



# HEFMA training and development

## The Future of Higher Education Estates in the context of Covid-19 Pandemic

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# CAUSE

- SARS-CoV-2 belongs to the broad family of viruses known as coronaviruses.
- On 11 February 2020, the International Committee on Taxonomy of Viruses identified 2019-nCoV as a virus of severe acute respiratory syndrome—related coronavirus.

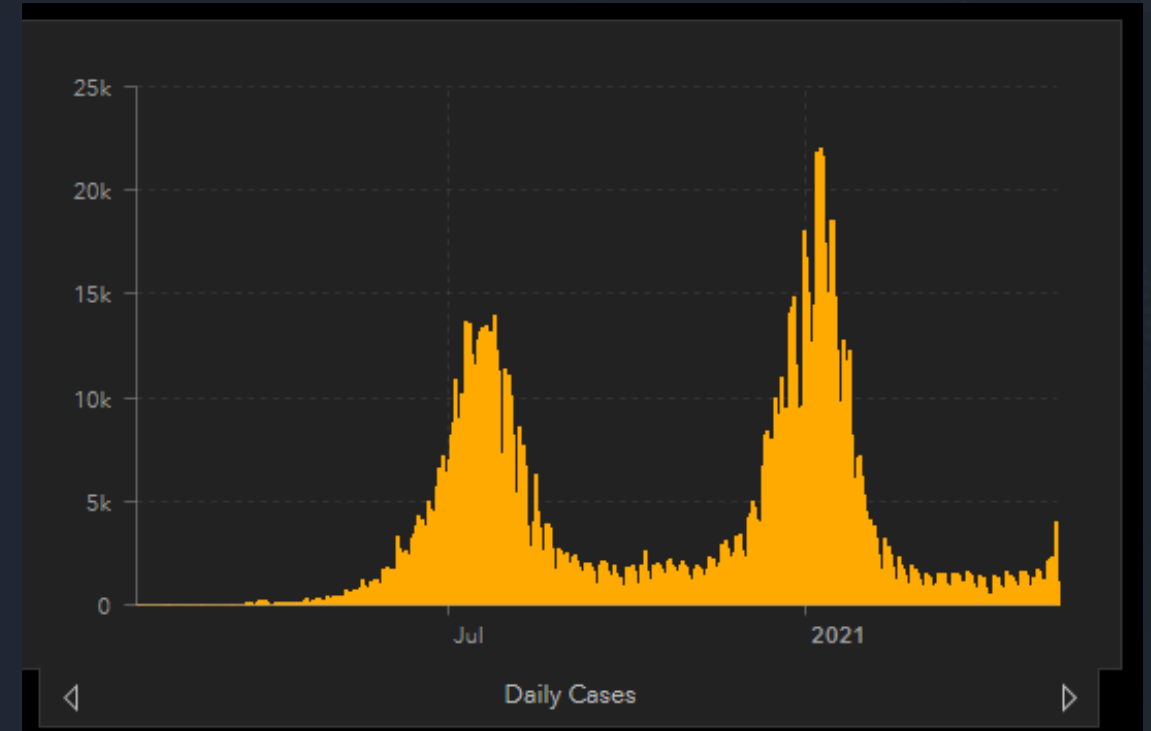
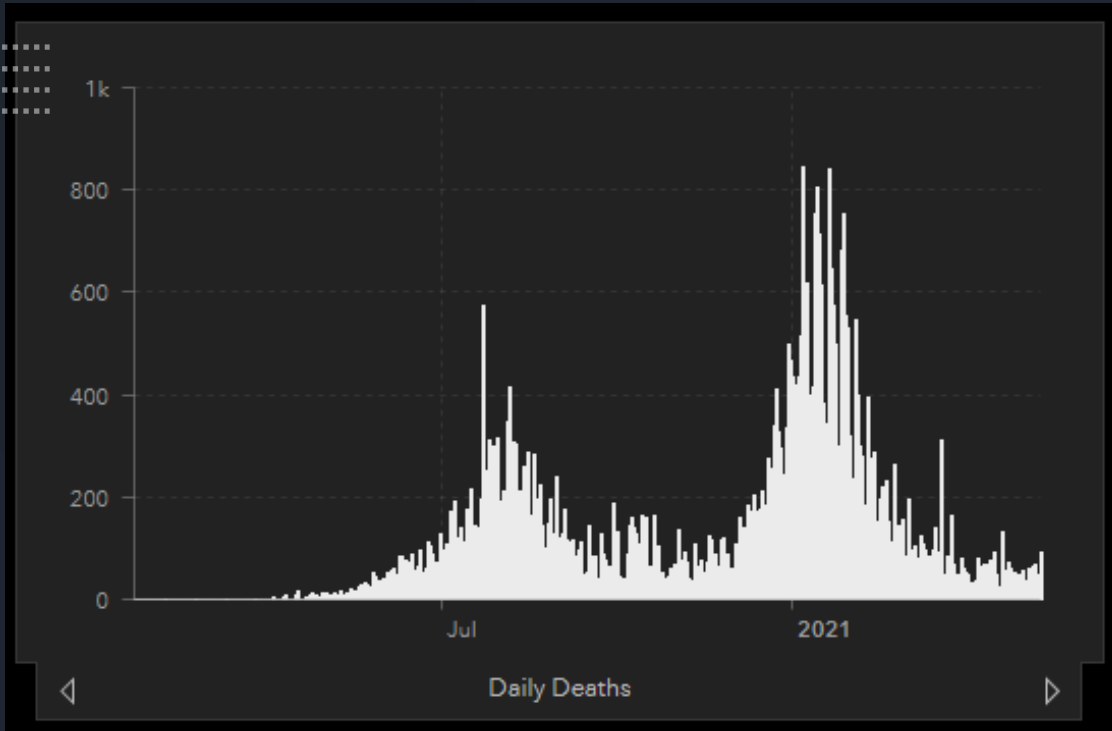
# COVID-19 PANDEMIC

