

A detailed 3D isometric rendering of a city. It features a dense cluster of skyscrapers in the background, transitioning into a mix of residential houses and office buildings in the foreground. The city is built on a grid of streets with various road types, including a major highway on the left. Green areas, such as parks and small gardens, are scattered throughout the urban landscape.

Team 12

Trip × AI × IoT

MEGURU



Don't we only go to the
usual tourist spots?

meguru: Digital Stamp Rally Service

Targets

- Tourism offices
- Businesses in rural areas

Problems

- Limited budgets of promotion
- Unable to collect or utilize customer data



Unable to attract tourists to various locations despite
many attractive spots, shops, and experiences... !!



Organizing cost-effective promotional events

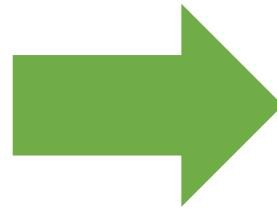


Collecting and utilizing data effectively



+ Providing users with "new city exploration experiences"

with IoT & AI



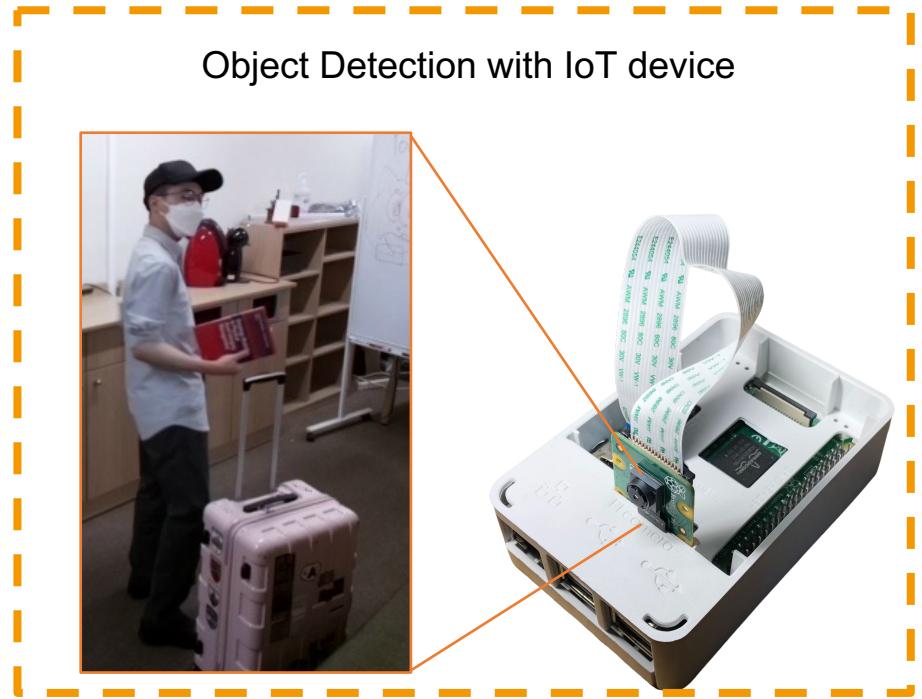
Utilization of **IoT devices**,
where technology is advancing



