The Contactless Office

Design Solutions to Increase Hygiene and Safety in the Post-COVID Workplace



INTRODUCTION

The COVID-19 pandemic has brought many economic, social and public health challenges. Many companies responded quickly, safeguarding employees by closing offices and establishing flexible work-from-home arrangements. However, as more employees work from home, employers are noticing a decay in corporate culture and employee engagement.[1] On an individual level, employees are facing increasing mental health challenges caused by working longer hours and reduced social interaction.[2] As lockdowns cease, and life returns to a semblance of "normal", a safe return to work for their employees is front of mind for most corporate leaders.

The pandemic has established a new paradigm for the employee-office experience. People are hesitant to return to the workplace, and expect a high standard of safety and hygiene before they do so.[3] In this new normal, designers and specifiers have the opportunity to create workplaces that make a safe return to and bridge the gap between the expectations of employees and the safety measures implemented by employers and workplaces.

The unique challenges of the COVID-19 pandemic, and the threat of future pandemics, will prompt designers to quickly adopt new touchless, hands-free technologies to create contactless workplaces where the risk of viral transmission from shared touchpoints is almost zero. "Low touch, high interaction"[4] will likely become the norm in the post-COVID world – spaces that combine physical distancing with other design strategies to increase hygiene and cleanliness without sacrificing functionality, convenience, or comfort.

In this whitepaper we take a close look at how workplaces can be designed for a safe return to work and beyond, with a focus on leveraging touch-free technology to reduce shared touchpoints and minimise the risk of viral transmission.





RETURNING TO WORK

A Holistic Approach to Workplace Design

Designing a COVID-safe workplace that facilitates a successful return to work revolves around the employee experience and providing holistic solutions that ensure their safety and well-being. According to a global Edelman survey, there is no agreement on essential measures that would enable a safe return to the workplace; reduced workplace density, masks, mandatory social distancing, plastic shields, all received varying levels of endorsement.[5]

In practice, all these measures will likely be needed going forward to instil confidence in the workforce that it is safe to return to work. A holistic approach to workplace design is required to address the range of risk factors contributing to viral transmission. Below are the key principles of workplace design in a post-Covid world.

Social distancing

Social distancing is the practice of maintaining a safe (1.5m-2m) distance from other people to minimise the risk of viral transmission. Social distancing measures will need to be incorporated into workplace design. What does this look like? Several measures can be taken including:

- reducing of density and occupancy levels at any given time;
- increasing space between desks and workspaces; and/or
- installing protective glass barriers between workspaces, which allows people to remain visible and connected, while stopping the spread of particles from coughs and sneezes.

Consistent social distancing requires a behavioural change, as humans naturally gravitate towards each other. Visual reminders, such as COVID-related signage (as required by SafeWork Australia) can be utilised.[6] Removing furniture and blocking off adjacent spaces can prevent impromptu gatherings. It is also advisable to introduce hand cleanser and sanitising stations around the office to reinforce hygienic behaviours.

Spatial configuration

How we use and occupy space needs to be reconfigured to ensure safe distancing and hygiene throughout the workplace. From a design perspective, this goes well beyond desk spacing. Designers will need to consider how to reduce spaces that flow into each other, which will likely result in more compartmentalisation within an office space. Furniture design and placement needs to be carefully considered to create workable spaces while preserving distance between employees.

Flow patterns throughout the office have to be closely analysed to avoid congestion. This will likely result in more one-way thoroughfares, widened passageways and expansive communal areas. Some companies have also introduced wayfinding signage to indicate safe areas to sit, stand and walk, which are aimed at reducing anxiety and increasing feelings of comfort and safety.[7]

Increased hygiene and cleanliness

More than ever, we will rely on effective and regular cleaning and maintenance procedures to prevent the spread of disease, especially via surface-to-hand transmission. High-touch surfaces, such as tables, chairs, doorknobs, light switches, phone receivers and keypads, remotes, handles, touchscreens, desks, toilets, sinks, elevator, and elevator buttons, will need regular disinfection.

Maintaining a hygienic environment given the number of high-touch surfaces within an office environment can prove challenging, both from a practical and a cost efficiency perspective. Inevitably, there will be periods of time between cleans in which surfaces pose a risk of contamination. Designers and specifiers can reduce such risk by specifying surfaces that are durable, scratch resistant and easy to clean.

Antimicrobial surfaces

Anti-microbial products and materials can also help increase hygiene levels and reduce opportunities for harmful pathogens to spread. Antimicrobial products are coated or impregnated with an antimicrobial agent that inhibits the ability of bacteria, virus, mould and fungi to grow on its surface. Many common fixtures, like tap handles and touchpads, are available with antimicrobial finishes that provide round-the-clock protection against microbial growth.

