xdesign

Pandemic Workplace Planning

Charting a course forward.

APRIL 2020 v1.02

Index.

Pandemic Workplace Planning.

Our guide has been directed by the most up-to-date research on the nature and lifespan of the virus, as well as the most advanced strategies, equipment and materials on the market to combat it. We will run through our process, the difficult choices before us and our suggested solutions. Let’s get started.

Introduction.

Workplaces will be a critical battleground in the fight to end the pandemic.

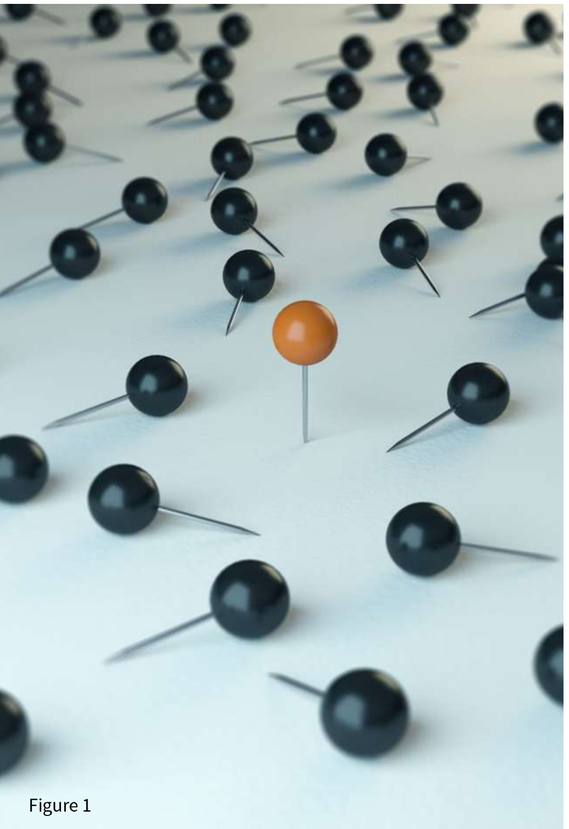


Figure 1

If you are reading this then you already know the seriousness of the situation. Until a vaccine is available, ***nonpharmaceutical intervention**** is the most effective method of combatting the spread of COVID-19. This guide is a resource to anyone responsible for the operation of an office workplace to assist with the planning and implementation of changes required to make a safe space for you and your team.

We do not have all of the answers yet.

There is no clear-cut path or roadmap to guide us. There is no *right* way. With an influx of contradictory and unsubstantiated information, we focussed on the most current factual and pragmatic approaches to the issues of this transitional period. We feel strongly that we cannot simply specify our way out of this problem, but need to work collaboratively within every layer of the process to truly understand the obstacles, while providing actionable ideas.

This guide is a live document which will be updated as new information becomes available. Make sure you have the latest version by visiting the link below. We will be updating both this guide and the resources list on a regular basis.

XDESIGNINC.COM/PANDEMIC

Hello.

UNCERTAINTY IS A QUALITY TO BE CHERISHED, THEREFORE—IF NOT FOR IT, WHO WOULD DARE TO UNDERTAKE ANYTHING?

Auguste Villiers de l’Isle-Adam

THE PROCESS

How we got here.

Risk Assessment
We had to ask the difficult questions—is this even possible? Do the risks outweigh the benefits?

03

Refining the Strategy
We decided a gradual, phased approach made the most sense given the ebb and flow of the COVID-19 curve.

04

Internal Survey
Our strategy and approached is fueled by our very own team—their concerns, questions and values with regards to transitioning back to the workplace.

02

05

Methods of Physical Intervention
Extra care was invested in researching the most effective methods of separation, materials, furniture and planning strategies to maximize occupant safety.

Getting all the Facts
We made sure that our solutions were backed by the most current scientific research on the nature of the virus.

01

06

Prescriptive Path
Our solutions are not final and they are not for every workplace—they are a stepping stone to transitioning back to normalcy, while mitigating the spread of the virus.

The results.

DURING OUR PROCESS

This is what we learned.

The findings behind our solutions.

The Internet is currently swirling with a myriad of articles claiming factual evidence of existing COVID-19 cures, unproven methods of infection and everything in-between.

Our team used up-to-date, validated research presenting us with the most viable information about the nature of the virus to help us predict how it will interact in enclosed spaces, its lifespan on surfaces, aerosolization and what role a vaccine can play in all of this—in order to incorporate preventative measures within the workspace.

COVID-19 lifespan

The characteristics of this disease and how it interacts with materials and surfaces are somewhat known. We need to plan around these realities. Existing solutions which may protect against bacteria are not applicable to dealing with a virus.

Role of HVAC

The virus can be transmitted through expelled droplets hanging in the air. The fully enclosed environment of most workplaces makes this a serious concern, but air exchange and filtering modifications are not effective against the virus.

Physical distancing

The most impactful tool we have is that of staying physically distanced from each other. Being apart is fundamentally difficult for humans, so finding ways of being together, but safely, is going to be paramount.

The vaccine

Until there is a vaccine and a subsequent herd immunity of 95%, we will have to continue safety mesaures in all aspects of our lives.

Have you considered the question?

We are currently living through the largest alternative workplace strategy experiment in history. It provides an unprecedented opportunity to reconsider the fundamental reasons for the need of a shared workplace.

Space affects us at a sub-conscious level , contributing to our emotions and perceptions both positively and negatively. Considerate office design can not only contribute to productivity but in supporting the mental and physical health of your team as well. So in a lot of ways it is also here to stay.

Before building a back to the office plan, review with your team the key elements of the office they miss, they need, and what they have been happy to do without. *See our team results on the next slide.*

Using survey tools and a simple SWOT analysis creates a map of the concerns and opportunities your team is seeing.

In-house research.

WE ASKED OUR TEAM

What do you miss most about the office?

Collaboration
Unexpected collisions and inspiration of other peoples' work.

Accountability
Avoiding 'home' distractions, team building and communication.

Socialization
Work friends, social connections to other people, mental health, work/life balance.

Infrastructure
Logistics hub, storage, library, servers and IT equipment, local business connections, financial investment in space.

Ergonomics
Physical health, dining room table not as good as my desk, task chairs.

Knowledge Transfer
Knowledge sharing, teaching.

Planning stages.

Returning to work will correlate with the current outbreak severity.

Plan for phased roll-out.

In a pre-vaccine/immunity reality, workplace operations will continue to be viewed as in one of three stages.

The timeframes of these stages will be weeks, months, or years. Optimistic vaccine timeframes see vaccinations available within a year.

This guide is focused on a pre-vaccine business environment.

Plan for retreat.

Regardless of the overall timeframes of beating the disease, we know that outbreaks and resurgences of the viral infections may still occur.

Planning will have to be in place to pivot backwards to a safer status should the need arise.

1

Lockdown: Teams are working remotely. Workplaces effectively off limits. Essentially support personnel only have access to office space to maintain infrastructure to support remote work.