## TRANSMISSION MECHANISM

- The virus is transmitted mainly through the respiratory route after an infected person breathes, talks, coughs, sneezes or sings. Those droplets may be inhaled or may reach the mouth, nose, or eyes of a person through touching or direct deposition (i.e. being coughed on).
- The closer people interact, and the longer they interact, the more likely they are to transmit COVID-19.
- Airborne transmission can particularly occur indoors, in locations that are poorly ventilated or where activities lead to increased exhalation (such as restaurants, choirs, gyms, nightclubs, offices, and religious venues). In those conditions small particles can remain suspended in the air for minutes to hours.
- The number of people generally infected by one infected person is on average between two and three other people.

# SOUTH AFRICA INFECTION AND DEATH RATE

- <https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>



How Long Can  
SARS-COV-2 LAST?



**Plastic**  
3 – 7 Days



**Stainless Steel**  
3 – 7 Days



**Wood**  
Up to 2 days



**Glass**  
Up to 4 Days



**Cardboard**  
24 Hours



**Copper**  
Up to 4 Hours



**Paper**  
Up to 4 days

# Can temperature and humidity affect the coronavirus?

- Viruses can be impacted by factors like temperature and humidity.
- Most corona viruses survive for a shorter time at higher temperatures and humidity levels.
- SARS-CoV-2 remained very stable when incubated at 4°C, however, becomes rapidly inactivated when incubated at 70°C

<https://www.healthline.com/health/how-long-does-coronavirus-last-on-surfaces>

# What about clothing, shoes, and floors?

- The stability of SARS-CoV-2 on cloth was tested and remained viable up to 2 days
- A study assessed which surfaces in a hospital were positive for SARS-CoV-2. A high number of positives were found from floor samples. Half of the samples from the shoes of ICU workers also tested positive.
- It's unknown how long SARS-CoV-2 can survive on floors and shoes.

