We Connect Everything to improve the quality of life

Smart Campus
with Smart Library
Entering a New Era of Campus

HKC International Holdings Limited

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香港通訊

" Our solution makes your school
or university safer and smarter"

Entering a New Era of Campus

Today's teachers and students are engaged in mobile and have high expectations on receiving latest technology. The consequence of digitalization, internet proliferation, and technology advancement, our way of teaching and learning has been changing. The role of library has to be converted into a place for future library is tied to the technological development of Web4.0.

HKC Smart Campus and Smart Library can help to streamline processes and create an efficient, seamless and self-service library environment. Some campuses have started to adopt the latest technology to convert their Campus and Library into Smart ones for the interests of students. When all of the people, devices, and applications on campus share a common technology infrastructure, they can interact with each other to enable experiences and efficiencies that were not possible before.
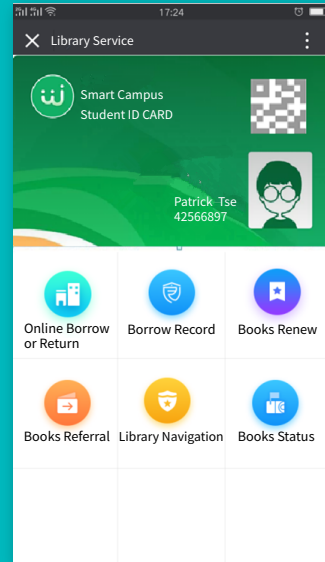
Technological advances have enhanced education to new heights, education is more than effective access to information. The connectivity of devices enabled by Internet of Things can no doubt benefit the whole campus. Institutions that adopt digital infrastructure and provides services to its users can become a Smart Campus. These include capitalizing on IoT, RFID, GPS technology.

Smart Campus has many benefits, including augmented learning spaces, student learning and teaching instruction, campus apps that contains a plethora of benefits, and cognitive offloading. These initiatives not only improve learning capability, happiness, and competitiveness, but also the advancement of education and knowledge proliferation.

Smart Campus

Counseling
Smart Canteen
Social Party
Facility Booking
Lost and Found
Dormitory Management
Flee Market
Exam Registration
Self Check-in

Dormitory- Personalized Learning

Access to Smart Library by Campus App:

Library Service
Smart Campus Student ID CARD
Patrick Tse
42566897

Online Borrow or Return | Borrow Record | Books Renew
Books Referral | Library Navigation | Books Status

Flipping the classroom

-Students watch prerecorded lectures, do readings, and take quizzes at home, then do activities and assignments during class time
- Use resources of smart libraries to conduct research, watch prerecorded lectures that utilize SMARTboard technology
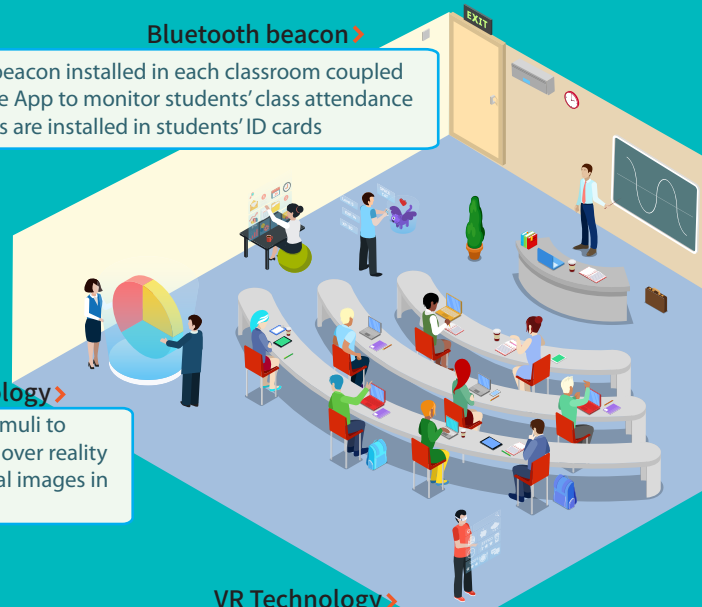
E-Learning and Virtual Classroom

- Students can vitually contact their academic advisors, and can learn individually in online courses or participate in virtual classrooms

Lecture Hall- Digitally Augmented

Bluetooth beacon

- Bluetooth beacon installed in each classroom coupled with a mobile App to monitor students' class attendance
- Or RFID tags are installed in students' ID cards

SMARTboard

- Can replace overhead projectors and allow teachers to enhance their lessons by integrating computers, video cameras, microscopes, and online resources with the board