2

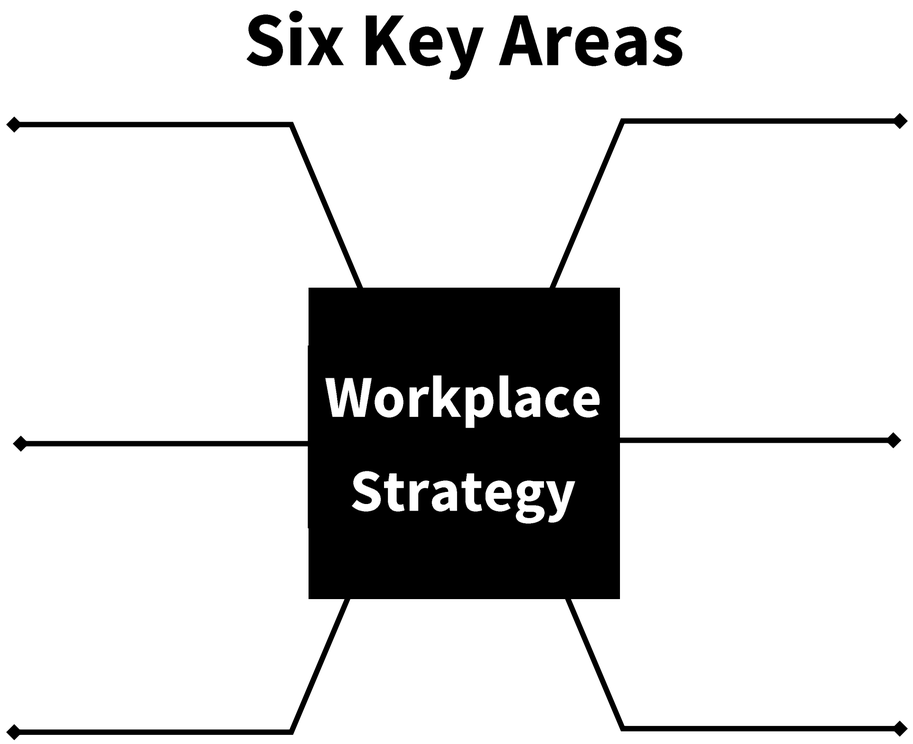
Critical Access: Workplaces are opened to no more than the maximum number of staff as determined by social distancing requirements. This first wave of folks will only be coming to the office to complete tasks not possible while remote.

3

Expanded Access: Workplaces can be opened to more of the general staff, but still closed to visitors. Social distancing may be slightly relaxed in the workspace but with the caveat that detailed contact tracing and health tracking is being observed.

Components of a strategy.

A proposed approach is to break down the strategy into six interconnected parts.



Policy Development

Alternative work strategies, HR policy development, communication.

Occupancy & Space

Staffing needs analysis, space planning, facility augmentation.

Operational Changes

Maintenance adjustments, security, space usage guidelines.

Materials Selection

Remediation products, new planning standards.

Technology Impacts

Changes to internal and external technology platforms.

Mechanical System Impacts

HVAC and climate control system changes.

Policy Development

There has to be some new rules of engagement for your team.

All anti-virus workplace strategies hinge on a collective commitment to revised and new HR policies.

SECTION

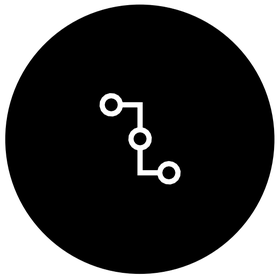
01

HR Policies.

Which policies may need to change?

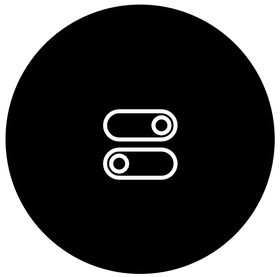
Office Health and Safety

Strict adherence to new workspace procedures from hand washing to routine maintenance.



Travel

Obviously business travel will be limited if at all. Also commuting for team members will need to be deemed safe.



Shift Working

Access should be broken into teams to limit cross-contamination and assist with contact tracing should it be required.

Work from Home Policies

Ongoing work from home guidelines need to be codified for the entire team.

Sick Policies

Even minor sickness should trigger an automatic work from home day at a minimum. Health tracking will be important across all teams.

Should I come to work?

Questions you should ask.

For all team members.

Team members with family members working in high risk industries will need to consider working from home in order to maintain company health.

Internally, processes of keeping track of employee well being and place of work daily will need to be in place.

Is it my shift?

You have been assigned an access day(s) to the office. Is this one of those days?

Can I accomplish my work from home?

How can I maxmize my productivity from home?

Am I healthy?

Even if I only have a sniffle should I risk passing it along? Will my sniffle make others uncomfortable?

Do I physically need to be at the office?

Does my work require me to be in the office, or is it because I mentally want to be there.

Pre-vaccine.

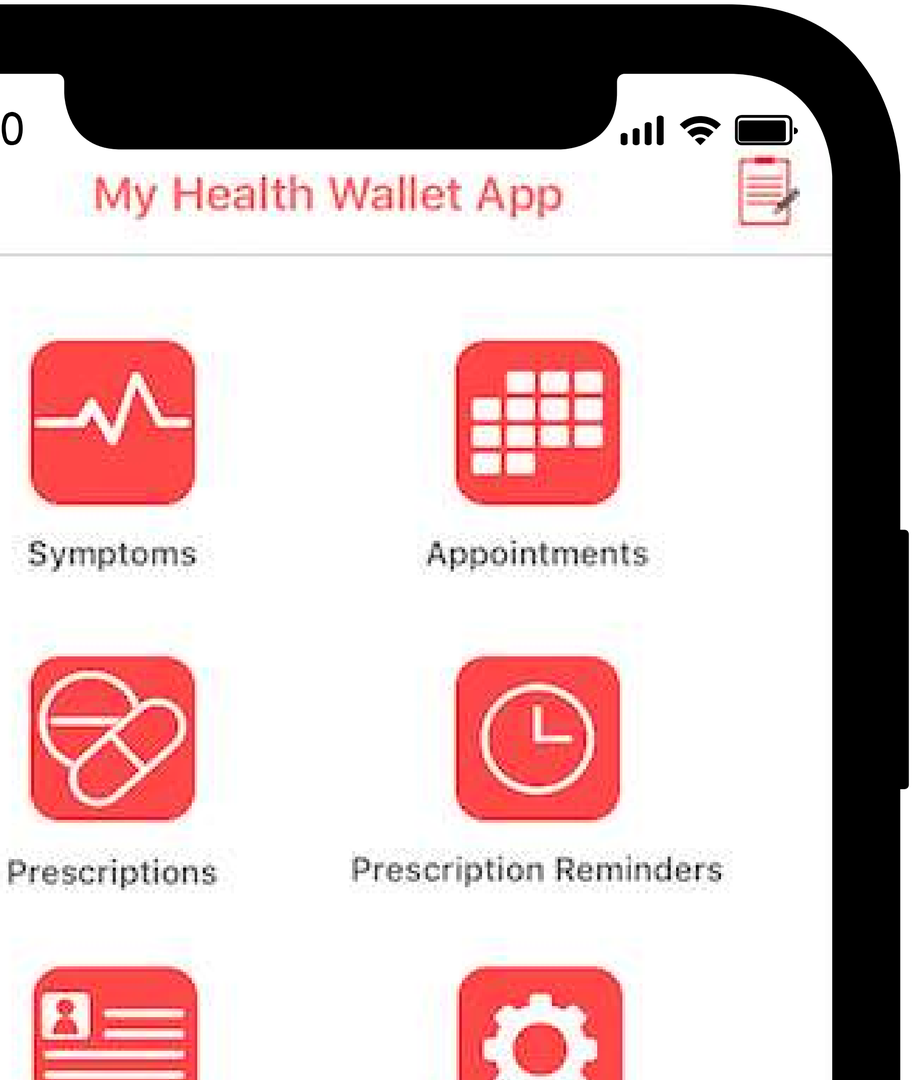


Figure 2

OUR WORK

When should you come to the office?