<https://www.healthline.com/health/how-long-does-coronavirus-last-on-surfaces>

# Can the coronavirus live in water?

- It's unknown exactly how long SARS-CoV-2 can survive in water.
- A study found that coronavirus levels dropped by 99.9% after 10 days in room temperature tap water.
- The coronavirus that was tested was more stable at lower water temperatures and less stable at higher temperatures.

<https://www.healthline.com/health/how-long-does-coronavirus-last-on-surfaces>

# The bottom line

- The virus persists the longest on plastic and stainless-steel surfaces. It's less stable on cloth, paper, and cardboard.
- It's not known how long the virus can live in food and water. However, there have been no documented cases of COVID-19 that are associated with food, food packaging, or drinking water.
- Even though SARS-CoV-2 can become inactivated in hours to days, the exact dose that can lead to an infection still isn't known. It's still important to maintain proper hand hygiene and to appropriately clean high-touch or potentially contaminated household surfaces

<https://www.healthline.com/health/how-long-does-coronavirus-last-on-surfaces>



# GLOBAL STANDARD RESPONSE – NON-PHARMACEUTICAL

## **People behaviour change:**

- ▣ Communication/Education
- ▣ Physical separation / distancing / travel restrictions / lock-down
- ▣ Hand disinfection/sanitising and washing
- ▣ Wearing of face masks

## **Facility use/environment change:**

- ▣ Surface disinfection
- ▣ Minimising surface hand contact
- ▣ Limiting facility occupancy
- ▣ Controlling access and distancing
- ▣ Increased ventilation
- ▣ Technology enablers for work from home

# GLOBAL STANDARD RESPONSE – PHARMACEUTICAL/OTHER

## **Pharmaceutical/Medical:**

- ▣ Research
- ▣ Health/Medical infrastructure expansion
- ▣ Vaccine development

## **Supply logistics**

- ▣ Personal protective equipment
- ▣ Disinfectant / Sanitisers

# COVID-19 PANDEMIC

## PLANNING

Credit: International Facility Management Association

PANDEMIC MANUAL:

Planning and responding to a global health crisis for facility management professionals

(<https://www.ifma.org/know-base/coronavirus-preparedness-resource-center>)

# POLICIES & PROCEDURES

## **Reevaluate continuation and/or prioritisation of resource deployment:**

- Identify and train back up personnel for key positions
- Determine a skeleton crew by position (minimum staffing)
- Verify the cross-training of personnel; establish a goal of cross training to assure 100 percent redundancy
- Assess implementation of temporary alternative work schedules.
- Provide list of signatories with delegation of authority
- Establish methods of quickly communicating with building occupants/tenants, suppliers, service providers, and other key personnel

# POLICIES & PROCEDURES

## **Reevaluate continuation and/or prioritisation of resource deployment:**

- ❑ Determine any contractors who might be able to provide personnel or functional support
- ❑ Update the list of companies (and contacts) that share buildings, floors, and facilities with organization employees
- ❑ Establish policies for authorising office and building closure and re-opening
- ❑ Conduct a Facilities Department scenario with running your department with 30 to 40 percent staff absenteeism
- ❑ Establish and maintain periodic contact with landlords of the organisation's offices
- ❑ Investigate if there are any landlord/tenant issues in implementing any part of this Pandemic Plan

# CRITICAL FM SERVICES

## How to change operations and maintenance:

- ❑ Building access system
- ❑ Building leasing and sales
- ❑ Building sanitation services
- ❑ Building system maintenance
- ❑ Damage assessment and repair
- ❑ Emergency response operations
- ❑ Environment, Health and Safety reporting
- ❑ Food services
- ❑ Grounds' maintenance
- ❑ Mail collection and distribution
- ❑ Monitoring and management of controlled environments (data centers, clean rooms, server rooms, PBX rooms)
- ❑ Physical security and access control
- ❑ Office space relocation

