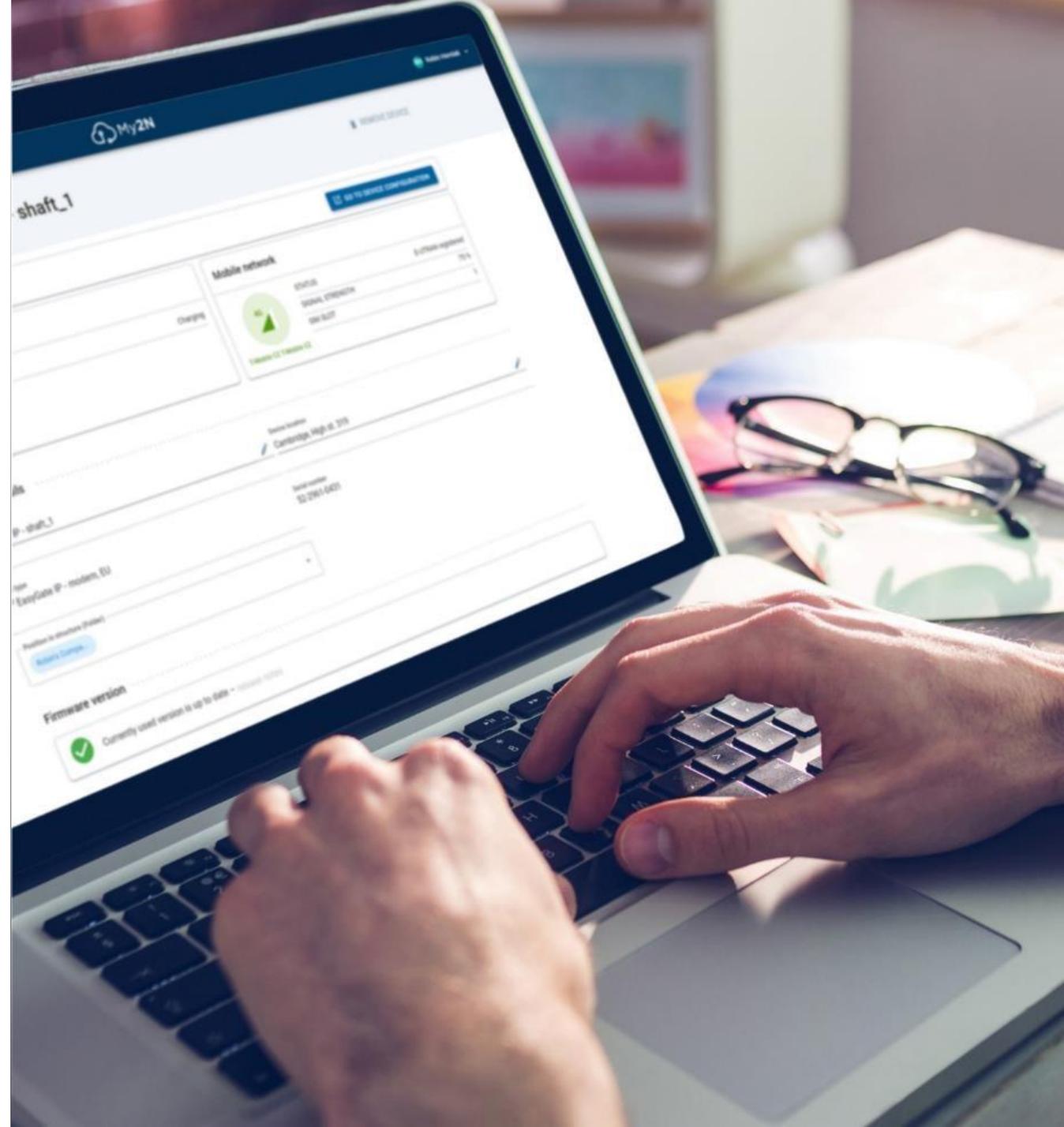
Smart elevators save the costs

Elevator market is very competitive, and all is about price (mainly post-warranty services)

Significant part of the cost represents human labor and site visits

Help operators do their job efficiently and **eliminate their unnecessary trips**

- Remote cloud-based access to installed IP devices
- 24/7 monitoring of all 2N IP elevator devices
- All done without any IT skills needed



Analog, digital or IP?

Choose the right solution!



Traditional analogue solution





2N® Lift1

Emergency lift communicator

Powered over phone line

Supports CPC and P100 protocols

4 versions: basic unit behind the COP (with or w/o cables), compact and TOC (top of the car)



2N® EasyGate IP

2N® EasyGate PRO

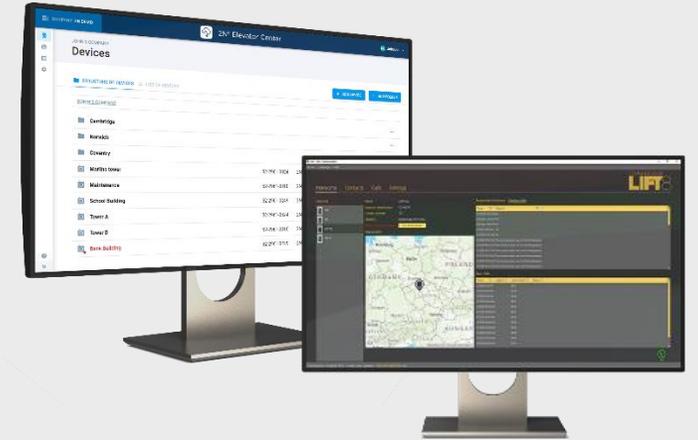
Communication gateways

(2G/3G/4G)

