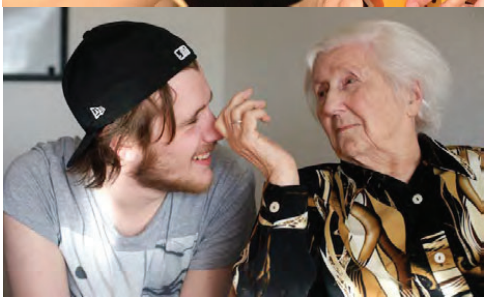


Tackling Double Ageing by Double Smart
以雙智慧應對雙老化
SOCIAL INNOVATION REGIONAL FORUM
社會創新區域論壇
2020
Thematic sessions 專題研討

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

INTERGENERATIONAL COMMUNITY IN A VERTICAL CITY

SIRF Thematic Session 3 | 6th November, 2020

Smart Neighbourhood & Community: Connecting All Without Boundaries

Dr. Calvin LUK

Project Manager I, Leader of Spatial Team,

Jockey Club Design Institute for Social Innovation,

The Hong Kong Polytechnic University

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

Jockey Club Design Institute for Social Innovation

PolyU Design

Vision

To become a leading institute to **trigger social innovation** in all dimensions of the society to improve the **well-being** of the community and people

Function in PolyU

1. University Social Responsibility - providing a **platform** to nurture and empower community members to become social innovators to tackle society's 'wicked problems'
2. Create opportunities to extend PolyU's **academic, social and knowledge impact** by making use of the departments' **applied researches**

2018-2021 Strategic focus - "Double Ageing"

Research & Practice areas - Social Design, Urban Planning, **Environmental Design, Design for Elderly, Universal Design, Accessible / Inclusive Design**, Design Thinking Education, Good Seed (Social Innovators Incubation)…..

DEPARTMENT OF LAND SURVEYING AND GEO-INFORMATICS 土地測量及地理資訊學系

DEPARTMENT OF BUILDING & REAL ESTATE 建築及房地產學系 INTERNATIONAL · COLLABORATIVE · CONSTRUCTION

應用社會科學系 Department of Applied Social Sciences

康復治療科學系 Department of Rehabilitation Sciences

School of Nursing 護理學院

BME DEPARTMENT OF BIOMEDICAL ENGINEERING 生物醫學工程學系

Tackling Double Ageing by Double Smart
以雙智慧應對雙老化

SOCIAL INNOVATION REGIONAL FORUM
社會創新區域論壇 2020

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

Thematic sessions 專題研討

4 Regional Landscape of Social Innovation

Smart Home
Improving Quality Living of Elderly

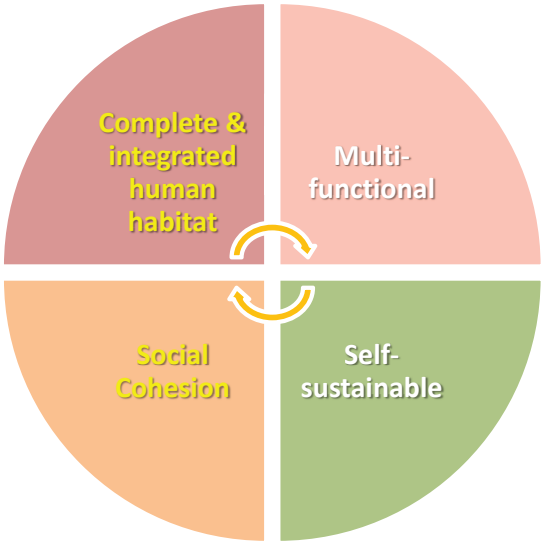
Smart Building
Achieving Sustainable Buildings

Smart Neighbourhood & Community
Connecting All Without Boundaries

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

VERTICAL CITY
共生 • Symbiosis



Kampung Admiralty (WOHA)

Vertical Village (OMA)

