(re)entry

Technology guide

For managing properties
COVID-19 has created a different set of priorities for managing buildings. The terms "experience", "gathering spaces" and "communal amenities" have been replaced with "social distancing", "touchless solutions" and "self-cleaning". Consumers are becoming accustomed to floor decals reminding them to social distance. Plexi-glass barriers are expected at all points of potential human interaction. Sanitization services are no longer a nice-to-have, but a must-have. Additionally, consumers are demanding a safer way to navigate our buildings. The answers can be found in innovative new technologies. As the leading property management provider in the U.S., JLL is here to help you navigate the “next normal” of property management, including how to navigate the technology being offered to support the nuances of running a building during COVID-19. Let us help you create a custom plan utilizing the appropriate technology for your building.

Re-entry technology guide

The re-entry technology guide is a tool to help you navigate available technologies for the building re-entry process. Technology options have been identified around various re-entry topics as well as case studies and potential vendors to assist you in choosing the right tools for your building. These vendors and case studies are meant to generate ideas and act as a starting point in the evaluation process.

They are not a recommendation or endorsement by JLL and need to be evaluated by you and your advisers.

Pre-certification—health screenings/temperature checks

Pre-certification tools allow a potential visitor, tenant and/or employee to take a brief survey in order to determine if they are healthy and understand the guidelines of entry prior to arrival. These tools will often require that all questions be answered favorably to gain entry. Once all questions are answered favorably, a QR code/Pass is generated signifying a person has passed and is safe to enter. There are two types of pre-certification tools:

- Stores the data a user provides
- Does not store the data a user provides

Keep in mind tools that store user data encounter a much higher risk of data privacy issues and should be verified for proper data encryption and handling.

Vendor/case studies

JLL has not vetted or verified the use of these products or vendors as it relates to COVID-19, nor does the firm endorse the use of these products.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Vendor name/product</th>
<th>Product info</th>
<th>Additional info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health screening</td>
<td>Aarete - Digital Pass</td>
<td>Precertification technology that stores data and provides analytics</td>
<td>Website</td>
</tr>
<tr>
<td>Touchless solutions</td>
<td>Guidepost Solutions LLC</td>
<td>A guild to temperature scanning technology and process</td>
<td>Guide to Temp Screens</td>
</tr>
<tr>
<td>Social distancing</td>
<td>Wellness SelfScan</td>
<td>Simple precertification technology that does not store data</td>
<td>Website</td>
</tr>
</tbody>
</table>
Touchless technology

Touchless technology reduces the spread of germs. At a minimum, touchless hand sanitizer stations in lobbies, elevator lobbies, mailrooms, parking facilities and other common areas, and near restrooms will be a consumer expectation. Utilize or phase-in touch-free technology wherever possible to maintain cleanliness and reduce the need for enhanced cleaning.

Retrofit existing

- For doors
  - Install hands free/automatic door operators
  - Install foot-operated handles for swinging doors

- For bathrooms
  - Retrofit toilet with touch-free flush valve
  - Add touchless operation to faucets and replace manual towel dispensers with touchless hand dryers
  - Install touchless trash cans by all doors

- For lighting
  - In older buildings, replace manual light switches with touchless ones, or move to motion detection lighting

Social distancing—lobby/common area density monitoring and scheduling

Currently there are no technologies that will enforce, create or fully control social distancing and the scheduling of building entry and exit. Technology alerts or data should be used to compliment property management's staff’s response to each individual situation.

Density

- Monitoring sensors and cameras
  Camera and/or overhead sensors that use active infrared (IR) and time of flight (TOF) technology can be used to detect when someone passes them. People are counted as they walk beneath the unit, in and out of a space. The devices can alert staff when occupancy reaches unsafe levels. They can also give employees and customers the ability to subscribe to Alerts.

- Tracking via wireless device signals
  Radio signals sent from users’ devices can be used to track concentration in an area. However, there are some drawbacks to this method, as some people may not be carrying a mobile device or their device can be offline.