Land-line replacement

Reliable transmission of DTMF

Backup operation using battery power



2N® Elevator Center

2N® Call Center

Software for the central management of emergency lift devices

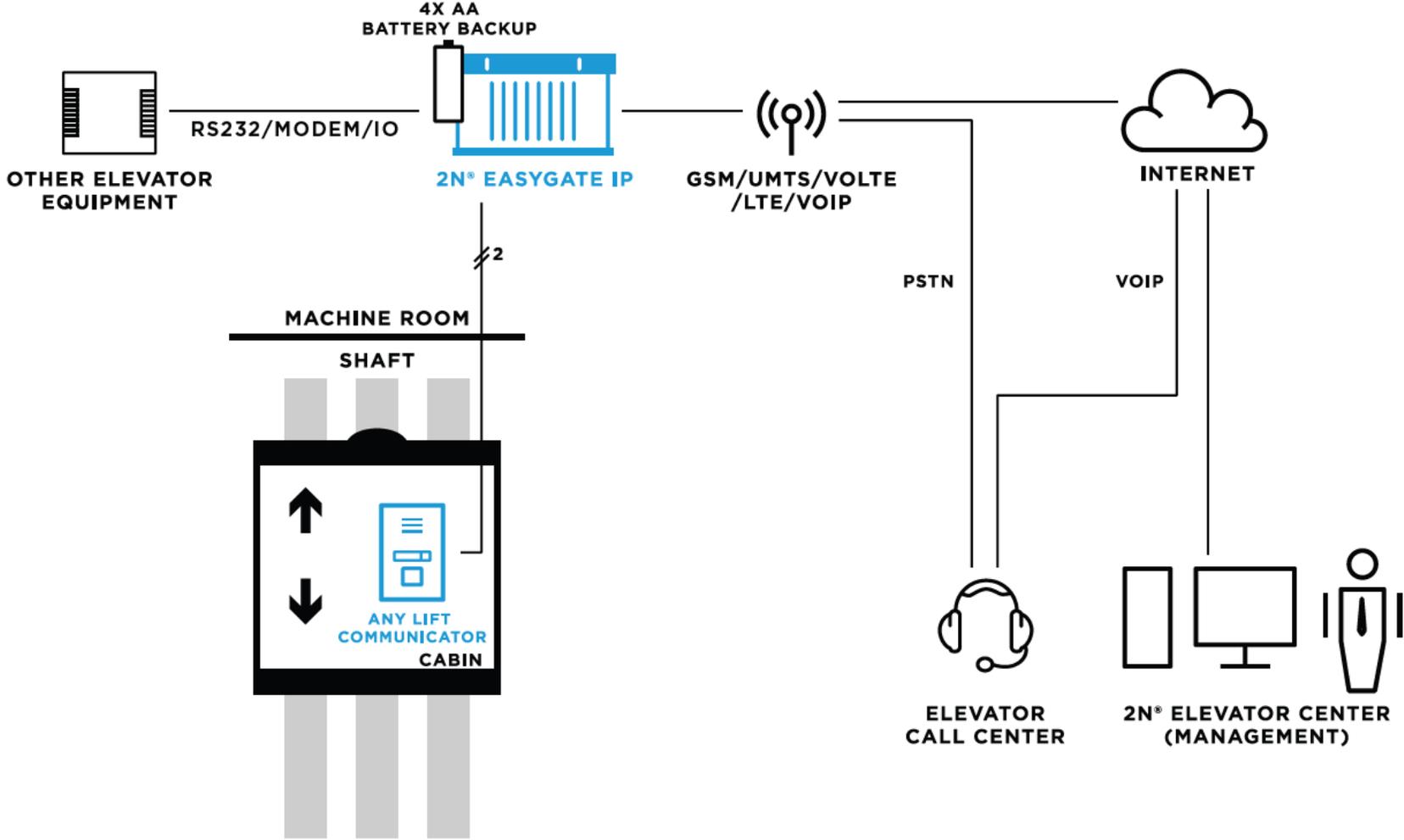
Remote monitoring and control

Intuitive user interface

Doesn't require any IT skills

Connection scheme

Traditional analogue communication





**Modular digital
solution**



2N® Lift8 Central Unit

Central unit for of up to 8 shafts

Wide range of communication interfaces (PSTN, GSM, UMTS, LTE, IP)