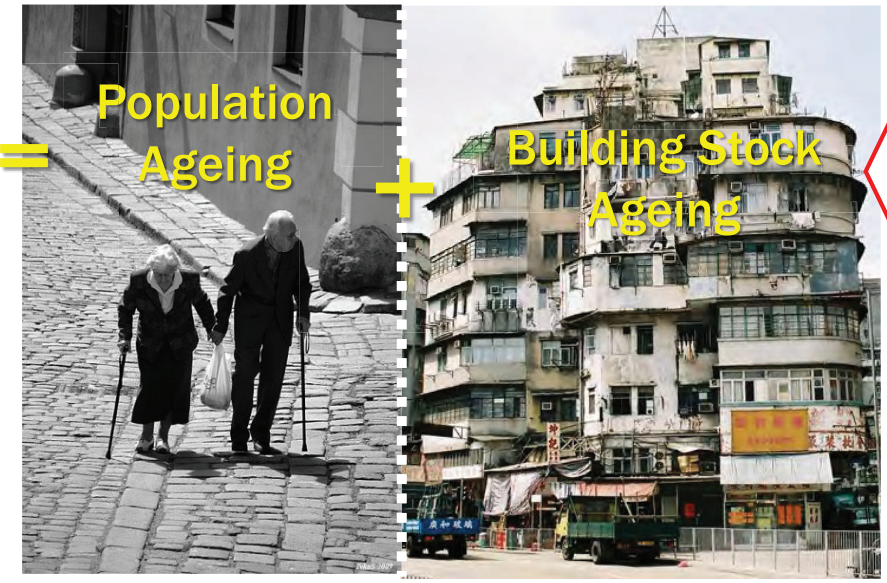
INTERGENERATION (IG) & INCLUSIVE COMMUNITY
跨代、多元文化、共融社區

Strategic Focus – Double Ageing
Tackling **Double Ageing** (雙老化) with **Double Smart** Solutions!

Towards a Planning Vision and Strategy Transcending 2030

"Double ageing"

In a high density vertical city

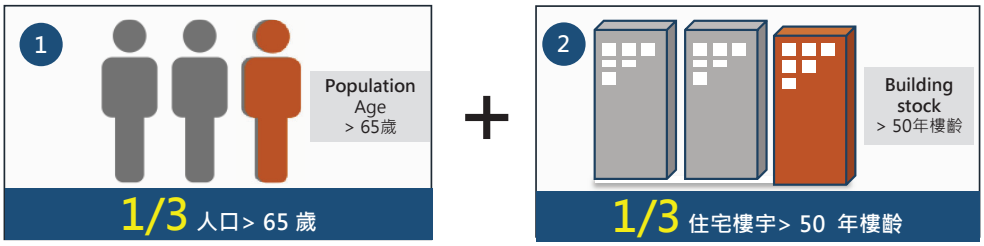


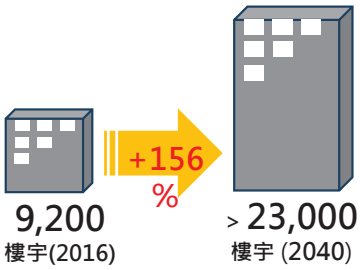
Smart Ageing in **Smart** Buildings & Neighbourhood

Requires ..... Translational Research & Transdisciplinary Collaboration

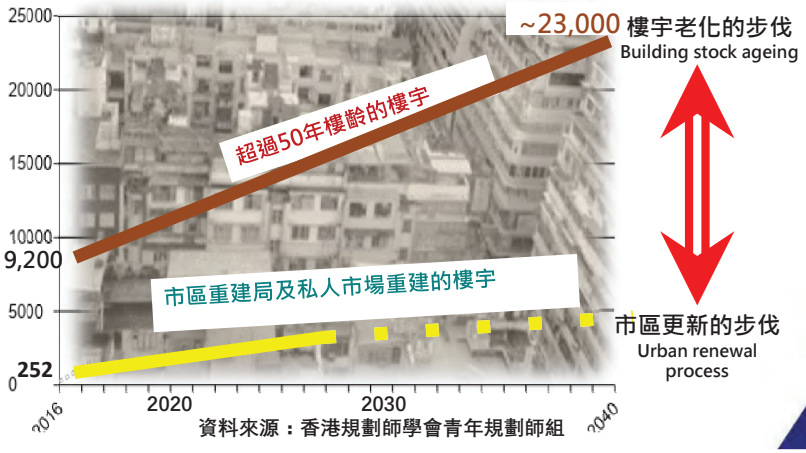
香港「雙老化」趨勢
Combined outlook on population and building ageing in Hong Kong

