Beach litter analysis service using drones
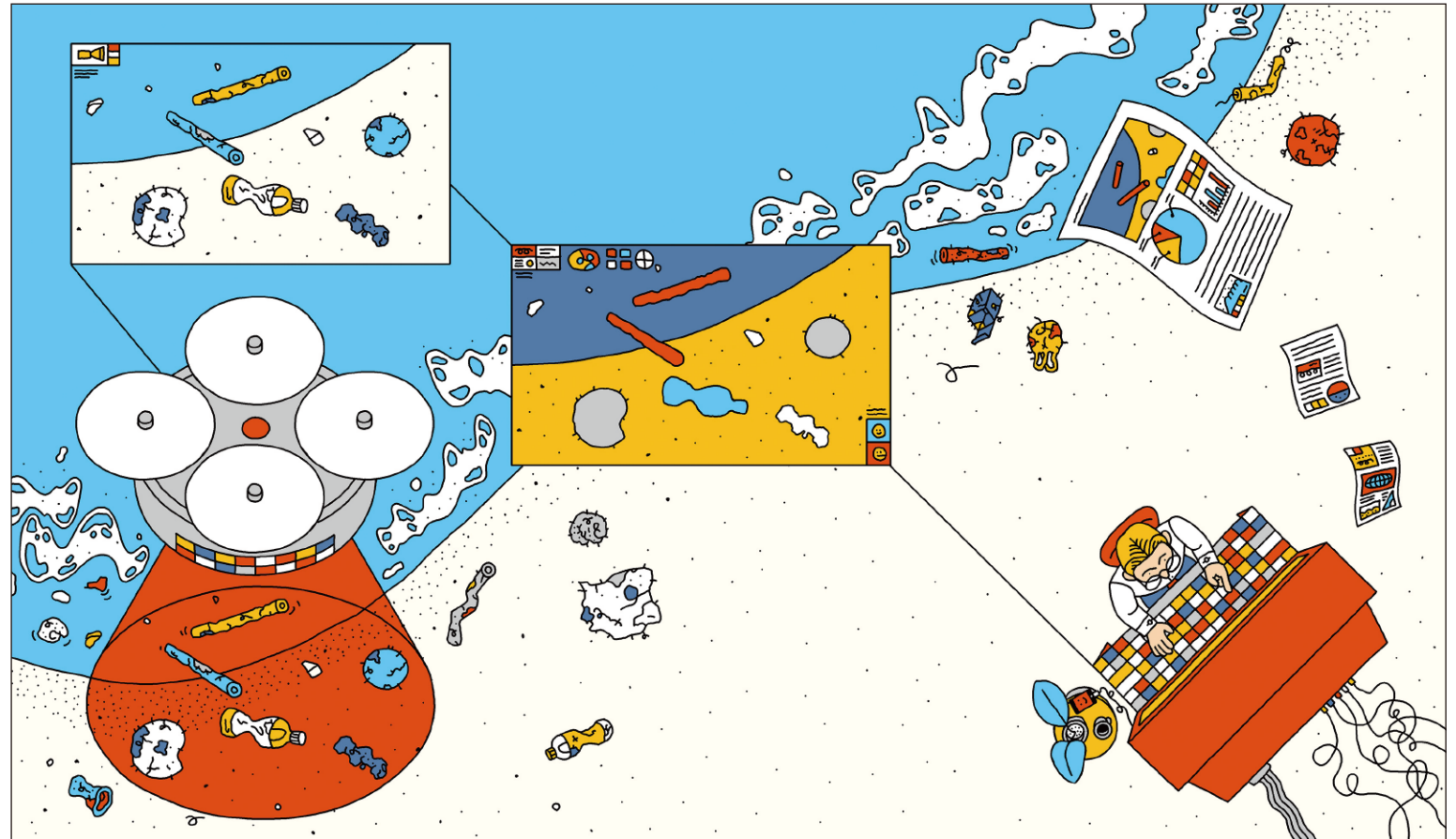
TEAM

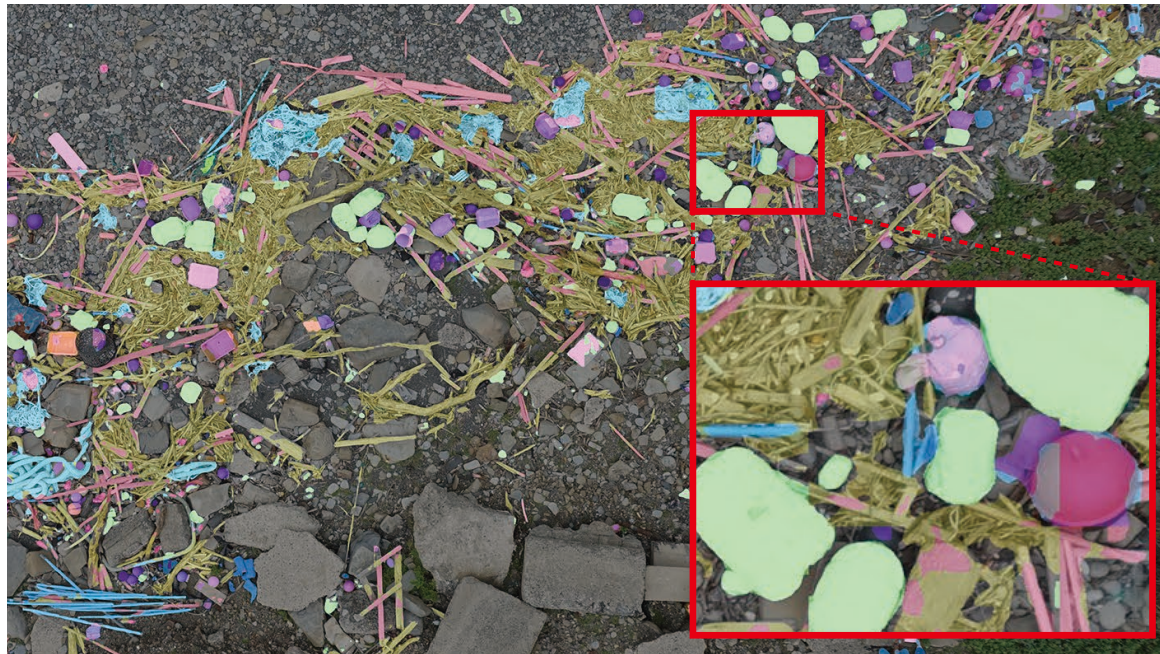ACSL Ltd. ╱ Ridge-i Inc.