Quick replacement of legacy solutions

Extending modules – I/O, camera, splitter and RS232 module



2N® Lift8 Communicators

Various communication units

Up to 6 communicators per shaft

Conference call between all the connected units

Fireman unit serves during fire-fighter intervention – top priority calls



2N® Call Center

Software for management of control and alarm calls

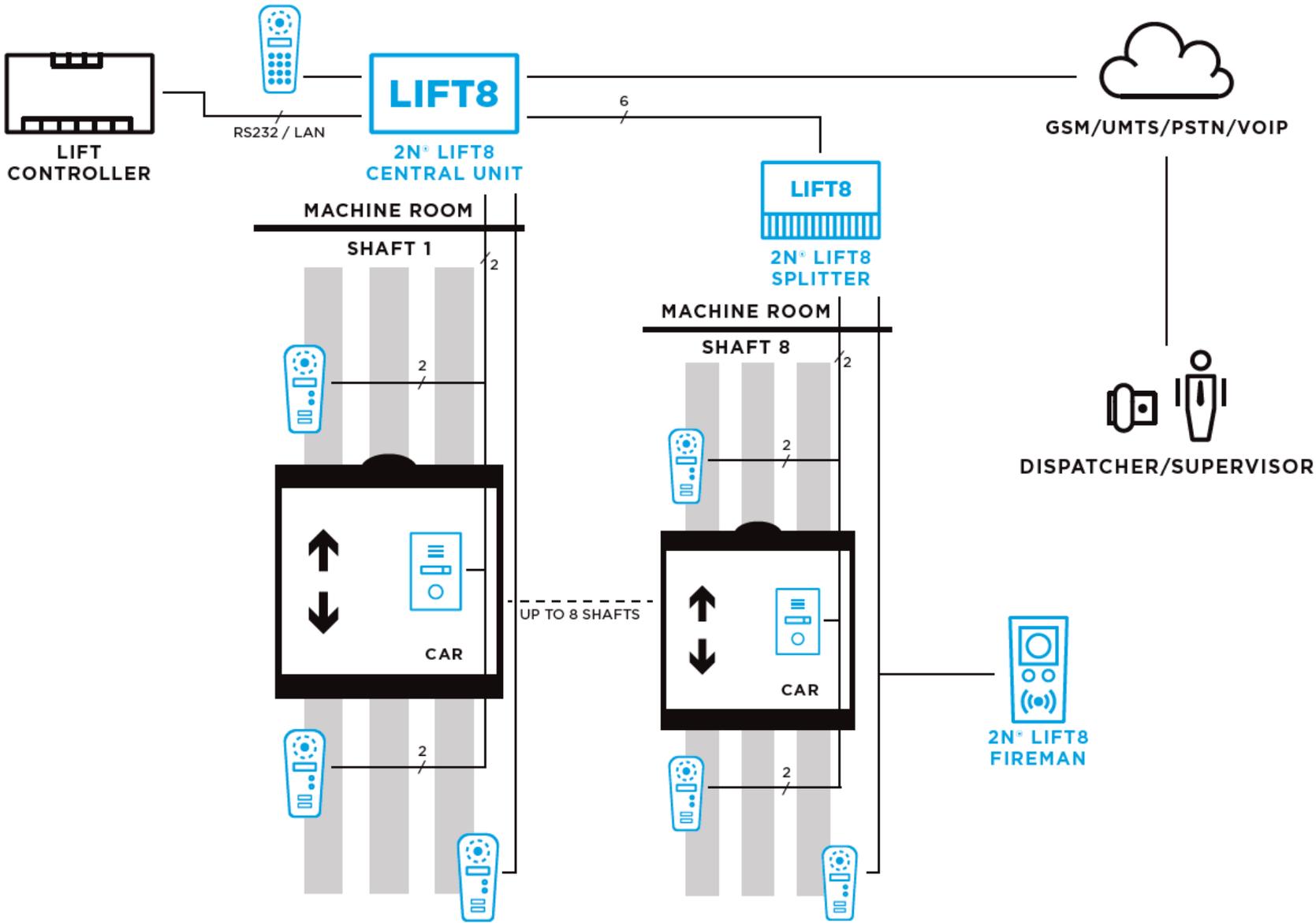
Support for CPC and P100 protocols

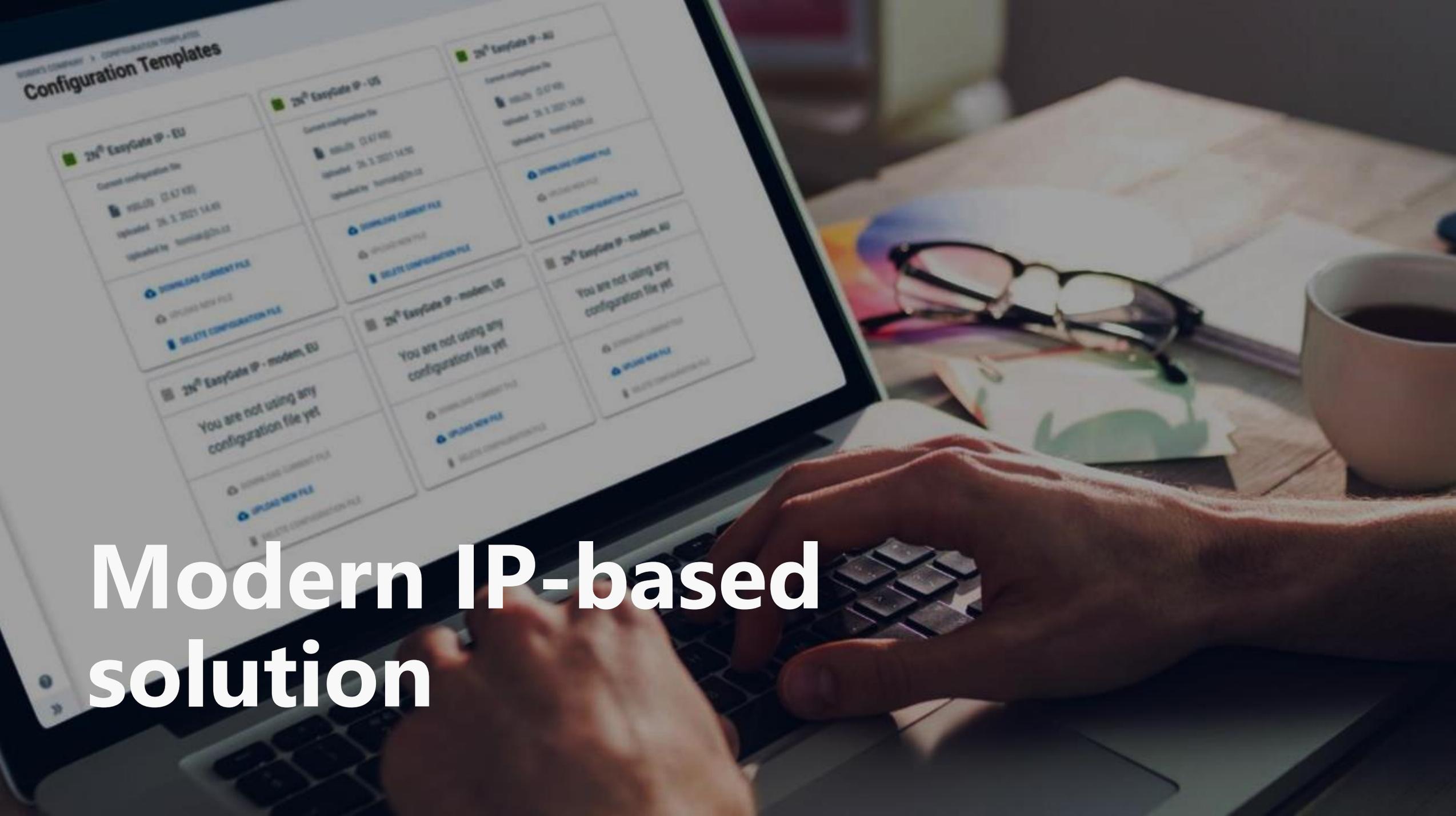
Integrated VoIP phone for handling alarm calls

