



# Raise the value of your buildings to new heights

KONE HIGH-RISE SOLUTIONS 2021

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floor  
100  
m  
300

## DEAR CUSTOMER,

It is my great pleasure to introduce you with KONE high-rise info package, a selection of the best people flow solutions and technologies available.

Our global team of experts at KONE Major Projects is ready to help you anywhere in the world with your most challenging and complex projects!

The ultimate goal is to design the right people flow for your unique needs.

Many of you have already trusted us as a partner, sharing your visions, challenges, and expectations for the future. Such co-creation dialogues are of paramount importance to offer you distinctive solutions.

This collaboration has helped us identify the core drivers to rethink and reimagine ways of working, living and playing in high-rise buildings.

We were proud and excited to introduce you with the latest solutions for high-rise buildings last November 2020 and since then the journey continues towards helping you raise the value of your buildings with:

- seamlessly connected solutions now and in the future
- elevated user experience to a higher level
- smart and most sustainable ways to plan, build, operate & upgrade your building

Our aim is to share KONE's latest thinking and insights around the high-rise with our customers. We truly hope this will lead you to realise your vision as well as solve challenges in ways previously unimaginable.

We look forward to collaborating and succeeding in your future project!

Samu Salmelin  
Head of Technology and Offering Development  
KONE Major Projects



[See what our customers say](#) →

[KONE Major Projects online](#) →

[Contact our global team of experts](#) →



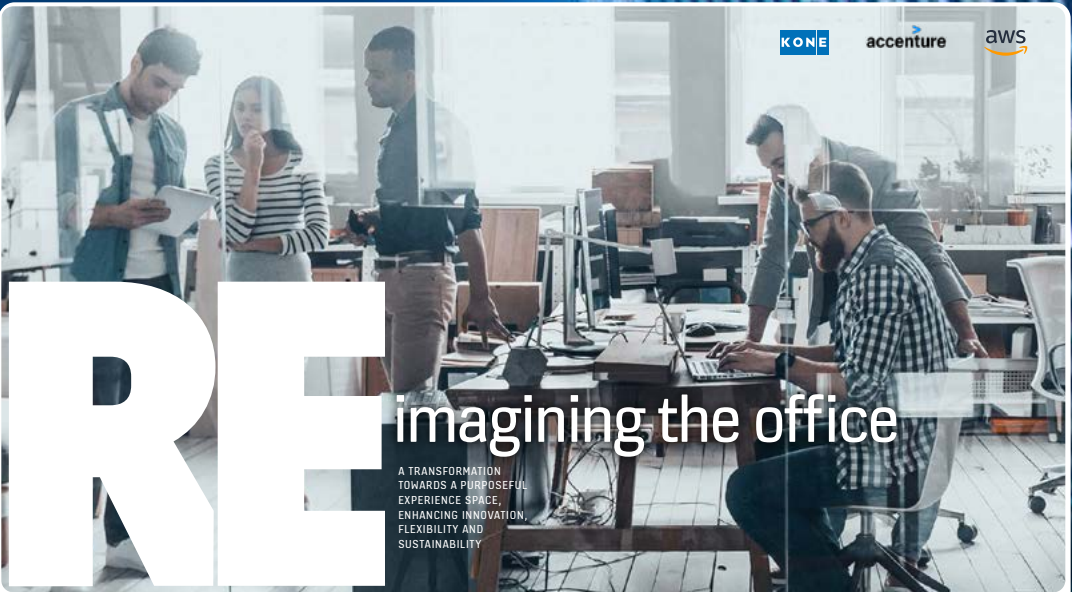
# RETHINKING HIGH-RISE

The high-rise game is changing and needs to be rethought. We are telling the story of the next era of high-rise buildings.

Whether it was built this year or during the golden age of skyscrapers, a high-rise building will undergo a variety of transformations, as it adapts to the needs of the people using it.

An array of smart, sustainable solutions is making a series of transformations ever-more possible, allowing developers to future-proof new buildings, and breathe new life into older ones. Innovation in fields as diverse as connectivity, people flow, access solutions, and even entertainment mean that no building needs to be left behind.

The importance of high-rise buildings in being able to cope with changing user demands has never been more significant. The Covid-19 crisis, the advent of 5G, artificial intelligence, the use of data and sensors, combined with bolder ambitions for urban sustainability, all point to a need for greater flexibility for high-rise buildings.



Reimagining the office vision paper →



Rethinking the new era of high-rise →



Rethinking high-rise living →



Rethinking high-rise working →

# RAISE THE VALUE OF YOUR BUILDING TO NEW HEIGHTS



floor  
100

m  
300

The rise of connected services, digital tools, and automation will influence how people use high-rise buildings. KONE’s new high-rise solutions will help smartly augment the built environment and future-proof your buildings.

## SEAMLESSLY CONNECTED SOLUTIONS NOW AND IN THE FUTURE

- KONE Office Flow →
- Advanced Destination Control System (ADCS) →
- KONE Digital platform →

## ELEVATING USER EXPERIENCE TO A HIGHER LEVEL

- KONE Digital Experience Car →
- Health & Well-being solutions →
- Automated Adjustment Tool (AAT) →

## SMARTER AND MOST SUSTAINABLE WAYS TO PLAN, BUILD, OPERATE & UPGRADE

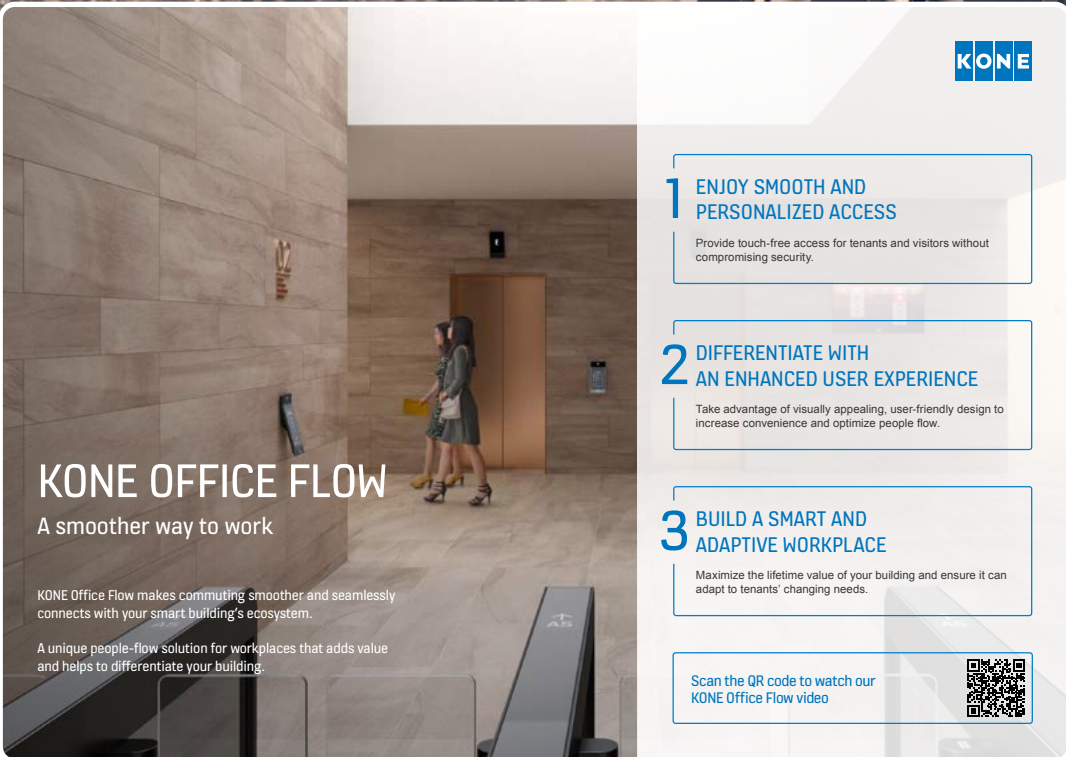
- KONE People Flow Planning and Consulting →
- KONE ReGenerate™ 800 DX and ReSolve™ 800 DX →
- KONE Modernization Overlay →
- KONE UltraRope® →
- KONE JumpLift →
- KONE 24/7 Connected Services →