AR Technology

- AR merges reality with fake stimuli to enhance learning ; data appear over reality so students can observe artificial images in a real-world setting

Crowd-sourced customized curriculums

- Teachers could share their syllabus, lecture notes, or even past exams with a network of teachers from different institutions
- Teachers could borrow the best ideas and adapt successful lesson plans into their own courses
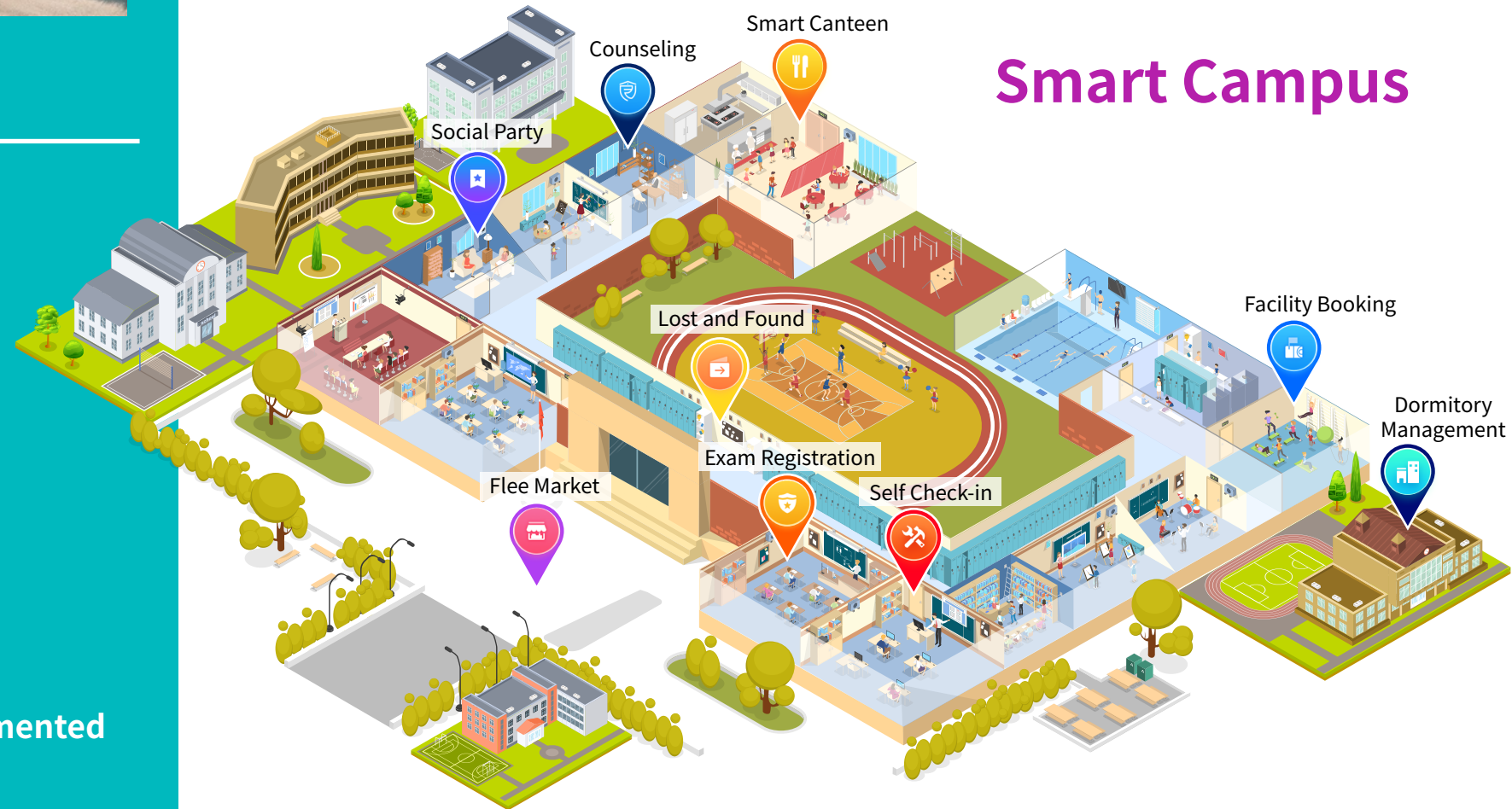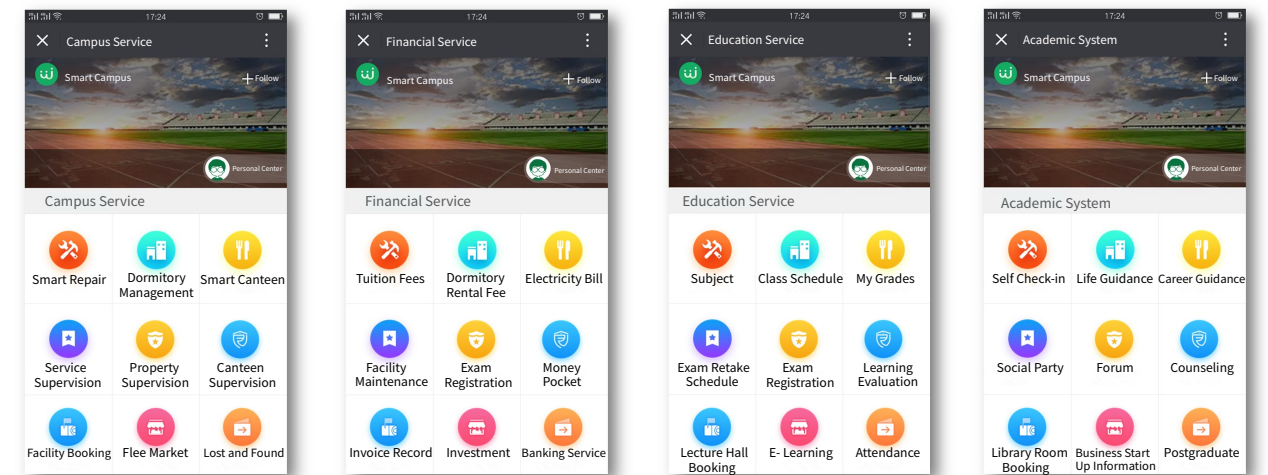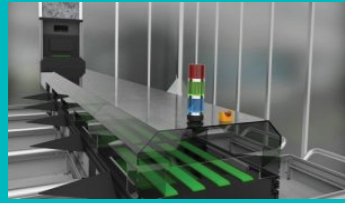
VR Technology