Only when required

Again, make sure there is a real reason to risk a trip to the office.

Keep track of transit use

Contact tracing is vital tool to understand if you may have been exposed or been at risk.

Plan your travel

Think about the most “touch-free” way to work as well as the least crowded way.

Ensure you have PPE

You should have and use a mask and gloves at a minimum.

Working from home.

Working from home will still be a part of our office culture as we gradually return to work.

Flexible Hours: You can create your work hours in the day, however must be available to communicate with your team members during regular office hours. The work week remains at 37.5 to 40 hours per week.

Policies: Items such as updating your status, sharing your calendar

Productivity: Choosing a space to work, proper chair, and communication

Digital Filing: Continuing to digitally file and maintain project records is key.

Meetings: Scheduled between 8:00 a.m. to 5:30 p.m. to respect time.

Working in the office.

Working at the office requires everyone's participation to ensure a healthy and virus free environment.

Follow all operations policies and procedures.

Ensure sanitary procedures are adhered to.

Follow all safety requirements.

Work with visitors to guide and enforce policies.

POLICIES

Sick?

If you are incapacitated due to any sickness, not just the symptoms of COVID-19, the same sick rules apply.

Discuss with Manager: If you are not feeling well for any reason, discuss your situation with a manager. You will need to work from home or get rest.

Sick Family Member: A sick family member may mean that you may be sick as well or they need your support Discuss with a manager how you can be supported.

A Team Member is Confirmed with COVID-19: In this case all team members who have been in contact with you including clients, vendors, etc. will be notified. A full quarantine plan will be put in place.

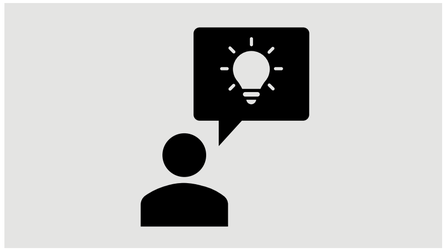
Figure 3

Site meetings.

Visiting a site and project meetings.

Our projects require us to visit sites to certify progress, troubleshoot and to evaluate existing conditions.

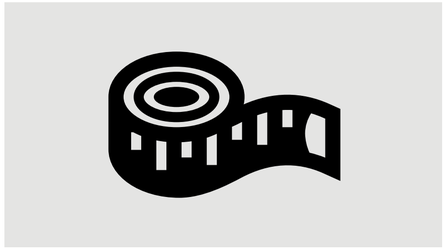
Procedures for site visits include common questions you should always ask yourself as well as participants to ensure safety is the first priority.



Confirm that a site visit is 100% required.

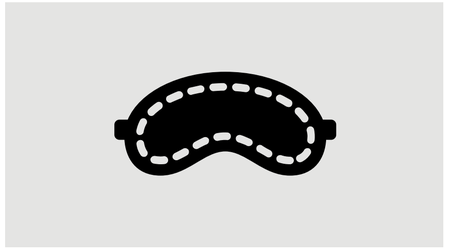
Can it be scheduled on a “non office day?”

Plan travel and route reducing cab usage.



Practice physical distancing, minimize people needed on site.

Follow the General Contractor’s guidelines.



Wear all required site equipment with additional PPE.

Change management.

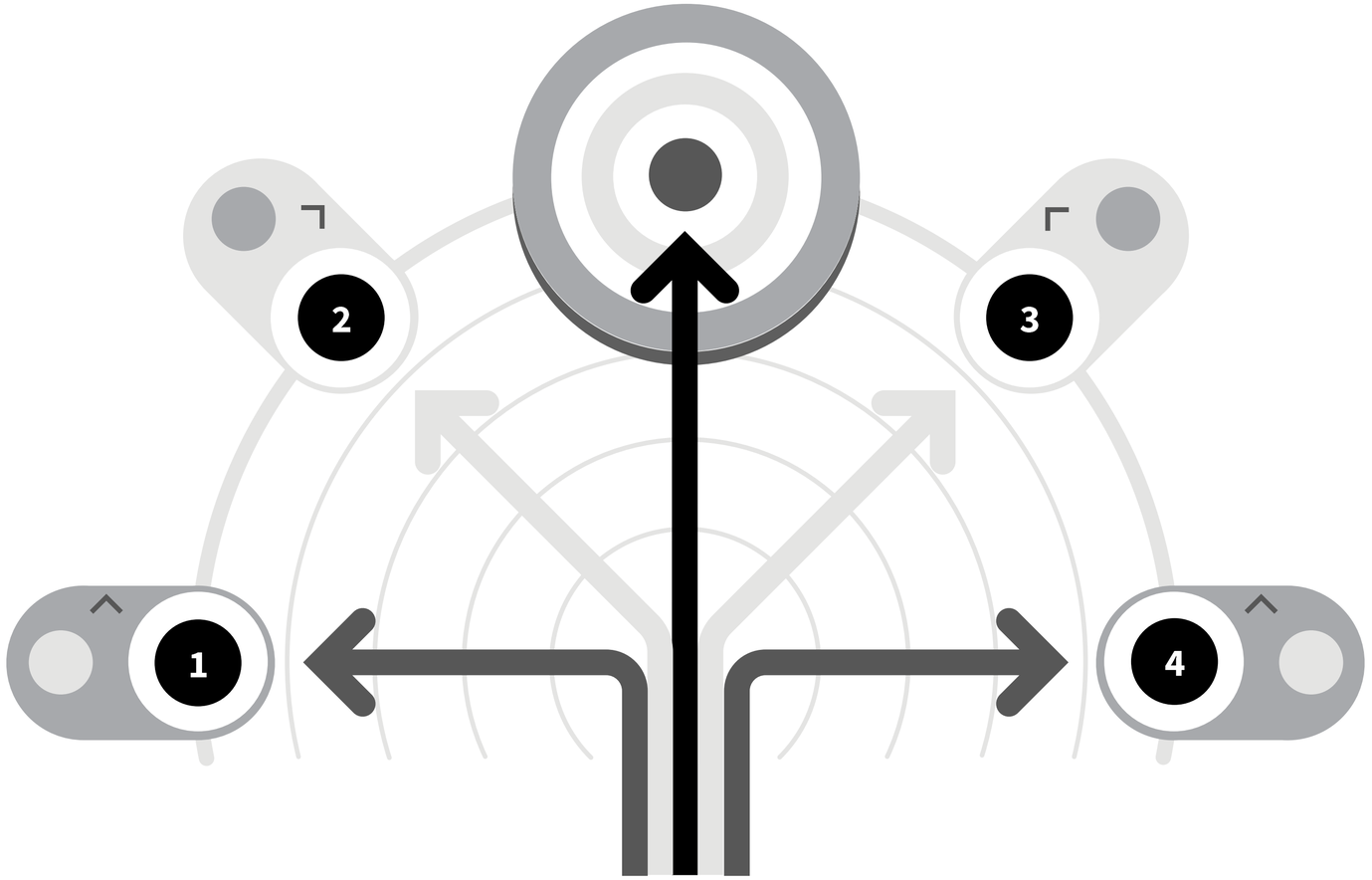
Communication addresses fear that may result from misinformation.