Year
2040年 =





(Urban Renewal Authority 市區重建局, 2017)

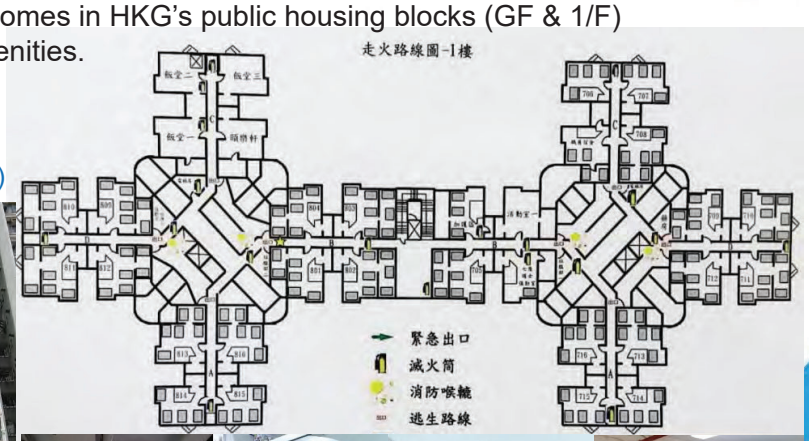


資料來源：香港規劃師學會青年規劃師組

“Harmony 1” floor plan
32 households
82 authorized occupants
vs
125 beds @7.5 sqm

Elderly living in Vertical City

Typical elderly care homes in HKG’s public housing blocks (GF & 1/F) with little outdoor amenities.
(Limited day light, natural ventilation, access to nature & outdoor space/activities)



Cross-discipline + Cross-sector collaboration
跨學科+跨界別合作

Student Service Learning

Clinical Trials & Research

Knowledge Translation

Project Lead

Design Partner

Care Home Operator

Property Owners

PolyU JCDISI

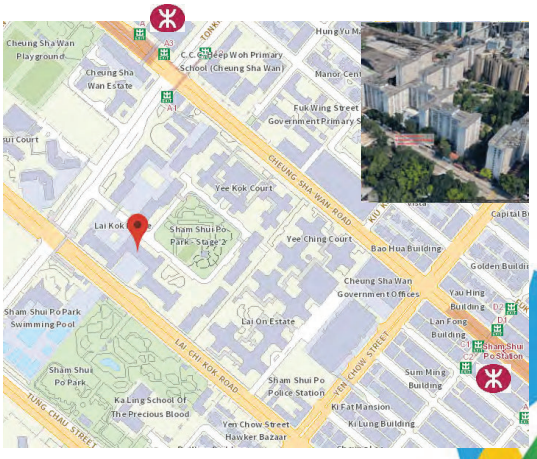
Gracious Alliance

GAW Capital

PolyU Academic Departments

One Bite Design Studio

ACTION PROJECT: LAI KOK ESTATE
行動項目：麗閣邨



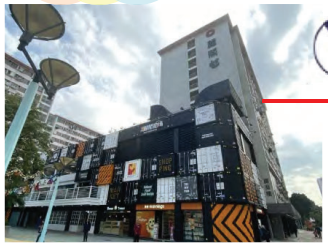
Type of Estate: Public Rental Housing
Year of Intake: 1981
No. of Blocks: 8
No. of Rental Flats: 3 000
Flat Size (m_2): 11.2 - 39.4
No. of Households: 2 800
Authorized Population: 6 500
(All figures as at 30.6.2020)

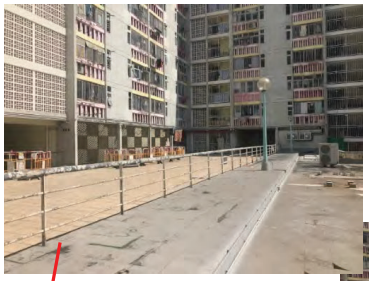
https://www.housingauthority.gov.hk/en/global-elements/estate-locator/detail.html?propId=1&id=1321348400456&dist=10