# KONE OFFICE FLOW

KONE Office Flow is a modular, connected solution that adapts with the needs of your building and its users, providing smooth people flow with touch-free access and personalized user experiences that make office environments more attractive and efficient.



KONE Lane animation →



KONE Office Flow one-pager →



- KONE Office Flow video →
- Office Flow - Introduction →
- Office Flow - Tenant →
- Office Flow - Visitor →
- Office Flow - Design →
- Office Flow - Adaptability →



KONE Lane two-pager →

# ADVANCED DESTINATION CONTROL SYSTEM

The Advanced Destination Control System solution is great to boost busy morning up-peak traffic in office buildings, the ADCS can gather passengers traveling to the same destinations in the same elevators, which reduces elevator stops and increases up-peak handling capacity. Challenge comes at lunch time with mixed traffic when others are leaving for lunch and others returning. ADCS do not yet perform optimally during mixed lunch traffic and waiting times are getting longer.

“Now with the Advanced DCS, we don’t have to sacrifice lunch time traffic anymore when having DCS system in the building.”

– WSP Global (KONE customer)



KONE ADCS intro



# KONE DX CLASS ELEVATORS

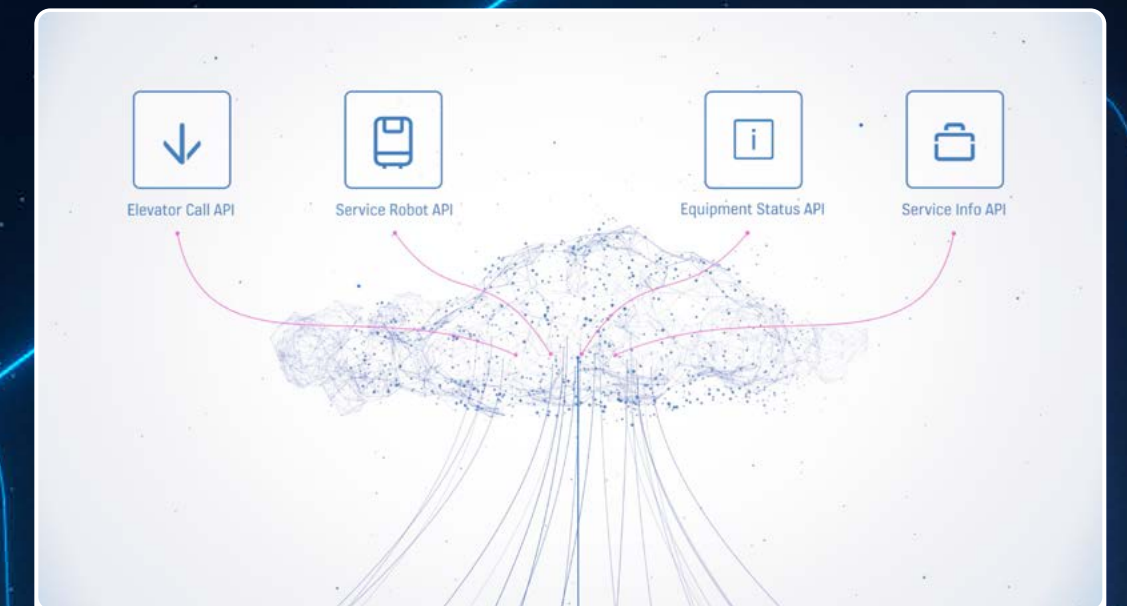
In an increasingly digitalized world, everything is connected. KONE DX Class elevators redefine the elevator experience with built-in connectivity for improved people flow – helping to create an experience that connects on every level.

## API DEVELOPMENT PORTAL

A smart elevator experience makes your building a more attractive prospect for tenants and visitors alike. Future-proof your building with market-leading elevator technology enhanced with connectivity.



