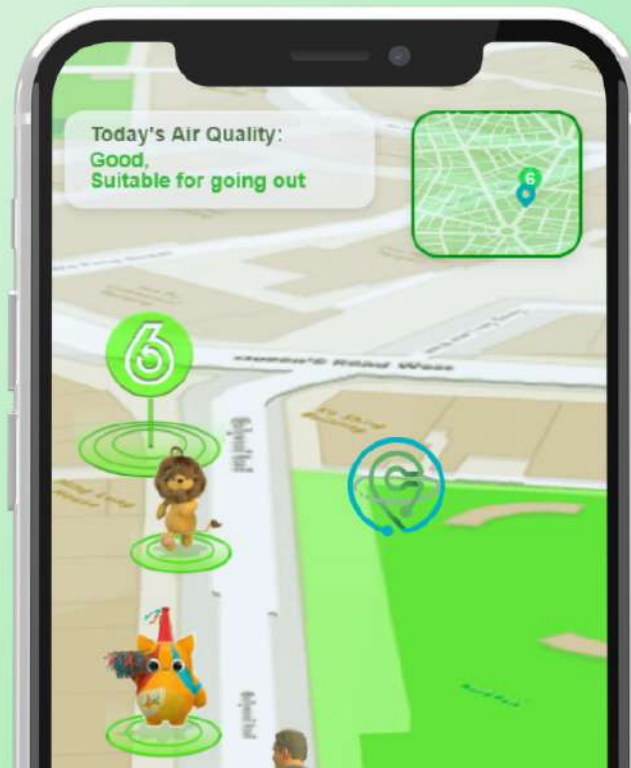Department of Urban Planning and Design,
Faculty of Architecture, The University of Hong Kong

HK GREEN METAWORLD

A fun and playful GIS-integrated system which empowers citizens and local businesses in ESG commitment.

Today's Air Quality:
Good,
Suitable for going out

SCAN FOR DEMO VIDEO

HKUrbanist

Huang Xinyi Joyce
Kuang Yi Lily
Liang Shizheng Laurence

Date
July 30 2023

PAIN POINTS

		Demand / Supply Gap	Solution
Individual	Demand	Lack awareness, guidance, and tools	Fun gamification mechanics to enhance engagement
	Supply Gap	Existing resources fail to effectively educate and empower	
Business	Demand	Seek motivation, guidance, and collaboration opportunities	Establishment of a unified platform to help with operations and promotion.
	Supply Gap	Current solutions fall short in meeting businesses' needs	
Government	Demand	Requires comprehensive ESG management solutions	Regularized the management of environmentally related industries and activities.
	Supply Gap	Lack comprehensive ESG frameworks	

Before

原來我之前嘅行為唔夠ESG

After

USER PROFILE

Emma Wong: 17 Years Old
High school student
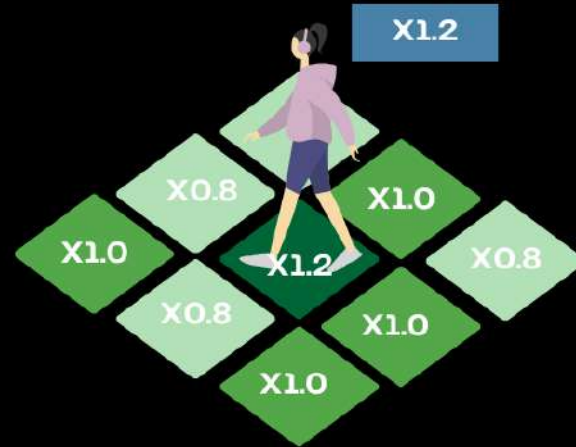
The interaction with Mascots can attract people to engage.