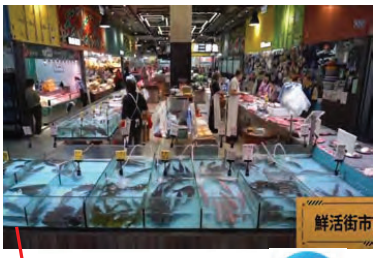
ACTION PROJECT: LAI KOK ESTATE
行動項目：麗閣邨

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院







INTERGENERATIONAL THERAPY GARDEN

NGO SOCIAL SERVICES & PRE-SCHOOL CENTRE

COMMERCIAL COMPLEX (Including shops and wet market)

PODIUM

OPEN LIGHT WELL

ELDERLY CARE HOME

COMMUNITY MEDICAL CENTRE

SOCIAL SERVICES TRAINING CENTRE

Podium Level

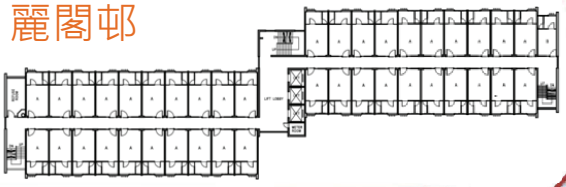
1/F

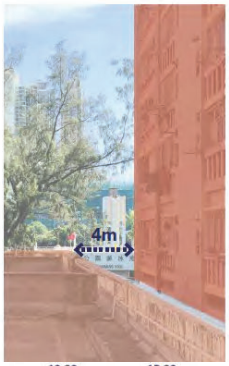
G/F Street Level

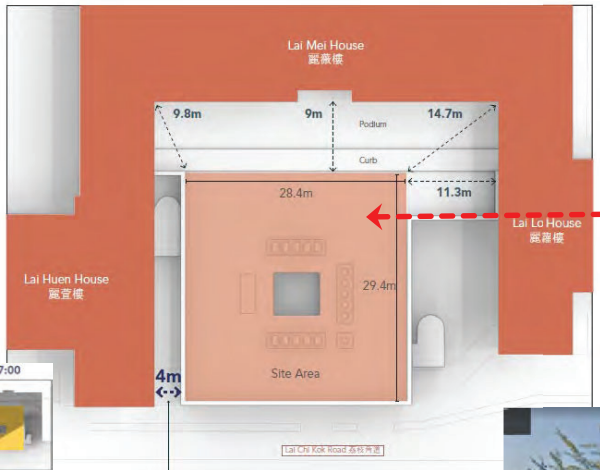
ACTION PROJECT: LAI KOK ESTATE
行動項目：麗閣邨

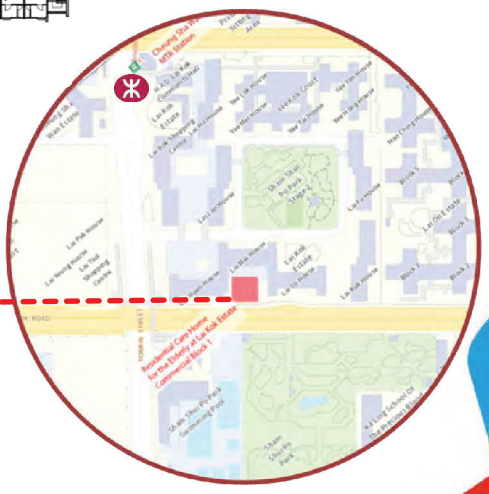
THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院







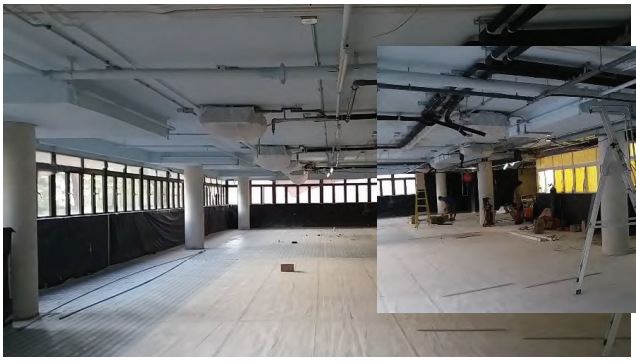


Close approximity to Lai Huen House

Site Area: 28.4m x 29.4m = 835m2

ACTION PROJECT: LAI KOK ESTATE
行動項目：麗閣邨

Construction Progress 5/11/2020



INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

Objectives

1. Transform “**vertical” challenge** to achievement through active walking journey
2. Promote **social connection** in a vertical city – create community cohesion & symbiosis
3. Promote **intergeneration interactions** - turn family visit (to the care home) to a fun and family activity.