- VR technology lets students explore ideas, play games, view films, visualize complex data, interact with 3D objects that are too fragile or microscopic, and visit other countries virtually

WeChat integration Campus App

Campus Service

Smart Campus

Campus Service
Smart Repair | Dormitory Management | Smart Canteen
Service Supervision | Property Supervision | Canteen Supervision
Facility Booking | Flee Market | Lost and Found

Financial Service

Smart Campus

Financial Service
Tuition Fees | Dormitory Rental Fee | Electricity Bill
Facility Maintenance | Exam Registration | Money Pocket
Invoice Record | Investment | Banking Service

Education Service

Smart Campus

Education Service
Subject | Class Schedule | My Grades
Exam Retake Schedule | Exam Registration | Learning Evaluation
Lecture Hall Booking | E- Learning | Attendance

Academic System

Smart Campus

Academic System
Self Check-in | Life Guidance | Career Guidance
Social Party | Forum | Counseling
Library Room Booking | Business Start Up Information | Postgraduate

*WeChat integration that allow teachers, students, administrators to communicate and accomplish campus-related tasks all in one app
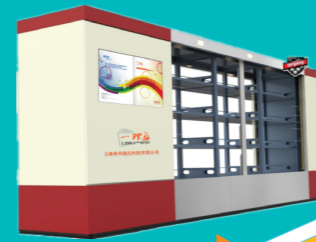
Smart Library

Books Drop and Sorting Unit

- 24-hours book drop
- Sorts books into their designated categories
- Improves library efficiency and book location accuracy

Smart Bookshelf

- Automatically detects on-shelve books
- Updates system records for stock take
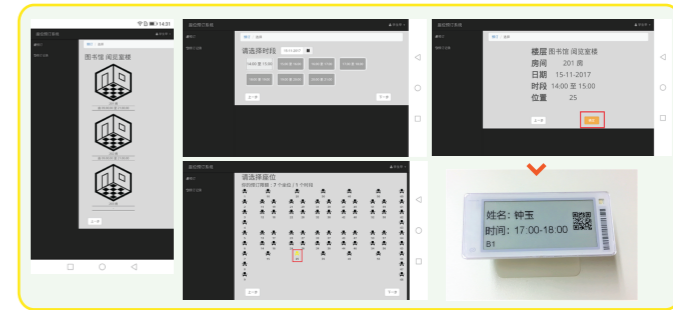- On-shelve books searching

RFID Applications

- RFID tags inside each book
- Gate keeps track of RFID materials passing for security check