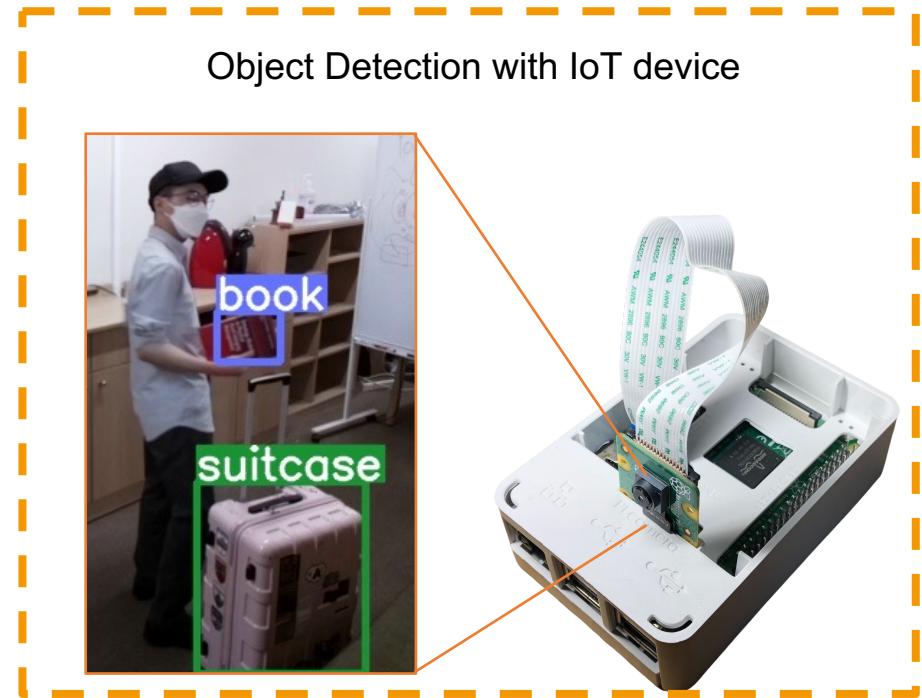
- Existing digital stamp rally apps require scanning QR codes