Provide step-by-step guidance leading to ESG principles

Today's Air Quality: Good, Suitable for going out
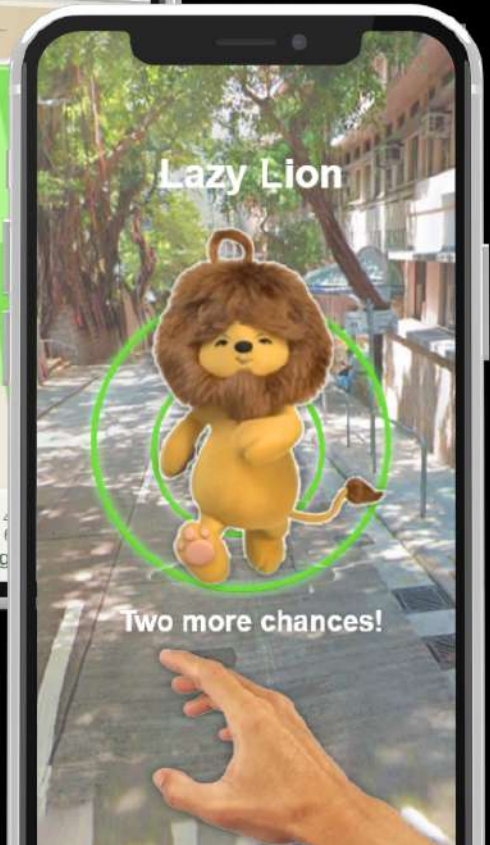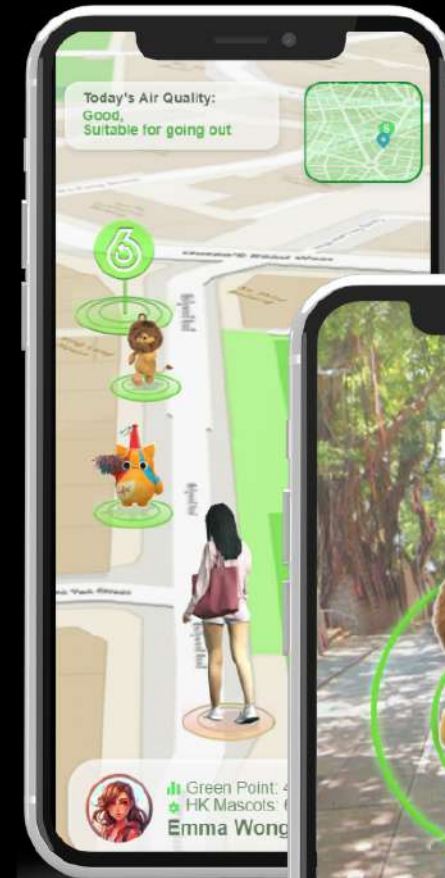
Green Point: 460
HK Mascots: 6
Emma Wong

Picture credit to: Midjourney

CITIZEN INTERFACES: ESG GAMING

Green Score Viewer

X1.2

X0.8 X1.0

X1.0 X1.2 X0.8

X0.8 X1.0

X1.0

Green Score accumulation

AR Hong Kong Mascot collection

Today's Air Quality:
Good,
Suitable for going out

Green Point:
HK Mascots:
Emma Wong

Lazy Lion

Two more chances!