1. **Update**
   Ensure key community partners and stakeholders are updated regularly.

2. **Promote daily preventative actions**
   Ensure supplies are distributed as well as health messages to the team.

3. **Address concerns**
   Be prepared to address those who are at high risk.

4. **Provide information**
   Ensure protocols of on-site operations and services are explained.



Occupancy and Space Planning

We need to determine the maximum occupancy while maintaining safe distances between folks.

In a pre-vaccine workplace most businesses will find it safer to keep a cohort of their teams working remotely and only bringing in essential staff. In most cases the costly retrofit to add panels or separations will be unfeasible or will not contribute to the overall safety of the complete facility.

SECTION

02

Occupancy and space planning.

IN REVIEWING AN EXISTING FACILITY, REVIEW THROUGH THE FOLLOWING SIX STEPS

Critical dimension review
Dimensional review of entrances, corridors, work areas, offices, workstations, and meeting spaces. Identify critical short falls and limitations. Determine usable and constrained areas.

Occupancy planning
Identifying usable work settings, determine safe staff count of space. Compare to operational head count requirements. Difference will require alternative approach for accommodation.

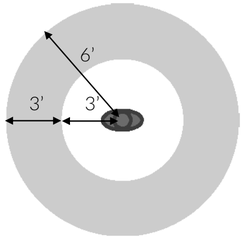
Traffic planning
Plan traffic pattern and safe path of travel. Identify safety and transition zones.

Work-setting standards
Development of existing furniture modifications, reconfiguration, or new standards development.

Sanitation station
Planning of sanitation/cleaning locations throughout space.

Graphic standards
Planning and development of instructional signage. Distribution of signage throughout space.

Seating configuration.

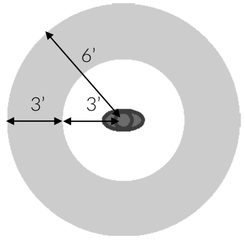
Symbol	Description
	Person with 6'-0" radius surround. Red indicates person at workstation. Blue indicates person at meeting space seating.

Total # of occupiable desk spaces = 20
(compared to 32–62% occupancy)

Total number of occupiable meeting space seats = 7

Indicates unused spaces.
Convert to storage or remove furniture and repurpose, as required.

Touchless locations and points of entry.

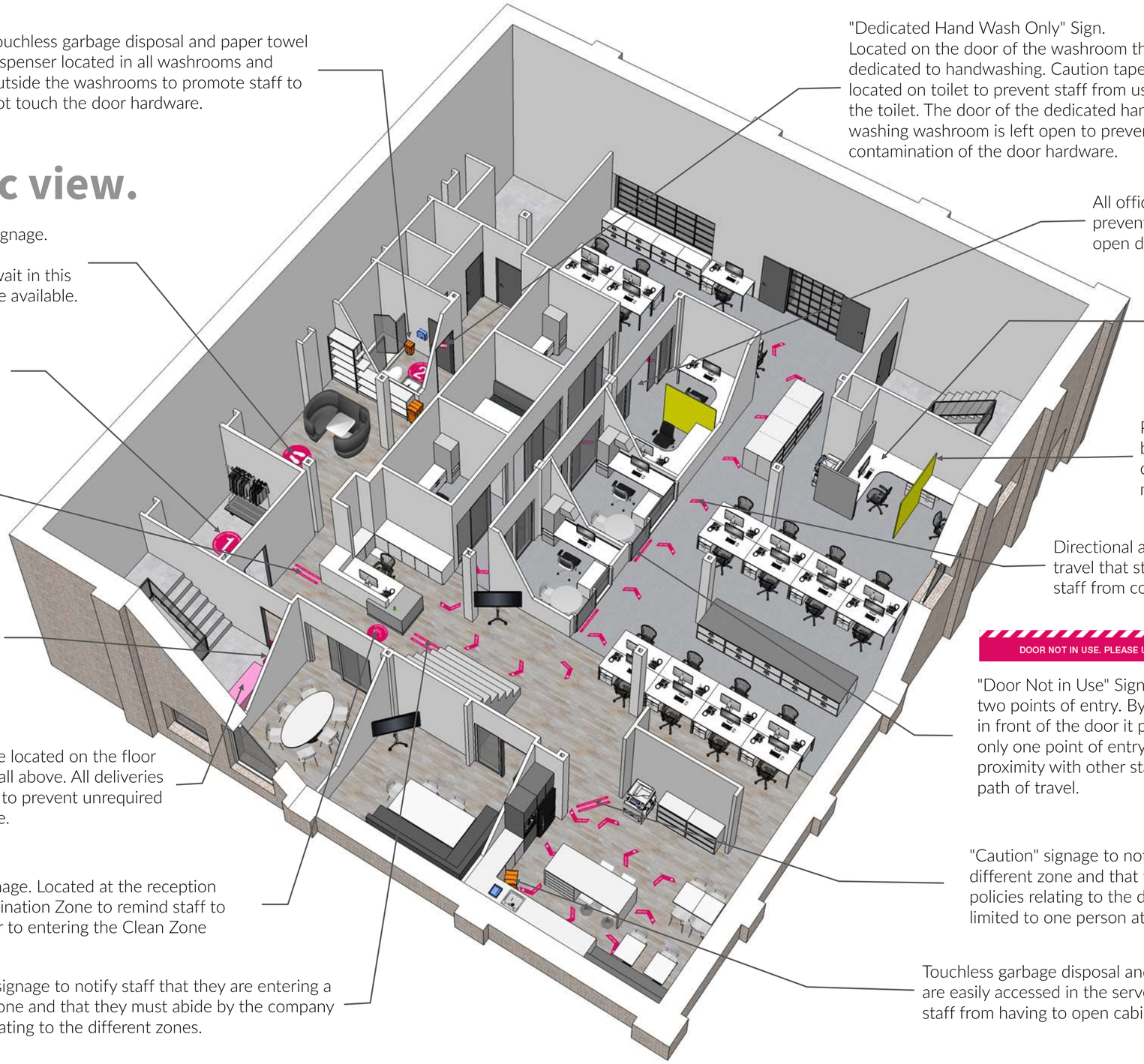
Symbol	Description
	Person with 6'-0" radius surround. Green indicates person entering the building or utilizing the facilities.
	Location of paper towels.
	Location of touchless paper towel, recycling and garbage disposal.
	Location of delivery drop-off.
	Location of hand sanitizer.
	Location of added privacy panels.
	Dedicated point of entry.
	Path of Travel.
	Dedicated point of egress.
	Location for a person to stop and wait if there is a person ahead.

Dedicated entrance and exit to encourage one direction of travel.

Zoning.

Symbol	Description
	Indicates unused space/cleaning supplies and storage.
	Indicates a Hot Zone. An area used by multiple people at separate times.
	Indicates a Transition Zone.
	Indicates a Decontamination Zone. An area where people must have their hands washed in the washrooms prior to continuing to the Clean Zone.
	Indicates a Clean Zone.
	Indicates a Neutral Zone.
1	Entrance/Exit for employees. All deliveries are to be left on the delivery table.
2	Coat storage. All coats must be hung up in this location immediately after entering the premises to avoid contamination throughout the office.
3	Reception Area. All employees must remove their coats and wash their hands prior to entering the Clean Zone.
4	Servery. Only one employee at a time is to use the servery. Prior to leaving, hands must be washed.
5	Cleaning and Supply Storage. Only cleaning staff are to enter this room.

