

### PREDICTIVE MAINTENANCE FOR SMARTER, SAFER PEOPLE FLOW

The ability to get on top of potential equipment problems before they cause unexpected, unpleasant surprises gives you and your building a competitive edge with minimum disruptions and maximum uptime.

Safer, more reliable elevators, escalators, and automatic doors mean smooth people flow even during peak hours, an improved user experience, longer equipment lifetime – and peace of mind for you.

Access to the latest equipment performance data puts you in control, helping you to make smarter investment decisions and optimize maintenance planning and budgeting.

This is what we call KONE 24/7 Connected Services.

This is what we call urban life - uninterrupted.





# BREAK FREE FROM BREAKDOWNS

With KONE 24/7 Connected Services, we can better predict what's happening with your equipment, improve how it's maintained, and step in quickly to prevent breakdowns and unplanned downtime. It's smarter, it's safer, and it's more transparent.



With the latest Al-based predictive maintenance, we can prolong the lifetime of your elevators, escalators, and automatic building doors and keep technicians one step ahead of what's happening. The result? Fewer malfunctions, faster repairs, and greater peace of mind.



#### **SAFER**

Because your equipment is on duty 24/7, we are too. If there's a problem, we can find out what's causing it and, in the case of unexpected malfunctions, get things back up and running again as soon as possible. By continuously analyzing the performance and safety critical components of your equipment we can help prevent breakdowns and improve accessibility in your building.



#### MORE TRANSPARENT

If we detect a critical fault that needs a technician's attention, we'll inform you immediately. You save time because you don't need to report the issue to us, and you can inform building users that the problem is being taken care of. Planning and budgeting for future maintenance needs is much easier, when you're fully aware of your equipment usage and performance.



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#### AMAZON WEB SERVICES

Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud and digital platform offering.

KONE and AWS innovate together to develop new technologies that further strengthen the scalability and performance of KONE services and solutions.

Sensors installed in the equipment gather information on the key operating parameters, usage data, and faults. This data is sent in real time to KONE and analyzed in our cloud service.

We use advanced analytics including machine learning techniques to determine if your equipment needs maintenance. For critical issues we alert a technician immediately. For less-urgent matters our technical support or customer service teams decide on the next steps and inform you.

A technician will be sent out as soon as possible to resolve any critical issues, and we'll make sure that non-urgent issues are addressed during the next scheduled maintenance visit.

You'll receive clear explanations of any maintenance work we do so you can easily stay up to date with what's happening with your equipment.

### A MAINTENANCE SOLUTION FOR EVERY NEED

### INCREASE SAFETY AND EQUIPMENT AVAILABILITY

KONE 24/7 CONNECT

Cloud-connected elevators, escalators, and automatic doors provide a constant stream of usage data that helps us to make intelligent, predictive decisions on how to solve potential problems before they cause disruption. Advanced analytics determines if an issue is critical and needs to be addressed immediately or if it can be solved during the next scheduled maintenance visit.

Information is shared in a transparent format that can be tailored to your reporting needs, so you'll always know what's happening – and what we have prevented from happening.

#### SEE THE BIG PICTURE

KONE 24/7 ALERT

KONE 24/7 Alert is a round-the-clock diagnostics service that continuously monitors and analyzes the operating status of your escalators and automatic doors.

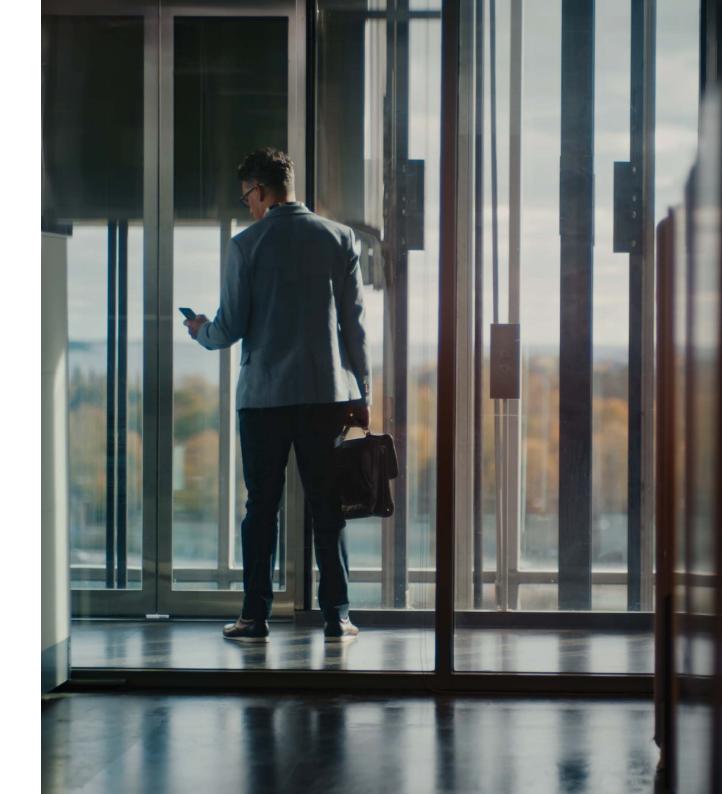
If a problem occurs, you'll be notified immediately with instructions on how to safely restart the equipment and details of what caused the issue. Any critical issues will be addressed immediately by KONE.