Use the camera module to have visual information from lift cabin

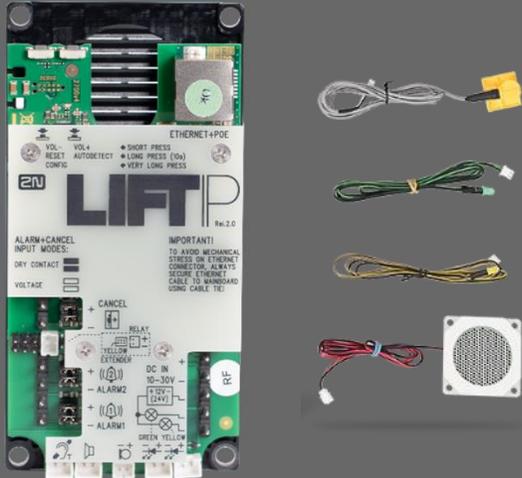
Connection scheme

Modular emergency communication





Modern IP-based solution



2N® LiftIP 2.0

SIP-based communicator (VoIP) with local power supply or via **PoE**

Various versions of cabin units

24/7 monitoring of the availability

Remote management & configuration

Alarm calls tied to video

Data protection & network security



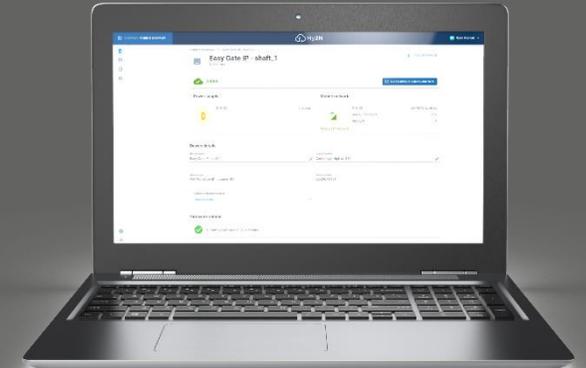
2N® LiftGate