& **Image recognition AI**
with high accuracy and speed

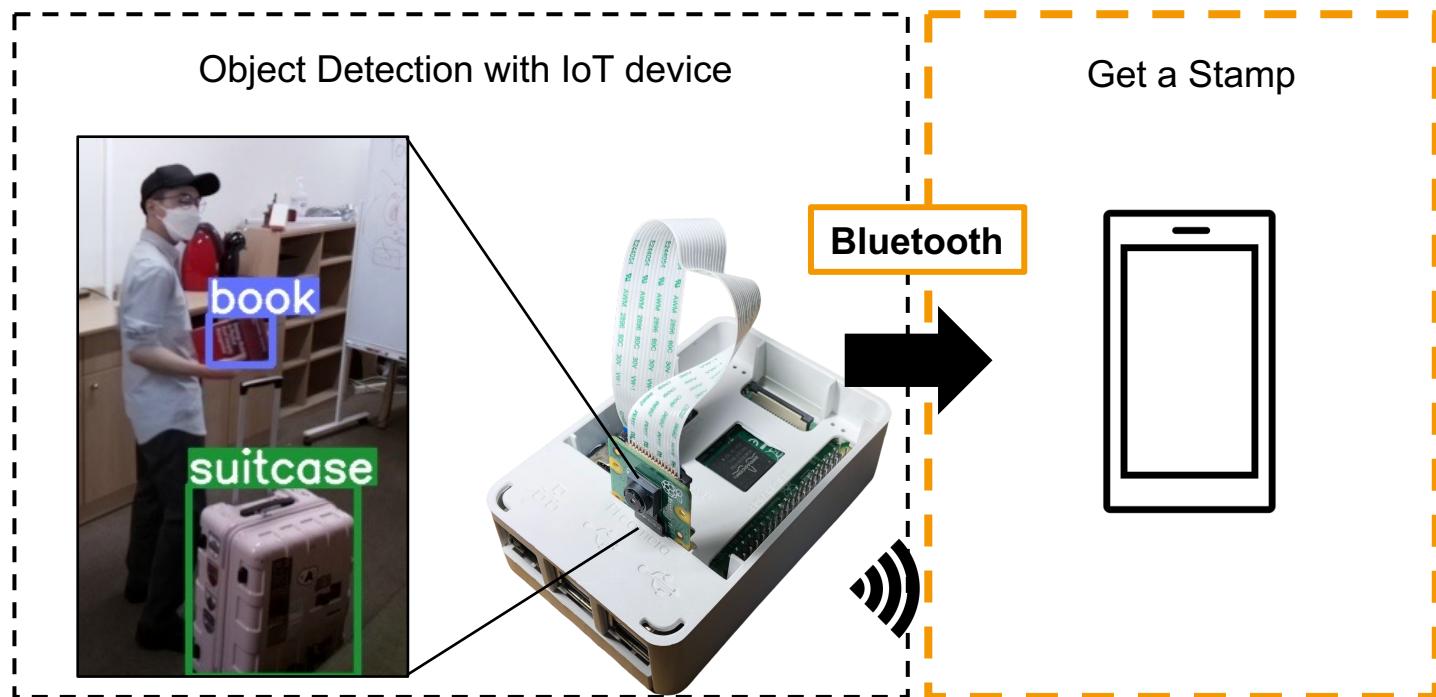
Service Flow: Let's walk around



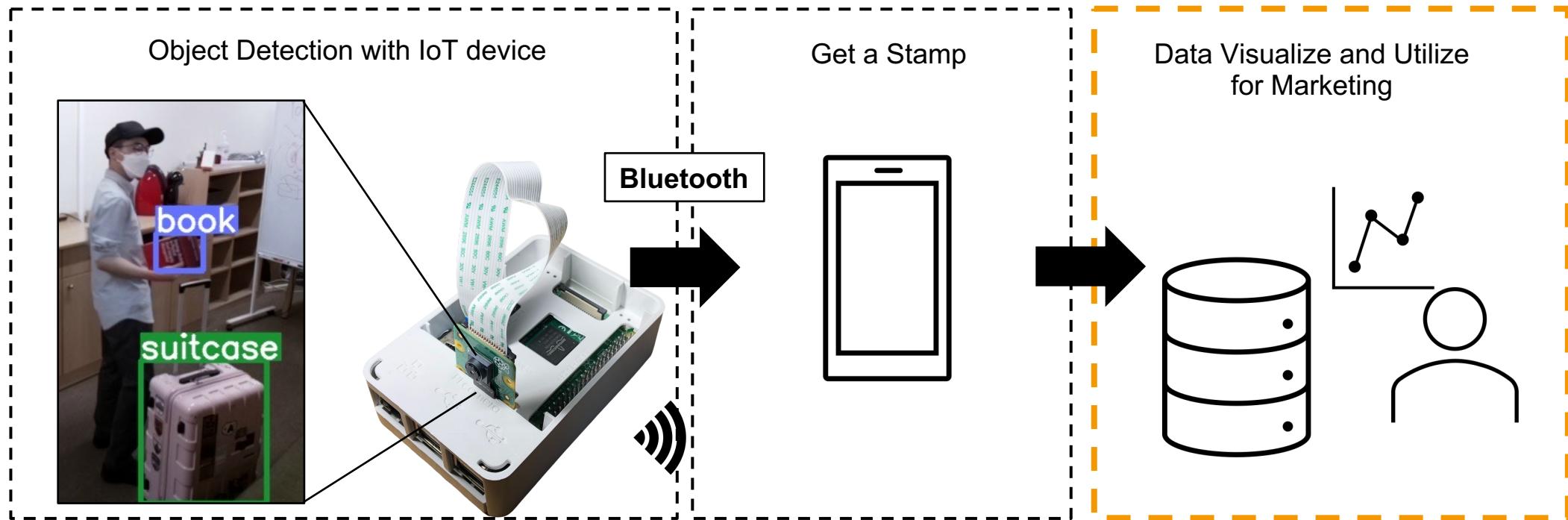
Service Flow: IoT device detects your goods