Design tools

Holistic Environmental Design – a continuum of human-centric design consideration across all ages, culture and abilities, encompassing Design for Elderly, Inclusive/Universal Design, Salutogenic Design, Evidence Based Healthcare Design such as Design for Dementia. [1]

1 Luk CW. (2019) Guide for Vertical Building Design for the Elderly in Hong Kong · [J]《南方建築》華南理工大學建築學院期刊2019, v190(2):13-18

INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

JOURNEY TO ROOF GARDEN

- **Vertical challenge** – "stepping up" to fitness
- **Reinforce journey experience** through iconic features (graphics/objects) on floor/ceiling along staircase, covered walkway all the way
- **Wall with speech bubble frames** encouraging conversation and reminisce

onebite One Bite Design Studio

INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

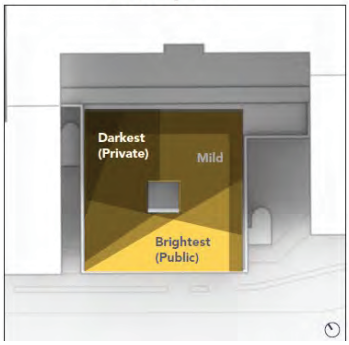
THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

ROOF GARDEN USERS

- ✓ **Residents** of care home
- ✓ **Family members** of residents
- ✓ **Caregivers** and **staff**
- ✓ **Neighbours** at Lai Kok Estate