Isometric view.



Touchless garbage disposal and paper towel dispenser located in all washrooms and outside the washrooms to promote staff to not touch the door hardware.

"Dedicated Hand Wash Only" Sign. Located on the door of the washroom that is dedicated to handwashing. Caution tape located on toilet to prevent staff from using the toilet. The door of the dedicated hand washing washroom is left open to prevent contamination of the door hardware.

"Please Stand Here" signage. When washrooms are occupied, staff must wait in this area until they become available.

All office and meeting room doors are left open to prevent staff from touching door hardware. An open door policy is used to prevent contamination.

"Coats and Personal Belonging" signage. All coats and personal belongings are to be left in this area upon entering the office.

Personal belongings and office supplies are removed from all desks and work surfaces.

"Caution" signage to notify staff that they are entering a different zone and that they must abide by the company policies relating to the different zones.

Privacy panel installed for additional separation between staff, increasing privacy and limiting contact. The privacy panel should be made from a material that limits the lifespan of germs.

Directional arrows to indicate the path of travel that staff are to utilize. This prevents staff from coming face to face with each other.

"Stop, Staff Only Beyond This Point" signage. Used at the front entry to prevent visitors from entering. The front door is left open to prevent contamination of the door hardware.

"Door Not in Use" Signage. Located on offices/rooms that have two points of entry. By closing one of the doors and moving furniture in front of the door it prevents staff from using the door. Utilizing only one point of entry prevents the potential of coming in close proximity with other staff members and forces users to only use one path of travel.

"Delivery & Pick-Up Zone" signage located on the floor in front of the table and on the wall above. All deliveries are to be dropped in this location to prevent unrequired personnel from entering the office.

"Caution" signage to notify staff that they are entering a different zone and that they must abide by the company policies relating to the different zones. The servery is limited to one person at a time.

"Sanitizer Station" signage. Located at the reception desk in the Decontamination Zone to remind staff to clean their hands prior to entering the Clean Zone

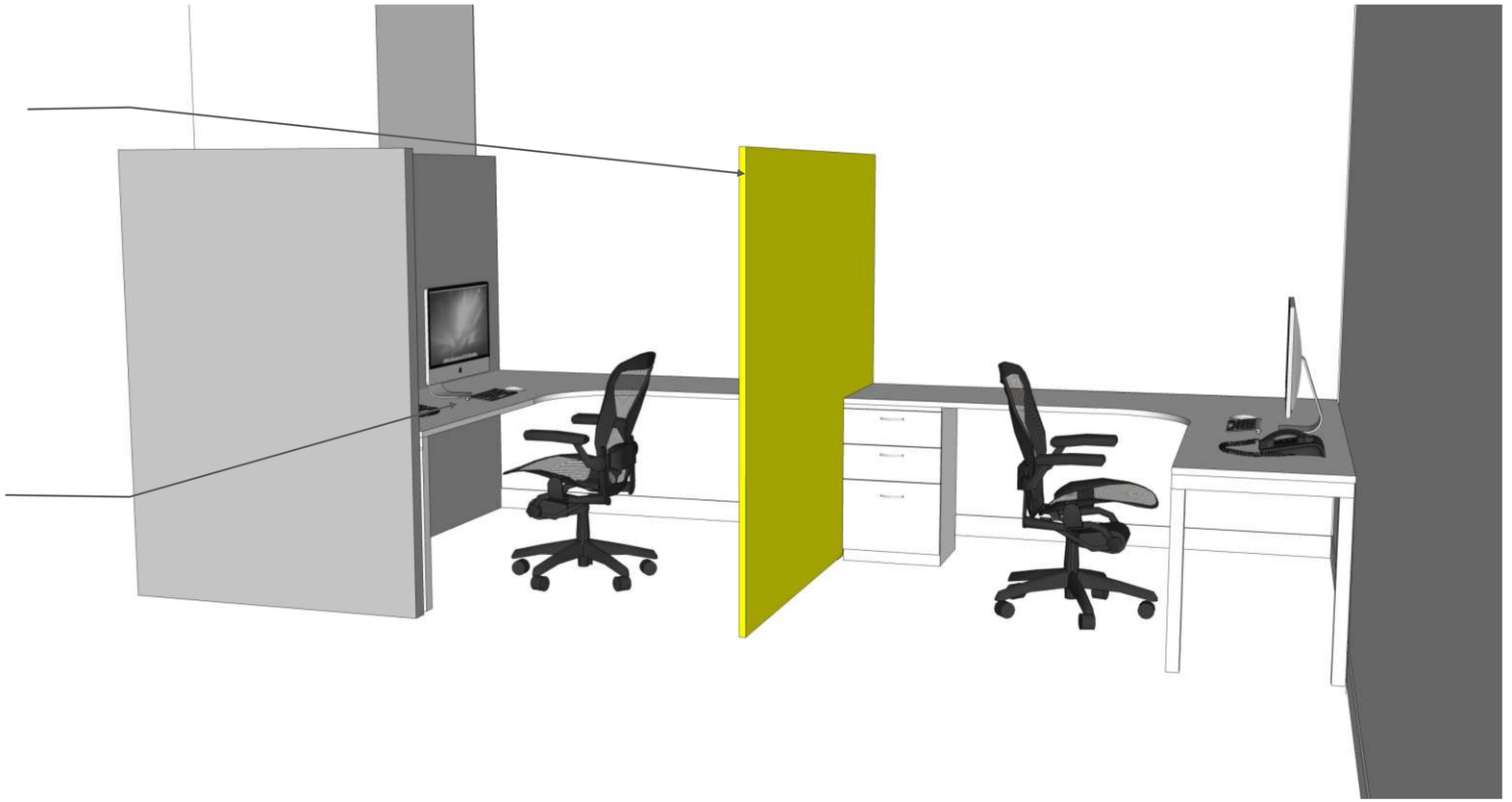
"Caution" signage to notify staff that they are entering a different zone and that they must abide by the company policies relating to the different zones.

Touchless garbage disposal and paper towels are easily accessed in the servery to prevent staff from having to open cabinets.

Workstation separations.

Privacy panel installed for additional separation between staff that are in close proximity to each other. By adding a privacy panel it increases an employee's personal space and limits the potential for the spread of germs. The privacy panel should be made from a material that limits the lifespan of germs, refer to page 33 for additional information on products and materials that limit the lifespan of germs.

All personal belongings are removed from desk surfaces to prevent contamination. Staff are required to leave all coats and personal belongings in the coat storage in the Transition Zone prior to entering the Clean Zone.



Floor/wall graphics and signage.

Used to indicate location of coat and personal belonging storage. This is the first area staff should go to prevent bringing contaminated items through the office.

Dedicated delivery and pick-up zone. Having a dedicated area that is properly located will prevent contaminants from being brought into the office.

DELIVERY + PICK-UP ZONE. PACKAGES GO HERE.

It is critical to create a definitive location which visitors cannot cross. Signage will make it apparent to visitors that they are unable go beyond a certain point.

STAFF ONLY BEYOND THIS POINT

Used in areas where staff are to wash their hands. These areas are considered Hot Zones because all staff members will be using these areas. Used in conjunction with the "Dedicated Hand Wash Only" sign.

The "Stand Here" signage is used to indicate where people can stand that is not encroaching on the suggested six-foot distancing. It is used at the entrance of the office to prevent multiple individuals from entering at the same time.