How KONE IoT works video

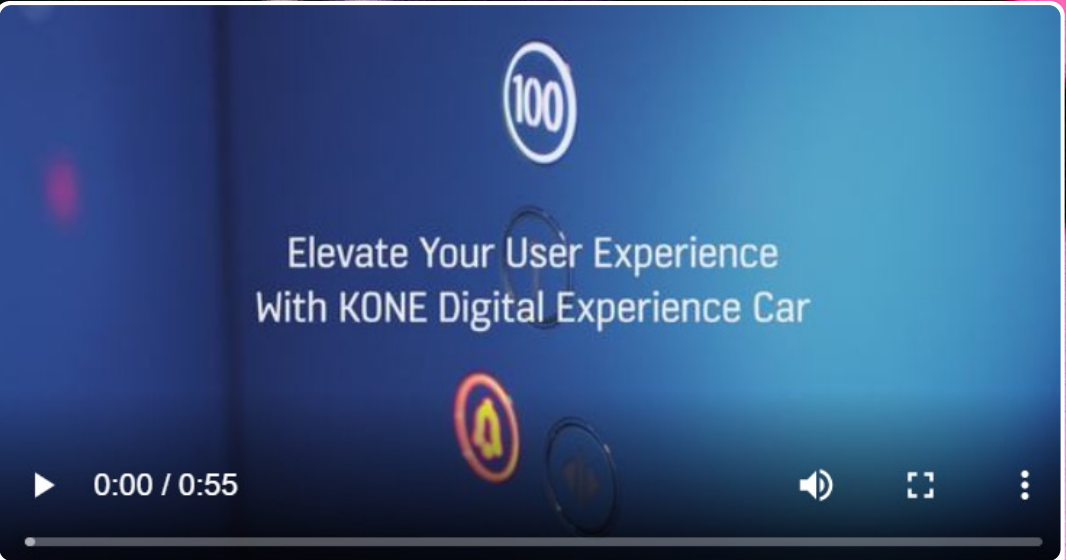


How KONE API works video

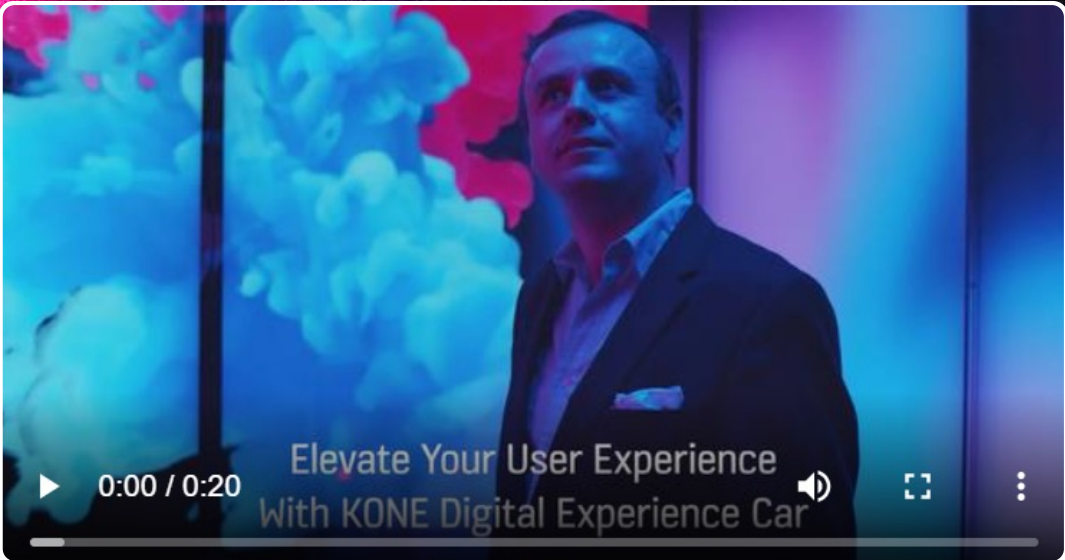


# KONE DIGITAL EXPERIENCE CAR

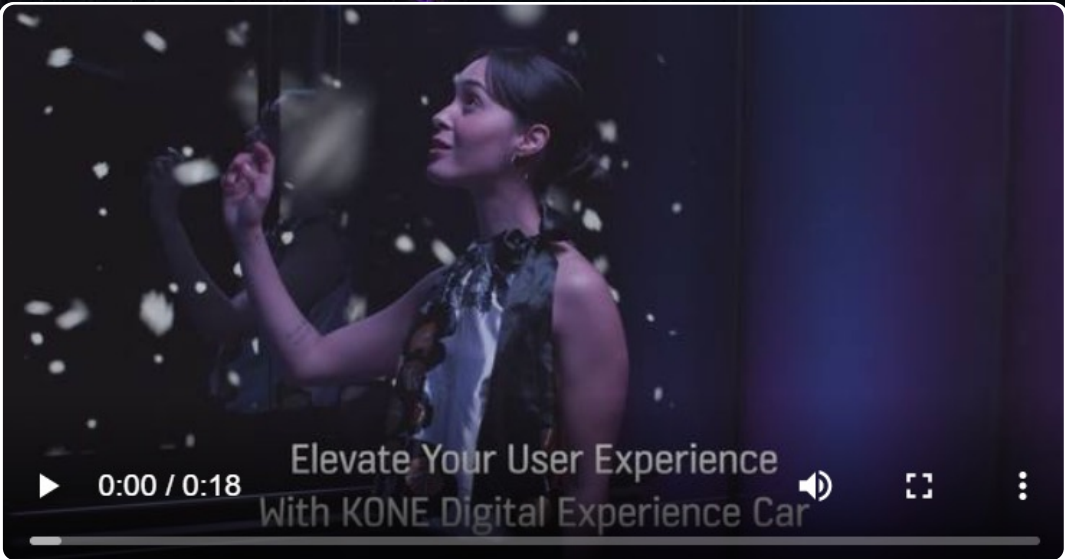
Enter a whole new world of multi-sensory experiences. From dynamic sound, to vivid colors, and engrossing themes – the KONE Digital Experience Car can be tailored to enthrall the senses. Enable a journey unlike any other for your building users.



KONE Digital Experience Car hero video →



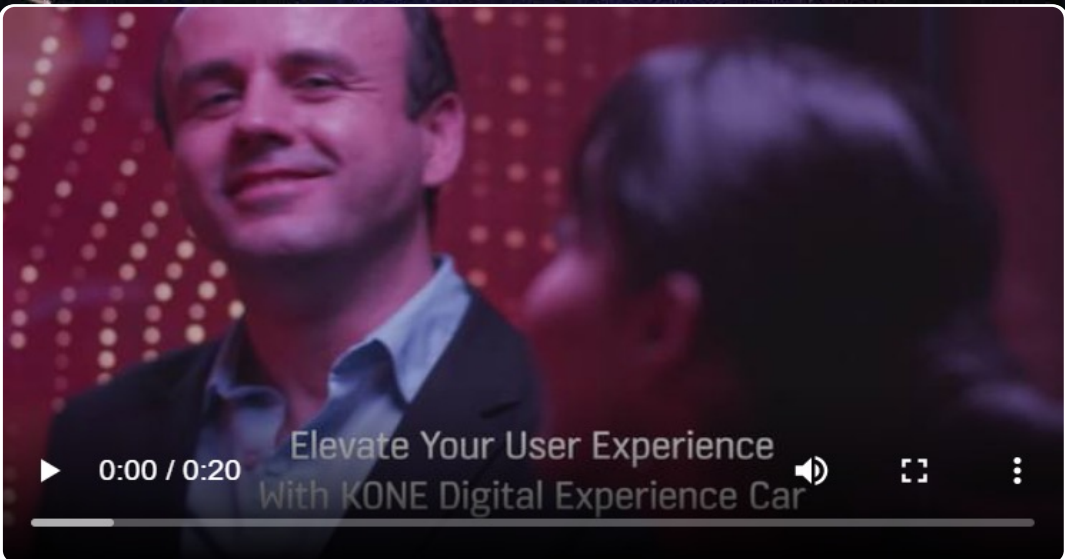
KONE Digital Experience Car LED feature video →



KONE Digital Experience Car mirror feature video →



Näsinneula Observation Tower (Finland) customer testimonial →



KONE Digital Experience Car sound feature video →

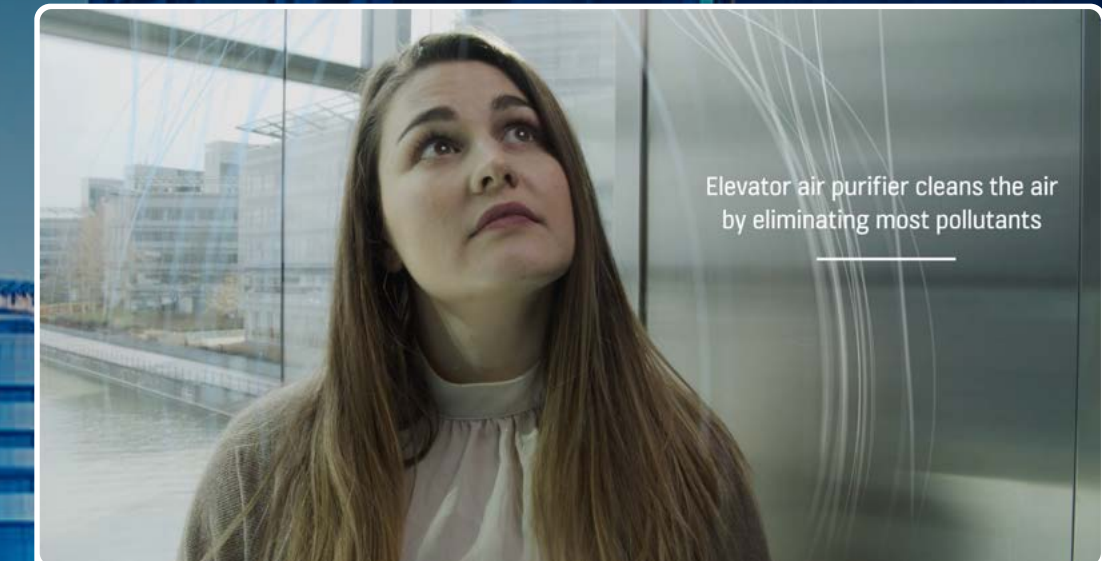
# HEALTH AND WELL-BEING SOLUTIONS

We are living in unprecedented times. Everyone is wondering if this is the new normal. If it is, how will it affect our lives and influence mobility both in the short and long-term and what can we do about it?

