

# Architecture in a Post-Covid World

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Report by



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## 1 Introduction

The pandemic of the century has certainly affected the world in unforeseeable ways and demanded shifts to our everyday lives. Our industries are now being forced to cope with the newfound health requirements and these changes to already established systems can be daunting. Specifically, architecture and the planning of spaces must be looked into in this new unprecedented light and taken very seriously. New methods are being used in the design of residences, with the aim of preventing transmission and encouraging social distancing.

## 2 Mitigating Health Issues and Future of Design

In terms of coping with the new and necessary unwritten rules of health and safety, new buildings are being constructed to have certain features, one of which is an exploitable rooftop. This is efficient in that it allows for sun light to reach inside the building and fresh air could allow for adequate ventilation. Along with this, the surroundings of the buildings are filled with gardens and greenery in order to ensure healthy, fresh air for communities. Similarly, placing importance on terraces, balconies, backyards and porches should be taken seriously. This also encourages buffer zones and different pathways for the public with the aim of reducing walking traffic and contact.

It is not a new concept that buildings should have proper ventilation systems, however now more than ever, it is of the utmost importance to provide this in the form of transitional and filtered entrances. According to some researchers, many buildings use low quality filtration system which catch virus sized airborne particles, and when they pass through ventilation ducts, it could be a threat to its inhabitants. Efficient and trustworthy filtration systems must be in place in order to minimize the risks associated with it.

Woods Bagot has given a new concept to design by using AD-APT design, which allows for a functional and multifaceted space. This concept utilizes adjustable walls and screens to cater to different uses for a traditionally open-plan area. This concept can allow for spaces to be more compact and enforce social distancing requirements.

Modular construction is also a very useful tool in these current times, in that the reuse of a prefabricated building would speed up the development of important projects and reduce costs associated with their development in this turbulent economy.

### 3 Design Principles in the Home

Nowadays, the use of flowing open plans has been quite popular. In light of the current situation, there has been a shift back to more traditional home design, meaning separated rooms and designated areas, which encourages social distancing and safety requirements. In addition, planning for multi-generational living could be very useful and appreciated as well.

Home entrances should now include transitional spaces, which can be used for removing shoes and sanitizing prior to entering the safe zone, which is one's home.

Due to the increased occurrences of working-from-home, it is necessary to create home offices, which should include acoustic buffering, as well as more square footage for desks and whatever else is required for each case. Having separated spaces solely for work is healthier mentally, in that one can leave their work behind when the day is over. In addition, home gyms are a very valuable asset right now, and planning for them must be taken into account.

### 4 Application of Future Technologies

The use of certain materials on surfaces can be a very useful tool to combat the struggles associated with COVID-19 and aid in the reduction of its transmission. These include antibacterial and antimicrobial materials in the form of quartz, porcelain tiles, corian, formica, Wilsonart, stainless steel and copper. In addition, the general reduction of flat surfaces should be enforced, as to limit the number of germs inhabiting the environment.

Ventilation systems should be taken very seriously, in order to purify the air and remove as many contaminants as possible. This includes air purification systems, such as HVAC filters, which recondition outdoor air and supply it to the indoor space.

Modern technology in the form of voice-activated and touchless controls is needed now more than ever. These options could be used to aid in safer and more hygienic usage light switches, elevators, doors, faucets, temperature controls and appliances.

In addition, we must think outside the box in these unforeseen times and utilize the existence of Artificial Intelligence, 3D printing and smartphone controls. These could somehow be implemented in the home to limit physical contact. Many firms are indeed providing great information and examples by minimizing the effects of the pandemic. These include Canon Design, ZGF, and Gensler, U.S.

## 5 Conclusion

It is no secret that every single industry in our world is being forced shift their methods of operation, and architecture and design are certainly facing a challenge. It is our duty to ensure safety within residences to the best of our ability, using as many tools as possible. We are quite lucky to live in a time where technology is at our disposal and we must utilize it and do our part to rise above the challenges we face.

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