



A COVID-19 Virtual Ideation Experience

The Autonomous Workplace

Team Number: 8

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Task

We discuss technology-based solutions CRE/FM Leaders and Organizations may adopt post-COVID to streamline work activity and enhance the worker experience for employees and teams supporting these employees.

Methodology

To provide considerations, technology adds, and workday and workplace experience changes, we forecast new technologies and recommendations for the post COVID workplace.

Stakeholders are broken down into 3 groups:

- Corporate Real Estate,
- Facilities & Maintenance, and
- Workplace Occupants

Takeaway

We believe the following material will help inform and provide a differentiated viewpoint to individuals interested in what a technology-driven autonomous workplace will look like in the future.



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Corporate Real Estate

GOAL

- To align Corporate Real Estate to trends being developed by Building Owners while balancing the needs of the employees to the strategic direction of the organization.

AREAS OF FOCUS

- Short-Term Planning vs. Long-Term Solutions
- Synergy with Landlord
- Employee Experience
- Space Utilization
- Collaboration
- Financial Investment

OUTCOMES

- Weighing what needs to be done now to ensure employee safety until longer-term strategy is developed
- Align occupancy needs to expectations of building owners
- Focus on employee needs, concerns, and expectations
- Reimagine space utilization and efficiency standards
- Reduce employee “touch points” and provide more control
- Invest in change



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Corporate Real Estate

SHORT-TERM PLANNING vs. LONG-TERM SOLUTIONS

- Develop short-term back to the office standards
- Assess functionality and occupant receptiveness on a building by building basis
- Adapt to new laws and regulatory requirements
- Develop long-term strategy aligned to organization goals, employee safety, and industry realities

LANDLORD SYNERGY

- Building access control and entry to limit touch points
- Temperature screening of tenants and visitors prior to entering space
- Visitor and supplier check-in via automated sign-in process (user app)
- Only consider buildings that meet new “COVID” standards as defined by organizational guidelines
- Automate transaction process with Landlord to improve efficiency and align to fast-changing market conditions

EMPLOYEE EXPERIENCE

- Touchless facility amenities (security, reception, reservations, entry)
- Increased cleaning intervals, notifications, and online recording
- Flexible seating environments to allow 6’ distancing with interchangeable configurations
- Dedicated work areas balanced by on-demand shared spaces sanitized before each use
- Smart office app that enables employees to reserve rooms, register visitors, verify cleaning, order meals



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SPACE UTILIZATION

- New space utilization targets based on social distancing; Target 50% in short-term
- Reduction or elimination of bench seating and move toward dedicated seats with distancing protections
- Develop circulation and directional protocols, i.e. one-way hallway
- Monitoring space utilization in real time to trigger alerts of pre-determined targets
- Improved signage with enclosed spaces (meeting rooms, rest rooms etc.) and current occupancy levels

COLLABORATION

- Balancing office and remote work while providing technology to support either requirement
- Technology tools to support either in-person or virtual requirements
- Collaboration tools and technology without sharing resources or devices
- Neighborhood space layouts that can be easily modified to accommodate growth/ contraction

FINANCIAL INVESTMENT

- Investing in “post-Covid19” facilities in an uncertain economic climate
- Availability of Capex to retrofit existing layouts
- Developing financial priorities (automation, technology, cleaning, space)
- Remote work to drive reduction and/or elimination of office requirements
- Leasing strategies to accommodate flexing SF up/down faster to reduce financial risk
- Purchase options for core assets to capitalize on market conditions (landlord default, etc.)



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Facility Management & Maintenance

GOAL

- To provide high Level of health & safety to protect people and businesses while providing Valuable Reliable Supportive Facilities and Efficient Operations.

AREAS OF FOCUS

- Cleaning Protocols
- Preventive Maintenance Protocols
- Security Protocols
- Communication Protocols and Support
- Physical Space Utilization Tracking
- Asset / Building System Tracking Solutions

OUTCOMES

- Integrating Safety, Maintenance, Security, Building Systems, with Facilities Management Protocols and Stakeholders through IoT, AI, and Integrated Platforms
- Complying with CDC, Health, and Authorities Regulations and Recommendations
- Maintaining Positive Cash Flow by Managing Contracts with Existing/New Tenants, Low Operational Cost, and Retrofitting Investments



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Facility Management & Maintenance