How people interact with everyday environments is set to change. KONE's people flow expertise, together with a range of health and well-being solutions, will help recreate safer user journeys and healthy spaces in your buildings.



Rethinking Urban Mobility video



KONE AirPurifier video



RE-OPEN – Best practices guideline



KONE Elevator Call video




KONE Handrail Sanitizer Premium video



# KONE AUTOMATIC ADJUSTMENT TOOL (AAT)

Automatic Adjustment Tool adjusts the car guide rail brackets to correct position with unprecedented accuracy. This allows us to deliver excellent ride comfort quality for the customers.

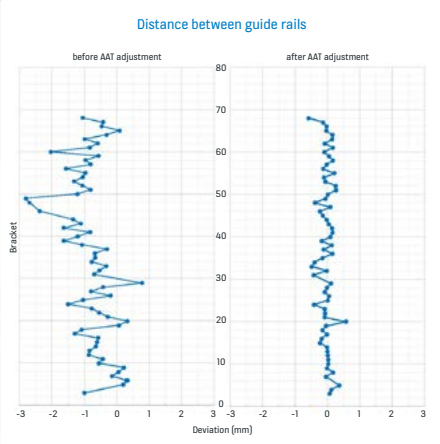


**TOWARDS AUTOMATED ELEVATOR INSTALLATION**

KONE AAT – Automatic Adjustment Tool

**Fast and smart execution**

Automatic Adjustment Tool adjusts the car guide rail brackets to correct position with unprecedented accuracy. This allows us to deliver excellent ride comfort quality for the customers.



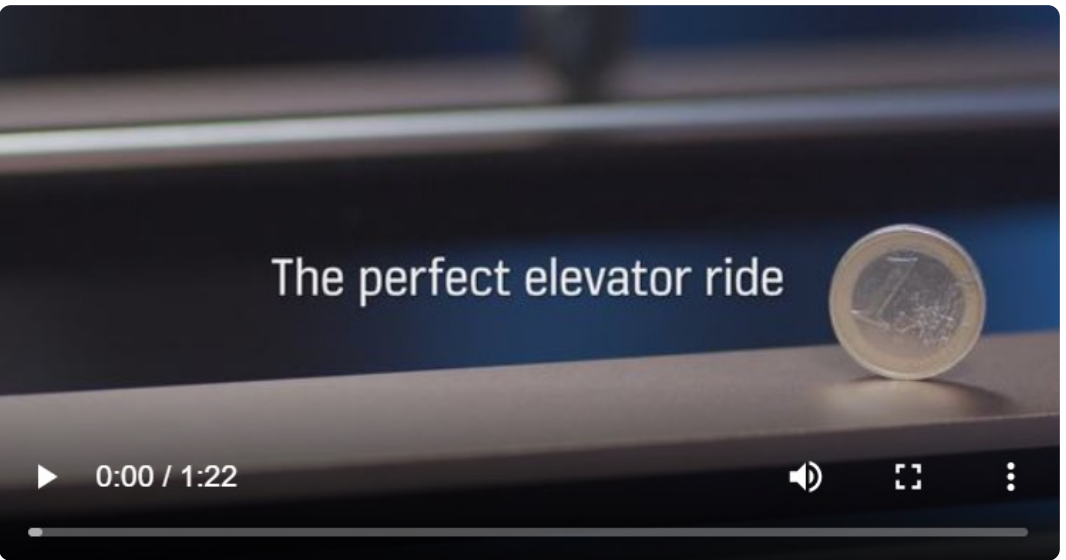
Distance between guide rails

before AAT adjustment    after AAT adjustment

Deviation (mm)