Scheduling tools for building entry and common areas

Two JLL technologies currently being used by Experience Management (Rise Buildings, HoQ) and Building Maintenance (Building Engines) are software solutions that have the ability to schedule common area amenities. There are also standalone scheduling tools that can be used to create and publish schedules and allow third parties to book time. However, there is no software that will enforce staggered entry/exit into a building without the collaboration from the property manager and the tenants.

Vendor/case studies

JLL has not vetted or verified the use of these products or vendors as it relates to COVID-19, nor does the firm endorse the use of these products.

<table>
<thead>
<tr>
<th>Vendor name/product</th>
<th>Product info</th>
<th>Additional info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Construction</td>
<td>Guidelines/timing for retrofitting touchless tech and other social distancing items into your property</td>
<td><em>Pricing and Lead Times for Actionable Covid Alterations</em></td>
</tr>
<tr>
<td>Datawatch</td>
<td>Touchless/contactless visitor processing, mobile building access, remote Monitoring</td>
<td><em>Website For more info contact: <a href="mailto:sebrown@Datawatchsystems.com">sebrown@Datawatchsystems.com</a></em></td>
</tr>
<tr>
<td>FaceLabs</td>
<td>Facial recondition for building entry and visitor processing</td>
<td><em>Website Sample quote</em></td>
</tr>
<tr>
<td>Openpath</td>
<td>End-to-end touchless building solutions</td>
<td><em>Website For more info contact: <a href="mailto:sebrown@Datawatchsystems.com">sebrown@Datawatchsystems.com</a></em></td>
</tr>
<tr>
<td>Rise Buildings</td>
<td>Touchless entry/visitor processing</td>
<td><em>Website Rise Re-Entry Deck</em></td>
</tr>
<tr>
<td>AppointmentPlus</td>
<td>Web based scheduling and reporting platform.</td>
<td><em>Website</em></td>
</tr>
<tr>
<td>Density Safe</td>
<td>Density monitoring sensors capture the real-time occupancy of buildings without needing, storing, or otherwise invading visitor identity. Sends alerts when a space has reached capacity.</td>
<td><em>Website</em></td>
</tr>
<tr>
<td>FastSensor - ADAM</td>
<td>Active Distance Alert and Monitoring (ADAM) - gives you up-to-the-moment data on the proximity and concentration (not just capacity) of everyone at your location(s) using real-time tracking of personal devices, allowing you to create a distance-friendly environment in today’s new normal.</td>
<td><em>Website</em></td>
</tr>
<tr>
<td>Rise Buildings</td>
<td>Beacons/counters are used to create heatmap type charts that show where people are concentrated/how many people there are.</td>
<td><em>Website Rise Re-Entry Deck</em></td>
</tr>
<tr>
<td>VergeSense</td>
<td>Cameras and sensors are used to track people in a space and alerts are sent when people are either too close or have reached the space capacity. Data is collected over time to provide analytics on space usage and provide insights on how to better maximize/minimize the space capacity.</td>
<td><em>Website</em></td>
</tr>
</tbody>
</table>
Mobility—elevator density monitoring, cleaning, and touchless operation

Due to the pandemic, it is important that elevators remain a safe and efficient method of vertical transportation. Elevator capacity will need to be reduced to adhere to social distancing requirements of (re)entry.

Weight capacity reductions
Reducing max weight capacity in most elevators will trigger it picking up less people. For example, if the max weight of the elevator is reduced to 600 pounds, it will only allow three to four people on at a time. Once the weigh capacity is reached the elevator will no longer operate.

Touchless controls
Voice activation panels
- Voice control panels can be placed in the lobby or in the elevator car. They allow users to simply speak the floor they need.

Mobile phone controls
- With a dedicated app, a phone can automatically place a call as soon as it arrives in the lobby to signal an elevator to come. Once in the elevator, the app allows users to enter the floor they need.

UV cleaning
Anti-bacteria UV light can remove 99% of the bacteria in the elevator. Installed on the cabin ceiling, a full sterilization of the car, including car operating panel, handrail, car wall and air is possible. Built-in safety modes prevent passengers from being exposed to ultraviolet light when taking the elevator.

Vendor/case studies
JLL has not vetted or verified the use of these products or vendors as it relates to COVID-19, nor does the firm endorse the use of these products.