# CRITICAL SUPPLIERS OF GOODS/SERVICES

## **Evaluate adequacy of supply, supplier diversification, logistical controls:**

- ❑ Antiseptic hand cleaners or alcohol-based soaps
- ❑ Antiseptic wipes and tissues
- ❑ Antiseptic or chlorinated cleaners
- ❑ Personal protective equipment (face masks, gloves, eye protection, head covers, smocks)
- ❑ Cleaning equipment consumables
- ❑ Waste baskets/liners
- ❑ HEPA Filters for HVAC systems
- ❑ Bathroom supplies
- ❑ Breakroom supplies
- ❑ Common area supplies
- ❑ Pandemic informational signs

# EMPLOYEE TRAINING AND AWARENESS

- ❑ Knowledgeable of the use, sanitising, and disposal of personal protective equipment
- ❑ Understand social distancing policies and practices
- ❑ Know how to maintain a safe workplace
- ❑ Educated to recognise flu/pandemic symptoms
- ❑ Understand organisation procedures for reporting pandemic-related symptoms
- ❑ Understand Human Resources policies regarding pandemic response
- ❑ Know how to obtain information related to the pandemic
- ❑ Have verified that they are able to remotely access systems, data, and other electronic records as needed



# EMPLOYEE & CUSTOMER PROTECTION

- ❑ Employees have been trained on pandemic prevention techniques to include cough etiquette, social distancing, and personal hygiene practices
- ❑ Employees are aware of interim policies specific to the pandemic
- ❑ Sufficient quantities and types of hygienic products are available to employees and as applicable, customers and visitors:
  - ✓ Soap or hand-cleaner
  - ✓ Disinfectant wipes
  - ✓ Protective masks and gloves
- ❑ Restrictions applicable to non-employees such as visitors, deliveries, and vendors are in place to limit the introduction of infected individuals
- ❑ Additional measures are in place to reduce the risk of infection, such as more frequent cleaning and sanitising of common surfaces and increased ventilation
- ❑ At-risk employees (those with chronic health conditions) are working off-site or have adequate separation from the general employee population
- ❑ Employees have been trained to identify influenza/pandemic symptoms

# COVID-19 PANDEMIC

## **OPERATING UNDER PANDEMIC**

Credit: International Facility Management Association  
PANDEMIC MANUAL:

Planning and responding to a global health crisis for facility management  
professionals

(<https://www.ifma.org/know-base/coronavirus-preparedness-resource-center>)

# RESUMING WORK FUNCTIONS

- ❑ Establish mutual support between multiple campuses
  - ✓ Departments that perform like or similar functions at multiple locations may provide mutual support by re-directing work to one another.
  - ✓ Rerouting voice and data communications may be required.
  - ✓ Internal and external organisations should be notified if work is re-directed to another location.
- ❑ Establish remote or work-from-home capability by providing employees with access to critical systems using remote access such as VPN or internet access to web applications.
- ❑ Establish work capabilities at an alternative workplace or third-party workplace
- ❑ Temporarily outsource critical work to third-parties

# COMMUNICATIONS WITH EMPLOYEES AND TENANTS

- ❑ Control measures (e.g., social distancing, cough etiquette, hand-washing, use of sanitary wipes, and similar items)
- ❑ Instructions on obtaining hygiene and sanitation supplies
- ❑ Building closures and/or access restrictions
- ❑ Temporary protocols applicable to managing visitors, deliveries, and others as appropriate
- ❑ Changes in Facility Management policies and practices (i.e., certain routine functions may be suspended, while others may occur specifically to control virus transmission)
- ❑ Other relevant procedures to be followed by building occupants

