



COVID – 19, RESHAPING URBAN LIVES

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Abstract: Today, corona virus has forced us to take a hard look at our cities, again. High transmission reached out to urban designers and architects to re-imagine and decongest four key spaces of our lives: a classroom, a street market, an office and a congested residential area. The look at their designs and innovations. Implications for urban planning and policy arise from the COVID-19 crisis, shedding light on ways to address inequities, support vulnerable groups, and improve quality of life in cities in times of pandemics but also under normal circumstances.

Keywords– Corona Virus, Re-imagine, Office Spaces, Street Market, Congested Residential Area, Classroom.

I. INTRODUCTION

Crowding occurs when the number of individuals exceeds the space available, resulting in adverse health outcomes, such as infectious diseases. Crowding may be temporary or long-term, which impacts on the intensity and duration of exposure to pathogens and the risk of transmission. For highly infectious agents, even temporary crowding in public areas such as trains and buses can propagate an outbreak. The risk of transmission in long-term crowding, such as in densely populated urban informal settlements (slums), worker dormitories and prisons, is even higher and is often compounded by poor health and nutrition of the residents, lack of access to health care and inadequate water, sanitation and hygiene services. The study conducted to show some of the strategies to solve the problems in the post covid-19 city areas through the study of the public spaces like Office, Schools, Street Markets and Residential areas.

II. OFFICES: USING TECH TO BUILD A QUICK WORKSPACE

The workplace needs to re-evaluate priorities and be prepared to respond with swiftness and agility to the next big disruption. To minimise the transmission of virus and other bacterium to make sure employee health are first concern for all organisations. To that end, we've looked at how to rearrange the workspace to allow physical distancing, and using smart technology can go a long way in upholding this new concern. In a pre-Covid scenario, the open office plan that we worked with accommodating 50 people in the focused workspace with a total capacity of 120 people. It comprised six types of spaces:

- High impact like the reception – lent itself to face-to-face interactions
- Plaza (like pantry) – allowed free flow of movement
- Learning centre – where people would sit and collaboratively work
- Open and enclosed jump spaces – equipped with digital tools to allow teleconferencing and white boards to facilitate group discussions
- Focused work areas – accommodates high density of employees;
- Leadership work zones – for senior members of the company

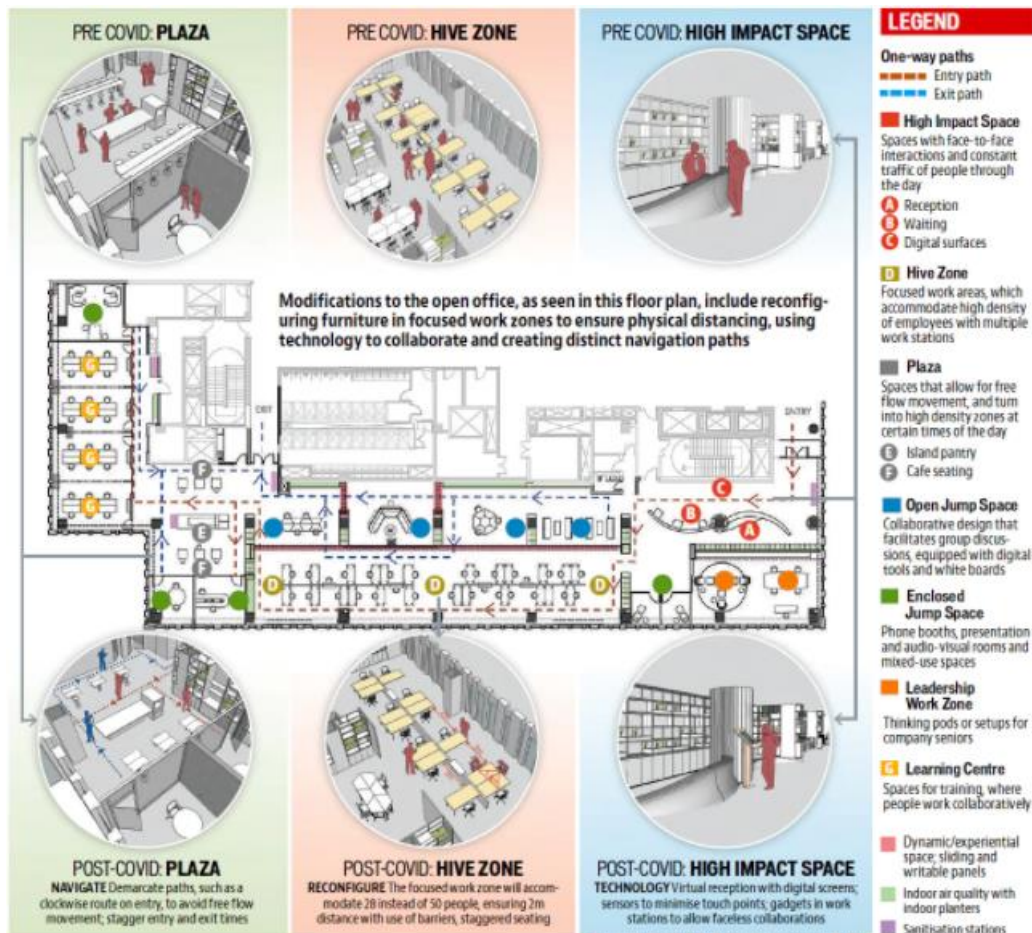
In the post Covid scenario, the rearrange open office will seat fewer people. The space allocated to each employee has larger workstations and higher partitions, in keeping with social distancing norms. Agile workspaces like five zones and jump spaces have been redressed.

