

TOUCHLESS SOLUTIONS PART 1

*Parking, Elevators
& Plumbing*



**Hosted by ESD, Kone & Legacy Parking
June 23 from 11 a.m. to 12 p.m.**

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Health and Well-being Solutions
5870

What is happening in the market?

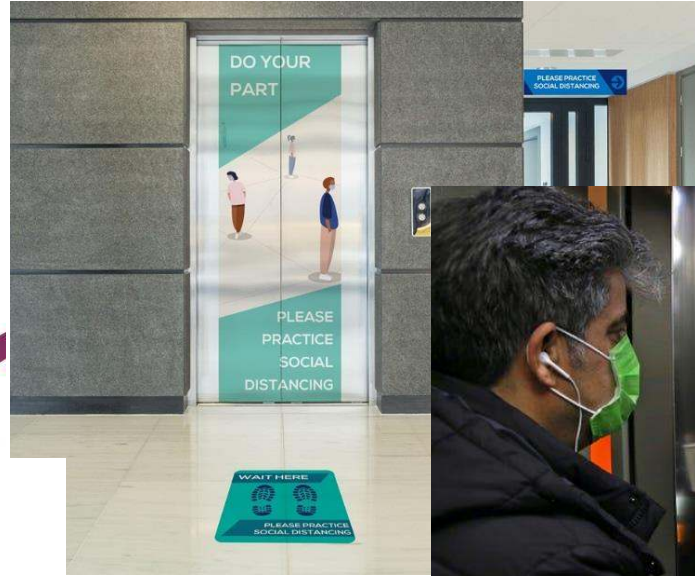


Elevators are a crucial in getting many people back to the office — but experts say they could be coronavirus transmission hotspots

Aylin Woodward May 21, 2020, 9:05 AM



Taped-off areas demarcate safe distances between people in the elevator lobby of an office building in New York City. (Photo: Getty Images)



ASK WELL

Can I Get Coronavirus From Riding an Elevator?

When infected people use elevators, they probably do leave some of their germs behind. Wear a mask and wash hands to lower