kone.com

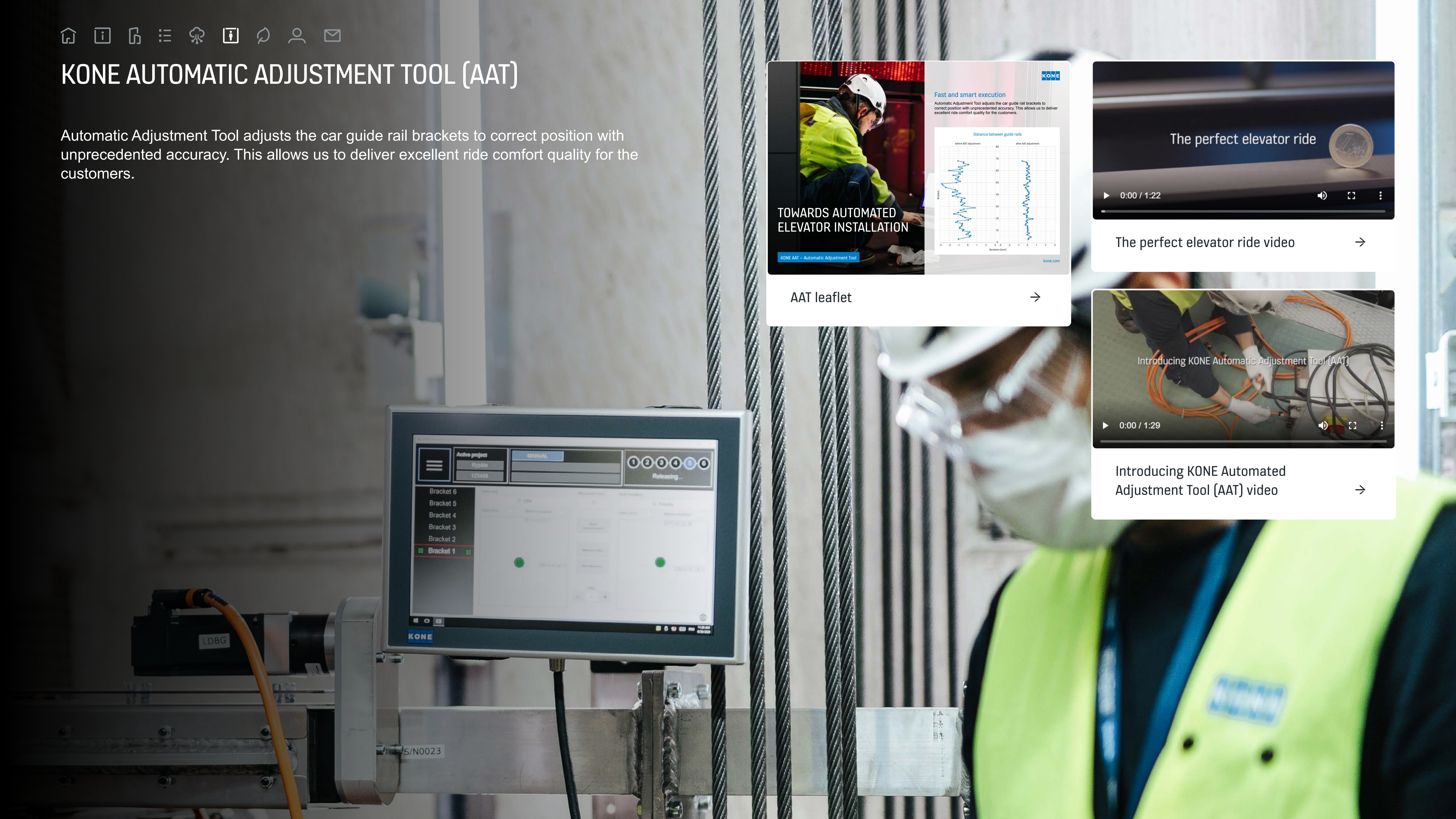
AAT leaflet



The perfect elevator ride video



Introducing KONE Automated Adjustment Tool (AAT) video



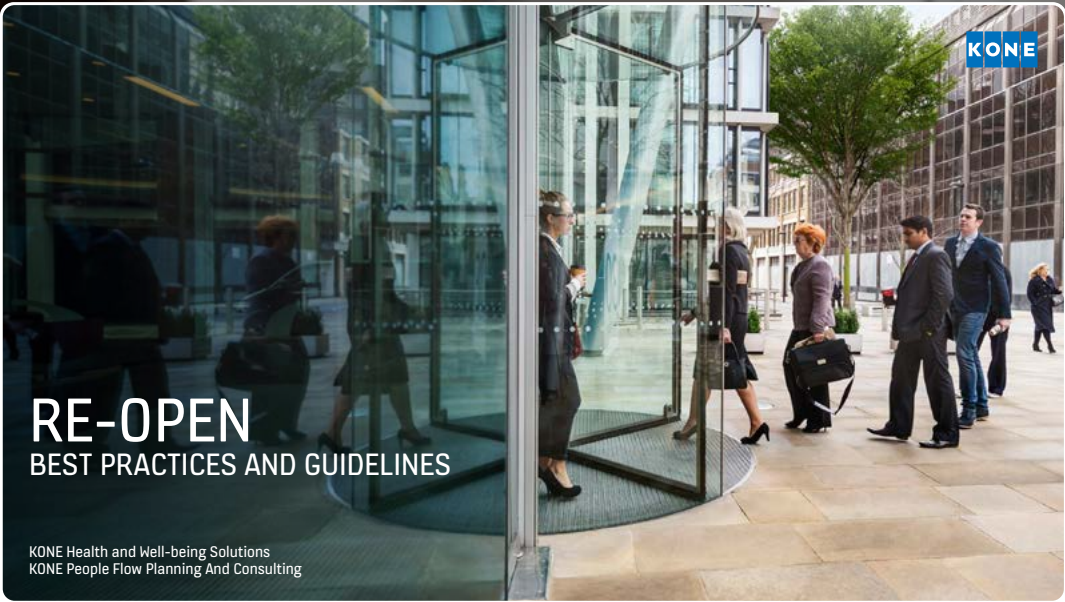
# KONE PEOPLE FLOW PLANNING AND CONSULTING

KONE People Flow Planning and Consulting helps you to create buildings with seamless people flow. We gather and analyze data and simulate reality to get insights into what works and what doesn't – and why.

Decisions based on accurate data mean a better user experience for everyone. We work closely with you to analyze how your building handles the flow of people and help it achieve its full potential.

🕒 16:03

👤 5870



RE-OPEN  
BEST PRACTICES AND GUIDELINES

KONE Health and Well-being Solutions  
KONE People Flow Planning And Consulting

RE-OPEN – Best practices guideline



KONE People Flow Planning and Consulting video



# KONE REGENERATE™ 800 DX AND RESOLVE™ 800 DX

KONE provides tailored modernization solutions for high-rise buildings, based on our most advanced technologies. Starting from a detailed assessment of the current people flow using real-time data from digital sensors combined with accurate 3d simulations. Using KONE Modernization Overlay to provide smooth & effective people flow during the modernization project. Solutions like KONE ReGenerate™ 800 DX and ReSolve™ 800 DX allow us to provide a unique, efficient, and sustainable modernization solution for future-proofing the vertical transportation of any existing high-rise building.



CREATE VALUE FOR YOUR BUILDING WITH IMPROVED PEOPLE FLOW

KONE ReSolve 800 DX brochure



UPGRADE YOUR BUILDING WITH A MODERN, CONNECTED ELEVATOR

KONE ReGenerate 800 DX brochure



# KONE MODERNIZATION OVERLAY

The KONE Modernization Overlay is compatible with both old and new elevator systems which makes it quick to install with little down-time. The overlay minimizes the disturbances modernization would cause for building’s people flow and elevator operations. Together with KONE Destination the elevator handling capacity can be boosted even further with an intelligent and attractive call allocation system.

## KONE MODERNIZATION OVERLAY

Call allocation system for smooth people flow during modernization

During elevator modernization, you might expect handling capacity to decrease when some elevators are out of service and there are both old and new elevator groups operating in the same lobby area. With the KONE Modernization Overlay, you can minimize handling capacity decrease during modernization.

The KONE Modernization Overlay is compatible with both old and new elevator systems which makes it quick to install with little down-time. The overlay minimizes the disturbances modernization would cause for building’s people flow and elevator operations. Together with KONE Destination the elevator handling capacity can be boosted even further with an intelligent and attractive call allocation system. Optimized and efficient people flow brings value to the building as well as ensures tenant satisfaction.