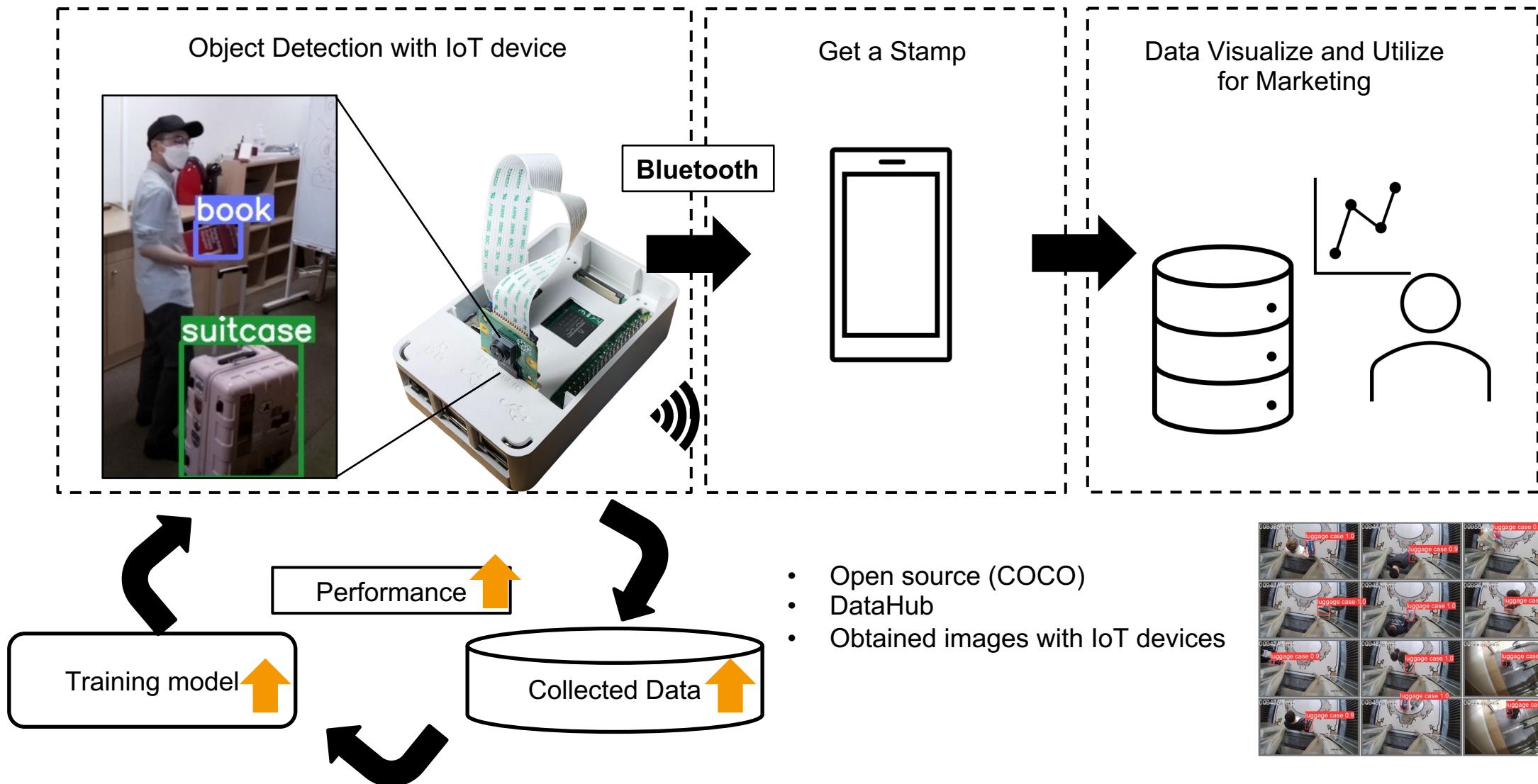
Service Flow: Stamps come to your app



Service Flow: Utilize data for marketing



Service Flow: Upgrade object detection model



What You Can Do with *meguru*

Make good use of *meguru* like ...

Estimating rally participants' attributes
(gender, age, preferences, etc.) from their belongings by image recognition AI