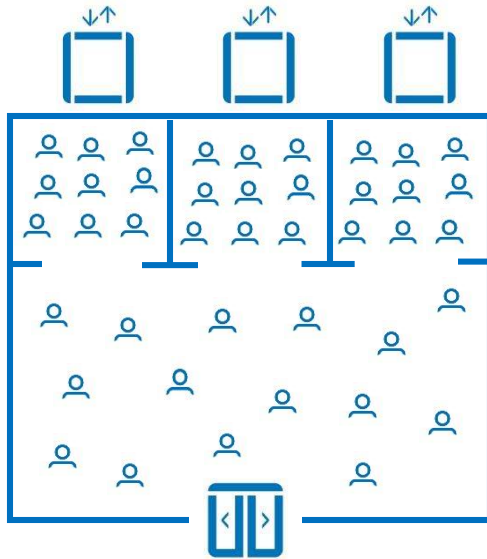
By Tara Parker-Pope

May 13, 2020

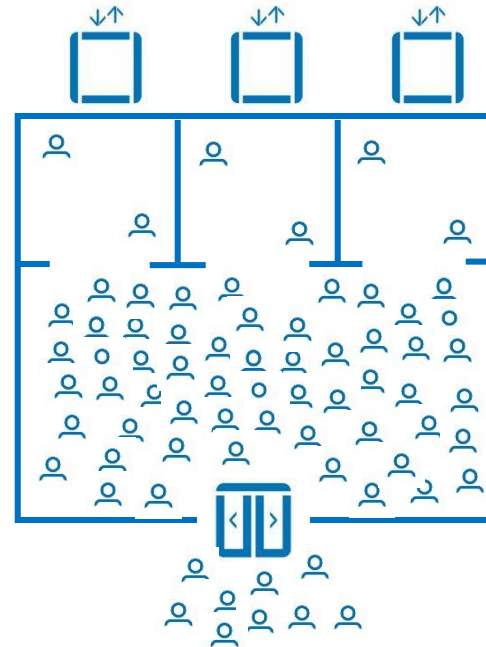


Effective Traffic Management

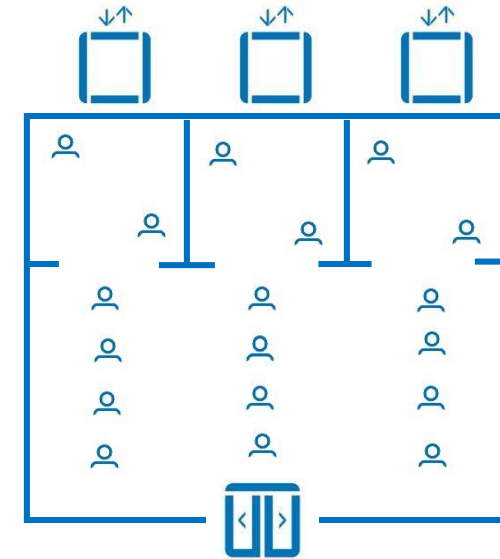
SUPPORTING A SAFE RETURN TO WORKPLACES



- Pre pandemic
- No staggering time
- 12 people / elevator
- Handling capacity: 99 ppl / 5 min
- Arrival rate: 16.5 %
- Time to fill building: 30 min
- Average waiting time: 27 sec



- Post pandemic
- No staggering time
- 2 people / elevator
- Handling capacity: 36 ppl / 5 min
- Arrival rate: 16.5 %
- Time to fill building: 84 min
- Average waiting time: 28 min



- Post pandemic
- Staggering time
- 2 people / elevator
- Handling capacity: 36 ppl / 5 min
- Arrival rate: 6 %
- Time to fill building: 84 min
- Average waiting time: 56 sec

Effective Traffic Management

SUPPORTING A SAFE RETURN TO WORKPLACES

	Elevator System Parameters (examples)				
Number of elevators in group	2	3	4	4	6
Number of floors served	4	7	10	15	15
Car speed (fpm)	200	350	350	350	500
100% total population for group	450	600	1000	700	1400
Number of people per elevator	2	2	2	2	2
	Handling Capacity				
Number of people transported in 5 minutes	21	30	35	29	51
Number of people transported in 1 hour	252	360	420	348	612
	Minutes to fill the building (based on population %)				
100% population	113	100	143	117	140
50% population	56	50	71	58	70
25% population	28	25	36	29	35
10% population	11	10	14	12	14

Assumptions

- Up-peak scenario only (100% incoming; 0% interfloor; 0% outgoing)
- Bottom landing is the only entry/exit floor
- Each floor above main landing has equal population
- Number of people limited boarding the elevator at the main landing
- Traction Elevator
- Controller Type: early vintage micro-processor
- Dispatching Type: conventional
- Door type / size = 42" wide / center-opening doors
- Standard acceleration rates
- 12ft floor heights

Germ-Free Elevator Solutions

Reduce the risk of transferring germs by creating a hands-free experience

Foot-Activated Call Button

- Allows activation of hall & car station buttons by shoe
- Robust durable design to withstand abuse
- Stainless steel or PVD brass finish
- Surface-mount option for hall station
- Keypad option for COP
- No code alteration or submission required for modification



Touchscreen System

- Easy-to-clean glass surface
- Clean with any glass-approved solution, including 70% alcohol to kill germs and viruses.
- Unlike mechanical pushbuttons, contaminants will not get trapped on the smooth glass surface.
- Calls can be placed by touch with a gloved or covered hand, which could further prevent the transfer of germs.
- Standard sizes available in 21" and 15".



Facility Elevator Stickers

EXAMPLES

Floor Stickers



Wall Stickers



Cleaning Solutions

Handrail Sterilizer

- Encourages passengers to “hold-on” to handrails
- Effective At Killing Bacteria And Viruses
 - Handrail Sterilizer utilizes UV-C LED light technology which is known to kill up to 99.9% of E.coli bacteria.

