

Smart Campus Services App

Integrating smart campus services with one click away.

Problem

NTU is known for being a **futuristic Smart Campus** with incredible technologies and facilities. President of NTU Prof Suresh has introduced the idea of **smart pass** around the university. A smart pass act as a **personal identification** from allowing user security access to libraries, labs, authorized buildings, to facilities bookings and many campus services.

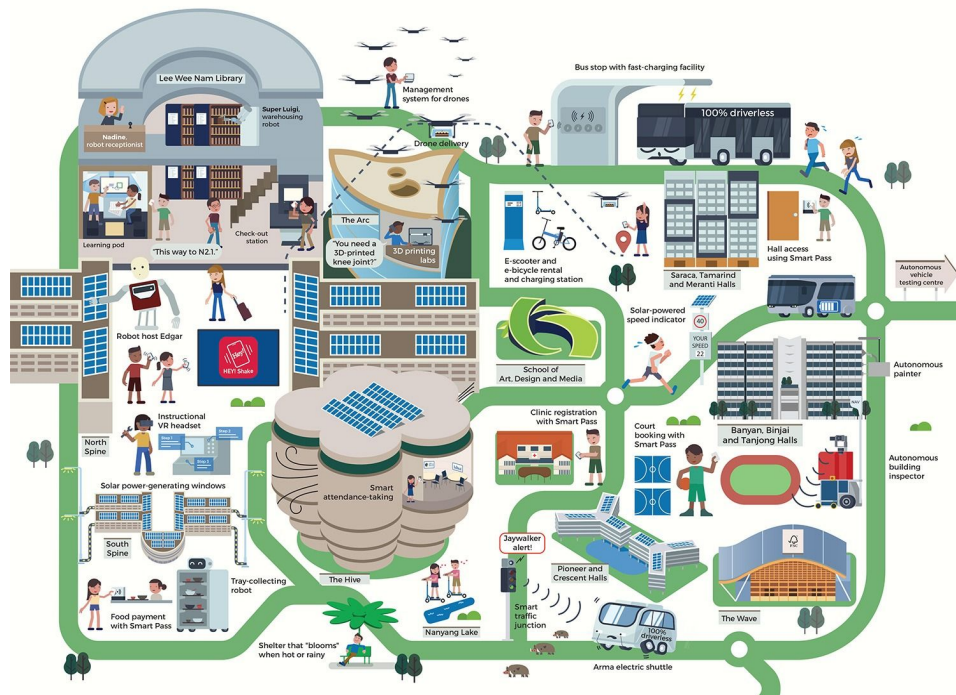


Figure 1: NTU Smart Campus Vision. We treat this as our model for developing our app.

However, the current problem is that **all the systems are sparsely distributed** - they are located in different websites and managed by different departments. This is really hard for new students or visitors to locate each type of service.

Solution

We created an **all-in-one app** where we can have complete smart services for university problems.

Some existing services may already be secure and robust enough, so there is no need to replace the services with our new systems. Hence, we created an app that could **link all the existing reliable systems** while also provided exciting new features for non-existing services.

Features included

QR Matriculation Card - Today's NTU matriculation card acts as a smart pass, but often the physical card is very easy to be lost. We made a **QR code** of your **matriculation card** so that you can **scan it to take attendance, access school facilities, make payments**, and many more.

Food Pre-Ordering - Ever want to skip long queues in canteens? Now you can **pre-order your meal** at any canteen across the campus and **pay beforehand**. An **email notification** will be sent to you when your meal is ready for collection. You can even **check your order history** to see what's your top 5 favourite canteens across NTU!