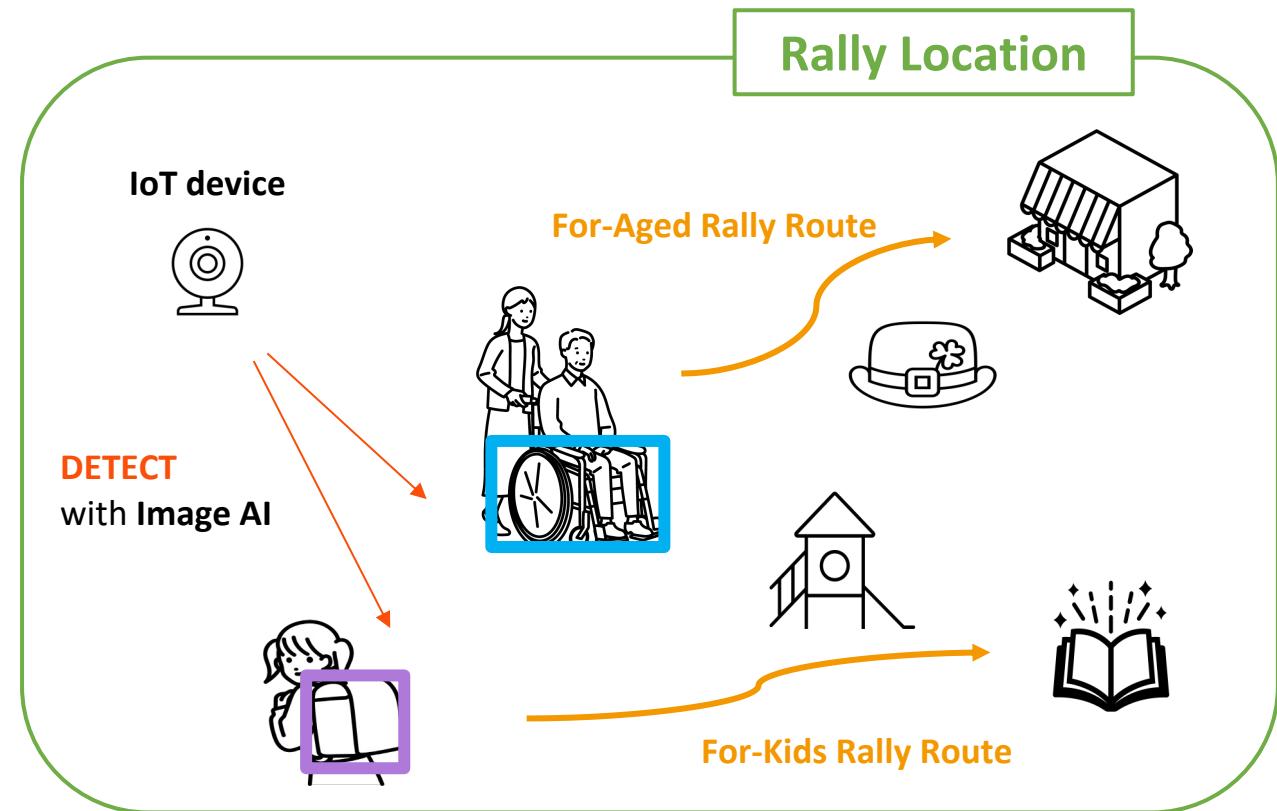
Custom rally routes according to their attributes to encourage purchasing