Green Score
100
0

COMPANY INTERFACES: ESG BUSINESS LOOP

Green Certificate
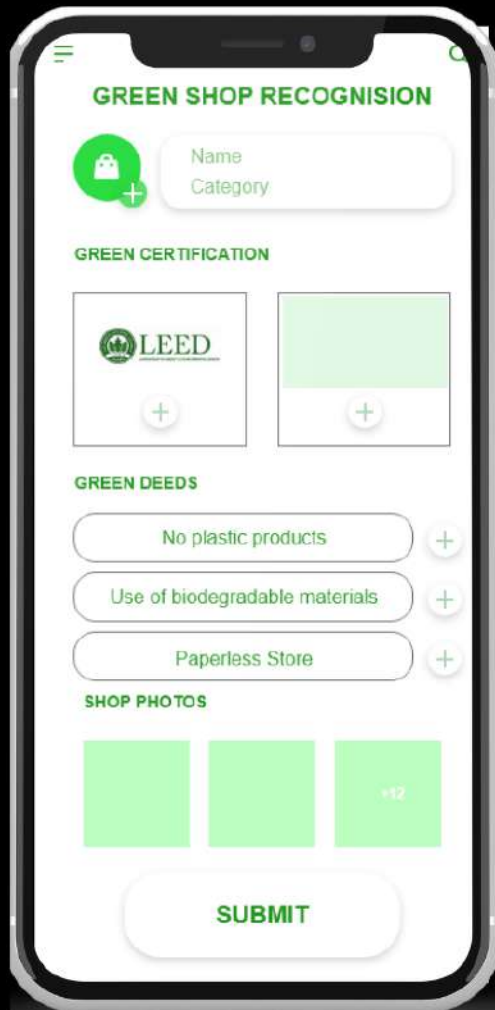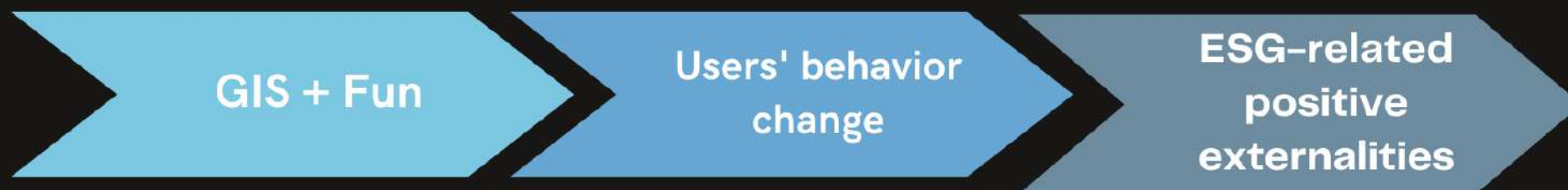
Green Initiatives
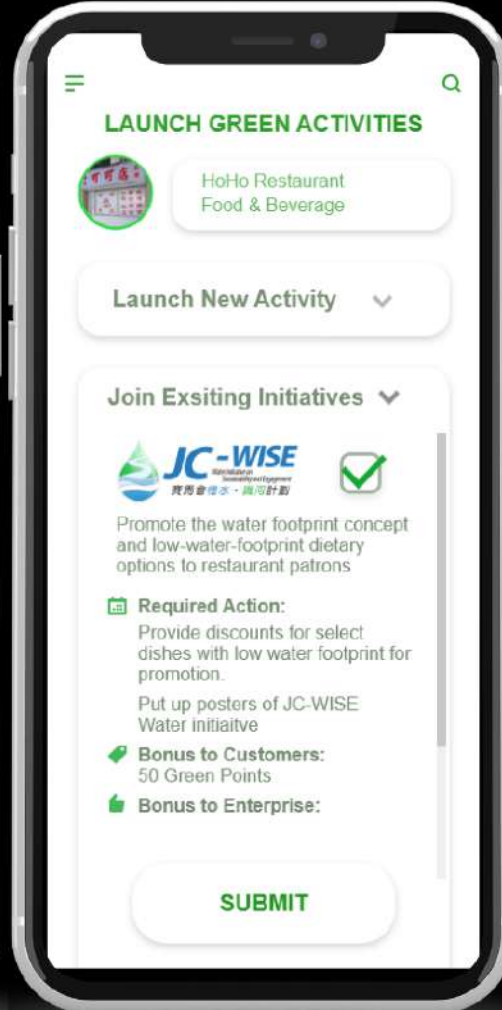
Notification

Merchant gets more popularity

Society

Citizen behaves greener

UNDERLYING TECHNOLOGIES

- Integrate GIS into the everyday lives of the general public

GIS + Fun → **Users' behavior change** → **ESG-related positive externalities**

- Center technologies with three themes:

PLAYABLE

APPROACH ABLE

MULTI-DIMENTIONAL

- Reality-Based Gamified Solutions
  - Game Engine Unity
  - Augmented Reality (AR)
  - Location-Based Service (LBS)
  - AIGC: Midjourney

- Multi-device Compatible for Citizens
- C# .NET Core 6.0

- Solid GIS Analyses
  - ArcGIS Maps SDK
  - ArcGIS REST API
  - ArcGIS Pro