#### STOP GUESSING, START PLANNING

**KONE 24/7 PLANNER** 

KONE 24/7 Planner takes the guesswork out of asset management planning with recommendations based on equipment usage data powered by data analytics and human expertise of KONE technicians.

Data on equipment condition and information about future repairs and upgrades help you to prioritize where and when to invest, as well as how to schedule work so that it causes minimum disruption to people flow.





### STAY UP TO DATE ANYTIME, ANYWHERE

KONE Online and KONE Mobile are your windows to KONE maintenance services, providing you with a clear picture of maintenance activities, equipment status, and what's happening on your site. You can also take advantage of equipment usage insights, comprehensive reporting, and a variety of convenient self-service functionalities.

#### KONE ONLINE - UP-TO-DATE MAINTENANCE **INFORMATION AT YOUR FINGERTIPS**

- Stay up to date on maintenance activities, equipment statistics, and preventive actions around the clock
- Utilize comprehensive reporting (availability, performance, costs) to support in planning and budgeting.
- Check maintenance contracts and invoices.

#### KONE MOBILE - REAL-TIME UPDATES ON THE GO

- Track the progress of all maintenance tasks, from registration all the way to completion.
- See service and equipment status while on the go.
- Receive push notifications on service requests and equipment events.
- Send a service request right from your smartphone.
- Connect to a service expert at the KONE Customer Care Center.







### CYBER-SECURE SOLUTIONS FOR A CONNECTED WORLD

In an increasingly connected world, cybersecurity plays an important role not only in building sustainable and smart cities, but also in our products and solutions.

To give you peace of mind, our digital services and connected solutions are designed with cybersecurity and privacy as key requirements from the start.

## KONE 24/7 CONNECTED SERVICES – Cybersecurity from end to end

We follow industry best practices for security management. Development and operations of KONE 24/7 Connected Services, KONE Online and KONE Mobile are certified according to ISO 27001. KONE Secure Development Lifecycle process is certified according to IEC 62443-4-1.

- 24/7 Connected Services only monitor the connected equipment and collect data needed for the service.
- Equipment cannot be controlled or shut down remotely via the service.
- Devices use strong authentication and encryption when connecting to the KONE Cloud.
- KONE follows industry best practices for secure development lifecycle which is certified with IEC 62443.
- KONE cybersecurity management system is certified with ISO 27001, including development and operations of KONE 24/7 Connected Services.
- We continuously monitor security of the service and are prepared to act immediately to any threats.



### SUSTAINABLE SUCCESS

Buildings account for a large part of the world's energy consumption and greenhouse gas emissions. For us, sustainability is both a source of inspiration and a competitive advantage. We are constantly striving to improve the sustainability of our operations and reduce the environmental and climate impact of our solutions and services.

We are committed to ambitious greenhouse gas reduction targets, which are validated against the latest climate science by the Science Based Targets initiative. Our targets are guided by the aim of limiting global warming to 1.5°C.

KONE has committed to a 50% cut in emissions from its own operations (scope 1 and 2 emissions) by 2030, compared to a 2018 baseline. In addition, we target a 40% reduction in emissions related to our product materials and lifetime energy use (scope 3 emissions) over the same target period, relative to orders received.

We have also pledged to have carbon neutral operations and we have plans to move to 100% renewable electricity in our own operations by 2030.

### CARBON NEUTRAL MAINTENANCE

Our highly energy efficient KONE DX elevators are revolutionizing the elevator industry. Using the power of connectivity, KONE DX elevators offer almost-endless opportunities to integrate new digital services - which can improve user experience, optimize and improve people flow, and make the building a better place to be.

Leveraging the power of predictive maintenance, connectivity, and transparency—KONE Care DX is the smartest way to seamlessly evolve your KONE DX elevator and keep it running for years to come. Now we make our KONE Care DX maintenance service carbon neutral.

#### CARBON OFFSET PROJECTS

We are currently working with South Pole, an industry leader in climate action. We have chosen to support recognized and GoldStandard® certified carbon offsetting projects to compensate the emissions. The diverse range of selected projects include forestry, renewable energy, and community-based emission reduction initiatives.

Service offering in terms of carbon compensated service may vary from country to country.