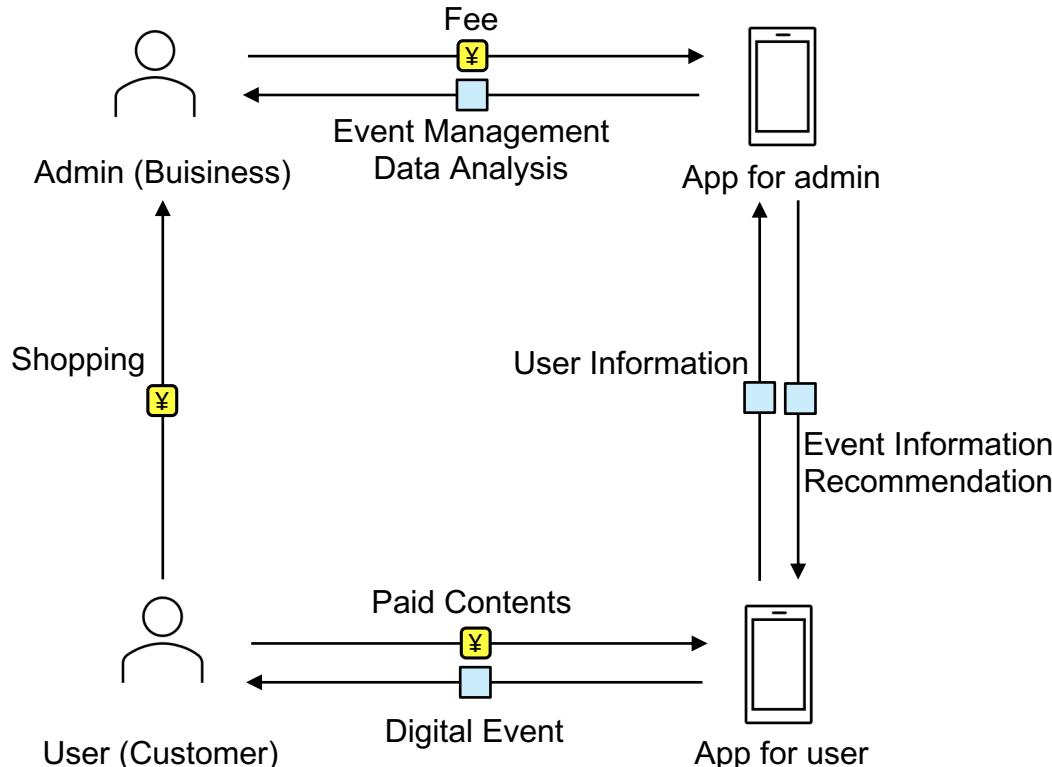
Businesses' Revenues ↑



Customer Satisfaction ↑



Business Scheme



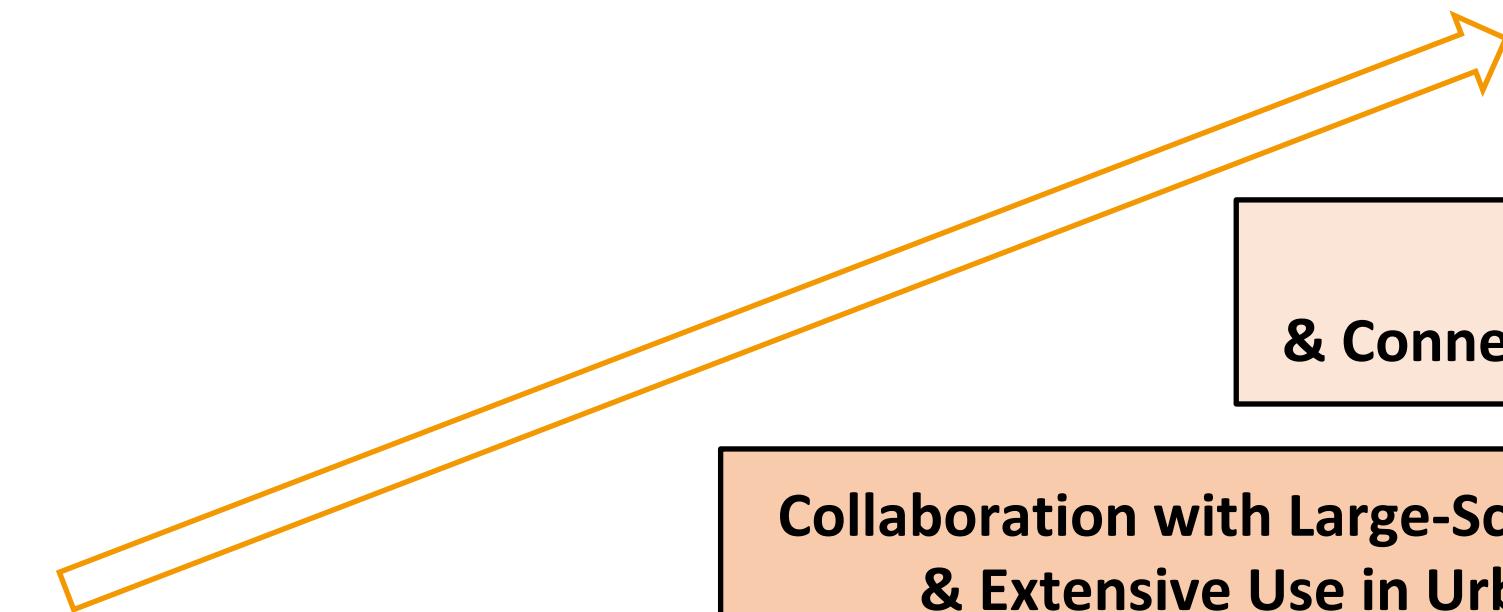
From Business-Side

- Fees for hosting the digital stamp rally
- Localized & personalized advertisement

From Customer-Side

- Charging for paid contents
- ✓ High-quality rally for education (for school trip)
- Trip package
- ✓ With admission tickets for sightseeing spots

Vision & Future Phases



Now Here

**Revitalize Local Tourism
& Data Utilization Ecosystem**

1st phase

2nd phase

3rd phase



4 QUALITY EDUCATION



**9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE**



**11 SUSTAINABLE CITIES
AND COMMUNITIES**

**Application to Smart City
& Connection with People and Information**

APPX: Validation of Image Recognition Engine