- Close common and public spaces have made way for staggered seating
- Workstations are connected through digital tools that allow multiple users to work at the same time and attend video conferences from their own stations
- Sliding panels create active working and meeting spaces
- Single tenure phone booths have been provided.
- Technology implant in furniture allows workstations to be truly plug-and-play.

The reception, an area of face-to-face interactions, has been replaced by a virtual reception that relies on smart technology and digital screens to fetch information to visitors. Pens and pads, magazines, staple features of a reception, have been removed. Facial and voice recognition technology have been adopted for the attendance system. The carrying capacity of lifts, is reduced to a fourth.

Technology can also be used minimise touch points like blinds, light switches, and toilets. Simple sensor-activated lights, faucets and smart window shades can be used. Temporary Plexiglas partition can be installed at various check-in points and hand-sanitizer dispensers as well as Ultra Violet phone disinfect stations can be placed in plain view.

Navigation is another essential aspect to the new office plan. Office must stagger entry and exit times to ease congestion. Multiple shifts for lunch hour can be defined to control the number of people assemble near the pantry at a same time. Creating separate lanes for to and fro movement also decreases chances of transmission of Disease.



III. STREET MARKET: MANAGING CUSTOMERS WITH DIY, LOW-COST DESIGN SOLUTIONS

Pali Market in Bandra west is, to a large extent, a typical Mumbai experience. Unlike other market places with limited areas for different produce — a square for the fish traders and meat sellers; another for the vegetable vendors; a separate footpath for grocers and dry goods, and quite another path for clothes or plastics — this market includes everything from restaurants to a fruit vendors on a 200-metre stretch that connects St Andrews Road on one and Dr. BR Ambedkar road, on the other end.

With this market as the basis of our example, and using a strategic urbanism proposition we have developed economical, scalable and modular design interference that can be adopted in public places in unlike combinations.

We've visualize a grid of six-foot circles. Differently painted, they have separate usages:

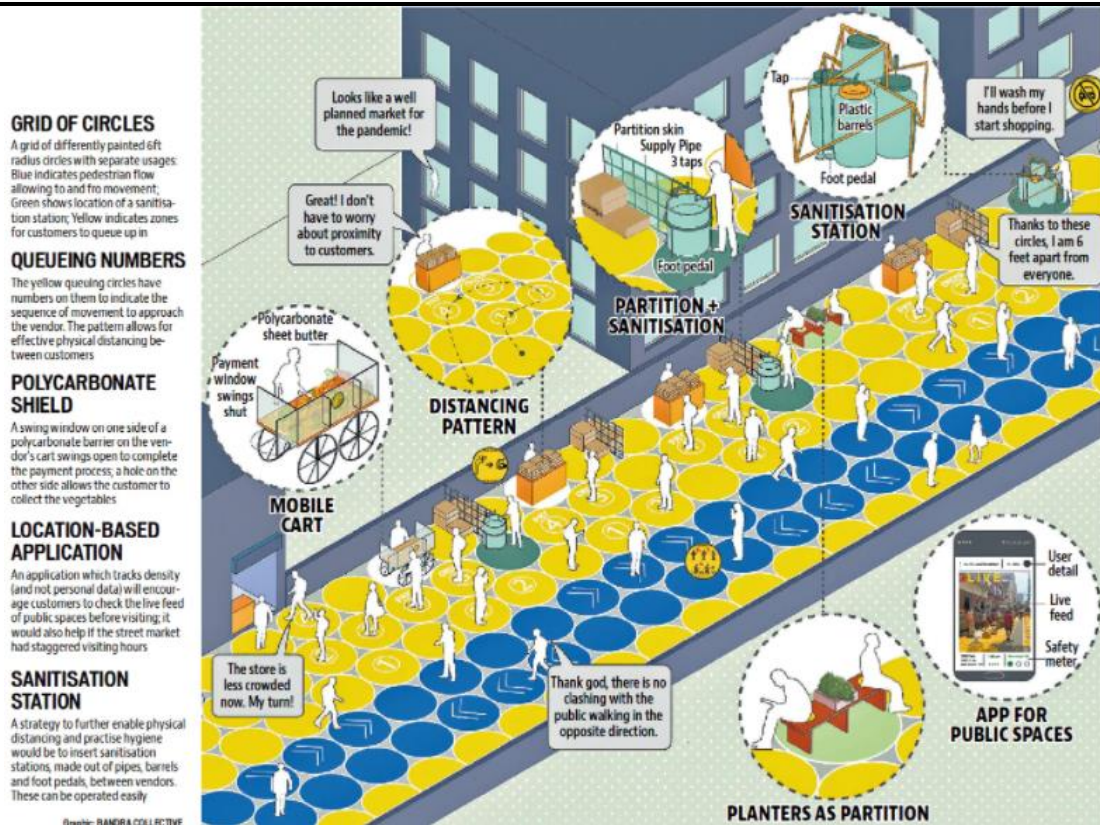
- Blue – pedestrian flow
- Green – a sanitation station
- Yellow – zones for customers to wait

