

DE-DENSIFICATION



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Workspaces Post COVID

DISINFECTATION



What works Post lockdown?

Post COVID -19, planning and preparation is on the charts, all companies are working on the strategies for safety of employees and prevent themselves from any liability arising out of it.

There is essentially one line of thinking which is buzzing around in the circuit; that is thinning down workspaces by increasing per sqft - per person ratio i.e "De-densification".

Since the existing facilities cannot be altered so fast and with businesses taking a hit, most of the companies will not have budgets to execute this concept, and that is why there have been talks of having graded opening, to start with lesser no. of people. The references have been made to initiate work with 25 percent of staff and then go up.

Also, for new projects, this seems far fetched. The economy will be hit for atleast for one year and will take atleast another year to recover, if not more. Ideas, which work against financial viability, will be a waste of time, putting efforts in. Increasing density would mean increase in rental cost and also the capital investment in the project. Actually, survival of many businesses will depend on, how lean they can become and operate with higher efficiency. And this concept of de-densification doesn't fit naturally into that thought process.



By Darpan Katyal

LONG TERM SOLUTION



When you are sharing the same space and working together in an air conditioned environment, it's very unlikely to not transfer infections.

For example, can we practice social distancing within our homes with our family and stay away from infections, unless we isolate ourselves in different rooms ?

Why and how do we get infections from our driver, who is driving the car with reasonable distance, while us sitting at the back & not inline?

How can we avoid people touching surfaces when it's said that virus survives for atleast 5-6 days?

We at "Urbane" feel, that we need to think innovatively and apply design thinking to mitigate this double edged sword. So we came up three prong approaches:

A combination of ●innovative layouts ● No/low touch design, along with ●disinfection & sterilisation of work environment is the viable and longterm solution.



INNOVATIVE LAYOUTS

While planning a new facility, we can through various layout techniques like **staggering, zig-zag, crisscross arrangements**, make people not sit in line and maintain required distance, without reducing the total density. Also, seating arrangement of people across, facing each other, can be avoided.

Having separators between adjacent workstations is another solution which can be done in existing facilities. Staggering by shifting pedestal alternatively and making people sit not inline, while facing each other, can make it more effective.

But the most effective way will be, to move from **open office system to suites or cabins** having 4-6 Nos. workstations and not put too many people together in one space. This way, we will be able to contain spread of any infection. To make this concept feasible, the design of Air-conditioning system also will have to change. The segregation of each room air space, is the key. System of FCUs (fan coil units), like used in hotel rooms, will provide easy segregation, without really reinventing the wheel.

The next two options are the ones, which are more relevant for handling the scenario post lockdown, as they can be integrated with existing facilities easily, and would turn out to be more successful & effective in controlling transmission of infections to public at large.

INNOVATIVE LAYOUTS



Alternate Seating



Zig-zag Workstations



Screen Division in Workstations



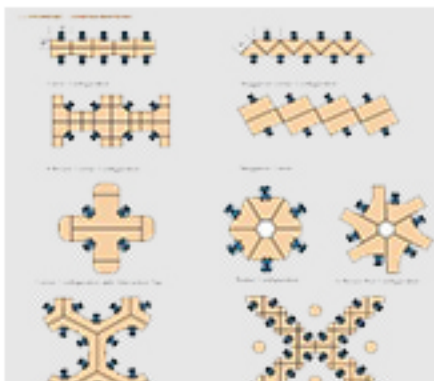
Zigzag Waiting with high screen



Linear Workstations with screen



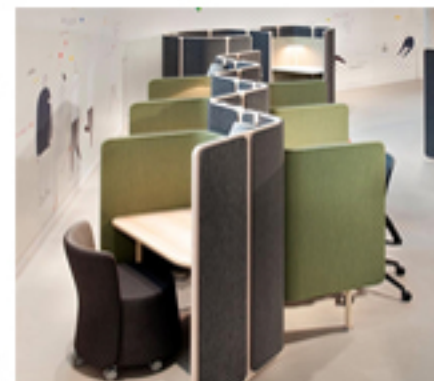
Waiting sofa with high screen



Soical Distancing Layouts



Criss-cross Workstations



Zigzag Workstations



Waiting pods with high screens



controlling transmission of infections to public

“LOW TOUCH NO TOUCH” DESIGN

All the equipments like coffee machines, water dispenser, printer/photocopiers, taps, soap dispensers, hand-dryers can operate through app, which could be downloaded by all the workforce and operated through their personal Smartphone. Even electrical switches and lights can easily be automated today, easily, without too much expense. Existing doors can be fitted with magnetic locks operated through the same app. There are technologies available with brands like Fibaro, which are more or less wireless and are designed for easy installation and integration, in existing facilities. This concept can be developed from “low touch” to “no touch”.

In newly designed facilities, all doors can be fully automatic, along with, all interior elements including blinds, AV system etc., designed **completely motorised/automated, operated through single automation app. Sensor based mechanisms** can be integrated for common areas to avoid people touching any surfaces. There are wireless sensing technology which can be easily installed and integrated in existing facilities. There are cost effective automation solutions available today, within affordable range.

