

10 useful inventions by Singapore firms during Covid-19

Crises can bring out the best in us. Even as the coronavirus pandemic has battered businesses locally, some Singaporean companies have been able to produce smart solutions to practical problems, from scuba diving-inspired masks to a ventilator that can be controlled over the Internet. *The Business Times* looks at 10 inventions that were born from the pandemic. **BY LEILA LAI AND LYNETTE TAN**

1. Sunburst UV Bot

Created by robotics and automation company PBA Group, the Sunburst UV Bot combines the disinfection capabilities of ultraviolet-C light with an autonomous mobile robot to reduce cleaning staff's workload and exposure to harmful chemicals and the virus. The bots are being deployed progressively at Frasers Property Group's malls in Singapore, starting with Northpoint City in May, and PBA is exploring roll-outs in the healthcare sector as well.



PHOTO: PBA GROUP AND FRASERS PROPERTY

2. The Gill Mask

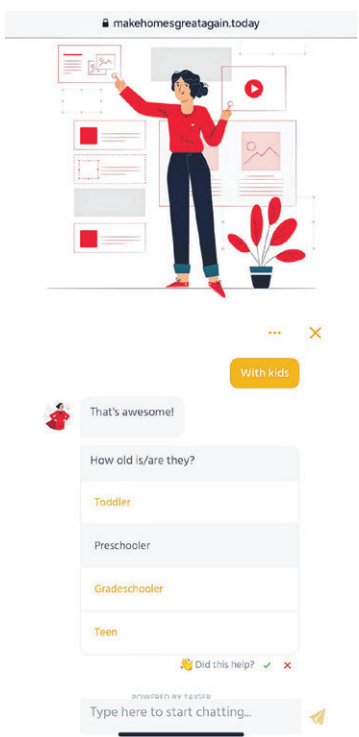
The Gill Mask is a reusable respirator that can extend the use of a surgical mask by up to six times. Gill Lab's founders leveraged their expertise from a previous scuba diving mask project to achieve an airtight seal, ensuring air only passes through a rectangular slot that is fitted with an appropriate filter like a piece of surgical mask. To date, Gill Lab has shipped more than 165,000 units worldwide, with Singapore sales comprising 20 per cent of total sales.



PHOTO: GILL LAB

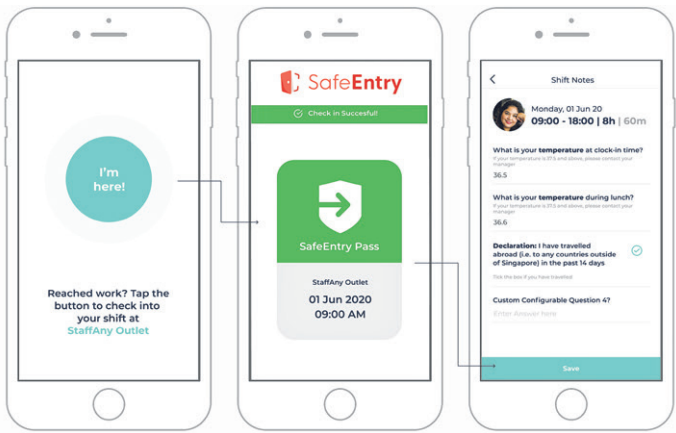
3. Ask Phoebe

AI startup Taiger started Ask Phoebe, an AI chatbot that profiles the users' requirements and curates social distancing-friendly activity ideas, in May, motivated by a growing demand for home-based activities amid lockdowns. The team at Taiger, many of whom are living with their parents or are young parents, also identified with the need themselves. The bot also allows brands to market products and services on it in a non-intrusive way. Companies such as Publicis Media APAC and MullenLowe APAC have included the chatbot as part of their employee engagement programmes. Taiger is working with the Ministry of Culture, Community and Youth to implement the chatbot on sg.unicity.gov.sg, as part of plans to scale it.



4. The CICO app

Attendance tracking has gotten a lot more complicated because of the pandemic, with employees needing to check in and out via the SafeEntry digital system for contact tracing, as well as via internal attendance systems. The CICO app by HR startup StaffAny was launched in June, just as businesses were reopening after the circuit breaker, to help firms ensure that staff complete every step in each process. Not only does it capture temperature and health declarations, but it also redirects users to the SafeEntry website and sends them reminders if they fail to complete the form. To date, more than 200 companies have signed up to use the app.



5. GrabCare

The 24-hour, dedicated ride service for healthcare professionals was started in February by ride-hailing firm Grab after observing reluctance among drivers to pick up such workers, for fear of being exposed to Covid-19. The service now covers rides from 16 hospitals; it was expanded in May to include rides from homes to hospitals. About 12,000 drivers have signed up to be part of GrabCare. GrabCare drivers have ferried healthcare workers over 588,000 km since February. That's equivalent to nearly 800 road trips to Kuala Lumpur and back. Grab has said it will continue to review the situation and determine how long the service needs to continue.