Self-cleaning button covers

- Attach via removable adhesive to high-touch areas such as elevator buttons, touchscreen surfaces and elevator cab handrails.
- Mineral nanocrystals harness the power of visible light to create a powerful self-cleaning oxidation reaction that continuously breaks down all organic contaminants.

Cleaning Equipment – best practices

- Follow recommendations from applicable public health authorities, e.g., CDC or WHO while reducing potential damage to equipment (Elevator buttons, elevator/ escalator handrails, car walls, elevator doors, automatic building doors or other equipment surfaces)



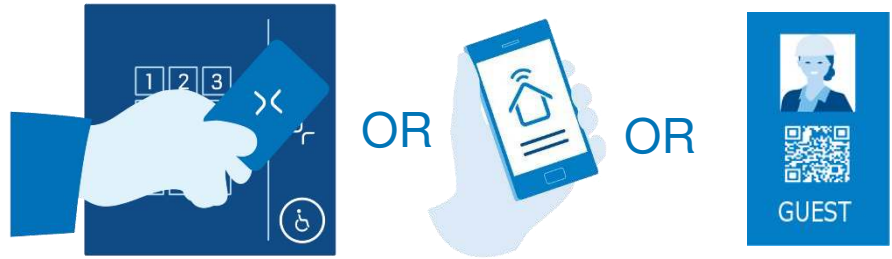
Actual surface design is a faux brushed aluminum finish featuring self-cleaning messaging.

NanoSeptic® Continuously Self-Cleaning Surface

Access Solution

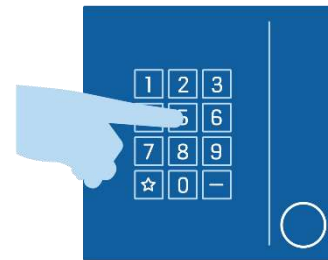


HOW IT WORKS



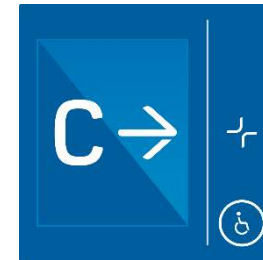
1 PRESENT

your card or mobile device or guest pass at the card reader.



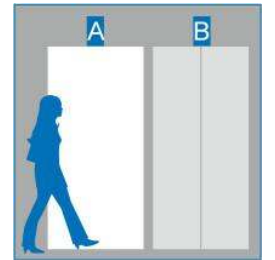
2 SELECT

your destination floor



3 MOVE

to your elevator



4 ENJOY

the journey

OPTIONS



Disability Call

Allows for extra space (x 1.3) inside the elevator car for users with disabilities and provides extra time to reach the elevator.

Priority Call

Authorized users can initiate destination calls with higher priority than others. The user receives an elevator as soon as possible.

Empty Car Call

Allows a user to call an empty car. Used for efficient tenant moves within the building and for larger deliveries.

Specific Car Call

Allows to designate a particular elevator for special loading conditions (i.e. bicycles, pets, privacy tenants).

Car Cleaning Mode

Allows the cleaning crews and building personnel to "park" a car with doors open for exclusive usage.

Out of Service Mode

Allows a user to remove an elevator car from operation for a specific use. Often used by building personnel to commandeer an elevator while working in the building.

Custom Access Options

Unique, customizable access considerations can be made with existing building systems through KONE's custom integration solutions.

Touchless Solutions

Mobile application for calling elevators



Integration with the existing building apps



Thank you!



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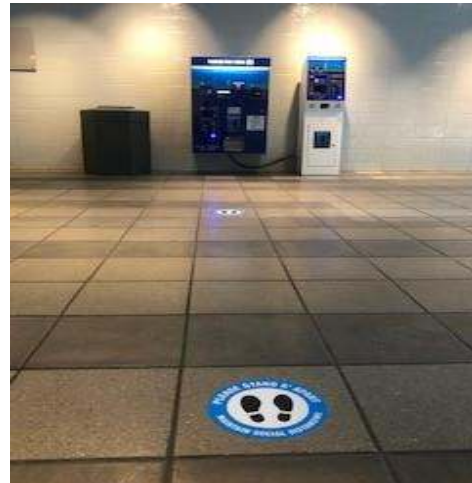