The file circles have numbers on them to indicate the order of movement to approach the vendor. As a further safeguard for street vendors, we have designed a PC sheet barrier for their vegetable vending cart which also provides a different space for the person selecting the vegetables and the person paying for it. A window on one side of the barrier can be move back & forth open to complete the payment process.

Other master plan to enable physical distancing includes introduction to sanitisation stations and planters as partitions. Simple & strategic design measures are more communicative in guiding people.

These interventions in this space go hand-in-hand with a pedestrianisation of the market, which will help ease congestion. We're also suggesting a simple location-based petition which tracks density to uplift citizens to check the live feed of public spaces before going, hence authorizing them to know the risks beforehand and make informed decisions.

Overall, the sectional approach is scalable and can easily be applied to street markets, parks and other public spaces around the city. Such a grid of circles already executed at Bhaji Galli (Grant Road) aim to scale the initiative around the city in the coming weeks.



IV. CLASSROOMS: USE OUTDOOR SPACES SMARTLY TO EASE CONGESTION

Few months after the corona virus spread, 27 out of 28 states in India and five out of the eight union territories had declare that all schools would remain shut until further notice. Stay home and study, children were told even as many teaching models were tried: free online resources, home schooling programmers, radio broadcasting, public television and online sessions. Many students don't own laptops or have good internet connections, to start with.

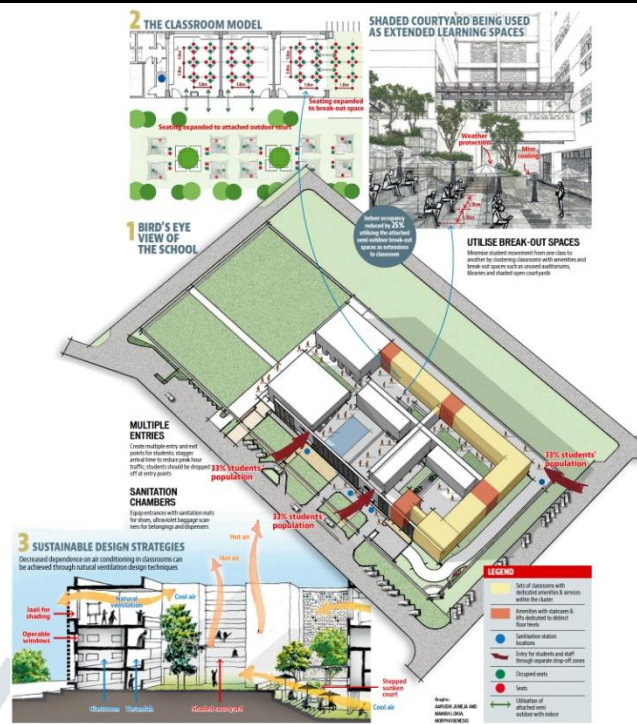
Hence a multi-faceted plan is necessary to overcome the challenges of physical distancing, navigation, and sanitation in order to build a strong Indian education system in the long term.

A design that inspire outdoor and indoor connect can easily be rearrange to address the disturbance raised by the pandemic. Model is based on the British School, New Delhi, which has Integrated Habitat Assessment, due to its pliable learning environment provided by the building design.

