Biometrics

How Biometrics Can Keep Society Healthy

Biometrics that ethically and transparently collect and use health data are one path to quelling infection spreads.

With the likelihood of more pandemics and rolling physical distancing measures, we need solutions that work in real time and across environments to monitor public health and provide crucial information to healthcare professionals, policy makers, and the public. Innovative uses of biometrics could help us control outbreaks with minimal disruptions to our lives.
Help to stay healthy

Wearables and ambient biometric sensors that monitor large public spaces offer a minimally intrusive way to collect personal health data in real time. Some could also help with contact tracing, prompt users to seek medical attention faster, and encourage people to make sound decisions about social distancing. Researchers are developing:

01 Rings that collect symptom data, which is then run through an algorithm that assesses the likelihood of infection

02 Adhesive patches that use health indicators like sweat, coughing, temperature, and heart rate, which are uploaded to the cloud and used to monitor infection transmission

03 Apps that match health indicators from a short recording of the user’s voice against a database of infected patients’ voices

04 Thermometers for mass temperature scanning in public spaces and for large gatherings

05 Adaptive and responsive spaces that can be quickly modified in health emergencies, like setting up temporary treatment centers

06 Smart flooring that creates safe pathways and smart elevators that manage rider numbers

Privacy and trust first

We could be entering a period of world-changing research and collaboration across health, design, and public policy. Biometrics can be key to creating new ways to safely interact with our environments and each other.

But biometrics will only be accepted if our personal data is truly private and we trust how it is used. It’s likely that the increased application of biometrics will prompt concerns about anonymization and personal data collection.

For biometrics to be effective, there need to be guidelines and regulations in place, including:

01 All biometric applications must be based on scientifically sound research.

02 Permissions for personal data collection and use must be obtained from individuals.

03 There must be limits on and transparency into who has access to personal data, where it will be housed and for how long, and what it will be used for.

Safer spaces

Architects and interior designers are exploring how design and technology can be used in concert to limit the spread of infections without sacrificing style or quality of life. Embedding biometrics could guide usage patterns, provide health alerts, monitor air quality and virus transmission, and ultimately inform safer building design.