

A Day in a Future Pandemic (2040)

“Beep beep...” the alarm function on my smartwatch beeps. Following which, a loud and shrill sound of the watch reads today’s date and time. “Today is the 2nd of April 2040, Monday. The time now is 7.01 a.m.”

I wake up eagerly as today is the first day of Home-Based Learning (“HBL”). The Education Ministry has been developing a new HBL system after receiving feedback from the previous round. We are currently in the middle of a pandemic and a lockdown is scheduled to start from today. As I enter the living room, I see my parents sitting in front of the TV and checking the latest news. I make my way to the kitchen where I make an order of 4 sets of eggs and ham for my family’s breakfast through the digital ordering screen. 20 minutes later, I receive a notification that my order is being delivered. As I head to the window, I spot a white colour drone coming towards me.



Source: <https://www.pymnts.com/news/delivery/2018/uber-drones-food-restaurants-retail/>

The drone lands on the floor in my kitchen and a compartment on the drone opens up featuring a paper bag which is my food order. I removed the bag from the drone before it departs. This is an invention after food delivery riders were infected with the new virus and an alternative contactless way of delivering food is needed.

After breakfast, I head into my room to start my HBL. Picking up my VR headset from my table, I put it on and log into my virtual class just on time. In 2040, MOE has provided every school-going child with a laptop, VR headset and headphones. This is a great step for Singapore in achieving inclusivity for all students as we all now have access to the complete suite of ed-tech tools required for HBL. In a virtual class, students can study in a virtual classroom that looks exactly the same as a physical one and interact with their peers. My classmates look exactly like how they are in real life with their real-time expressions. We can also form teams and work collaboratively in a seamless manner. The virtual classroom comes equipped with a whiteboard and the teacher can write on the virtual whiteboard as if we are in an actual classroom. If my teacher wants to share an article, a video or a presentation, the content will simply appear in front of us. Besides classroom-based lessons, physical education periods can also be carried out with specially selected breathing and stretching exercises such as Yoga. Such exercises are beneficial in helping students relieve stress and practice mindfulness in this period of the pandemic. All students have also been issued with an exercise mat from their schools.



Image Credit: vectorfusionart/Shutterstock

Via source: <https://venturebeat.com/2016/12/03/pilot-projects-show-how-vr-will-revolutionize-education/>



Image Credit

Via source: <https://sharpbrains.com/blog/2018/05/09/initial-study-finds-promise-and-limitations-in-using-virtual-reality-vr-to-treat-adhd/>

A few hours with a couple of breaks later, I remove my VR headset as it is dismissal. With my rumbling stomach, I walk out to the living room and pick up my antiviral reusable mask with 100% bacterial filtration efficiency. It contains Hepa filters that can last for half a year and a replacement alert will be sent to the user's phone. It has a Bluetooth connection with in-built earphones to allow people to easily hear what others are saying. However, the noise-cancelling function was removed after some accidents were caused by people being not aware of their surroundings. The mask was recently distributed after a tech-company invented this revolutionary mask. With the mask securely and comfortably fitted on, I head out to the bus stop.



Image Credit by Will.i.am

Via Source: <https://www.edmtunes.com/2021/04/will-i-am-unveils-new-face-masks-with-noise-canceling-audio/>

The buses in Singapore have changed since the previous COVID-19 pandemic to be safer for commuters. The new generation buses boast of a full-length door that is automatically lifted when it arrives at a bus stop. Commuters just need to look up at a camera. It will identify all passengers and deduct payment accordingly based on facial recognition. The handlebars and stanchion poles are coated with an antibacterial coating and would rotate 360 degrees at every stop to clean it. This implementation of the bus originated from the idea of Ryan Teo's submission for a design contest named "The FourC Challenge" in the 2020 pandemic. It has been improvised from RFID to facial recognition payment technology and is now fully implemented in Singapore.



Photo: Ryan Teo. Ryan's submission for The FourC Challenge in June 2020, organised by Shanghai Jiao Tong University.
Via Source: <https://www.straitstimes.com/singapore/pandemic-proof-bus-by-sporean-and-3-others-wins-design-contest>

I head to the hawker centre to buy my takeaway lunch. As soon as the bus arrives at the hawker centre, I proceed straight to my favourite Chicken Rice stall. I make my order by scanning my face using the contactless payment screen.