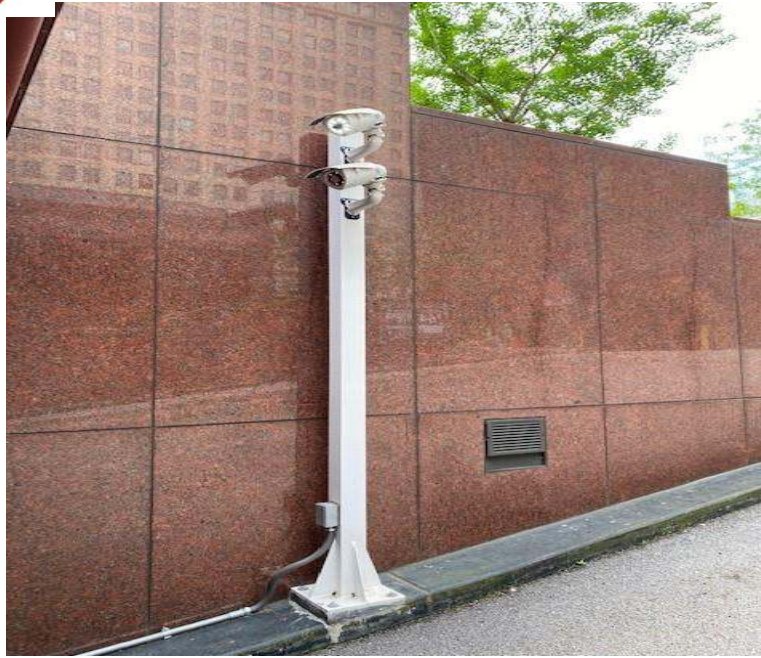
Contactless (Safe) Parking for the Post Covid-19 Era



The Main Points of Concern

- *Entry/Exit Terminals and Pay on Foot Devices*
- *Valet Environments*
- *Elevator Lobbies*





Alternative Ticket Dispensing and Payment

Advantage - Minimal investment to implement contactless (\$150 - \$550 per entry device)

Disadvantage - Not all manufacturers have implemented this technology so it may not be available depending on your model of PARCS.

Conclusion - Fairly new technology to the market, but affordable and a simple way to accomplish the contactless goal.

Examples- Motion Activated, Text for Ticket, NFC

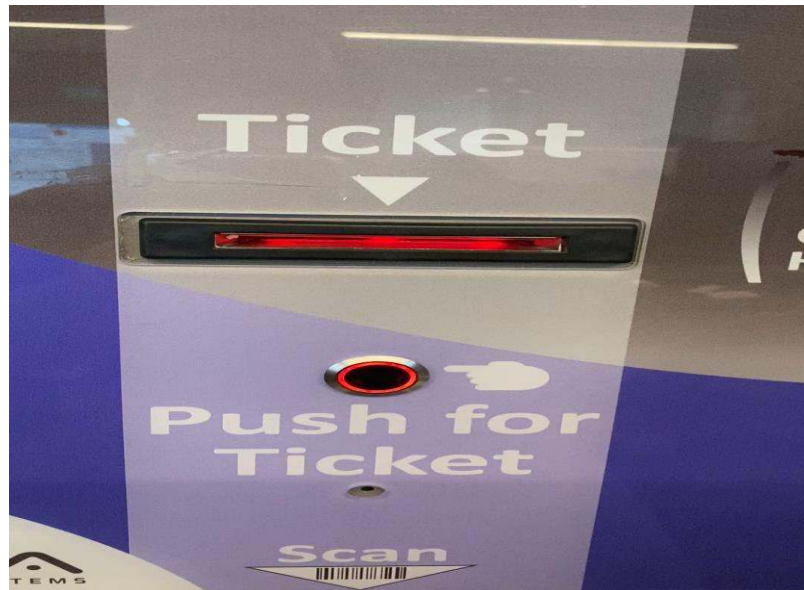


License Plate Recognition

Advantage - contactless entry possible for most parker groups

Disadvantage - (1) More expensive to deploy than the other options available (2) Requires a very specific line of site and distance for accuracy (3) Still requires machine interaction at entry for true transient parkers.