The "Stand Here" signage for the Hot Zone is used outside of the washrooms to prevent staff from standing in an area where personal distancing cannot be achieved.

Sanitizer station signage is used to locate hand sanitizer at the reception desk. This acts as a prompt for staff to remember to clean and disinfect their hands before entering the Clean Zone.

Directional signage is used to indicate the path of travel that staff are to take. This prevents people coming face to face with each other and makes it simple for all to understand what the flow of traffic should be within the office.

ENTERING CLEAN ZONE. DID YOU WASH YOUR HANDS?

DECONTAMINATION ZONE. MAINTAIN 2m | 6ft DISTANCE.

Floor signage that indicates when staff members are entering a new Zone are reminders of the actions that should be taken according to that specific area.

DOOR NOT IN USE. PLEASE USE OTHER SIDE.

ENTERING HOT ZONE. LIMIT ONE PERSON AT A TIME.

ENTERING HOT ZONE. MAINTAIN 2m | 6ft DISTANCE.

Operational Changes

Most critical to an overall strategy will modifications to your facility management routines.

Usage procedures, security, cleaning, and maintenance will all need to be addressed.

SECTION

03

How will we actually put people in seats?

What operational changes will need to occur?

Four steps for operations implementation

Reopening and then operating the office can be broken into four major steps.

1

Reconfiguration and Preparation: Before any staff return the facilities team will:

- Reconfigure furniture/space as required.
- Removal/storage of any excess furniture and equipment.
- Conduct deep clean of entire facility.
- Prepare new/revised office usage guidelines.
- Identify office availability Shifts and staff usage plan.
- Prepare and post signage and circulation floor graphics.
- Post final space plans identifying overall facility guidelines.
- Make adjustments to base building HVAC (if possible).
- Communicate to team what has been done and let them know the facility is ready.

2

Return to the office. Day one: When the office can officially reopen:

- Returnees confirm they have reviewed new policies and procedures before their return.
- Orientation packages ready for their return.
- Feedback collected at the end of the day to solicit any improvements and comments.
- Facilities team on site to review if procedures have been followed and to provide support.
- Staff clean all surfaces used before and after use. “Clean In/ Clean Out.”

3

Weekly Overview: What the weekly activities will look like:

- Access schedule: Shift One will be MON/TUES. Shift Two will be WEDS/THURS/FRI.
- Complete office cleaning scheduled for Tuesday night and Friday night (between Shifts).
- Each Shift should file/organize and materials at the end of their shift to assist with cleaning.
- Facilities and management team meet to review any issues and comments.

4

Continuous Improvement: The overall situation is not static:

- Gathering any feedback and comments from the staff will be critical to identify possible problem areas or opportunities for improvement.
- As external conditions change keep the staff updated with possible impacts to the workplace.
- Any revised or new policies and procedures which are developed will need to be broadcast out to the staff via the Pandemic portal.
- Conduct regular all-hands meetings (virtually) to keep the entire team apprised of the response.

Operational changes.

Guideline additions.

New habits will have to be built to work in the pandemic workplace.

Keep it clean

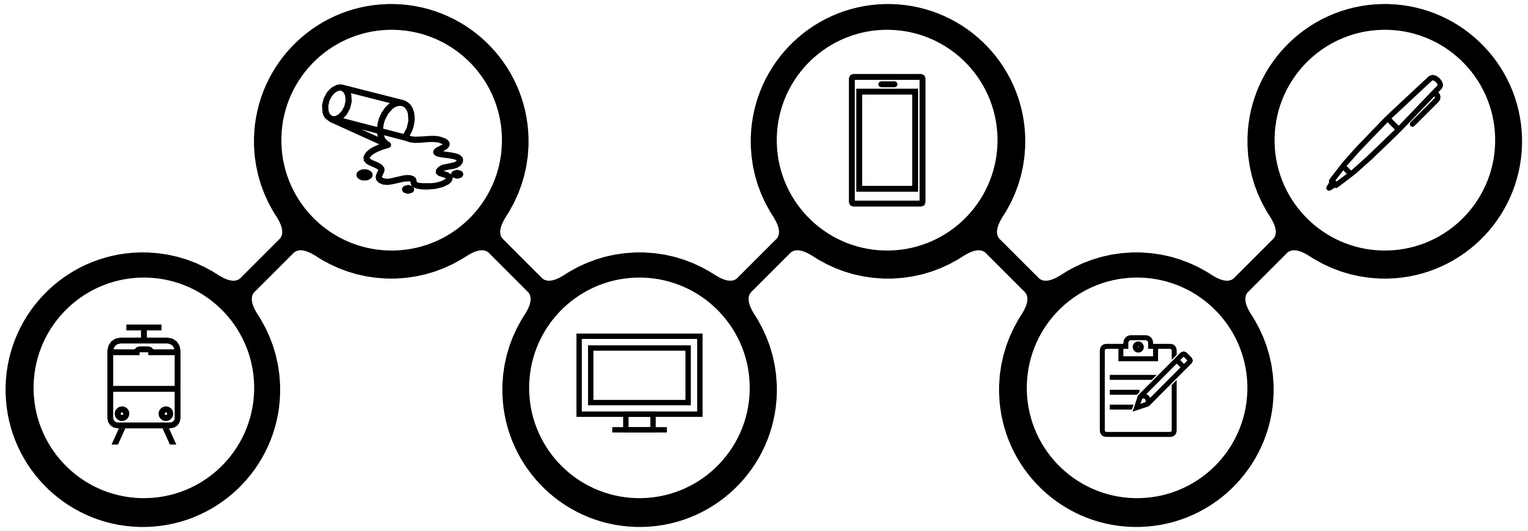
Everyone will be responsible to clean common elements as they go to ensure it is clean for the next person.

Phone

Ensure your phone is disinfected.

Stationary

Minimize and clean your stationary and writing equipment. No more pen holders on desks.



Transit

Route planning including allowing for flexible hours to avoid rush hours.

Workstation

Exercise a strong desk cleaning protocol daily. "Clean in/ Clean out."

Tracking

Sign-in/out sheets to be adhered to.

Material Selection

There are many materials and products which can be used to enhance the health safety of your workplace.

We believe that we will not be able to simply “specify” our way out of the danger this virus imposes. Carefully selected products will enhance safety in the office.

SECTION

04

Surfaces.

How long does the virus stay on materials?

According to a study conducted by the U.S. National Institute of Allergy and Infectious Diseases (Chung, 2020), the virus could be detected on the following materials for these prescribed time limits.