PHOTO: GRAB

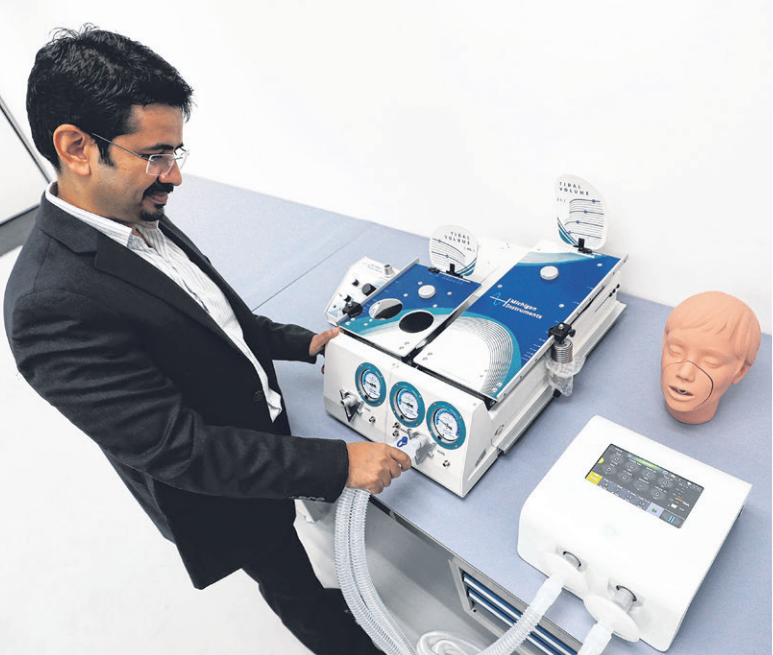
6. Zazacorona

Over 60 years of expertise in animal health gave Zagro a headstart in developing a disinfectant targeted specifically at viruses like Sars-CoV-2. Within 10 days in February, the Singapore-headquartered firm created Zazacorona, a reformulation of an existing disinfectant proven to be effective against animal viruses. Zazacorona is being sold overseas and locally in NTUC Fairprice outlets and Watsons as an anti-virus disinfectant that destroys coronaviruses and is safe for use in homes, offices and commercial spaces.



7. The Alpha ventilator

It's billed as the world's first telehealth ventilator, which means that it can be controlled both manually and remotely with a computer. It is manufactured by Temasek-owned Advanced MedTech, which worked with another medical device firm, ABM Respiratory Care, to convert the latter's existing respiratory care device into a ventilator. The firms saw a massive shortage of ventilators globally during the pandemic, which they say is still unresolved. Advanced MedTech is seeking approval from various countries' regulatory agencies for emergency use during the pandemic. With Covid-19 potentially having a long-term impact on patients' lungs, the Alpha ventilator will evolve into a fully featured ventilator and go further to provide integrated lung clearance therapies, which no ventilator provides today.



ST FILE PHOTO: TIMOTHY DAVID

8. Colour Me Magic!

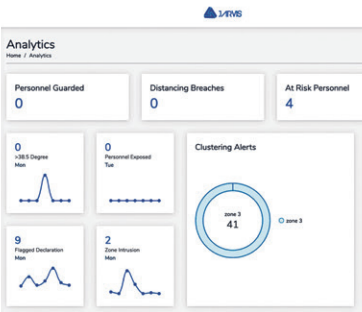
Launched by Singapore Airlines (SIA) in collaboration with Wildlife Reserves Singapore, Colour Me Magic! is a mobile app that renders colouring in 3D using augmented reality (AR) technology. The idea was first pitched by two SIA employees - and further developed by KrisLab, SIA's digital innovation lab - as a way to keep children entertained on flights. It was to have been launched on board SIA's flights earlier this year, but due to the virus outbreak, the company decided to roll it out for families at home during the "circuit-breaker" period instead.



PHOTO: SINGAPORE AIRLINES

9. JARVIS COVID

Viatick built JARVIS COVID, an extension of its personnel and asset tracking application, after clients who were allowed to stay open during the "circuit-breaker" period faced difficulty in ensuring constant safe distancing and active contact tracing within their companies. The app's key features include identifying close contacts within 30 minutes if someone in the office is infected and alerts when safe distancing rules are breached. Companies with branches in different countries can also track the information on the same app. Some companies that have used the app are Kuala Lumpur-based security seals maker Mega Fortris Group and Samsung Electronics Singapore.



10. Biovitals Sentinel

Working with Singapore's Ministry of Health (MOH), Biofourmis adapted its technology to detect signs of deterioration in Covid-19 patients so that clinicians and nurses can intervene. A biosensor worn on the patient's upper arm captures more than 20 physiological signals and provides the real-time data on the Biovitals Sentinel platform, allowing Covid-19 patients to be monitored remotely. The platform is being deployed by MOH; it's also being used in health systems in the US, the UK, Australia and Hong Kong.



PHOTO: BIOFOURMIS

Note: The innovations are not listed in any particular order or ranking.