- First principle is to scatter crowds and manage flow of movement. To that end, scatter the entry across three gates thereby lower the traffic to 33%. Each entry point is furnished with sanitation chambers obliging sanitation mats and ultraviolet baggage scanner. Student movement is crumpled by designating a separate staircase for each entry floor.
- The flare-up space near a classroom – is perfect for redesign. In our readdressing of the classroom, we've made good use of an outdoor court. This cuts the density of children indoors and even the spread across the flare-up space.
- Each year group is allocated four to six classrooms with an attached flare-up space. A shaded courtyard can also be used as a flare-up space for the expandable classrooms. The various clusters can use them at distinct points in time during the day. The indoor classroom itself is reshaped keeping social distancing norms of at least 1.8m between students. Transparent buckler can be employed to reinforce the distancing.
- Semi-covered areas in outdoor spaces can easily be transforming to classrooms, but a space can only be experienced in outdoor courtyards designed for maximum shade, given our weather conditions. Adaptive master plan such as mist cooling fans and temporary shading devices would also intensify student condolence.
- Sanitation pods have been placed tactically. Think of the new water-cooler, which allows social distancing and at the same time doesn't do away with spaces of interlink age.
- A school that include sustainable design elements like baolis, self-shaded internal courts, verandas and sun shading strategies help connect students with nature. The facility of operable windows with sun shading inspires natural ventilation through the classroom.

In a post-pandemic classroom, a decreased vulnerability on air conditioning is advisable and natural ventilation design techniques will help achieve this.

Rethinking schools post pandemic is a subject that requires a composite approach, because even the most collective technologies with an academic focus cannot replace organic social commitment and play. Therefore, educating the students about the pandemic through practical experience is necessary.



V.RESIDENTIAL AREAS: MORE ACCEPTABLE SPACE FOR GOOD QUALITY OF LIFE

As Indian cities battle with Covid-19, in some of the opaque residential areas have appear as hotspots. The pandemic spotlight the failure of urban planning that has conducted creation of such dense residential spaces. As an example Seelampur, a sub-district in North-East Delhi and home to migrants. In the absence of timely up gradation of basic amenities and infrastructure, the housing stock has remained low-priced. At 540 PPH, its density is more than four times that of Delhi.

In the sketch below, it's shown how a colony like Seelampur could be made more residential. In its current form, a 9.0 Meter. wide road is the primary street, but it lacks pedestrian facilities, and is often overrun with traffic and crowds. The narrow lanes between the buildings that adjoin the main street and those on the smaller plots behind are annoying for residents. The four to five-storey high buildings on these plots experience very little light and ventilation, and do not have any open space that can be used by the community. Even the dwellings are extremely small for the size of families that resides there. Educational and Health care facilities are almost fictional.

However, through urban renewal programmed contain plot redevelopment, plot amalgamation and street widening; the same density can be lodge with better quality of life. Redeveloping the plots would mean an increase of the built-up area, which in turn promises greater usable space per person. It would also mean wider streets with augmented infrastructure and planned retail and commercial outlets. Amalgamating plots would not only create larger dwellings, but also neighborhood amenities and open spaces. The existing byroad and passages should be retained for public entrance within these rearranged plots. The main street can be given reassembling with wider footways, better pedestrian facilities, seating for the public and landscape to create a vibrant environment.

EXISTING UNPLANNED HIGH DENSITIES

In this 25-acre area, the primary street is overrun with traffic and lacks pedestrian facilities; the four to five storey buildings receive little ventilation and light, have no open areas; dwellings are too small

- Plots abutting 9m primary street lacks civic infrastructure, public space. In the re-imagined graphic below, we see more built-up area, wider streets
- Small scale plots, accessed by 5m and 3m lanes, get very limited light, have no open space. In the graphic, we see larger dwellings, shared spaces, amenities
- Similar small scale plots, but more linear in their form. In the graphic below, we retain these plots to showcase the difference in development of habitable spaces

A PLOT REDEVELOPMENT

Redeveloping the plots would mean an increase of the built-up area, which in turn guarantees greater habitable space per person. It would also involve wider streets with augmented infrastructure, planned retail and commercial outlets

B PLOT AMALGAMATION

Amalgamating plots would not only create larger dwellings, but also neighborhood amenities such as a community hall or educational centre, and open spaces that can be used by the residents as parks, among other things

C STREET WIDENING & RETROFITTING

The existing lanes and alleys should be retained for public access within these reconfigured plots. At the same time, the existing main street can be given better pedestrian facilities, retrofitted with wider footways, landscape, and seating for the public, to create a vibrant environment

RE-IMAGINED PLANNED HIGH DENSITIES

The same 25-acre area can accommodate the same density of people but in more habitable spaces through plot redevelopment and amalgamation, as well as improved street infrastructure

Graphic credit: HABITAT TECHNICS ARCHITECTURE & URBANISM

VI.CONCLUSION:

Thus imagining the Post Covid19 city is usable at the some extends for the city population and the private workers and the users. The study gives some of the strategies to redevelop or rearrange the public space to reduce the spread of the pandemic among the people in the congested areas like office, schools, street markets and the congested residential areas. Further research is needed to obtain a more complete picture of how COVID-19 reshaped the links between cities and quality of life. Systematic reviews of literature for specific life domains are needed when empirical evidence is more complete and more mature. Future context-specific reviews will also be useful to provide a more concrete understanding of local contexts.

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