All in one IoT gateway – main unit (in the machine room) and cabin switch

IP connectivity to the cabin over 2-wire

Backup power supply

Communication via SIM (4G) or WAN



2N® Elevator Center

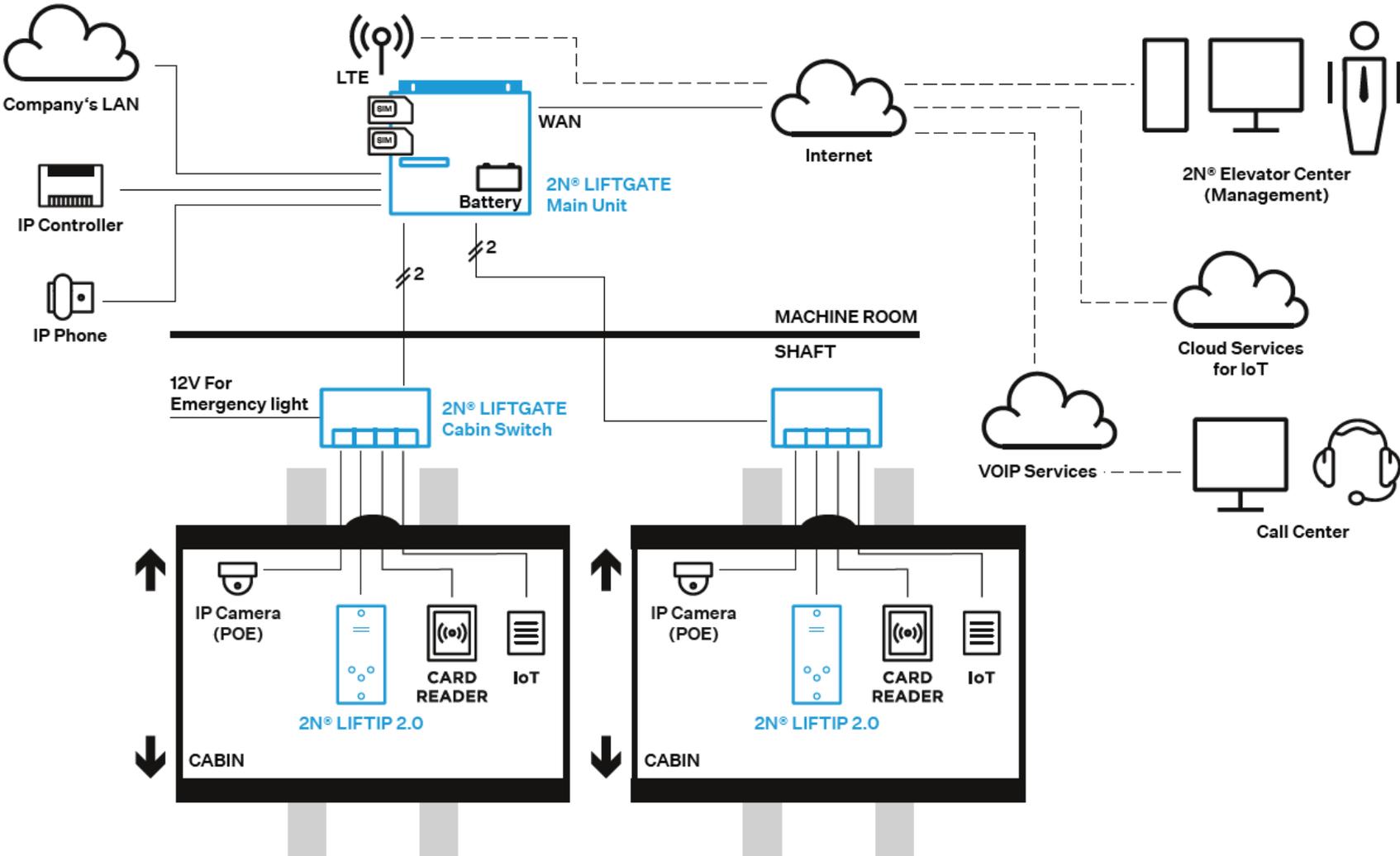
Cloud-based service for non-stop control over all 2N IP elevator devices

Remote management and monitoring of IP communicators, gateways and routers

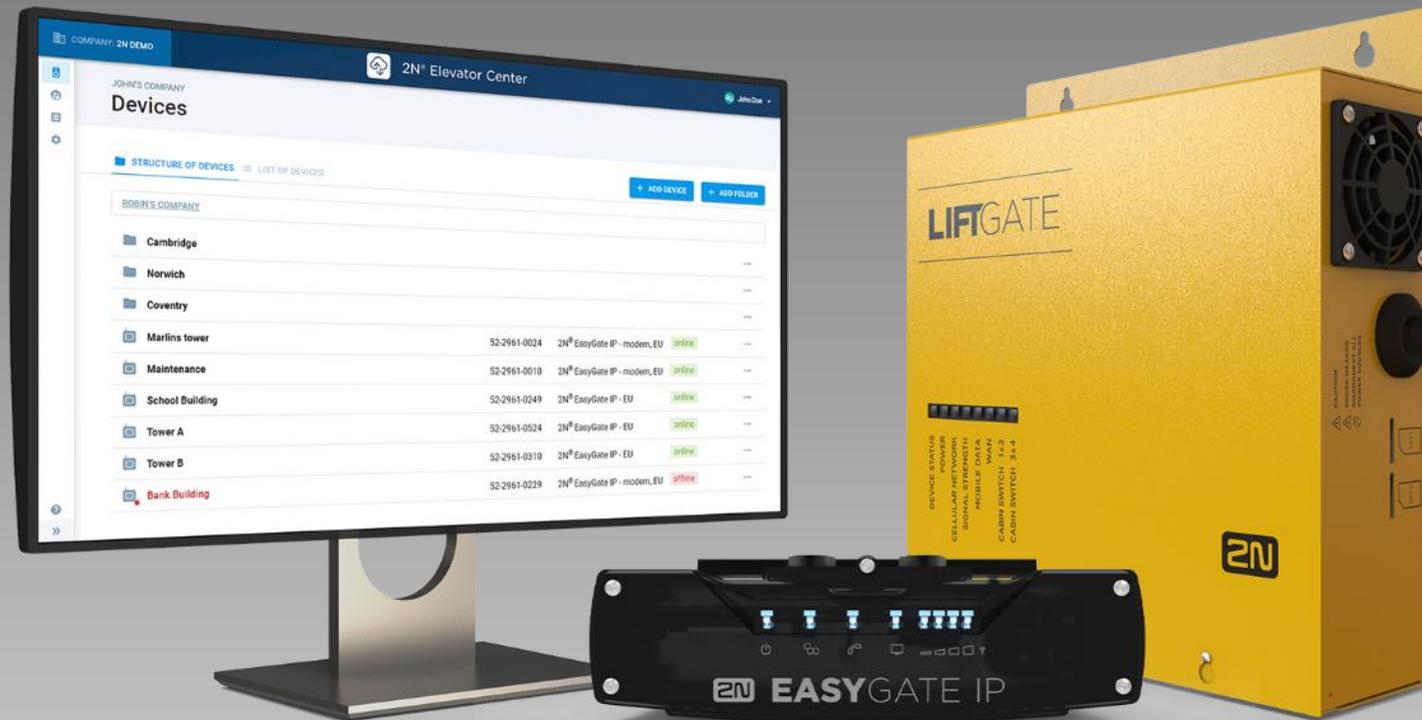
Access to connected devices from your office prevents unnecessary trips

