Personal protective environments

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Olafur Eliasson. Courtesy of the artist and Guggenheim Museum.

Personal protective equipment (PPE) like gloves and masks aren’t going away anytime soon. But as consumers look for further safeguards against viral and bacterial contaminants, brands are turning their attention to a new type of PPE: personal protective environments. A slew of new products—when paired with existing measures like social distancing and face coverings—offer an extra layer of protection and heightened peace of mind for virus-averse consumers.

Auto armor

As people are taking refuge in their cars, they’re calling for new and improved ways to keep the interiors virus-free.

At the end of May, Ford released a software update with a new sanitation mode to disinfect car interiors. The new function raises the car’s interior temperature to 133 degrees Fahrenheit for 15 minutes, which was enough to eliminate the virus during tests conducted in collaboration with microbiologists at Ohio State University. The New York Police Department—which has about 9,000 vehicles, mostly manufactured by Ford—is one of several law-enforcement agencies adopting the feature.
Many Chinese car companies are also introducing antiviral add-ons. In February, SAIC General Motors announced the world’s first built-in deep ultraviolet (DUV) anti-virus car air conditioning to be installed in new vehicles. Guangzhou Automobile (GAC), another leading automaker, is offering a new three-level air filter system in many of its new models. And Geely’s latest vehicle Icon, debuted on February 24, 2020, includes a new Intelligent Air Purification System that claims to eliminate bacteria and viruses.

Decontaminated dwellings
More than ever, people want extra assurance that they aren’t tracking bacterial contaminants into their home on high-touch items like clothing, phones and wallets.
Samsung AirDresser
Samsung’s newest appliance to hit the US market is a smart closet that disinfects clothes. The AirDresser, which made its stateside debut in July after its initial release in Europe in 2018 as an at-home dry-cleaner, is now being touted as viral-killing wardrobe; Samsung claims that the device eliminates 99.9% of bacteria in all types of clothing and fabrics. “Amid the coronavirus pandemic, the sanitization features and convenience of the product are even more relevant, so consumers can ensure hard-to-clean items like jackets and other outerwear, bedding, and even soft children’s toys are sanitary from the comfort of home,” Shane Higby, vice president for home appliance product marketing at Samsung Electronics America, told Fortune.
Italian designer Carlo Ratti anticipates that clothing disinfectants will “play a vital role in the post-pandemic world next year as we regain our old social life.” His eponymous design studio, Carlo Ratti Associati, unveiled its Pura-Case decontaminating wardrobe design in April and is currently developing a prototype, with plans to launch a Kickstarter campaign soon. The device will use ozone to sanitize fabric as part of an hour-long purification process. As the studio explains, “ozone, a naturally-occurring triatomic form of oxygen (O3), is commonly used in the health and textile industry to sanitize fashion items, objects, and spaces.”
A slew of UV phone sanitizers has been introduced over the past several months, including Casetify, which was released in March and began shipping in April; PhoneSoap Pro, which is available for preorder at the time of writing and will ship by the end of August; and Samsung’s new 10W wireless charger that sterilizes phones with UV-C light while replenishing its battery, released in July.

**Purified public spaces**

Posters at the Guggenheim Museum in Bilbao coated with Pureti Print
In Spain, billboards are being repurposed as public air purifiers. At the end of June, the Guggenheim museum in Bilbao coated its outdoor signs with Pureti Print, a treatment developed in collaboration with NASA that mimics the natural process of photocatalysis to remove pollutants, bacteria, mold, and bad odor from the air. The museum estimates that the air purifying effect is the equivalent of that of over 700 trees. Estudios Durero, the design agency that implemented the project for the museum, explains that the treatment can convert any printed material into a decontaminating element.
The same month, new startup Perform Path launched to bring UV disinfectant technology to sports venues. One of their partners, Puro Lighting, is currently piloting a program with the Metropolitan Transportation Authority (MTA) in New York City, harnessing UV lights to disinfect subway trains, public buses, and subway stations. The Tokyo Metro, meanwhile, began applying an antiviral coating to high-touch surfaces in subway cars in July, with plans to complete work on all 2.7k train cars by mid-August.
Large retail spaces are getting similar attention. At the end of June, New York governor Andrew Cuomo announced that New York malls will need air purification systems that can filter out the coronavirus before they are permitted to open. In the beginning of July, MIT announced that it had designed a robot that uses a custom UV-C light to disinfect surfaces and neutralize airborne forms of the coronavirus, which could be used to disinfect a warehouse, supermarket or school.

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“For the first time in history, everyone around the world is recognizing how the indoor environment influences our health,” Joseph Allen, assistant professor at T. H. Chan School of Public Health at Harvard and coauthor of Healthy Buildings: How Indoor Spaces Drive Performance and Productivity, wrote for Fast Company. With this heightened attention, expect to see more innovative solutions for creating purified personal spaces.

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