#### **Energy efficient** elevators

- · 21 elevators with the best A-class rating
- · Regenerative drive and other innovations

#### Measure

 We calculate the CO2 impacts of all the activities associated with maintaining the equipment and verify the results with third party verifiers

#### **SPARE PARTS**

- 94% of waste recycled currently in own operations
- Working with suppliers to reduce CO2 (parts, packaging,...)
- Innovative solutions (e.g. travelling cable, batteries, repairs)

#### Reduce

#### MAINTENANCE VISITS

- Optimized route planning for reduced driving
- · Moving towards low emission car
- Predictable maintenance

#### **FACILITIES**

 Moving towards 100% renewable energy

#### Compensate

 The remaining carbon emissions will be calculated and compensated



In line with KONE's Climate Pledge targets.

According to KONE's Environmental Guidelines and overall emission reduction targets.







#### THE FLOW OF BUSINESS MUST GO ON

In today's fast-paced world there's no time for interruptions. Equipment that works reliably even during the busiest periods thanks to smart, predictive maintenance can be a game-changer for office buildings.

After seeing the value of the KONE solutions, we decided to install KONE 24/7 Connected Services because of the reliability and the comfort of predictive maintenance. Personally, it makes my work easier!"

Ricardo Garcia, Maintenance Manager,

Edificio Bronce, 22-floor office building in Madrid, Spain

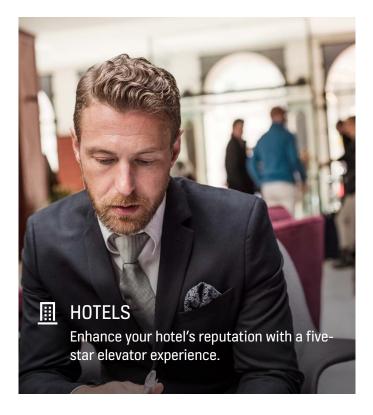
#### HOME IS WHERE THE RELIABLE ELEVATOR IS

Everyone expects their home to be a sanctuary, free from hazards and hassle. Even the slightest problem may cause a crack in this sense of security. By making elevators significantly more reliable and safer, predictive maintenance is a real game-changer for residential buildings.

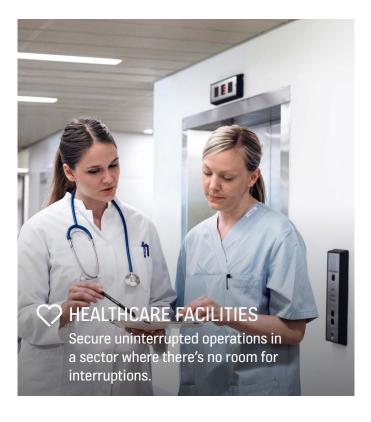
With 60% less feedback from the building's users, we have more time to deal with other day-to-day operations. Not to mention the peace of mind we have with our elevators."

Teo Hock Lye,

Center Manager of People's Park Centre - A mixed-use development, Singapore







#### EXPERIENCE IS EVERYTHING

In the hospitality industry, reputations are hard to build and easy to dismantle. When things just work, people don't even notice. But when things go wrong, guests are quick to post reviews and social media posts. That's why avoiding unplanned downtime is critical to maintaining reputation and brand loyalty.

II KONE 24/7 Connect maximizes the availability of our elevators and creates more security for guests and employees."

Hotel Asset Manager, Europe

#### **EVERY FLOOR MEANS BUSINESS**

The world has seen an unprecedented growth in online shopping. To keep people coming back to your stores, an inspiring and smooth user experience is a must – and this is where predictive maintenance comes in.

The greatest benefit that I have seen is the case when the system detected a potential safety issue with an elevator, recognized it as high priority, and activated KONE to dispatch their technicians to resolve it before it became a problem. All this was done in real time and even before the issue was spotted by a person."

Kenny Ng,

Manager of SAFRA, Retail and Shopping facilities, Singapore

#### IT MIGHT BE A MATTER OF LIFE AND DEATH

In healthcare facilities, ensuring that everything works is not just a matter of happier customers – it's about saving lives. Predictive maintenance enables uninterrupted operations 24/7 by significantly increasing equipment reliability and ensuring that critical issues are addressed immediately.

During the 4 months pilot period, the number of elevator failures decreased by 25%, the failure rate improved by 14%, and no cases of entrapment occurred. Based on these good results, we decided to connect all 305 of our elevators to the system."

Mika Ahia,

Facility Manager, Helsinki University Hospital (HUS), Finland



KONE provides innovative and eco-efficient solutions for elevators, escalators, automatic building doors and the systems that integrate them with today's intelligent buildings. We support our customers every step of the way: from design, manufacturing and installation to maintenance and modernization. KONE is a global leader in managing the smooth flow of people and goods throughout buildings. This makes us a reliable partner throughout the life cycle of buildings. We are fast, flexible, and we have a well-deserved reputation as a technology leader, with such innovations as KONE 24/7 Connected Services and KONE UltraRope®. KONE employs over 60,000 dedicated experts to serve you globally and locally.

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