Connection scheme

IP-based emergency communication



Want to know more about 2N products?



2N[®] LiftGate



2N[®] LiftGate Main Unit (in the machine room)

2x SIM; 2G / 3G / 4G

2 inputs (NO/NC/Voltage), 2 relay outputs

1 x WAN, 3 x LAN (one with PoE)

Battery backup

2N[®] LiftGate Cabin Switch (on the roof of the cabin)

4 x LAN (2x with PoE)

Ethernet and power (incl. backup) over 2 wires

12V output (incl. backup – for emergency light)

2N[®] EasyGate IP

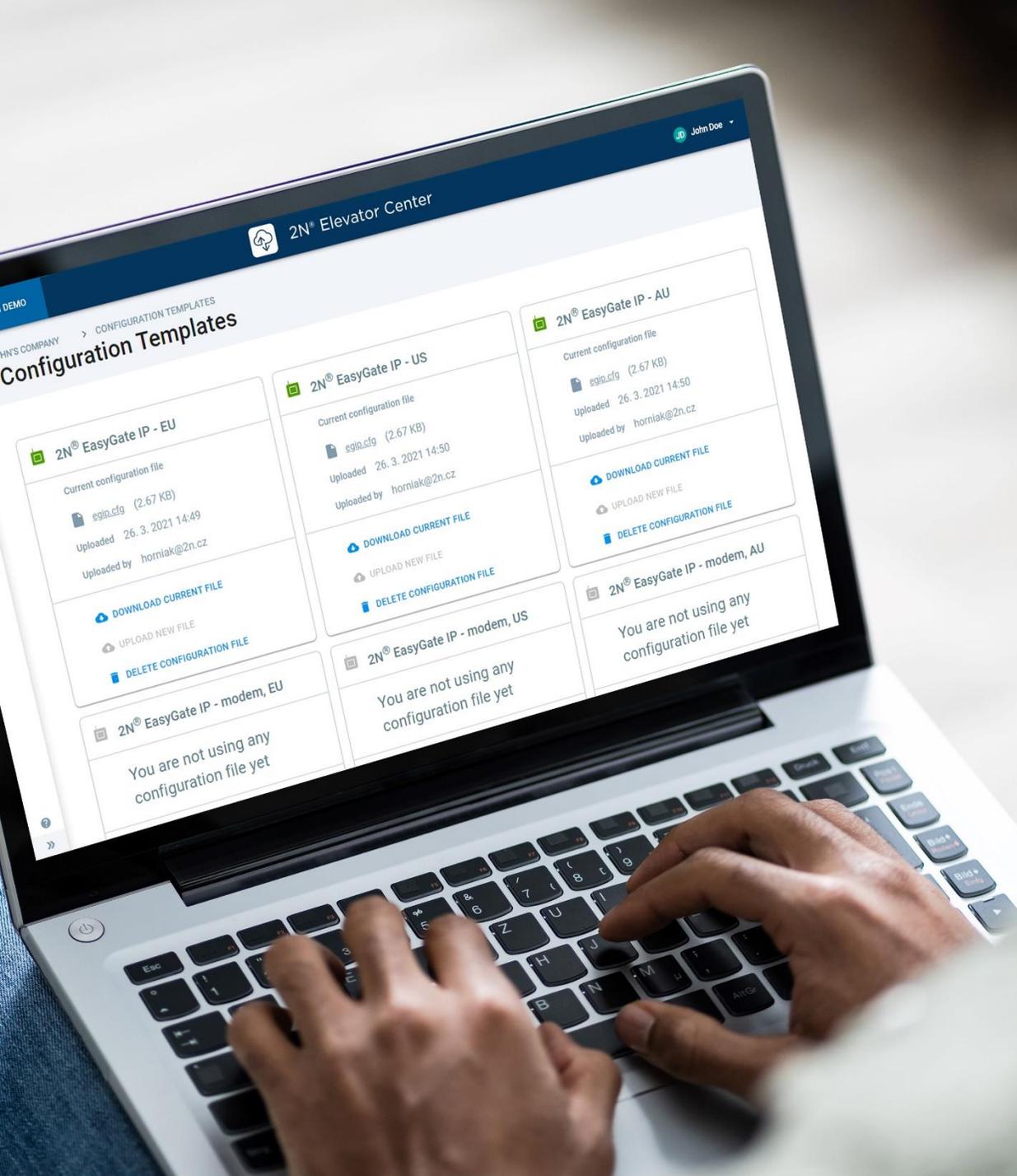
Seamless transition to modern 4G network