Conclusion - Although a very valuable piece of technology to solve many issues, not perfect for every operating environment or budget.



Online Platforms/Mobile Payments

Advantage - Allow for both contactless entry and exit (in the case of online platforms) as well as potential Bluetooth capabilities for a more seamless experience.

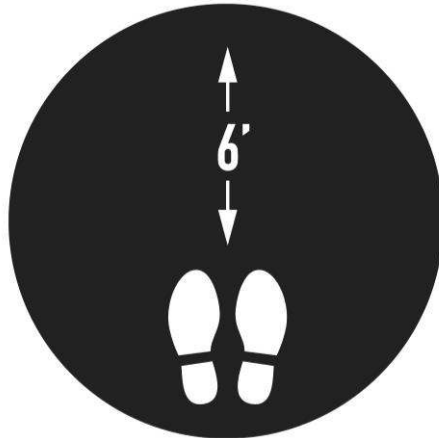
Disadvantage - (1) Requires efficient communication to steer customers to the appropriate platforms (2) For online platforms there is an associated cost for utilizing their services

Conclusion - This technology is probably already incorporated into most parking environments, and by marketing it appropriately can help steer consumer behavior.



Additional Details to Consider

Pay On Foot Lobby Distancing



- Remember to include the parking area in your social distancing initiative

Elevator Lobby Distancing



- Proper signage throughout the facility to promote proper distancing at all areas and occupancy limitations in areas such as elevators
- Promote stair usage when possible through signage

Valet Safety



- Proper PPE should always be worn
- Employ steering wheel and gear shift covers
- Lightweight UV wands can be easily carried and utilized by valets



Summary

The Present

- *Technologies available to create contactless interaction.*
- *Need to pay special attention to valet environments.*

The (Not Too Distant) Future

- *Continued integration of ticketing and virtual payment systems via the phone and its associated Bluetooth technology.*

Conclusion

- *Contactless parking equipment is achievable through multiple channels.*
- *A critical detail that cannot be overlooked is appropriate maintenance to ensure a clean and disinfected environment.*

COVID-19

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BOMA

Touchless Plumbing Technology

Today's Presenter



**JAMES DIPPING, PE, CPD, GPD, LEED AP
BD+C, ARCSA AP**

Director of Plumbing Engineering, ESD Global

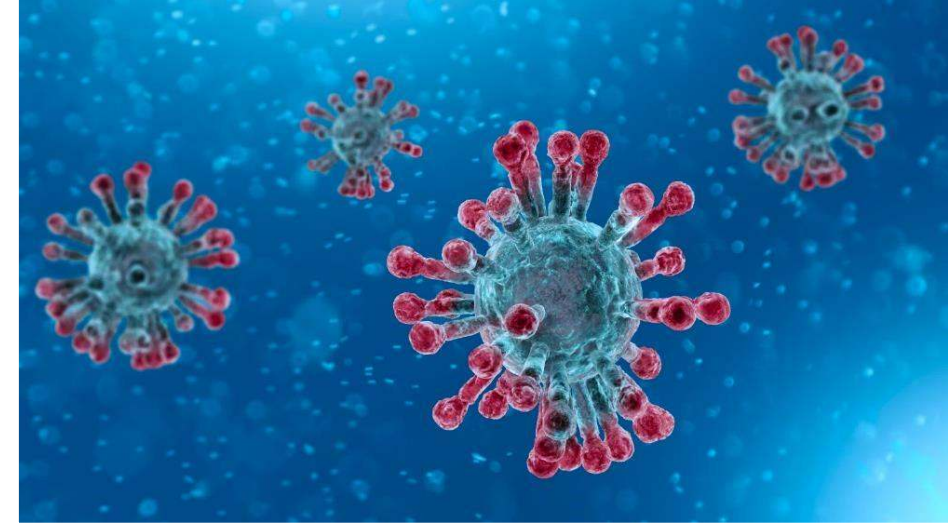
Today's Discussion



- Touchless Plumbing Technology
- Integration in Buildings
- Immediate Options for Landlords and Tenants to begin the Touchless Experience.
- Long-Term Considerations for Landlords and Tenants to advance the Touchless Experience
- Nuances of Touchless Technology
- How to Get Started!