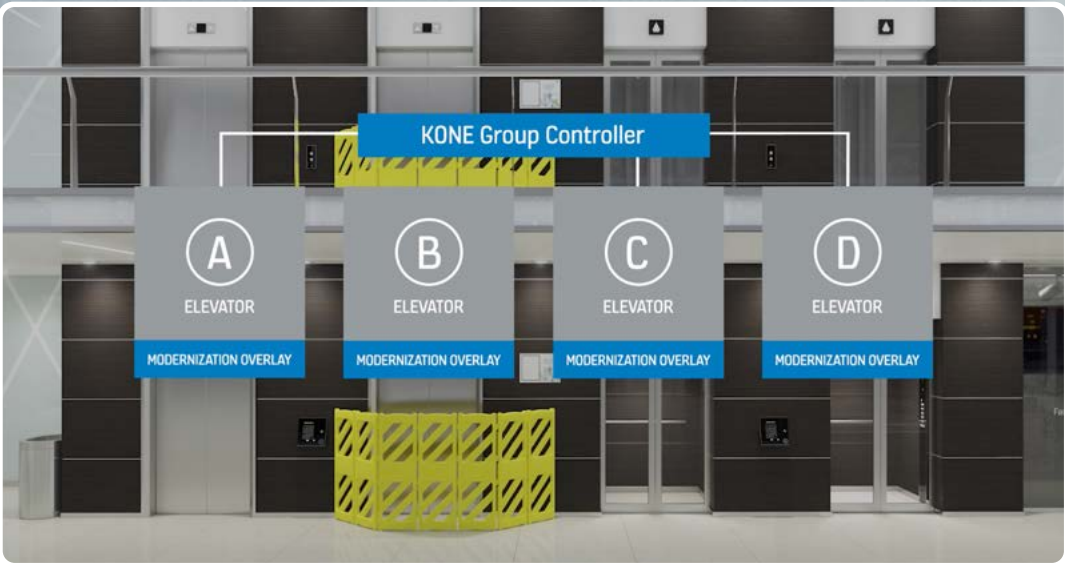
### FEATURES

- Improved traffic capacity**
  - Increases handling capacity during modernization with benefits of destination control system
  - Improves call allocation between old and new elevator groups
- Minimized disturbance**
  - KONE Modernization Overlay is modular, resulting in short installation times
  - Minimized out-of-service time when setting up overlay system
- Usability**
  - Consistent user interface at landing
  - Common landing stations or destination operating panels for old and new elevators
  - Smooth transition from conventional control to destination control
- Compatibility**
  - Can interface with most types of existing elevator controls
  - Compatible with destination control and full collective systems
  - For different group sizes (three or more elevators)
  - Compatible with machine room and machine room-less elevators

KONE Modernization Overlay factsheet →



KONE Modernization Overlay video (traditonal)



KONE Modernization Overlay video (hybrid)




# KONE ULTRAROPe® HOISTING TECHNOLOGY

The super-light KONE UltraRope technology provides unrivalled elevator eco-efficiency, reliability and durability, while also improving elevator performance. It eliminates the disadvantages of existing steel ropes – high energy consumption, rope stretch, large moving masses, and downtime caused by building sway. KONE UltraRope can enable future elevator travel heights up to 1,000 meters.


## REFERENCE CASES

- Näsinneula observation tower, Finland →
- 110 North Wacker, USA →
- CITIC Tower, China →

TOTAL MOVING MASSES




Traditional steel rope  
97.60 tonnes



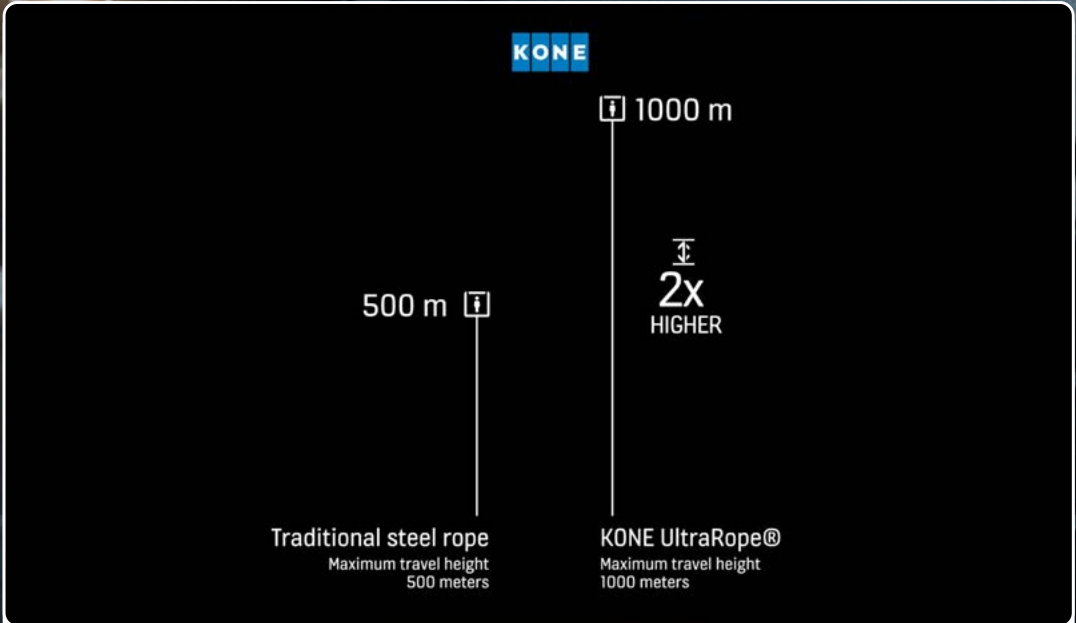
KONE UltraRope®  
73.16 tonnes

25%  
LESS

 6 elevators, 300 m elevator travel, 10 m/s elevator speed, 24 passengers

KONE UltraRope® video

→



500 m

1000 m

2x  
HIGHER

Traditional steel rope  
Maximum travel height  
500 meters

KONE UltraRope®  
Maximum travel height  
1000 meters

KONE UltraRope® projection

→

THE BENCHMARK  
IN HIGH-RISE  
TECHNOLOGY  
AND INNOVATION

High-rise construction requires creative architectural vision, watertight planning, and cutting-edge elevator technology. KONE has continually set new standards for innovation in high-rise projects, and is proud to introduce the latest in a long line of technological breakthroughs. Our pioneering new solutions will take buildings higher while making elevators even more energy efficient and reliable, all while delivering an unforgettable passenger experience.

**ULTIMATE PERFORMANCE**  
Our new KONE UltraRope® technology sets a new benchmark for elevator performance. In an elevator traveling 500 meters, the lightweight carbon fiber core cuts elevator moving masses by up to 60% compared to steel ropes. When elevator travel heights increase, even larger reductions can be achieved. In the future, KONE UltraRope can enable travel heights up to 1,000 meters.

**BEST IN CLASS ECO-EFFICIENCY**  
Our lightweight hoisting system, powered by the eco-efficient KONE EcoDisc®, enables huge energy efficiency gains. With the significant reduction in elevator moving masses, lower acceleration currents, and a reduced need for machine-room cooling, KONE high-rise elevator solutions are more efficient than conventional technologies. KONE UltraRope cuts energy consumption by 15% for a 500 meter elevator. When elevators travel higher in the future, an energy savings as much as 45% can be achieved for an 800 meter elevator.

**UNPRECEDENTED RELIABILITY AND DURABILITY**  
The carbon fiber core of KONE UltraRope has an exceptionally long lifetime – twice as long as the lifetime of conventional steel ropes. And, unlike steel, the solid structure does not dent and stretch, while the special coating means no lubrication is required. All of this adds up to a significant reduction in elevator downtime.

**INDUSTRY-LEADING RIDE COMFORT**  
KONE's advances in ride comfort guarantee a passenger experience like no other. As well as the KONE UltraRope, which helps to reduce noise levels, and our innovative new car structure that ensures excellent noise isolation, our hoisting system also ensures smooth acceleration and deceleration, and accurate leveling. We monitor quality at every stage of the installation process and carry out comprehensive ride comfort testing on every single elevator before handover.

**TOTAL MOVING MASSES**



**KONE ULTRAROPe – ULTRA LIGHT, ULTRA DURABLE, ULTRA EFFICIENT**  
Our new rope technology eliminates the disadvantages of existing steel ropes – high energy consumption, rope stretch, large moving masses, and downtime caused by building sway.