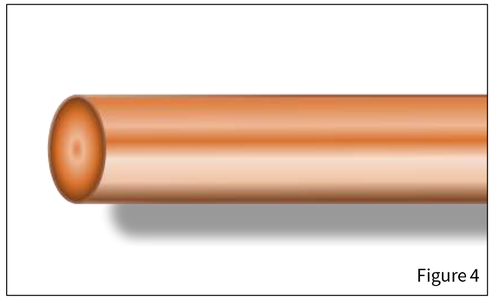


Figure 4

Copper
4 hours

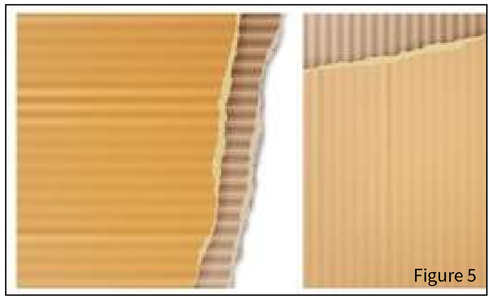


Figure 5

Cardboard
24 hours

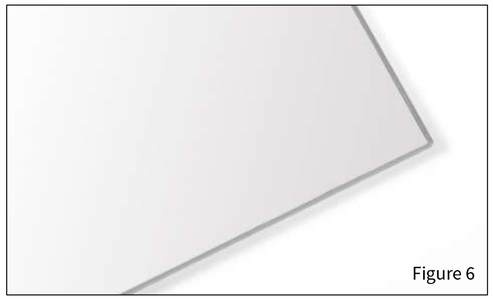


Figure 6

Plastic
72 hours


Figure 7

Stainless Steel
72 hours

According to an article by CBC (Chung, 2020), posted on March 25, 2020 and updated on April 1, smooth surfaces, such as metal or plastic are riskier surfaces, other than copper. Viruses generally don't survive as long on porous surfaces like paper or clothing.

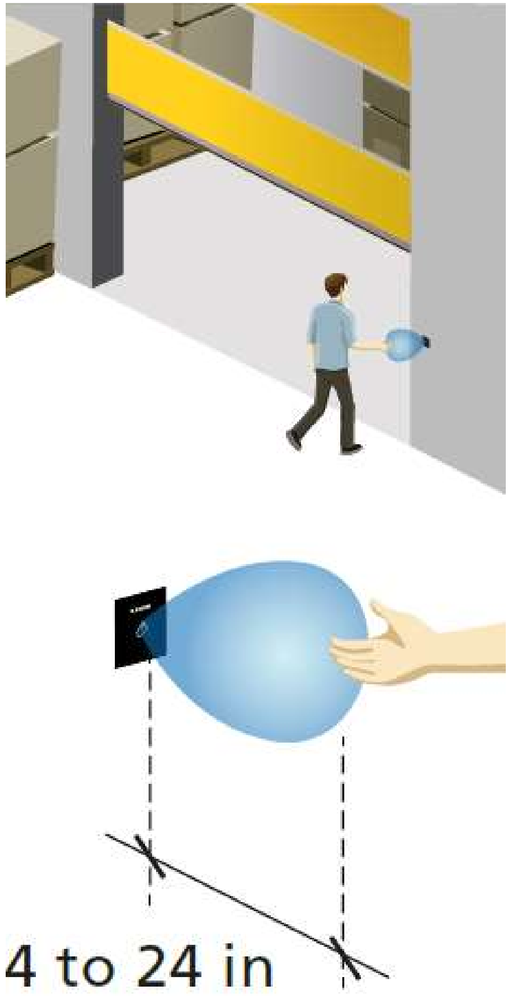


Figure 8

Entrance and exit hardware.

The materials and products presented here are just some of the options available to help us bring a sense of security to the workplace amid the Covid-19 pandemic and facilitate the transition back to the office post-vaccine.

Touchless Door Openers

Motion sensors with adjustable range sensors are typically be used for swing or sliding doors. Sensors can read hand waves, carts or wheelchairs and activate single or double doors to open. Designed to reduce the spread of germs and increase accessibility.

Exit Hardware

Push pads to exit spaces can be ordered in an antimicrobial finish. The antimicrobial coating inhibits the growth of bacteria, mold and mildew.

Technology evolves in tandem with our daily lives.

Reception.

Protecting your environment.

Figure 9

CLEAR SHIELDS

Entrance Portal

Using Far-UVC technology for a 10–20 second walk through, a standalone gate can be placed at any entry point, killing 90% of bacteria and viruses.

Reception Clear Shields

Acrylic shields with an access window Custom designed to fit reception desks and personal workspaces.

Lighting Sensors

Integration of wireless technology with new or existing light fixtures. Add a wireless ceiling mount sensor for retrofit or new construction.

Pulls and door hardware.

Materials and coatings can make a difference.

Figure 10

Figure 11

Door Push Plate and Pulls

Door pulls made with copper have natural antimicrobial properties, which continuously clean surfaces by killing bacteria. Copper can naturally kill 99.9% of bacteria within two hours when cleaned regularly.

Door Lever Hardware

Application of special coatings on doors levers can permanently suppress the growth of bacteria, algae, fungus, mold and mildew.

Washrooms.

Automated Dispensers
Soap, paper towel and sanitizer dispensers that are motion activated and battery operated.

Automated Hand Dryers
Compact models for quick dry with hygienic attributes that can capture bacteria in filters.

Automated Hand Washing Faucet
Battery operated and plug-in models available with sensor activation and ADA compliant.

Figure 12

Automated fixtures.

Touchless and automated equipment can assist in keeping surfaces clean and bacteria free

Servery and common spaces.

FINISHES

Preventing the spread of bacteria.

Note:
No evidence suggests that products treated with antimicrobials offer any enhanced protection from the spread of bacteria and germs.

Bin Disposal – Touch free with motion sensor and step can garbage bins.


Figure 13

Pull Hardware – Copper finish hardware pulls for millwork and cabinetry.


Figure 14

Faucets – Battery operated and plug options available in copper finish for bacteria protection.


Figure 15


Figure 16

Sinks – Copper sinks continuously kill 99% of bacteria within two hours.


Figure 17

Countertops – Quartz is hygienic , non-porous and resistant to staining and water absorption.


Figure 18

Fabric – Some textiles have antimicrobial properties, however no evidence shows that the virus remains on soft surfaces, such as fabric.

general office

Innovative ideas that create a healthy environment

Small Sanitizing Case

Communal or personal, this provides a quick and easy method to clean and sanitize personal belongings against bacteria.

Office Slippers

No outdoor shoes inside means switching to office slippers. Not too informal, however comfortable.

Mouse Pads

Not your standard mouse pad, but rather one powered by light, creating a continuously self-cleaning surface.

Desk Separators

Adding a panel to an existing row of workstations can be a quick solution for immediate physical boundaries.

Dividers

Ceiling hung dividers can provide protection from higher traffic corridors and common areas.

