

**PROJECT SYNOPSES**

**ITE AND VTC ISS STUDENT PROJECTS**

**MAIN THEME:  
POST COVID-19 WORLD: TOWARDS AN INCLUSIVE AND SUSTAINABLE FUTURE**

**Joint Project by ITE and VTC**

Title: ***Looking through the Human Canvas***

Through the use of creative body painting as a visual communication medium, this joint student project by ITE and VTC aims to let students express their experiences as they live through the current pandemic. The artwork will bring the viewers through a visual journey in four stages: pre-pandemic, pandemic, transition phase to 'new normal', which we find ourselves in, exploring along the way, various aspects of sustainability, inclusivity and the reimagining of our future.

## SUB-THEME 1: INCLUSIVITY

### Projects by ITE

#### Title: ***The Kindness Project - Inclusivity@CE***

Covid-19 has shone a light on physical social isolation during the Circuit Breaker in Singapore, in particular for seniors living alone and needy families. On the virtual front, with learning going online via home-based learning (HBL) and a constant lack of face-to-face interaction, youths are increasingly susceptible to cyber bullying.

Different outreach programmes to address both physical isolation and cyber bullying have been implemented to create a kinder society for a stronger community :

- Physical channels: Various activities to help the Elderly, needy families and individuals with special needs.
- Virtual channels: Creating audio books on cyber etiquette with the support of Singapore Kindness Movement to share with lower primary school students.

#### Title: ***The Sixth Sense***

People with visual impairment experience difficulties transiting from one location to another, and face common obstacles that cannot be detected with the use of walking canes. In partnership with Singapore Association of the Visually Handicapped, the team used Artificial Intelligence Imaging technology, to develop an application that aids in the recognition of signage, such as male and female toilets, and public bus numbers, to provide more accurate identification of one's location and bearings.

### Projects by VTC

#### Title: ***iStick***

"iStick", specially designed for visually impaired people, is a smart cane with a health monitoring system empowered by AI technology. It helps users navigate their environment safely when going out. By adopting the new technology, "iStick" allows family members to monitor the health condition of users in a smart and effective way.

#### Title: ***ELVIS: an ElderLy Video and Image Sharing Application***

The project team attempts to use Gerontech to support the elderly in the community by developing a smart social media platform known as "ELVIS: ElderLy Video and Image Sharing Application". ELVIS is a memory driven social media platform for the elderly to connect with their beloved ones, with a view to enhancing intergenerational understandings.

#### Title: ***My Culture, My Identity***

To spread love and inherit the beauty of the Chinese culture, the cross-institutional student team between VTC and University of West England, looked for creative ways to share and celebrate their heritage. They proposed a line-up of activities, including introducing religious culture, drawing fortune sticks and enjoying local food, to the schools in Hong Kong and the UK.

## SUB-THEME 2: REIMAGINING

### Projects by ITE

Title: **MEETA**

To redefine the grocery shopping experience, and assist and motivate shoppers towards healthier diets, the team designed a Mixed Reality (MR) app that offers shoppers a curated and immersive experience. Using MR HoloLens, customers can readily view suitable food products on retail shelves based on their user profile. The app's virtual assistant also provides dietary advice to customers on their purchase decision. This project was in partnership with Sheng Siong Group Ltd, where pilot studies were conducted with shoppers to validate the proof-of-concept solution.

Title: **Eduverz**

The pandemic accelerated digital learning infrastructure with the fast adoption of platforms, such as Microsoft Teams and Zoom, for home-based learning (HBL). However, these platforms do not effectively engage students in its two-dimensional (2D) format. In partnership with Finate Pte Ltd, the team used Unity software, a metaverse application, to create and conceptualise a 3D virtual immersive classroom, to promote practical learning through 3D teaching and learning.

### Projects by VTC

Title: **All Screens**

In view of the outbreak of Covid-19, online teaching and learning have become a "new normal". The project "All Screens", using cloud AI services and VR chatbot, was developed to facilitate the delivery of online classes, which include designing a virtual teaching assistant to answer students' questions online.

Title: **U-trap Refill Automator**

Drain outlets or U-traps serve to stop foul odour and unhygienic substances in the drainage system from entering living areas. The student team developed the U-trap Refill Automator, which could assist residents in monitoring the water level in U-traps, and refill water automatically when the water level in a U-trap is insufficient to block virus and bacteria from entering the living area. It could help prevent the spread of disease effectively, in particular, in times of Covid-19.

### SUB-THEME 3: SUSTAINABILITY

#### Projects by ITE

Title: **SiO2**

Glass has one of the lowest recycling rates in cities such as Singapore and Hong Kong, posing significant landfill challenges. The team found a great opportunity to reduce glass waste through the use of art and aesthetics to promote recycling and upcycling, thus breathing new life to glass forms. The team conducted Upcycling Workshops, such as glass jars for planters and upcycled wood, and donated these handmade items to Siloam Thrift Store. They also developed sustainability awareness and talking points through art installations on campus.

Title: **EastWest Food Rescue**

Food waste is one of the biggest waste streams in Singapore, with an increase in 20% of food wastage in the past decade alone. In a collective effort, the team sought to apply digital solutions by utilising FormSG with QR Codes, published on social media platforms to collate demand and supply of food items at the community level. Through this application of a B2B model, donors (F&B businesses as well as households) with excess food items nearing expiry are matched to the recipients to reduce food wastage. The team also worked on an educational awareness campaign to reduce wastage of fruits and vegetables. ITE College West's Amber West restaurant, in partnership with food supplier TreeDots, transformed unappealing (but perfectly edible) foods into delectable meals worthy of being presented in a restaurant menu.

#### Projects by VTC

Title: **The World's Your Oyster**

Students majoring in Visual Communication, and Food Technology and Safety programmes modified the recipe of XO sauce by making use of dried pearl oyster meat, which was of limited usage and used as feed for fish farming in the past. The design team assisted the fisheries industry in rebranding and promoting local fisheries products in local and mainland markets.

Title: **Adaptive Reuse of MiCs after Covid-19**

During the pandemic, some temporary community isolation facilities were built in Hong Kong and worldwide by using Modular Integrated Construction (MiC) units, a new building technology. To explore ways of re-using the facilities effectively after the pandemic, the student team studied how to upcycle those MiC residential units so as to build a sustainable society and promote green living.