# FACILITY CLEANING AND DISINFECTING

- ❑ As frequently as practical, clean hard surfaces that are commonly touched by employees with a neutral detergent followed by a disinfectant solution.
  - ✓ Handrails / Doorknobs / Handles
  - ✓ Elevator buttons
  - ✓ Sinks and taps
  - ✓ Countertops/Windowsills
  - ✓ Light switches / Equipment controls
  - ✓ Vending machines
  - ✓ Copier/printer/fax control buttons
- ❑ Provide disinfectant soap in all bathrooms and break areas.
- ❑ Provide sanitising/disinfecting wipes to all departments and encourage employees to frequently (several times per day) sanitise surfaces that they are in contact with.
- ❑ Place sanitising/disinfecting wipes in company vehicles with reminders to wipe down steering wheels, knobs, etc.

# DINING ROOMS / CAFETERIA

- ❑ Place a sanitation station at the entrance to the dining facility.
- ❑ Reduce patron concern by posting information summarising the steps that the food service facility is taking to reduce pandemic transmission.
- ❑ Replace silverware with plastic wrapped, disposable eating utensils.
- ❑ Assign cafeteria personnel to continuously sanitise hard surfaces that are commonly touched by patrons.
- ❑ Suspend offering buffet line items that are open to employees and typically protected only by a sneeze guard.
- ❑ Alternatively, place buffet items behind a serving counter and assign cafeteria staff to serve the items rather than allowing self-serve.
- ❑ Suspend offering items that are prepared off-site under conditions that are not monitored by the company.
- ❑ Suspend offering items that are not cooked and are not pre-packaged (e.g., salads, fruits, raw vegetables, uncooked sandwiches, bakery items, etc.).

# KITCHENS / FOOD PREPARATION AREAS

- ❑ Train all kitchen employees on pandemic transmission and prevention measures.
- ❑ Require the use of rubber gloves, paper food service masks, and headgear by ALL food preparers at ALL times in the kitchen.
- ❑ Arrange for clothing worn by kitchen staff to be washed nightly.
- ❑ Frequently sanitise food preparation items (pots, pans, knives, cutting boards, and similar items).
- ❑ Soak implements in a bleach solution for 30 minutes (1 cup [250 ml] unscented household bleach to 20 litres of water
- ❑ Ensure delivery of food items is monitored closely to ensure kitchen contamination does not occur. Alternatively, do not allow delivery personnel in the kitchen.
- ❑ Cutting boards that are pitted, cracked or otherwise in poor condition should be discarded

# BATHROOMS

- ❑ Consider installation of motion-sensor activated soap dispensers, toilet flushers and paper towel dispensers.
- ❑ All bathroom doors must have reminders of the importance of hand washing and attention to hygiene.
- ❑ Ensure all bathrooms are adequately stocked with sanitising soap and hand towels. These will be depleted rapidly by employees and will require replenishing more often than normal.
- ❑ Frequently wipe down bathroom taps and fixtures.
- ❑ Increase the frequency at which wastepaper is collected and disposed of.



# GENERAL SUPPLY

❑ Obtain adequate stock of hygiene and sanitation supplies, such as:

- ✓ Neutral detergents (i.e., bleach)
- ✓ Disinfectants
- ✓ Hand sanitizer
- ✓ Disinfecting/sanitizing wipes
- ✓ Tissues
- ✓ Rubber gloves
- ✓ Face masks

❑ Antibacterial hand washing solutions such as hand sanitizers and sanitary wipes in all common areas, such as:

- ✓ Central locations within work areas
- ✓ Break rooms
- ✓ Bathrooms
- ✓ Lobbies
- ✓ Copy rooms
- ✓ Cafeterias
- ✓ Waiting rooms
- ✓ Training rooms
- ✓ Outside elevators

# BUILDING SYSTEMS - HVAC

- ❑ HVAC systems should continue running, increasing the amount of outside air and reducing the amount of recirculated air. Alternatively, increase ventilation in the workplace by opening windows, if applicable.
- ❑ Increase the frequency at which air-handling device filters are replaced and implement a coil cleaning protocol to improve indoor air quality.
- ❑ Consider using HEPA air filters to improve air quality.
- ❑ Cleaning and disinfecting HVAC coils:
  - ❑ Significant risk exists for pathogens to take root deep within these coils.
  - ❑ Coil cleaning makes it possible to both remove biofilms and kill any pathogens that may be present within the coils or underneath them.
  - ❑ Recommended use of hospital-type disinfectant, such as Chlorine Dioxide (ClO<sub>2</sub>) that is effective against coronavirus.