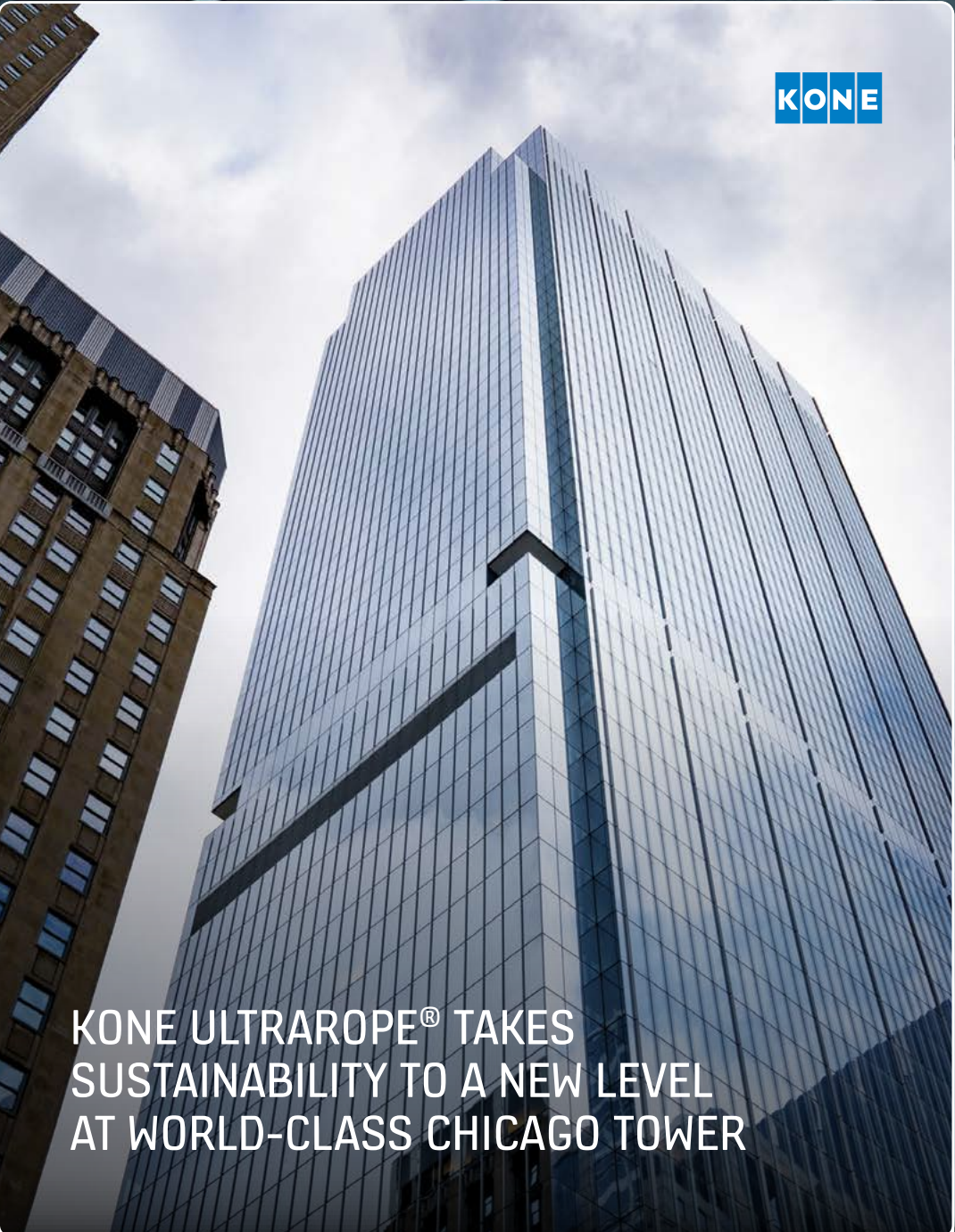
- Ultra-light rope with carbon fiber core surrounded by high-friction coating
- Carbon fiber has excellent strength properties
- The coating is highly resistant to wear and abrasion
- Less sensitive to building sway frequencies that can cause elevator downtime during high winds

KONE UltraRope®

kone.com

KONE UltraRope® leaflet

→



KONE ULTRAROPe® TAKES  
SUSTAINABILITY TO A NEW LEVEL  
AT WORLD-CLASS CHICAGO TOWER

110 North Wacker KONE Energy Study

→

# KONE JUMPLIFT



KONE JumpLift is a construction time elevator with a temporary machine room that can be moved upwards as construction progresses. KONE JumpLift advantages: enables a faster, safer construction process, earlier closing of the facade, reduced down-time, and safer transportation in all weather conditions.



KONE JumpLift video →



Citic Tower (China) customer video →



IMPROVING PEOPLE AND GOODS FLOW DURING CONSTRUCTION

KONE JumpLift® brochure →

## KONE JumpLift

BUILDER'S REQUIREMENTS

The list below details the requirements for the installation of a KONE JumpLift. These are the builder's responsibility unless otherwise specified.

- Removable Deflection Deck or flat Retaining Deck as specified in site specific KONE jump plan and contract [\[1\]](#)
- Double Protection Deck is provided by KONE. The deck will be relocated and sealed watertight according to agreement. The upper deck must be watertight and the lower deck must have fixing points for installation equipment [\[2\]](#)
- Block-outs in the shaft walls for the Double Protection Deck, double protection deck, lifting beams, and mobile machine room as specified in KONE drawings and in accordance with code requirements [\[3\]](#)
- Finished floor level mark inside elevator shaft at each landing (normally the builder puts these marks outside and the installer transfers them from the landing)
- Adequate power supply for the mobile machine room, hoists, power tools, and lighting, as specified in the KONE jump plan [\[4\]](#)
- Support for transporting elevator construction materials to predefined floors; KONE will verify floors and staging loadings with the builder in advance
- Adequate protection for landing-door
- A dry and wind-free area below the Double Protection Deck incorporating full-height, imperforate entrance protection to open landing entrances
- A closed, lockable area adjacent to the pit area or lowest floor, for the rope reels (where applicable), power cable, and main isolator/main disconnect [\[5\]](#)
- Fixed, debris-free stair access to, and continuous lighting for, all floors served by the JumpLift up to the Double Protection Deck
- Flat, step-free access or temporary ramps to the JumpLift car
- Intercom and telephone connection inside the car in accordance with elevator code requirements
- If possible, appoint a dedicated elevator attendant
- All necessary climate control devices in the mobile machine room and rope reel room according to the purchasing agreement
- Keeping lobby area accessible and tidy

Full details can be obtained from your local KONE contact



KONE JumpLift builder requirements →

# KONE 24/7 CONNECTED SERVICES



KONE 24/7 Connected Services brings uninterrupted people flow to a whole new level. It is a service that enhances user experience, keeps you in the know and it's an investment in your building's future.

We connect your elevators, escalators, and automated building doors to our cloud-based service and use AI-based assessment of the data to provide valuable information on upcoming maintenance needs and any potential issues before they even occur.