Specifying protections with antimicrobial protection offer several advantages in the post-pandemic workplace. They provide continuous protection in between cleans and mitigate the variability in cleanliness levels caused by inconsistent cleaning practices. They also reduce the need for harsh cleaning chemicals that may be harmful to the environment and human health.

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REDUCING THE HUMAN TOUCH

While distancing, spatial changes and regular cleaning can mitigate the risk of viral transmission, such measures are not fool-proof. The effectiveness of social distancing is reliant on changing human behaviour that is well ingrained. Additionally, cleaning procedures can be inconsistent depending on who is conducting the cleaning, contamination of cleaning tools, and cost constraints. Some spaces, such as elevators, kitchen benches and toilets, cannot be moved or altered, making any significant changes to layout impractical.

There are also many high frequency spaces in an office, and a preponderance of surfaces that become shared touchpoints. Employees encounter a wide range of commonly-touched surfaces on an average workday, including doors, printers, and kitchen appliances, all of which can become points of infection.

Reducing shared touchpoints is a high priority in post-COVID workplace design as it furthers the goals of physical distancing and reduces the risk of surface-to-hand transmission of virus and bacteria. In practice, reducing shared touchpoints can also significantly lessen employee anxiety and increase confidence that appropriate COVID-safe measures have been taken.

Against this backdrop, the COVID-19 pandemic will likely hasten the adoption of touch-free technology that enables the workplace to minimise shared touchpoints while remaining functional. The workplaces of the future will likely be contactless, removing a key risk factor in the spread of virus and bacteria.



EMBRACING TOUCH-FREE TECHNOLOGY

Design Solutions for a Post-COVID Workplace

Sensor-activated systems and fixtures

Sensor-activated systems allow employees to interact with architecture without touching it and will become an essential feature of post-COVID workplaces. Workplace tap handles are commonly contaminated with virus and bacteria.[8] Toilet seats, flush handles, soap dispensers, and toilet door handles are also likely infection points.

Touch-free tapware and bathroom fixtures, which are operated by a simple wave of the hand, provide a hygienic and healthy solution for bathrooms and kitchens. Filtered water systems with no contact points are convenient with added benefits for health and hydration. Designers may also specify sensor-activated toilets, soap dispensers and hand dryers to increase the standard of hygiene in office bathrooms

Automatic and sliding doors

Door handles are some of the most touched surfaces in a workplace. Replacing traditional doors with touchless automating sliding or swing doors is a basic requirement in contactless workplace. Additional features such contactless entry and sign-in provide additional safeguards.

Touch-free lift operation

Lift buttons are subject to hundreds of presses per day from a wide variety of people. Studies suggest that elevator buttons can be 40 times more contaminated than toilet seats.[9] Touchless lifts are available on the market with integrated technology that enables the user to open the lift and select a floor without contact. Some more advanced solutions offer virtual control panels accessed from the user's personal device.