Enhanced cleaning technology
Enhanced cleaning technology allows for more efficient cleaning. At a minimum, utilize or phase-in touch-free technology wherever possible. Equip restrooms with touch-free toilets, sinks, fixtures and dispensers and provide touch-free trash cans to maintain cleanliness and reduce the need for enhanced cleaning.

UV lighting and self-disinfecting/cleaning surfaces
Ultraviolet light is an effective tool that has been in use for decades in hospitals settings. UV light—particularly the shortest wavelength, UVC,—kills viruses by damaging their DNA, stopping their ability to make copies of themselves.

Self-cleaning surfaces utilize a self-cleaning “skin” that contains nanocrystals to create an oxidation reaction stronger than bleach, without using poisons, heavy metals or chemicals.

Smart restroom solutions
Smart restroom solutions allows you to seamlessly monitor your restrooms, keep track of stock, usage and increase customer satisfaction, all through your smart phone or computer. In addition, they track data for reporting and analytics.

Vendor/case studies
JLL has not vetted or verified the use of these products or vendors as it relates to COVID-19, nor does the firm endorse the use of these products.

Vendor name/product | Product info | Additional info
--- | --- | ---
BioShield Matrix | Solid surface disinfectant barrier that lasts for 90 days. Protects against future contact with viruses and bacteria. | Website

Georgia Pacific - Kolo | Data driven cleaning and smart restroom monitoring. | Website, Infographic, Features Summary, Matrix Case Study

Kimberly Clark-Onvation | Data driven cleaning and smart restroom monitoring, plus restroom traffic alerts. | Website, JLL Presentation, Case Study from Chicago Property, JLL discounted pricing: Tania Knowd, Tania.Wiley@kcc.com

NADCA | Ultraviolet Lighting Applications in HVAC Systems | Website

Tork - EasyCube | Data driven cleaning and smart restroom monitoring | Website, JLL Tork Pilot Case Study

Trax Analytics | Data driven cleaning and smart restroom monitoring. | Website, Info Prepared for JLL, Clean and Inspect Product Info

Vendor name/product | Product info | Additional info
--- | --- | ---
Liberty Elevator | Liberty Elevator is actively working with industry leaders to offer a portfolio of options to best integrate your elevator into your health and safety plans. | Elevator Technology Guide

Thyssenkrupp | Thyssenkrupp Elevator has a range of options to create a clean and healthy car environment and reduce the risk of virus transmission | Elevator Technology Guide
How to get started?

It is important to keep in mind that not all health and safety measures need technology. This “next normal” is a fluid situation and some measures needed today may not be needed several months from now. It’s a balance between temporary vs. long-term as well as traditional measures vs. technology solutions.

JLL is here to help you evaluate these and other health and safety tools based on your building needs and your property’s budget. JLL recommends meeting with your client relationship manager/regional manager to begin the process.

Sifting through health and safety technology tools can be a daunting task when many of them don’t have a proven track record just yet. Your JLL team is here to help you ask the questions and seek the answers so your building can be a source of comfort for those returning to the office. We look forward to being your tech-partner in (re)entry.

step 1
What are the requirements of your local authority having jurisdiction?

- Identifying local requirements will enable you to prioritize the must-haves and the nice-to-haves

step 2
What are the biggest areas of concern for your building?
(i.e., communal spaces, guest check-in process, etc.)

- Where does your building have the largest congregation of people?
- Where do lines tend to queue?
- Where are the biggest high-touch areas?

step 3
What health and safety measures are you currently unable to meet without technology?

- Can you currently control elevator usage?
- Do you know how many people are entering your building so you can maintain allowed capacities?

step 4
What are your tenants asking about your health and safety measures?

- Are the tenants in your building most concerned about restrooms?
- Are the tenants in your building most concerned about their arrival and departure process?

step 5
What technology tools will solve your most pressing areas of concern?

- Do you need a tool to monitor elevator usage?
- Will an app allow for touchless entry and exit to your building?

step 6
What is your budget for technology solutions?

step 7
Work with your JLL Client Relationship Manager to vet each technology, including first-hand experience from current users.