Agenda

- Touchless Plumbing Products
- Immediate Options for Landlords and Tenants to begin the Touchless Experience
- Long-Term Considerations for Landlords and Tenants to advance the Touchless Experience
- Considerations of Touchless Technology
- How to Get Started



Transmission

Modes of Infectious Disease Transmission in a building:

- Person-to-person
- Contaminated Surfaces / Plumbing Fixtures
- Droplet Spread/Aerosol (coughing/sneezing)
- Airborne Transmission



Touchless Plumbing Technology: Product Overview



Lavatory Faucets

Touchless Activation Technologies

- Traditional Infra-Red available by most major manufacturers
- Kohler Insight Adaptive IR Technology
- Kohler Kinesis IR Technology
- Delta Proximity Sensing Technology—
Entire Faucet is a Sensor
- Delta H2Optics Technology—Advanced IR
- American Standard Selectronic Proximity Faucet
- Toto EcoPower



Lavatory Faucets

Temperature Control

- Traditional Infra-Red available by most major manufacturers
- Side handle user operated temperature control
- Fixed temperature with under sink lavatory



Flush Valves

Touchless Activation Technologies

Traditional Infra-Red available by most major manufacturers

Single and Dual Flush

Kohler Tri-Point Technology

Kohler Wave Technology

Toto Eco-Power Flush Valves



Soap Dispensers

Touchless Sensor Activation

- Available by Several Faucet Manufacturers such as Sloan, Delta, Toto, Moen
- Liquid and foam soap dispensing
- Delta Touch2O sensor and proximity activation



Wash Stations

Bradley All in One WashBar

- Washing
- Soap Dispensing
- Hand Drying



Hand Sanitizing Dispensers and Stations

Touchless Sensor Activation

- Main office entrances/exits
- Toilet room entrances/exits
- Pantry and copy areas
- Fitness and amenity areas



Touchless Pantry Faucets

Touchless Sensor Activation

- Kohler Sensate Technology
- Moen MotionSense
- Delta Proximity and VoiceIQ Smart Connectivity
- Activate water flow, do not control temperature



Voice Controlled Faucets and Showers

Touchless Sensor Activation

- Kohler DTV+ with Konnect
- Delta VoicelQ Smart faucet technology with voice activation—can dispense specific volumes
- Moen U-Shower system



The Touchless Experience: Integration into Buildings and Immediate Use Options



Integration into Buildings

Apply Touchless Technology in High Touch Areas

- Toilet Rooms
- Pantries
- Meeting Areas
- Elevator Lobbies
- Common Areas



Immediate Use Options

Utilize Battery “Wireless” Powered Sensor Devices

- Standard off the shelf batteries
- Manufacturer long life proprietary batteries, i.e. Kohler Hybrid 30 year battery



Immediate Use Options

Coordinate with Existing Infrastructure

- Select fixtures that do not require modification to rough in
- Utilize manual flush valve retrofit kits to replace manual handle



The Touchless Experience: Long Term Building Integration for Advanced Touchless Experience

Integration into Buildings

Invest in Permanent Solutions

- Hard Wired Faucets and Flush Valves
- Designing a “Decontamination Flow” to direct people traffic in areas such as toilet rooms and pantry areas
- Remaining Open to New Smart Technology
- IoT sensors for maintenance and cleaning routines.



How to Get Started?



Current Challenges

Time is short

Money is tight

Costs are increasing

Timelines are getting longer



ESD Assistance

On-Site Assessment

MEP Design



**Questions or
Comments?**



Thank you

James Dipping, PE, CPD, GPD, LEED AP BD+C, ARCSA AP

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