Changes all your analogue devices for devices that support VoIP

Automated configuration using 2N[®] Elevator Center (or via local web interface over USB)

- 2x SIM; 2G / 3G / 4G (VoIP & VoLTE)
- 1 input, 1 relay output and RS232 interface
- 1 x FXS for analogue line connection
- Battery backup
- Variant with or w/o modem





2N[®] Elevator Center

Central management of all connected 2N IP devices (gateways, routers, communicators)

Remote monitoring – mobile network, signal strength, primary or back-up power

Connected devices will automatically download the right **configuration template**

Trusted & verified cloud platform ensures absolute security and reliability

2N[®] LiftIP 2.0

IP communicator using **VoIP technology (SIP)** for transmitting call from an elevator cabin

IP connectivity allows its remote management, continuous monitoring, and status updates

Emergency **calls** can be **tied to the video** from the IP camera in the elevator cabin

Installation requires no additional converters or other hardware





2N[®] Lift8 solution

Modular lift system for emergency communication in **up to 8 shafts**

Includes various communicators, central unit with battery backup and connectivity, and monitoring software

Up to **6 communication units per shaft** (cabin, pit, machine room, car top and bottom, fire)

Integrated **fire fighter** solution for top priority calls

2N[®] Lift8 solution

Wide range of **communication interface**:
PSTN / GSM / UMTS / IP / LTE interface

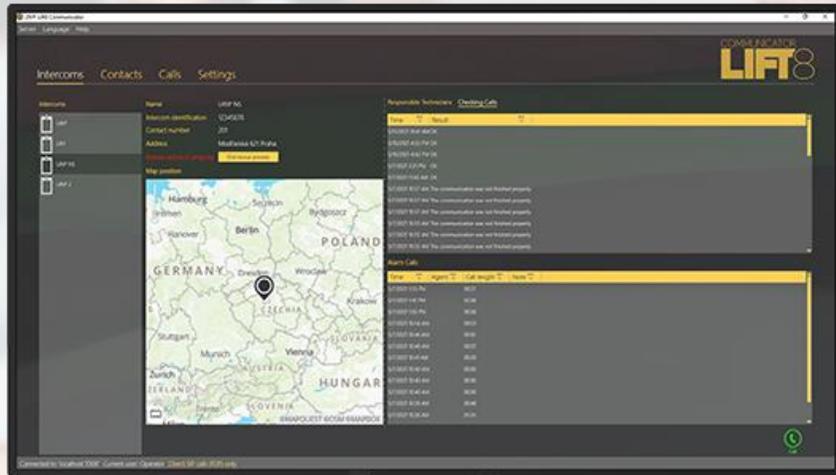
Configuration possibilities: call in, SMS, IP,
USB or via Android device

Up to **6 numbers for alarm calls** with
configurable sequence

CPC & P100 protocol support



2N[®] Call Center



Management of emergency elevator communication

Software handles control and alarm calls thanks to **integrated VoIP phone**

Detailed calls overview with the option to archive or export the data (EN 81-28)

Remote, real-time monitoring of connected lifts with visualization and alert options