Booking system user interface:

- Online booking of library facilities such as function rooms and multimedia equipment
- Integrated with access control to authenticate users
- Smart display : Display user name and booking details on tag for function room booking and study corner
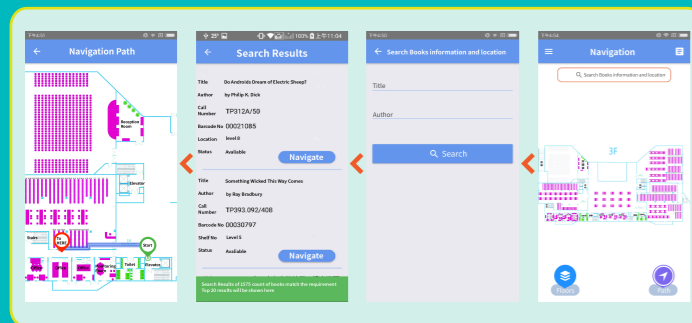
Mobile Stock Take Trolley

- Automatically detects books on the trolley for uploading to shelf
- Provides stock functions with a handheld device

Books Returning Process:

- Encourages self-service
- Hybrid system (HF/UHF/EM) to allow easy deployment and upgrades
- Able to collect and analyzes user behavior

Book Sterilizer

- 30 sec. sterilization time only - Mixed usage of ultraviolet and essence for sterilization to minimize books damage

Real time location system user interface:

Real time location system

- Beacon for navigation
- Provides navigation function
- Convenient searching
- Reservation of library resources
- Library map and guide
- Integrated with recom-mender

Stock Take Robot

Automatic moving machinery to facilitate navigation and stock count :
1) Automatic locates book shelf
2) Automatic provides stock count report
3) Will be equipped with touch screens and voice recognition system

Self Check in and Out Station

Tagging Station

Booking System
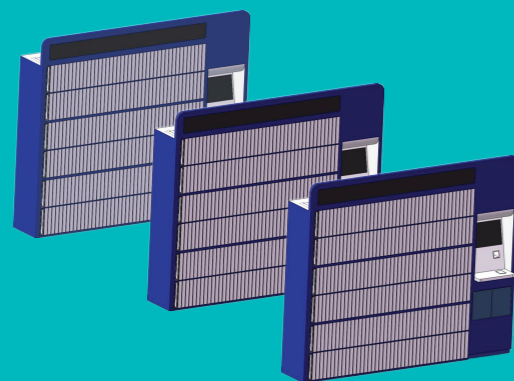
Front Desk Work Station

- Possess dual screens to let librarians / users view book status
- Can cater book location enquiries
- Can perform tag information changes
- Can provide statistics and analysis reports
- Can sync. with security gates
- Can change to self borrowing / returning station

You have successfully borrowed the books
Do you want to borrow again

Continue   ?   Quit

Recommendation of books you may like

Guide to Studying in the USA
KAPLAN
370.973

Recommender System

- Recommends books based on user preferences
- Identifies user's previous records. Content-based or/and collaborative filtering

Books borrowing process:

Ai Greeting Robot

- Help to assist first line support and providing interactive conversation with different langauges
- It can provide real-time navigation and recognize customers' faces and attributes to create custom analysis report
- All branding and promotion messege can be broadcasted to robot instantly

Entrance Gate (For card access)

Security Gate

Beeping sound will be created when non-borrowed items pass the gate
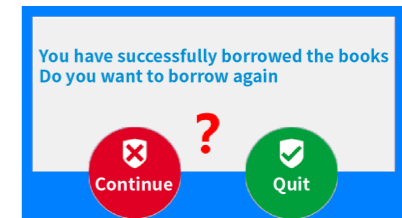
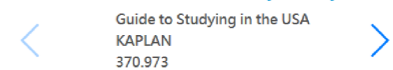## Outside the Library:

24 hr self-service library

- Automatic detection of books on shelf
- Updates the system records automatically
- Self-service reader card registration
- Self-service book check in/out
- On shelve book browsing through touch screen monitor
- Book reservation
- Book recommendations
- Monitors abnormal user behavior
- Integrated with security system to pop up problem location

Smart library is a hardware and software complex with a wide range of opportunities for searching and providing necessary information to virtual users according to their inquiries and requirements. Another definition of smart library is a library provided services, which are interactive, innovative, informative, actual, changing and international.

Smart library provides such advanced services such as personalized services, hypertext services, computer-aided design services, knowledge mining services, cross-media services. All these services make a digital library more active, professional and intelligent.