# SITE ACCESS RESTRICTIONS

- Identify any prerequisites to be met by employees and third-party service providers/vendors prior to entering restricted access sites:
  - ✓ Self-health assessment questionnaire
  - ✓ Personal protective equipment use
  - ✓ Medical evaluations
- Establish communications protocols for notifying employees when a building will be closed as well as re-opened.
- Identify access control support that can be provided from remote locations.
- Ensure all entrances to the affected facility can be effectively secured. Access to the facility should come through the main entrance only.
- Direct all incoming and outgoing personnel through the main entrance of the facility to assist in access monitoring.
- Ensure documentation of all visitors and personnel into and out of the facility

# SUPPLY CHAIN MANAGEMENT

## □ Continued evaluation of:

- ✓ Potential supply shortages resulting from the pandemic
- ✓ Effects of transportation disruptions on the supply chain
- ✓ Verify, as appropriate, excess stock of necessary supplies has been ordered, received, and stored in a secure location
- ✓ Assess pandemic impacts to suppliers and estimate ongoing supply chain shortages
- ✓ Identify alternate sources of critical supplies and services
- ✓ Execute contracts with alternate suppliers
- ✓ Establish arrangements for 24/7 communications with critical suppliers

## □ Supplier strategies

- ✓ Alternate suppliers - Identify other third parties that can provide like products or services.
- ✓ Establish contracting mechanisms prior to a disruption to expedite the procurement process.
- ✓ Service-level agreements (SLAs): Negotiate or purchase acceptable service levels that may be invoked in the event of a disaster. SLAs may include 24/7 emergency communications, service priority, and minimum response times.

# COVID-19 PANDEMIC

## **RETURN TO NORMAL OPERATIONS**

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professionals

(<https://www.ifma.org/know-base/coronavirus-preparedness-resource-center>)

# READINESS ESSENTIALS

- ❑ Prepare the Building: cleaning plans, pre-return inspections, HVAC and Mechanicals checks
- ❑ Prepare the Workforce: Mitigating anxiety, policies for deciding who returns, employee communications
- ❑ Control Access: protocols for safety and health checks, building reception, shipping and receiving, elevators, visitor policies
- ❑ Create a Social Distancing Plan: Decreasing density, schedule management, office traffic patterns
- ❑ Reduce Touch Points and increase cleaning: open doors, clean desk policy, food plan, cleaning common areas
- ❑ Communicate for Confidence: Recognise the fear in returning, communicate transparently, listen and survey regularly

# ISSUES TO CONSIDER & MONITOR

- ❑ Monitor local government re-opening guidance.
- ❑ Commerce, transportation, businesses, etc., will likely be implemented on a phase-in or transition-in basis.
- ❑ Under government guidance, re-opening will most likely include phases with criteria that must be satisfied before moving on to the next phase.
- ❑ A significant part of re-opening will most likely be facility disinfection.
- ❑ Employee testing for a period following re-opening. May need local health department guidance, inspection, and certification.
- ❑ Have policies in place for employees whose test results range from clean, to recovered, to infected.
- ❑ Social distancing will probably remain in place for an extended period after re-opening.
- ❑ Be able to provide masks, sanitiser, disinfecting wipes, etc.