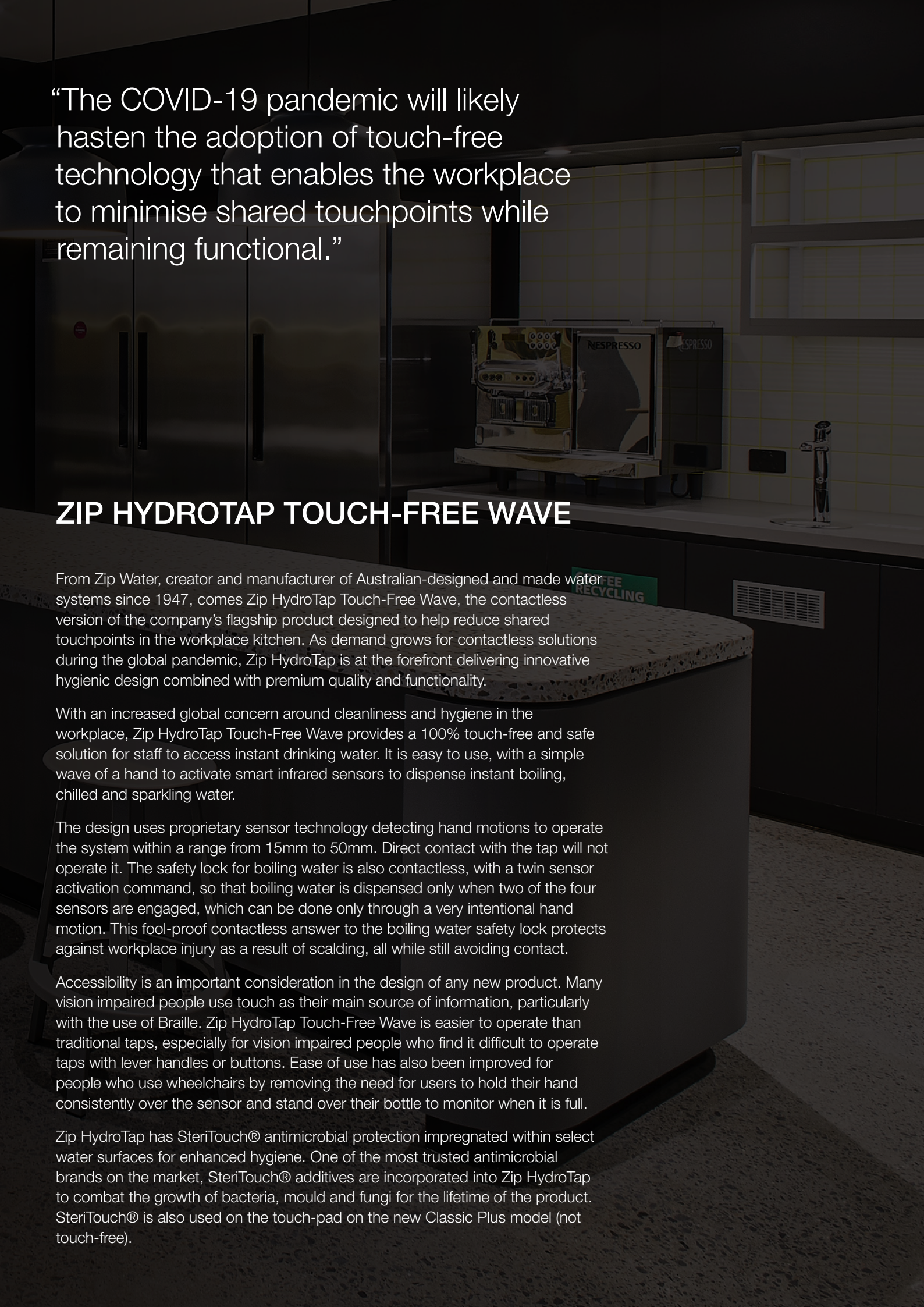
Smart lighting

Smart lighting refers to office lighting technology designed for energy efficiency, and convenience. Various solutions can be activated by voice, sensors or using a mobile app, avoiding yet another major touchpoint in an office – light switches.

Increased integration with personal devices

Commonly-touched office systems such as air-conditioning controls and audio/visual (AV) equipment can become infection points. While manual operation of these services is the norm, this may all change due to COVID-19. The desire for distancing provides the motivation to overhaul the design of these services to eliminate the need to touch commonly-used surfaces such as remote controls and meeting room booking screens. Better integration of all these systems through building automation may start allowing users to book meeting rooms, adjust lighting, and operate AV equipment using personal devices rather than shared devices.

There is also opportunity to leverage existing assets. Security swipe cards for most office staff are commonplace, and their potential to bolt on additional functions is yet to be fully explored. Potential swipe card functionality could include not only touchless entry, but also to automatically call the elevator to a certain floor based on the employee's profile.[10]



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ZIP HYDROTAP TOUCH-FREE WAVE

From Zip Water, creator and manufacturer of Australian-designed and made water systems since 1947, comes Zip HydroTap Touch-Free Wave, the contactless version of the company’s flagship product designed to help reduce shared touchpoints in the workplace kitchen. As demand grows for contactless solutions during the global pandemic, Zip HydroTap is at the forefront delivering innovative hygienic design combined with premium quality and functionality.

With an increased global concern around cleanliness and hygiene in the workplace, Zip HydroTap Touch-Free Wave provides a 100% touch-free and safe solution for staff to access instant drinking water. It is easy to use, with a simple wave of a hand to activate smart infrared sensors to dispense instant boiling, chilled and sparkling water.

The design uses proprietary sensor technology detecting hand motions to operate the system within a range from 15mm to 50mm. Direct contact with the tap will not operate it. The safety lock for boiling water is also contactless, with a twin sensor activation command, so that boiling water is dispensed only when two of the four sensors are engaged, which can be done only through a very intentional hand motion. This fool-proof contactless answer to the boiling water safety lock protects against workplace injury as a result of scalding, all while still avoiding contact.

Accessibility is an important consideration in the design of any new product. Many vision impaired people use touch as their main source of information, particularly with the use of Braille. Zip HydroTap Touch-Free Wave is easier to operate than traditional taps, especially for vision impaired people who find it difficult to operate taps with lever handles or buttons. Ease of use has also been improved for people who use wheelchairs by removing the need for users to hold their hand consistently over the sensor and stand over their bottle to monitor when it is full.

Zip HydroTap has SteriTouch® antimicrobial protection impregnated within select water surfaces for enhanced hygiene. One of the most trusted antimicrobial brands on the market, SteriTouch® additives are incorporated into Zip HydroTap to combat the growth of bacteria, mould and fungi for the lifetime of the product. SteriTouch® is also used on the touch-pad on the new Classic Plus model (not touch-free).

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