Atmosphere



onebite One Bite Design Studio

INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

Zoning

THERAPY EQUIPMENT

WATER ELEMENT

HORTICULTURE

ACTIVITY AREA

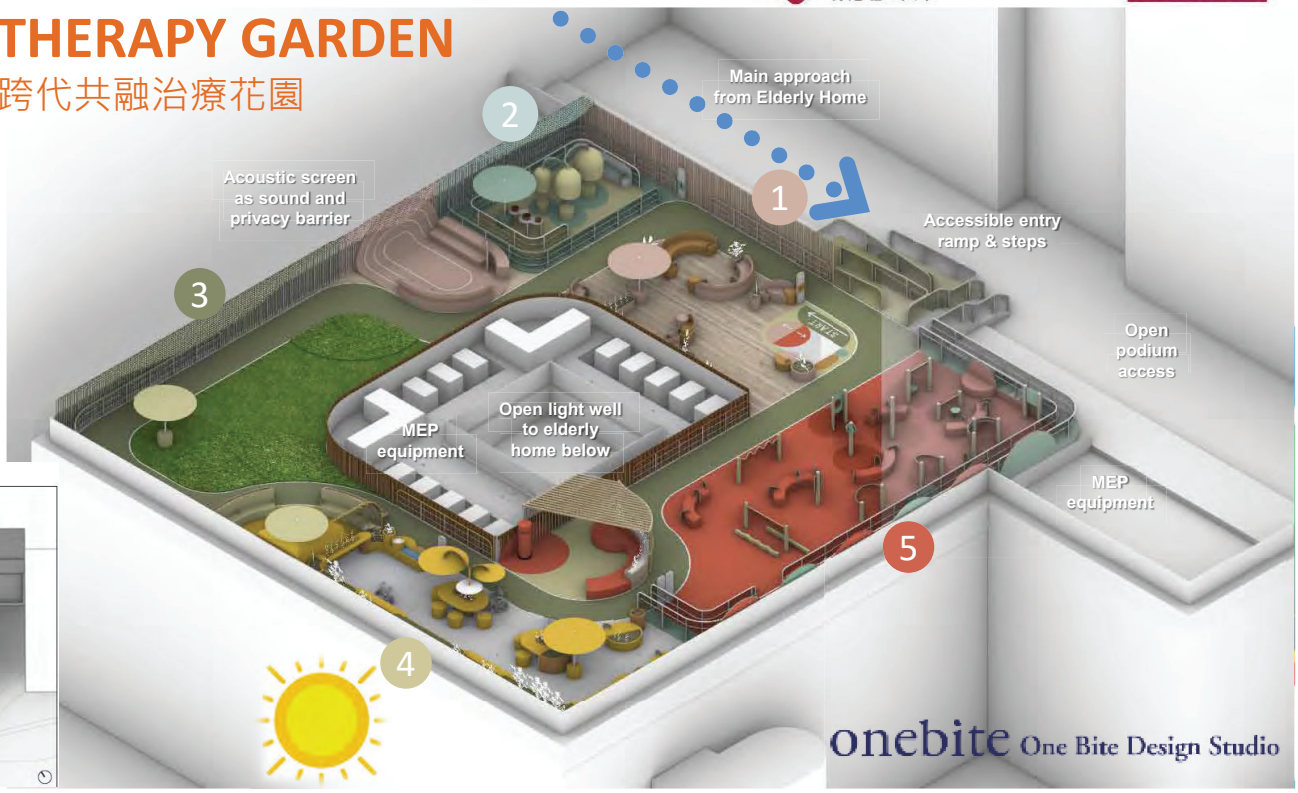
onebite One Bite Design Studio

INTERGENERATIONAL THERAPY GARDEN

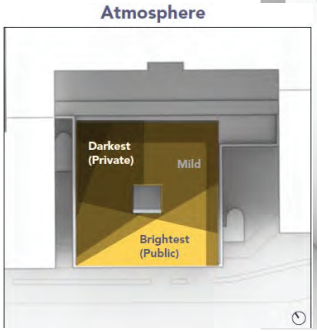
跨代共融治療花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院



Atmosphere

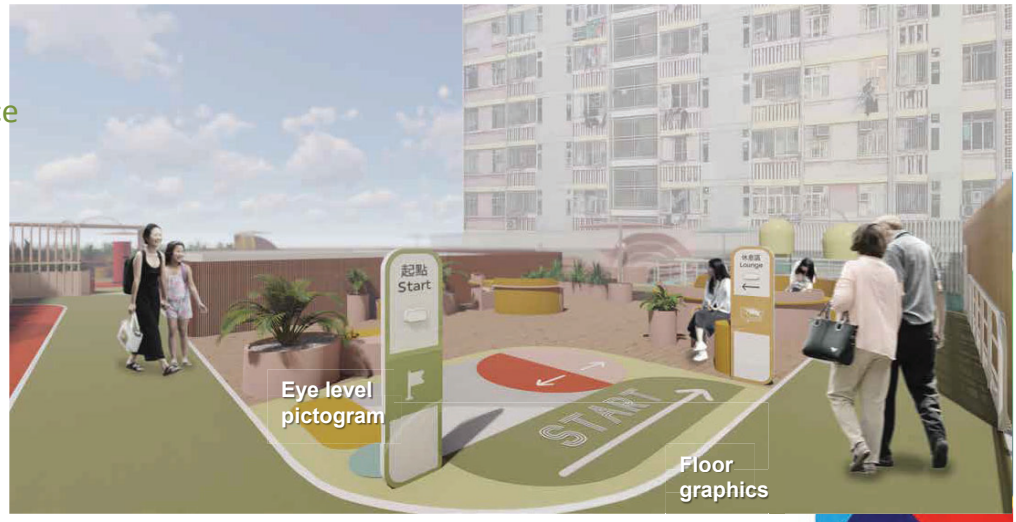


onebite One Bite Design Studio

INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

ENTRANCE PLAZA

- Barrier-free **Accessible** entrance with ramp & double handrail
- Start of the wandering path
- **Colourful floor graphics** to welcome visitors and provide a better sense of direction and orientation for elderly users
- **Eye level signage with pictograms** to demarcate each zone



INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

1. QUIET LOUNGE

- **Variety of space for different level of social interaction** – family/small groups to intimate/personal.
- **Inward-facing seating** to encourage communication
- Seating with higher **back rest and handles**
- **Feature planting** to prompt conversations