SERVICE VISION

In order to implement the collection of litter washed ashore at the municipal level, it is essential to develop a plan for the collection method and disposal of the collected litter. To do this, it is necessary to know the type and amount of litter in advance.

This service uses a drone to take aerial photos of beaches several kilometers in length, and uses AI analysis to identify the types of trash and estimate the volume and weight of the trash. We then create a document that will serve as a base for the planning of waste collection.
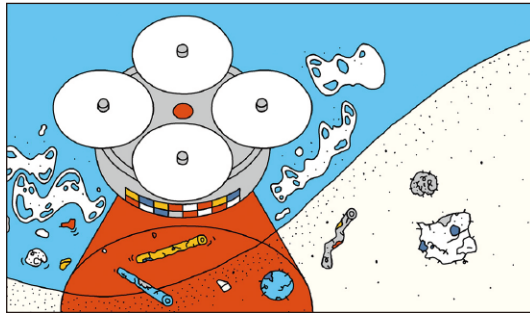
SERVICE FEATURES

After aerial photography of several kilometers of coastal areas using a drone, AI analysis of the image data identifies 9 types of litter and provides a report estimating the amount of litter (approximate volume and weight) on the beach.

IDENTIFICATION

Styrofoam

Fishing buoys

Artificial trees

Driftwood

PROJECT IKKAKU

SERVICE OVERVIEW

Aerial photography by drone

Image analysis by AI

Creation of reporting materials

A drone is used to take aerial photographs of beaches in units of several kilometers and acquire image data of litter that has drifted ashore. Because we use long-range aircraft bodies that are capable of out-of-sight flight, we can also photograph remote islands that are inaccessible to humans.
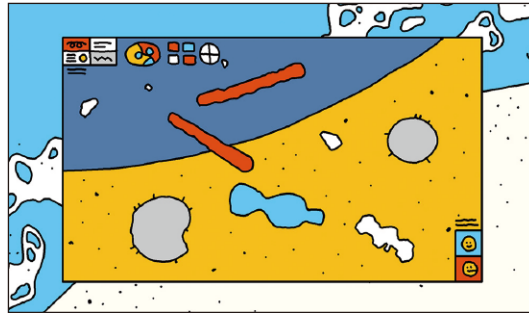
The collected images are analyzed by AI to estimate the type (9 types) and amount (approximate volume and weight) of litter.

A report is prepared that includes information that can be used as a reference for developing a specific refuse collection plan (e.g., ratio of combustible/noncombustible refuse, number of trucks required for collection, etc.).

PROCESS and SCHEDULE

1st Month
Discuss and decide on (aerial) shooting policy

2nd Months
Implementation of drone photography

3rd Months
Reporting of AI analysis results

※ Standard: About 3 months from the start of consultation.

※ Continuous surveys over the course of a year are also possible.

COST

Standard Plan ▶ 4,500,000 JPY

Survey area up to 5 km / 1 implementation of drone shot

As of March 2022

TEAM

ACSL Ltd.

Location：2F Hulic Kasai Rinkai Building, 3-6-4 Rinkai-cho, Edogawa-ku, Tokyo, Japan

Representative：Satoshi Washiya, President and COO

Website：https://www.acsl.co.jp/

Business Description

● Manufacture and sale of industrial drones and provision of solution services for humanless and IoT applications using autonomous control technology.

Ridge-i Inc.

Location：Otemachi Building 438, 1-6-1 Otemachi, Chiyoda-ku, Tokyo, Japan

Representative： Takashi Yanagihara, President and Representative Director

Website：https://ridge-i.com

Business Description

● Consulting and development of AI and deep learning technologies.

● Provide products through joint ventures, licensing, maintenance models, in-house development, etc.

Inquiries about this service

Project Ikkaku Secretariat (in Leave a Nest)

✉ ikkaku@lne.st

Web site is here.
▼
https://ikkaku.lne.st/

ABOUT PROJECT IKKAKU

Project Ikkaku was launched in 2019 by the Nippon Foundation, JASTO, and Leave a Nest with the goal of realizing businesses that reduce marine waste in society.

The project adopts a process that promotes the development and commercialization of innovative technologies through the collaboration of "hyper-interdisciplinary teams" including venture companies with new technologies and unconventional ideas, as well as academic institutions, town factories, large corporations, and small and medium-sized businesses. With support from the Nippon Foundation, a number of services have been developed over a three-year period through 2021.

From April 2022, we will continue to work with the participating teams as a stand-alone project to promote the social implementation of businesses that reduce marine waste.