[How KONE IoT works video](#)



[KONE 24/7 Connected Service video](#)



UNINTERRUPTED  
PEOPLE FLOW® FROM  
DOOR TO DESTINATION

KONE 24/7 Connected Services for Building Doors

[KONE 24/7 Connected Services for  
Building doors brochure](#)



UNINTERRUPTED  
INSIGHT, OVER THE FULL  
EQUIPMENT LIFECYCLE

KONE 24/7 Planner

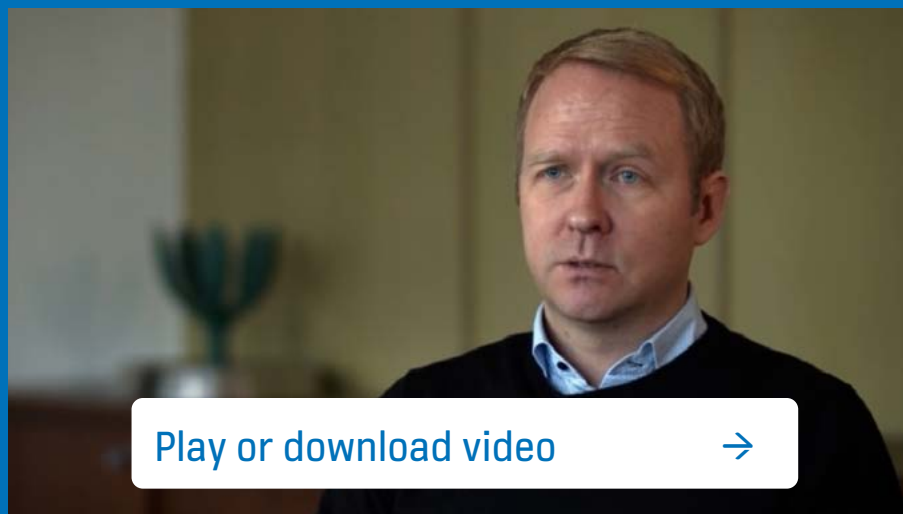
[KONE 24/7 Connected Services Planner  
brochure](#)



# CUSTOMER CASES & TESTIMONIALS: WINNING WITH CUSTOMERS



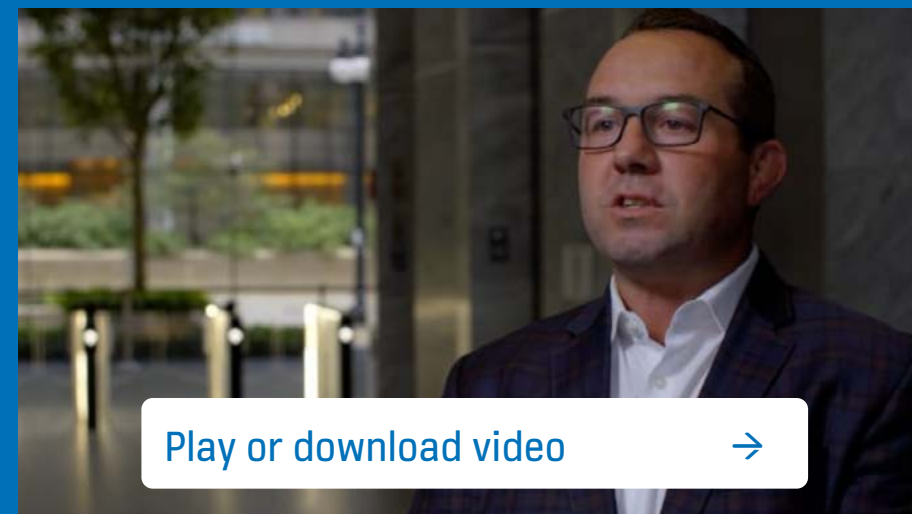
## NÄSINNEULA OBSERVATION TOWER, FINLAND



When the elevators of Finland's tallest building needed to be modernized, KONE was called in. Learn more about the makeover that took place at the Näsinneula Observation Tower.

Special solutions in use:  
KONE Digital Experience Car  
KONE UltraRope®

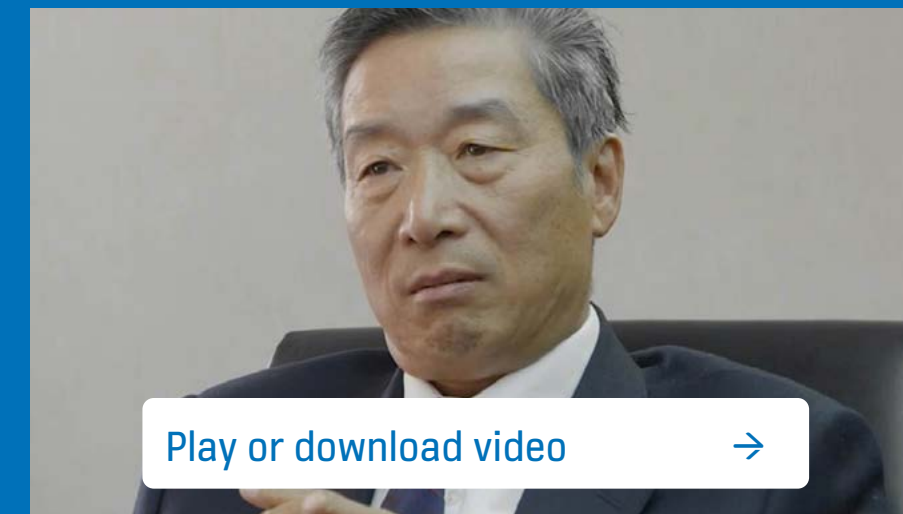
## 110 NORTH WACKER, USA



110 North Wacker is the newest high-rise office building to tower above Chicago's central business district. Learn how 110 North Wacker is reshaping downtown Chicago.

Special solutions in use:  
KONE Office Flow  
KONE Destination Control System  
KONE Access Solutions  
KONE Turnstiles  
KONE InfoScreens  
KONE E-link™ Monitoring  
KONE UltraRope®  
KONE 24/7 Connected Services

## CITIC TOWER, CHINA



Discover how Beijing tallest building speeds up construction and saves money with KONE JumpLift construction time elevator.

Special solutions in use:  
KONE JumpLift  
KONE UltraRope®

## SKY TOWER, NEW ZEALAND



Find out how the iconic Sky Tower in New Zealand upgrades to KONE UltraRope technology for better and smoother end-user experience.

Special solutions in use:  
KONE Polaris™ Destination Control System  
KONE UltraRope® technology  
Modernization packages  
• KONE ReGenerate™ 800  
• KONE ReNova™  
• KONE ReVive™



## WHY WORK WITH KONE MAJOR PROJECTS?

### BESPOKE SOLUTIONS FOR ONE-OF-A-KIND PROJECTS

When you are attempting something never done before, you turn to the leaders to design the people flow solutions you need.

### WORLD EXPERTS FOR SPECIAL PROJECTS

Either in size or in complexity, your project is not ordinary and needs careful planning and top-notch project management skills.

### ONE TRULY GLOBAL PARTNER YOU CAN COUNT ON

When you work with KONE Major Projects, you work with a team of experts ready to serve you anywhere in the world.

## A GLOBAL TEAM OF EXPERTS SERVING YOU WHEREVER YOU ARE LOCATED



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