CLEANING PROTOCOLS

- Corporate return to work strategies focused on janitorial work automatic alerts
- Use of sensors to track usage to aid in cleaning (cleaning areas that have been used vs. cleaning everything all the time)
- Inventory system to track cleaning supplies and tools
- Install touchless sensors at doors, restrooms, access/egress points

PREVENTIVE MAINTENANCE PROTOCOLS

- Use of sensor system regulate HVAC temperature and humidity levels based on CDC and authorities recommendations
- Inventory system to track equipment and physical maintenance supplies and tools
- Integrate facility's maintenance management solutions with preventive maintenance protocols to safely locate, inspect, and fulfill work orders requirements
- Use sensor systems that can also help monitor areas if supervision is limited i.e. water intrusion sensors to control any possible leaks or pipe breaks if onsite personnel is not available or in the area to address it

SECURITY PROTOCOLS

- Maintain /retrofit monitoring system to increase surveillance system
- Install RFID access points at locations that would require additional access points
- Increase WI-FI security requirements to secure facility's and tenant's data protection
- RFID access points also allow for touch-less entry/time stamped entry & exit, manpower counts. This system can also aid in mass communication in case a site needs to be evacuated or cleared due to any issues (tag will vibrate or beep)



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Facility Management & Maintenance

COMMUNICATIONS PROTOCOL AND SUPPORT

- Provide bandwidth capacity to maintain tenants WFH requirements and facilities requirements
- Maintain integrated direct communication system with tenant's and facilities crews

PHYSICAL SPACE UTILIZATION TRACKING

- Occupancy control - same cluster of people continuously so that you can track exposure if someone were to get sick - better to alternate weeks in clusters rather than days of the week
- Workplace sensor system to track space usage and 6 FT min. distance recommendation per occupant
- Use of sensor system to track personnel and visitors and to also see, in real time, their approximate temperature i.e. touchless system with IR thermal cameras at the entry gates along with the RFID tracking

ASSET / BUILDING SYSTEM TRACKING SOLUTIONS

- Use of sensors/scanning to detect and disinfect airborne contamination at common areas, elevators, entry/egress points



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Workplace Occupants

GOAL

- To provide tenants with the information, communication, and ability to work, reacclimate and operate in their workspaces as close to Business as Usual as possible in their new norms.

AREAS OF FOCUS

- Two-Way Communication
- Mobile Application Technology (Employee App+)
- Touchless Egress / Entryways
- Occupancy tracking
- Technology Enabled Workspaces (AV/IT)

OUTCOMES

- Employee apps, email and/or signage
- Amenity, seat assignment, location information & consistency of “rules” of the company & local ordinances
- Using and/or repurposing existing technologies
- Agile / hoteling



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Workplace Occupants

COMMUNICATION

- Manage cultural shift in how business is done via communication
- Email, physical signage, decals, LCD screens
- Changes in privacy, tracking requirements, anonymity
- Information on entry requirements, i.e. temperature checks, mask or glove requirement

MOBILE APP TECHNOLOGY

- Employee App to foster notifications, where they sit, incl. what common spaces and amenities are available for use
- Employee App to allow tenants to provide feedback on space condition, cleanliness, FM work orders
- Interactive, liaison between end user and the facility
- Report violations of rules / social distancing
- Change management for new way of working/ how space is now being used
- Coworker locator function on app

TOUCHLESS ENTRY

- Touchless Building Check-In (visitor management system, reception, virtual receptionist)
- Biometric entry into building: facial recognition, retina scan (DoD), fingerprint
- Elevator access to floor via hand swipe, automated via badge, phone app
- Automatic doors into tenant space (main office, bathrooms, and other high traffic areas)



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Workplace Occupants

TECHNOLOGY ENABLED WORKSPACES

- Touchless & seamless wireless / technology for audio/video conference projections, activating screen projection automatically
- Holograms for virtual meetings
- Provide technology supporting both home and work environments

SPACE NAVIGATION

- Information on how to navigate space: what is open, where can (or cannot) tenants sit and migrate to, where are team & collaborators sitting
- Reception – interaction: virtual or in person
- Space Occupancy: Use of sensor system to track personnel and visitors and space usage
- More hoteling, agile space

AMENITIES

- Enabling Access to Food & Beverage: cafeteria, delivery, pickup, pantry rules, where is the coffee?
- Mail: Protocols for pickup of mail, how mail was handled (and/or sanitized)