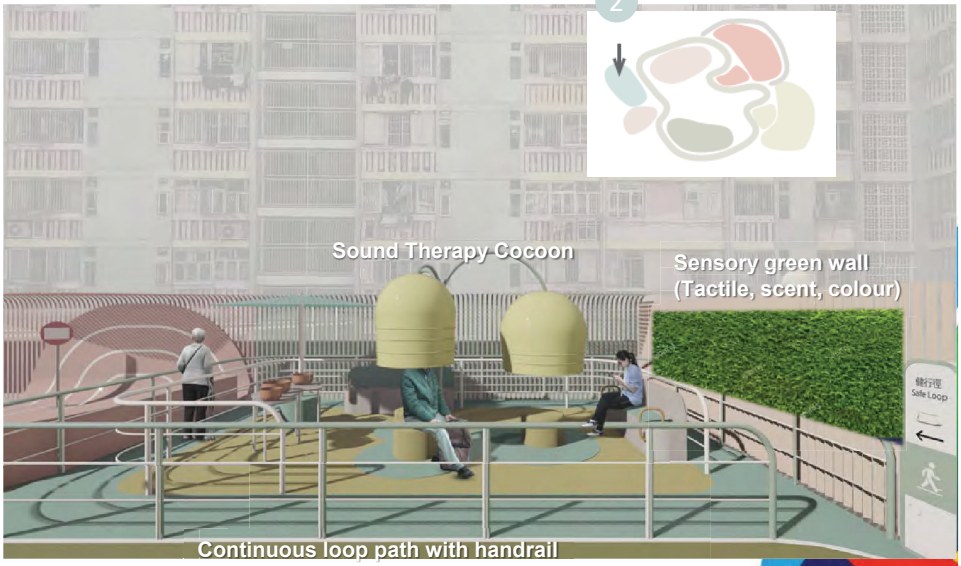
INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

2. SAFE LOOP

- **Continuous loop path** w/multiple sensory restoration elements incl. water, scent, flowering plants and other tactile features.
- **Sound therapy stations** with lighting and sound player installed inside collapsible cocoon
- Continuous handrails
- Detachable parasols for shading



INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

3. GAME / SPORTS ZONE

- **Artificial lawn** for a wide variety of **games & sports** facilities to provide interaction opportunities **across generations**
- **Acoustic screen** to safeguard against noise as well as privacy to the adjacent/overlooking residential blocks.

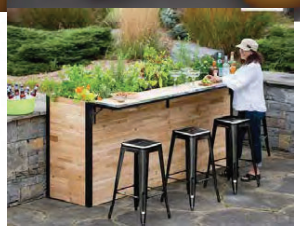
INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

4. NURSERY GARDEN

- **Communal table** for group activities
- **Planters with different heights** for children and people with different abilities (e.g. wheelchair users)



onebite One Bite Design Studio

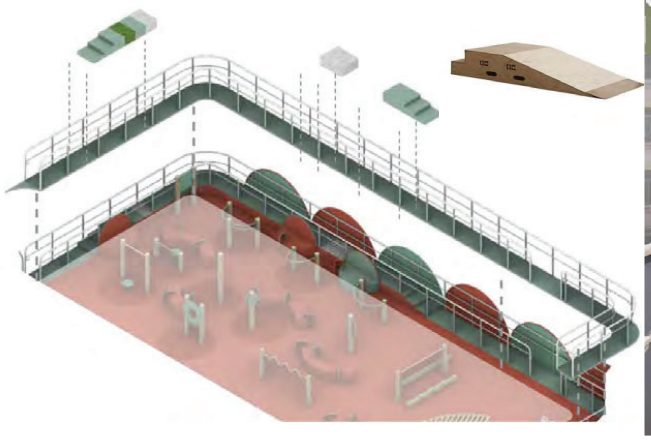
INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

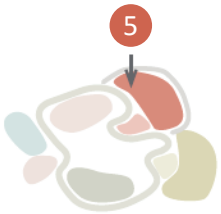
THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

5. FITNESS ZONE & CHALLENGE TRAIL

- **Therapy equipment** & program
- Bench with **handles of varying height**
- **Modular blocks** that can be changed to create different courses/training





onebite One Bite Design Studio

INTERGENERATIONAL THERAPY GARDEN 跨代共融治療花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

STORY CORNERS

- **Inclusive / Universal Design seating** for spontaneous interaction across generation.
- **Reminiscent objects & settings (seasonal)** to encourage story-telling and sharing of histories.