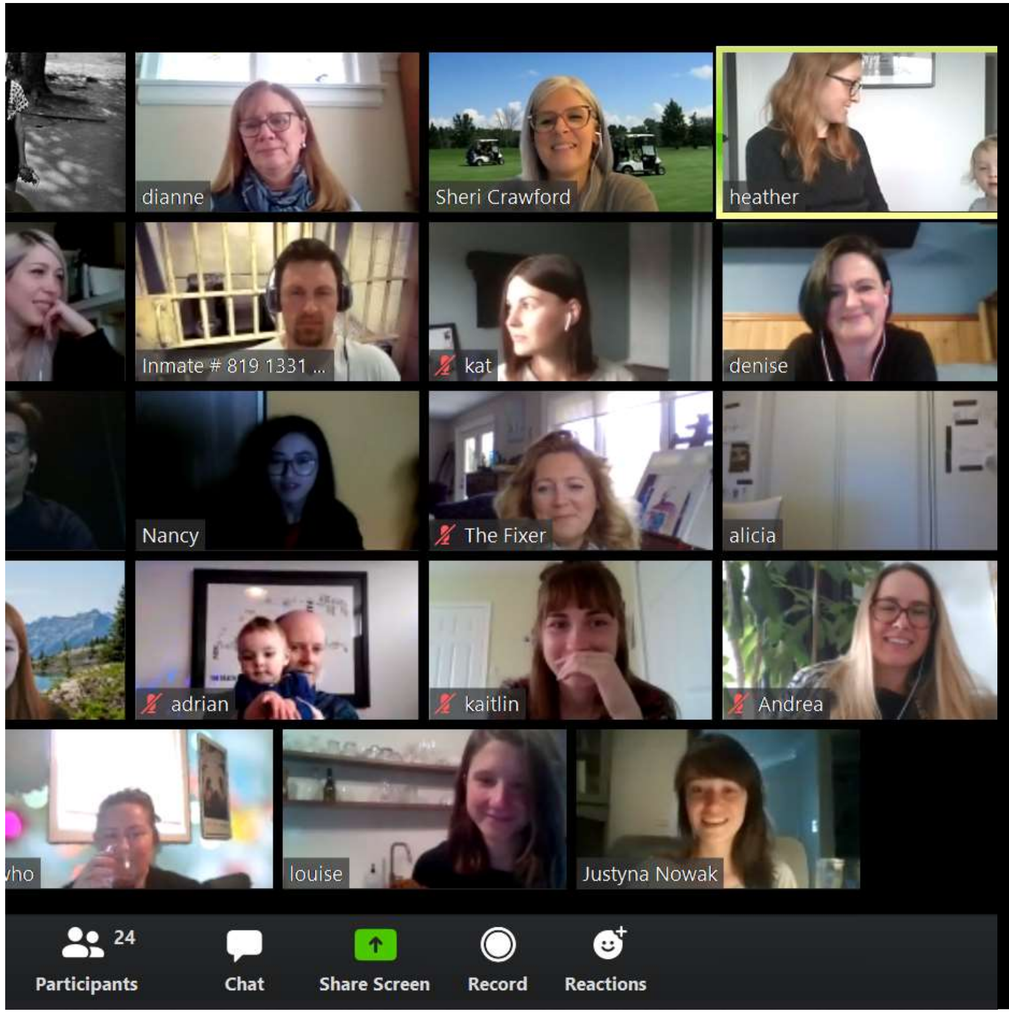
Technology Impacts

The rapid move to work remotely over the past several weeks has been unprecedented.

This has provided a crash course for team members to embrace an incredible amount of technology and software. The technology genie is (finally) fully out of the bottle and expect that the rate of change to only increase.

SECTION

05



SURPRISE, YOU'RE ON CANDID CAMERA

Video is here to stay.

Whether its Teams, Zoom, or Hangouts, you are seeing and hearing a lot from your coworkers lately. The success can really be measured by the fact of how quickly people have started coordinating family calls with grandma over Zoom.

The workplace impacts of this will be extensive.

- Everyone is their own broadcast facility. Home lighting, acoustics and bandwidth are all critical.
- Office spaces will need more elaborate media rooms to broadcast from1 to many.
- Security on any given platform willl be essential.
- Ongoing training and skills development will need to be integrated into a plan.

How will Technology Respond?

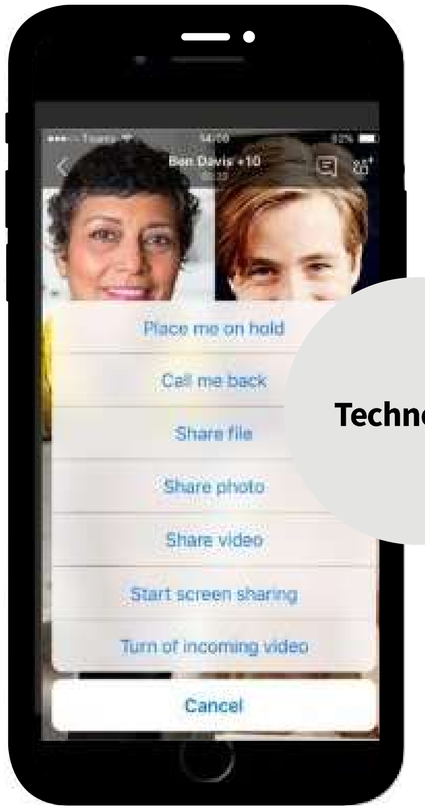


Figure 19

Technology

01 Access Control

02 Team Member Tracking

03 Security

04 Systems capacity

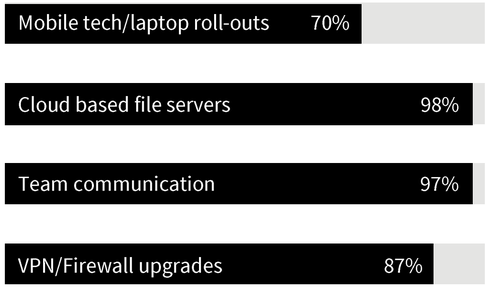
05 VPN + Remote Access

06 Verbal Interfaces

Digital Response

Technology has provided us the ability to remain connected during COVID-19 but how will it continue to change our working environment?

Technology Priorities 2020



Mechanical Systems

An airborne virus presents both a difficult technical and human perception problem.

Knowing that a microscopic organism could be floating its way towards you with the ability to harm you is something we are not used to in our workplaces.

SECTION

06

How mechanical systems will clean our environment.

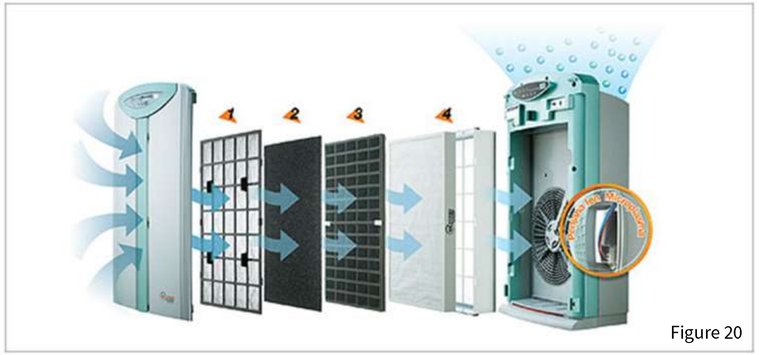


Figure 20

Does indoor air quality matter?

The question of whether COVID-19 can be transmitted through the air has sparked dialogue around improving Indoor Air Quality (IAQ) and possible changes to a base buildings main HVAC system.

As of the date of this publication, the World Health Organization (WHO) has stated that: “COVID-19 is mainly transmitted through contact with respiratory droplets rather than through the air.”

There is evidence that improving IAQ can improve human wellbeing and productivity, but we are not aware of any evidence that indicates improving IAQ by making changes to a base buildings main HVAC system will be effective against COVID-19.

Regardless, each building will hold its own challenges and opportunities to make changes to IAQ. The economic feasibility for most cases will not make changes possible.

Fresh Air/Air Exchange

The amount of fresh air to a workplace is mandated by code to meet certain minimum requirements. Adding additional fresh air to existing systems for a lot of existing buildings may be possible. Operable windows will also help if available.

Humidity Control

Studies on similar viruses have identified a possible band of humidity level (40% to 60%) which the virus may not like. Setting humidity levels to this is recommended where the controls exist within a building.

Air Purifiers and Filters

Purifiers and filters do not in themselves kill the virus. They can stop particles from being recirculated, but only after air has travelled completely through a space. Cleaning or replacing filters is a best practice for IAQ regardless.

Resources

ADDITIONAL INFORMATION

See the link for a list of resources.

xdesigninc.com/pandemic

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List of figures.

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