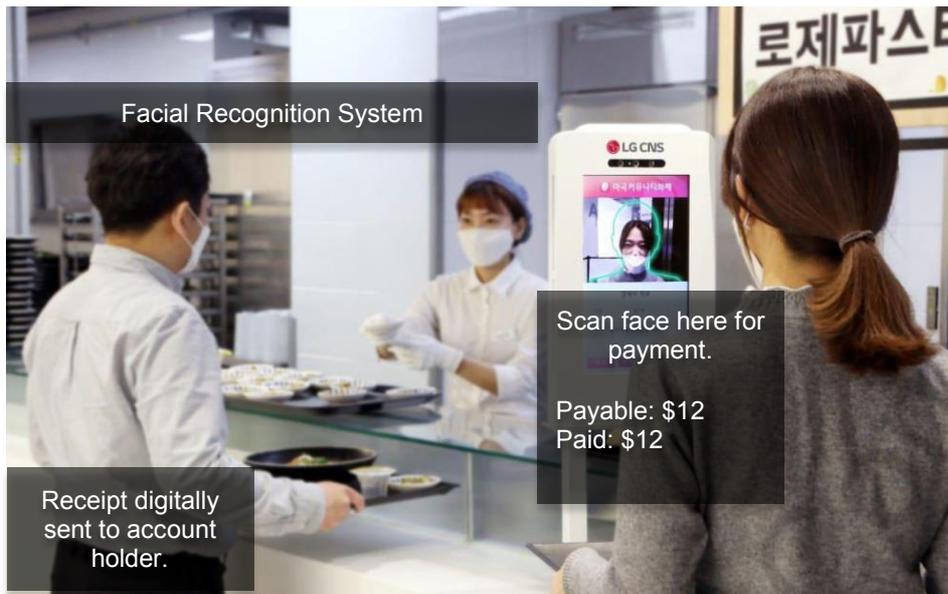


Image Credit: LG CNS

Source: <https://www.inceptivemind.com/lg-contactless-facial-recognition-payment-system/12881/>

Soon, my order is ready. Instead of taking the bus back home, I walk to the nearby bicycle rental station to rent a bicycle to ride home. To rent a bike, all I have to do is to scan my smartwatch against the reader. It was made possible by a chip with bank account details installed in the watch. After selecting my bicycle preferences and the bicycle going through disinfection, it comes out of the rental station in good condition for my ride home.



Image: courtesy Shabazz Stuart

Via source: <https://www.fastcompany.com/40544370/these-colorful-kiosks-could-be-the-future-of-urban-bike-storage>

To reduce Singapore's carbon footprint, designated lanes were made for bus lanes, bicycle paths and footpaths on roads as Singapore has achieved car-lite vision by 2040. Singapore's Transport Revolutions were kicking into high gear with predictions that 90% of

Singaporeans' commutes would be made by public modes of transport like buses, trains, walking and cycling. Bicycle rental stations were built and public amenities like seats were installed near them.

As I mount the bicycle, my smartwatch beeps and a notification from my phone flashes across. I take a look and see today's virus case numbers. It is good news as the number of cases is lesser today. I then start cycling home as my family is still waiting for me to bring their lunch back.

Back at home after lunch, I decide to check on the unit management device. The unit management device is a management device installed in every household. It allows residents to manage their unit and retrieve parcels. I notice there were parcel delivery notifications on my device, so I click the "retrieve parcels" button on the screen. A pin code appears on the device's screen. The notification to retrieve parcels is also sent to my smartphone. I take down the pin code and go down to the void deck. Over the years, the old mailboxes were removed due to a sharp decline in snail mails after organisations have all switched to digital notices or emails. The mailboxes were replaced with parcel storage rooms by Singapore Post where parcels from online shopping are delivered and deposited. UV lights were also installed in the room to sterilise parcels once placed inside. I key in the pin code and one of the many storage boxes opened, revealing my parcel. I take my parcel and return home.



Photo: KEBA KePol. All Rights Reserved.

Via Source: <https://postandparcel.info/97101/news/infrastructure/paz-opts-for-keba-parcel-lockers/>

Next, it is time for me to log into a holographic call with my classmates to discuss our project. Previously, we usually meet up in cafes or the public library for discussions. However, the latest lock-down made us move our discussions online. My parents are also using holographic calls for their virtual meetings when they are working from home.



Image by ProlmageContent (Stock Footage)

Via Source: <https://videohive.net/item/video-chat-on-hologram-screen/23935642>

Also, apart from holographic calls, the government is testing out another new form of communication called Holoportation. I have a classmate who is quarantined. However, the government brought him to a special facility to serve his quarantine as he is trialling the first phase of the new holoportation system. The holoportation set-up in the facility can help him interact with his family and friends. Being in quarantine is a very isolated and lonely experience which can be distressing and depressing for the people being quarantined. If the trial is successful, the government can implement it at all the quarantine facilities for those under quarantine to interact with others.



Photo: Microsoft – Holoportation

Via Source: <https://www.microsoft.com/en-us/research/project/holoportation-3/> and <https://www.microsoft.com/en-us/research/project/holoportation-v1-images/>

Before dinner, my mother walks to the nearby multi-storey carpark to collect her vegetables for cooking. She goes to the rooftop farm where she has been planting some kai lian and bok choy. The rooftop farm, which uses innovative and sustainable technologies, was built in tandem with Singapore's "30 by 30" goal where Singapore aimed to have 30% of our nutrition needs by 2030. We have surpassed that aim and have set a bigger goal to have half of our nutrition needs by 2045. Hence, during this pandemic, Singapore is still able to have sufficient local produce to sustain us as a nation even as there are many disruptions to global food supply chains with Singapore. The rooftop farm has also expanded to other floors with high-powered LED grow lights as the number of cars has decreased and there is more space for farming. Soon, she comes back with a bag of vegetables for our dinner! Our other food products are also locally produced, for example, fish and eggs. Our fish are reared in local offshore fish farms using advanced farming systems, which our family orders on a weekly basis.