LOW TOUCH NO TOUCH DESIGN

APP BASED



App Based Automation



Automated AC Thermostat



App Based Coffee Machine



Smart Microwave



Automated meeting spaces



Smart Landline



App Based Motorized Blinds



Smart Photo Copier and Printer



App accessible CCTV



Smart TV

LOW TOUCH NO TOUCH DESIGN

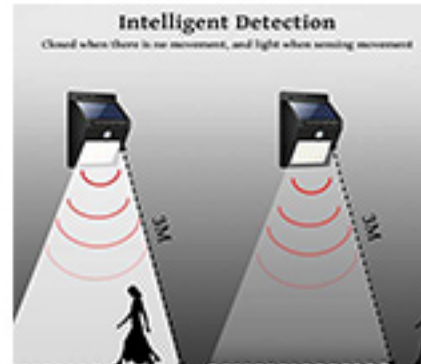
BOT & sensor BASED



Bot Based Automation



Sensor Magnetic Locks



Intelligent Lighting



Automatic Doors



Voice Recognition Hardware



Sensor Sanitizer Dispenser



Light Sensors



Sensor Based Water Dispenser



Sensor Soap Dispenser



Facial Recognition Smart Access

DISINFECTION

Our experience of health care projects like designing large hospitals along with, working on projects of high end labs starting from pharmacy/path lab to clinical & analytical research lab going up to animal houses, has given us knowledge & incite on designing infection free spaces. We have been trying to understand the outcome of our projects through the complete life cycle, over last 25 years of our practice. This has also taught us effective methods of housekeeping and maintenance, of these facilities.

The system of housekeeping & cleaning, comes first and foremost, for disinfecting the premises. The process of **vacuuming** and **steam cleaning** can give you completely germ free surfaces. Steam cleaning pretty much sterilizes the facility. It's easily available & quick solution. This can be done, as much as twice a day, without extra manpower or cost. The cheapest could be to clean the whole office with bleaching agent mixed with water. The other foolproof method is to use cleaning chemical agents which have disinfecting properties. But they should be carefully chosen with properties of **having low VOC** and also not harmful to the users. **Organic agents** are also available in this category.





STERILIZATION

Beyond this weekly sterilisation process can be followed, with fumigation being easiest and cheapest mechanism, to have infection free interiors. The **fumigation** of ducting system on weekly basis, can kill all the microbes breeding inside and for all those areas, which are inaccessible.

These practices, combined with strategic placement of sanitisers in each area & distribution of **face protection gear** instead of mask, can give effective results. Please remember that people tend to remove masks while conversing, and breathing for long periods becomes difficult. The face protection gear also covers the complete face. People have tendency to touch face & rub eyes, all the time.



INDOOR AIR QUALITY

To nip the problem in the bud itself, most of the commercial buildings will have to install disinfection tunnel, right at the entrance, which will have to work on agents which are apt for workplace usage and don't spoil clothes. All the workforce will have to be temperature checked, then disinfected, right before entering the premises.

"Indoor air quality for the well being of workforce" will become most important mantra. The systems will have to be designed comprehensively catering to three immediate problems which hurt us the most, in all big cities in India. These are; "indoor air pollution - infections - sick building syndrome".

The consciousness about fresh air design along with multilayer air filter system can cater to all 3 issues. The design of Airconditioning system itself needs to be based on dividing the airspace of offices, in sections/parts with independent return air is the most effective method, to stop large scale transmissions.

One has to understand that beyond direct transmission from the carrier, most of the infections occur through these microbes falling on surfaces and then getting transmitted through touch or air. These methods are far more viable and effective in controlling the spread of infections including COVID but are not talked about seriously.

DISINFECTION & STERILIZATION

INDOOR AIR QUALITY



Fumigation Machine



UV Robots

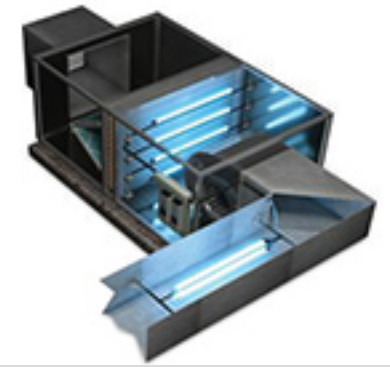


Steam Cleaner on Upholstery

Eco-Friendly
**CLEANING
PRODUCTS
& GADGETS**
To Kill Viruses & Germs



Eco-Friendly Cleaning Products



HEPA with UV filter for AHU



De-Fogging Machine



Steam Cleaner on Carpets



Organic Disinfectants



UV Based Stand Alone Air Purifier



TFA unit with MERV13 Filters

CAPPING & COVING

In newly built facilities, POST- COVID, use of **anti microbial** & **anti bacterial** finishes already used in healthcare spaces, will become a new norm for all the building typologies, especially office buildings.

In our sub-tropical climate, corners are the major source of microbial growth as they cannot be cleaned easily. "Capping & Coving" corners on the floor, walls and ceilings is a very effective design mantra followed in hospitals and labs and can be easily practiced in workspaces.



CAPPING & COVING



Ceiling Coved Corner



PVC Coved Skirting



Vinyl Capped and Coved Skirting



Aluminium Coved Skirting



Different Colour Skirtings



Wall Corners Coved Skirting

HEALTH INSURANCE

The employers, companies and co-working players will have to get health insurance cover for all the employees/users & insure themselves against any liability, arising out of spread of infections, within their premises.

The certification mechanisms is also not too far away and will become new norm for all public buildings. This will have to be updated on regular basis, to be able to function, without any hinderances.



The safety of employees and customers is already a major concern for most of companies to operate post-lockdown & any incident can become a operational hazard and a business risk. There will be huge spending by companies in retrofitting their facility and will use their reserves to not only become compliant to new guidelines but make sure that they stay away from the liabilities and fear of business shutdown, if there is any case within their facility.



This is new opportunity for fit-out companies which will require with in-house expertise & collaboration between Health care professionals -Architects - Engineers - Contractors- Technologist. Since our group companies, "Sky construction company" in collaboration with our design company "Urbane - the design workshop", already have in - house expertise available along-with our past experience in health care and R&D field; this provides us a perfect launch pad to introduce these services, within our Design & build portfolio. These solutions will be customized based on each setup 's need & budget, designed to be retrofit viable.

**"IN HOUSE
EXPERTISE"**