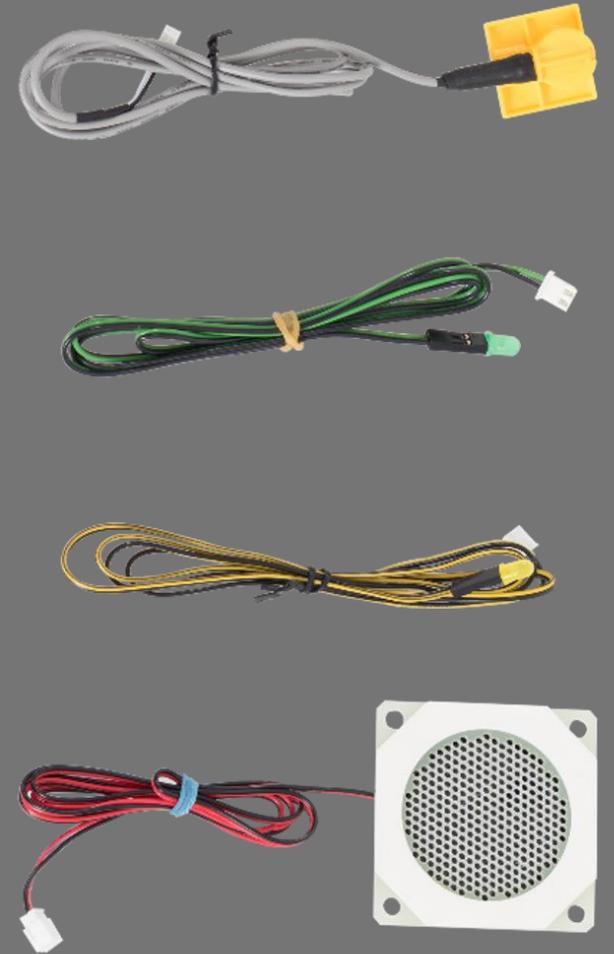
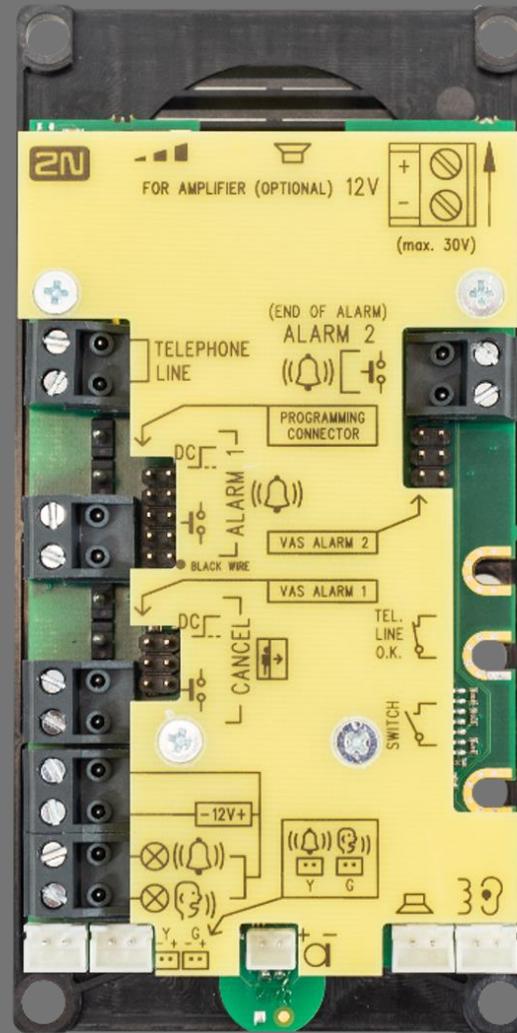
2N® Lift1

Cost effective analog solution for two-way emergency communication

- Typically between the cabin and control center (or machine room)

Connection of two additional audio units and machine room unit to the cabin's one.

Powered over phone line (2-wires for power and for communication)



2N® Lift1



Configuration possibilities:

- locally using **configuration software** app.
- remotely via **voice menu** (call in)
- using **SMS** service (if connected to the 2N® EasyGate IP or PRO)

Supports **CPC and P100 protocols**

TÜV certification EN 81-28 and EN 81-70 (quality design and compatibility with standards)

Induction loop

Emergency lift communication for the **hearing-impaired people**

- delivers audio to the lift-cabin interior
- transmits the sound to hearing aids with a built-in inductive sensor

Connect to any lift communicator

With an external antenna designed to be fitted on the lift cabin roof

Two independent audio inputs





2N[®] EnergyBank

Backup power supply for emergency communication devices in lifts

Comes with a universal adapter for industrial connection to the mains

Unattended operation after connection

Supplied with 10x AA NiMH (1800 mAh)



2N[®] 2Wire

Set of two convertor units for IP connectivity to the cabin over 2-wire

One unit is connected to the IP device and the other one to the switch

Ethernet including PoE over 2 wires

Resistant to mechanical damage thanks to robust aluminium housing



2N[®] Floor Annunciator

Communication device designed to be installed in the lift cabin

Inform people of the current floor number whenever the lift stops

Simple configuration using switches

Customize the messages or add additional languages

Related norms and certificates

2N company is ISO 27001 certified

Our products fully comply with strict European Union standards:

- EN 81-28 ... emergency calls
- EN 81-70 ... barrier free elevators
- EN 81-71 ... vandal resistant elevators
- EN 81-72 ... firefighter elevators
- EN 81-80 ... elevator modernization

Certified by TÜV-SÜD

References



Cairo Monorail

- Cairo, Egypt
- 2N[®] LiftIP



Khalifa International Stadium

- Doha, Qatar
- 2N[®] LiftIP



Elbtower

- Hamburg, Germany
- 2N[®] Lift8

References



V Tower

- Prague, Czech Republic
- 2N[®] Lift1



W Hotel (The Palm)

- Dubai, United Arab Emirates
- 2N[®] Lift8



Zorlu Center

- Istanbul, Turkey
- 2N[®] LiftIP

References



Universitair Ziekenhuis

- Gent, Belgium
- **2N® Lift8**



Royal Atlantis hotel

- Dubai, United Arab Emirates
- **2N® Lift8**



Varso Tower

- Warsaw, Poland
- 29 elevators (two of them are used for evacuation in case of fire)
- **2N® Lift8**

2N Elevator System

Future-proof emergency
communication