Photo: Singapore Food Agency.

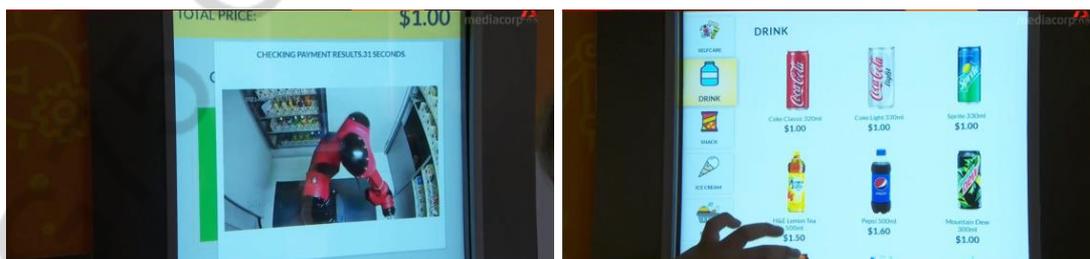
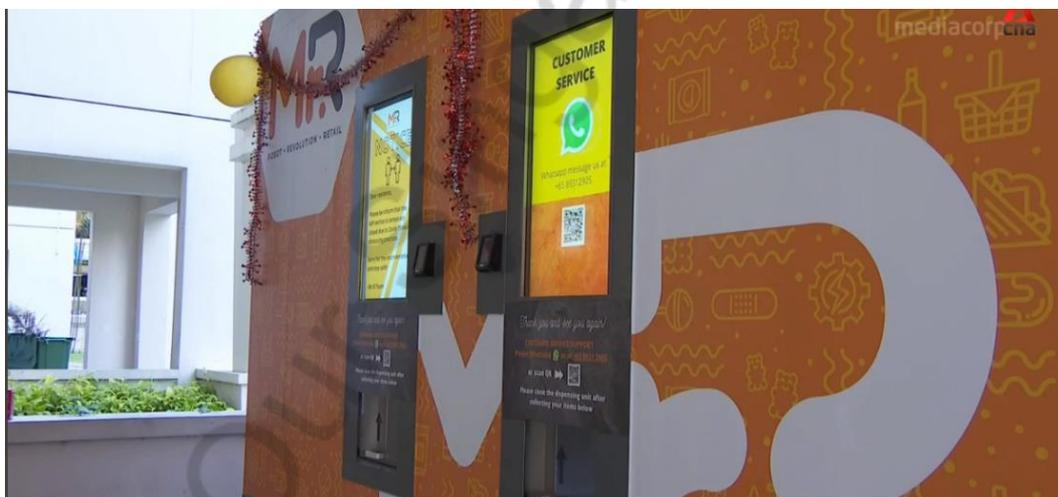
Via Source: <http://www.greatnewplaces.com/sq/t-Gardening>

Also, as a small island nation whose only resource is our people, the government has been trying to reduce unemployment rates by offering more support schemes to businesses and mandating fair employment practices.

During the previous pandemic, food insecurity in the form of hunger has increased amongst the disadvantaged in our society due to job losses. Since then, local food charities

have decided to decentralise and collaborated with Singapore Post to dedicate a few storage boxes at parcel storage rooms for storing non-perishable donated food to help the needy. A kiosk scans the item and uses artificial intelligence to identify the product. The donor just needs to key in the expiry date and a box would open for the item to be placed inside. A display screen would display the food items available and the beneficiaries can type in their food charity account number to select and collect donated food. This is building upon the strength of our community's goodwill to lend a hand to the less-privileged in our community.

After dinner, I feel like having some fruits and sweet snacks and think of going to the convenience store. Instead of an actual store, a huge room-sized vending machine is where I head to at the void deck. The convenience store I am visiting is completely automated, unmanned and cashless. I just have to select the items that I need and pay for my order using my smartwatch. The items soon land in my reusable bag which I attach to the dispenser bin. The screen of the vending machine shows a message that an e-receipt has been sent to the email address linked with my bank account. It is so convenient and hassle-free! I smile to myself as I bring my purchased items home.



Pictures: Extracted from CNA News 26 May 2021 By Alif Amsyar

Via source: <https://www.channelnewsasia.com/news/singapore/first-unmanned-cashless-store-powered-by-ai-and-robotics-in-the-14884418>

Although this is happening in the future, we are battling a pandemic now in 2021. The current pandemic is not the first that we have faced and it will definitely not be the last. Although our current technology may not completely match up to the ones envisioned in 2040, it will definitely improve. As we evolve through technologies development, the future virus may also become stronger. We need to always be one step ahead of the virus to be able to defeat it. Let's all do our part to be one step ahead of the virus by cooperating and continuing with the current safe management measures.

Together, Singapore will emerge stronger!

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Disclaimer: This article is fictitious and represents an imaginative envision into a future pandemic based on the research of some currently available technological products and government initiatives. Pictures featured in the article are purely used for research and illustration purposes only.