- We verified the feasibility of this service by implementing a [prototype](#) of a scheme to train a new image recognition model using image data captured by a camera, and to improve the accuracy by learning additionally to the already trained model
- As an example, we used [YOLO v5](#) and transfer learning to detect luggage cases, baby carriages, and wheelchairs in a fixed camera
- Using the weights of the YOLO model already trained with [COCO128](#) as initial values, additional training was performed using the "[Objects in Surveillance Scenes](#)" (©Datatang Inc.) provided via the Axross Recipe DataHub (©SoftBank Corp.)

With a relatively small amount of captured image data,
the YOLO model can be additionally trained to detect objects with high accuracy!

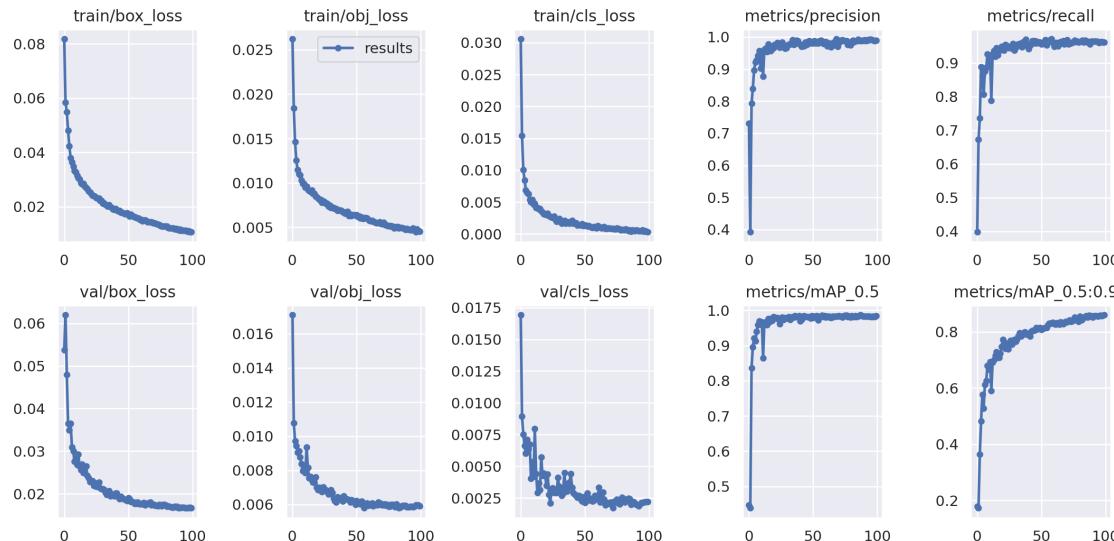


Fig.1 Learning results



Fig.2 Detection results