# ACTIONS

- ❑ Develop and follow a defined schedule to manage the return to normal operations.
- ❑ All staff members and impacted tenants, contractors, etc., should be aware of the schedule.
- ❑ Inform all branch offices / campuses of the return to normal schedule.
- ❑ Enable supervisors to verify that functions can be performed effectively.
- ❑ Maintain elevated staffing levels while returning to normal operations, during the transition period the FM staff may be performing functions using both normal and alternate processes.
- ❑ Validate that systems are fully functional before ceasing manual contingencies.
- ❑ Communicate appropriately, internally, and externally when return-to-normal operations are complete.



# BUILDINGS/OFFICES REOPENED

- Common areas and equipment have been thoroughly sanitised.
- Sanitation and hygiene supplies have been re-stocked.
- Normal FM functions that had been suspended are reinstated.
- Building occupants are informed of any new FM procedures that may impact them.
- Third-party vendors and suppliers have been notified regarding when normal operations will be resumed.
- Employees have been notified of the return to normal policies if special policies have been instituted.
- Support services are available for FM employees that are reluctant to travel after restrictions have been lifted; or other remote work options are available.
- FM managers should consider that employees may face long-term personal and family care issues that impact or limit work capacity.
- Counseling or other types of support should be made available to help FM employees overcome reluctance to return to the workplace.

# SITE SAFETY & SECURITY

- Notify office campus occupants if safety and/or security systems have been disrupted (coordinate communications with FM Director).
- Provide interim safety/security instructions. Institute necessary work restrictions.
- Post access control personnel to prevent entry into hazardous or unauthorized areas.
- Validate that critical safety and security technologies are working (systems, video surveillance, badge readers); request technical support, as necessary.
- Confirm that fire, security, and life safety monitoring capabilities are functioning properly and are manned by qualified personnel.
- Ensure personnel resources are available to provide necessary access control.
- Ensure safety programs are being adhered to throughout recovery activities.
- If requested, re-establish medical services at an off-site location, or engage contracted medical support.
- Initiate an incident log to track and record injuries and illnesses related to the event.
- Evaluate opportunities to adjust air handling and/or ventilation systems to improve air quality or to control the spread of contaminants.

# ESSENTIAL BUILDING SYSTEMS

- ❑ Evaluate the status of all utilities supply
- ❑ Monitor the emergency standby generator(s) for proper functionality, fuel levels, load capacity, etc.
- ❑ Monitor HVAC systems for proper functionality.
- ❑ Validate that water, wastewater, and natural gas lines have not been damaged and are functioning properly.
- ❑ Confirm that building systems are working properly in controlled environments (data centers, server rooms, clean rooms, etc.).

# ALTERNATE WORK LOCATIONS & BUILDING SANITISING

## ▣ Alternate work locations:

- ✓ Coordinate with building tenants to assist with identifying and leasing/purchasing alternate workspace. To the extent possible, utilise unoccupied campus workspace
- ✓ Identify primary and an alternate contact for each tenant group or department. Communicate information about alternate workspace needs and relocation schedules with these contacts only.
- ✓ Assist in coordinating transportation and access to the alternate work location.
- ✓ Assign an FM staff member to monitor the group's needs, and to provide updates regarding the move back to the normal work location.

## ▣ Building sanitising

- ✓ Evaluate special sanitation needs on the campus. Re-assign staff or contractors as needed.
- ✓ Evaluate the need for PPE or special supplies.
- ✓ Emphasise the sanitation of restrooms, cafeterias, training rooms, and other common areas.

# MAIL SERVICES & SUSPENDED PROJECT

## □ Mail/ Courier services:

- ✓ Identify an alternate site for mail collection and distribution.
- ✓ Notify company management and building tenants of alternate mail processing procedures/instructions.
- ✓ As required by the nature of the event, initiate special mail handling procedures

## □ Suspended capital / construction projects

- ✓ Determine the status of capital or construction projects that were halted because of the pandemic.
- ✓ Each project will need a review as to its current status, what it will take to get the project started and moving, possible completion schedule, expected problems, and financial ramifications.

**END**

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