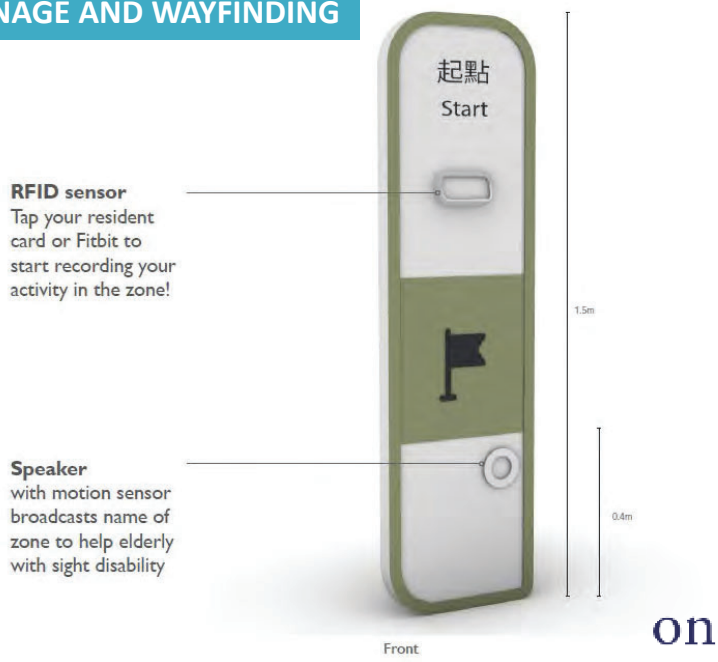
onebite One Bite Design Studio

SMART ROOF GARDEN 智慧屋頂花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

SIGNAGE AND WAYFINDING



onebite One Bite Design Studio

SMART ROOF GARDEN
智慧屋頂花園

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

INCORPORATING IoT AND TECHNOLOGY

❶

Start
Users tap their RFID resident card or Fitbit on the signage of each zone to activate the sensors within the area to record their activity data.

❷

Activity
Users' activity will be logged by various sensors in each zone. For the therapy zone, screens on each individual machine will display their workout data.

❸

Leaving
Users can tap their card on the signage again when leaving the zone and the tracked data will be visualized and displayed on the screen on the signage.

❹

Network of users
The screen behind the signage will display the top 3 performers who logged the most activity in a month (with their consent). Users will be able to enter into a competition with monthly awards to the most active user.

2007 UK Estate Elderly Home | PRE004 | 2020091 |

onebite One Bite Design Studio

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

J.C.D!Si 賽馬會社會創新設計院

THANK YOU!

calvin.luk@polyu.edu.hk

Ar. Sarah Mui
onebite One Bite Design Studio

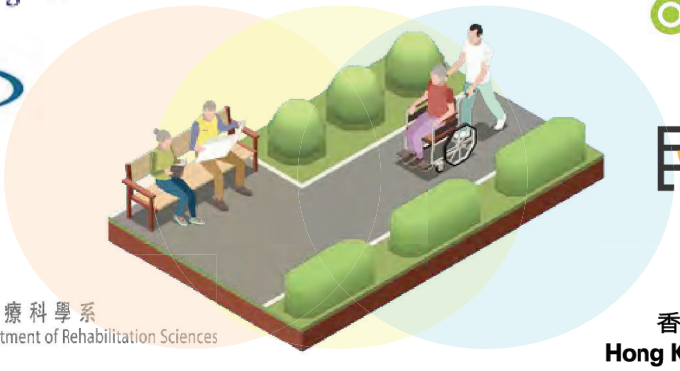
Ms. Rebecca Chau
凝心薈 Gracious Alliance

Associate Professor
Dr. Cheung Kin
School of Nursing 護理學院

Associate Professor
Dr. Kenneth Fong
康復治療科學系
Department of Rehabilitation Sciences

民坊 PEOPLE'S PLACE Managed By 基滙資本 Gaw Capital

香港房屋委員會
Hong Kong Housing Authority



Let's create innovative intergenerational space in our vertical city!