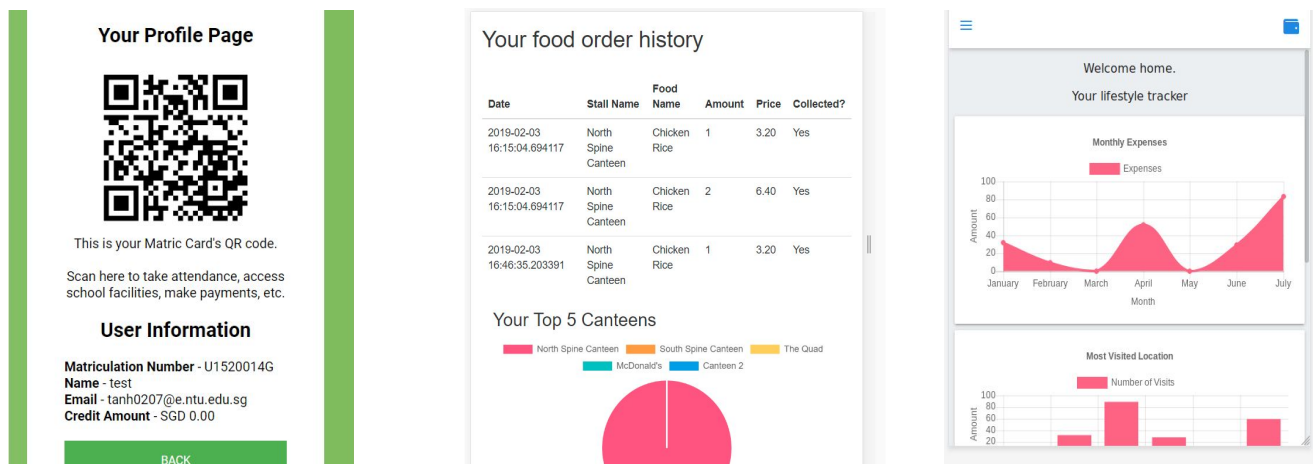


Figure 2: Features for QR Matriculation Card, Food Pre-Ordering and Lifestyle Tracker

Lifestyle Tracker - The user-friendly service will guide you to a balance lifestyle in university. The basic features of this tracker will analyze users' **monthly expenses**, and provide users with a **heatmap** of most visited locations in university areas. The future features will even provide users with research results and user customization towards healthy lifestyle.

Clinic Services - Allow users to book an appointment for medical services at nearby clinics.

Bus Services - To check the **real-time** location of buses. We integrate the famous bus tracking website (<https://baseride.com/maps/public/ntu/>) to show you the **exact** location of all types of buses in NTU. You can even check the estimated **arrival time** of each buses in each bus stops.

Library Functions & Booking Facilities - Shorten the time of facilities checking, booking at anywhere, anytime. With this app, you could land on any NTU services in just one click.

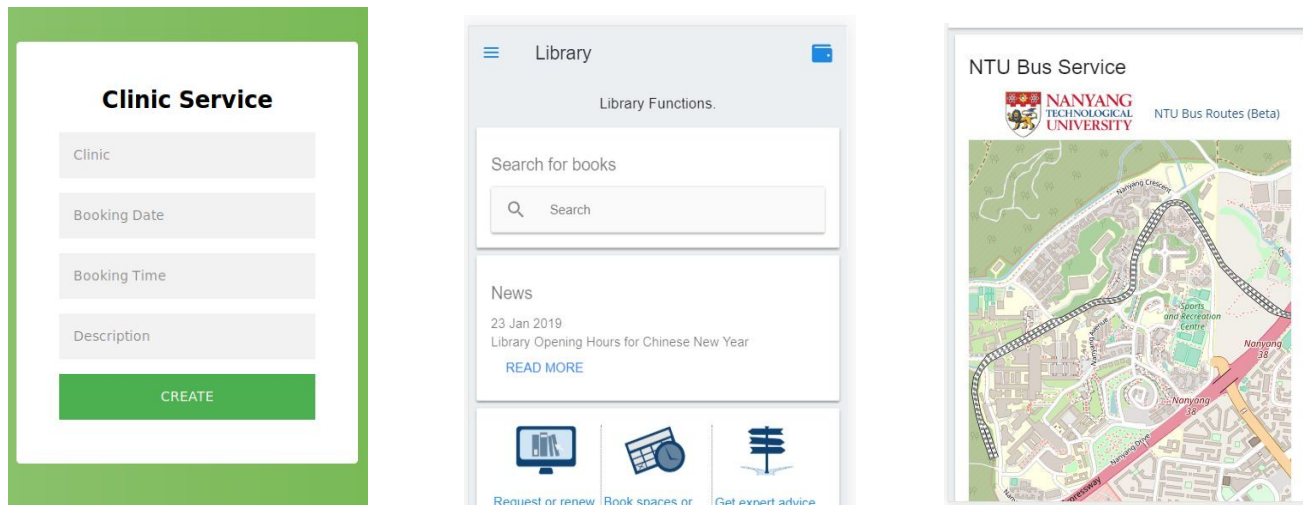


Figure 3: Features for **Clinic Services, Library Functions & Booking Facilities** and **Bus Services**

Event Application - Have an event information to share? You can submit an application into our app and once approved, the information will be disseminated to everyone in the school!

Event and News Notification - Get the latest news and events feeds happening around NTU at the homepage of our app.

Conclusion

The deployment of this all-in-one app aims to solve the sparse distribution of services. User will not have to worry about limited phone storage or which app to choose from anymore. With the unification of these smart services, NTU will be a huge step closer in being a real **futuristic Smart Campus**.

Brought to you by:

Team CHKL - Chong Bing Sheng, How Chun Hung, Tam Zi Hao, Tan Hao Hao, Tan Pak Zan