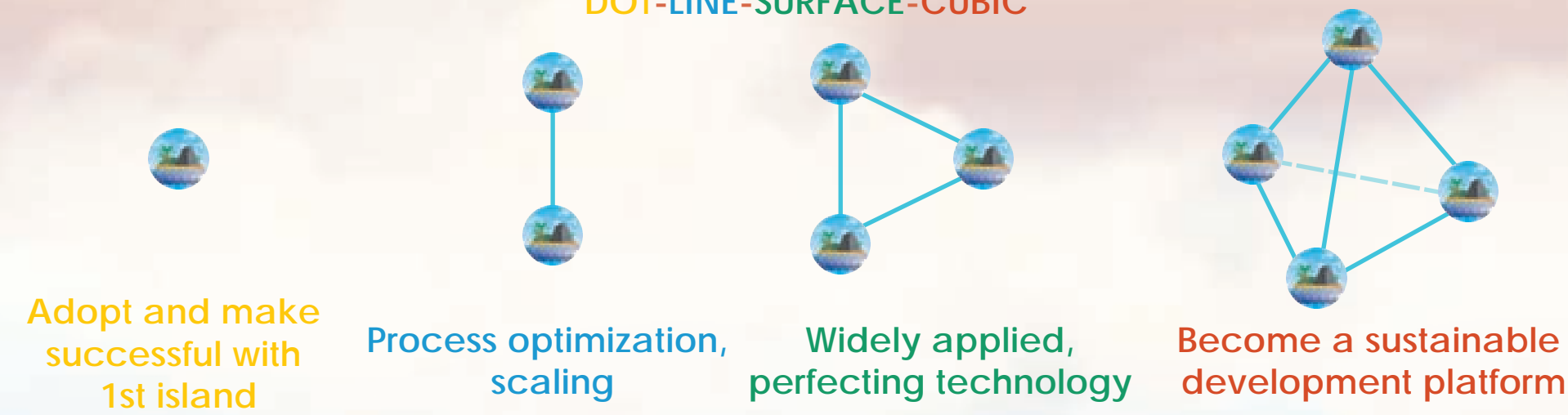


Introduction

Knowing the great challenge of Phuket in recovering sustainable tourism post-pandemic, the **Wave Blade** aims to build an **eco-friendly** and **smart (ECO SMART)** resort, furthermore, an island with a network of **eco-smart resorts**. In this project, we propose 03 remarkable points of this **ECO SMART** resort:

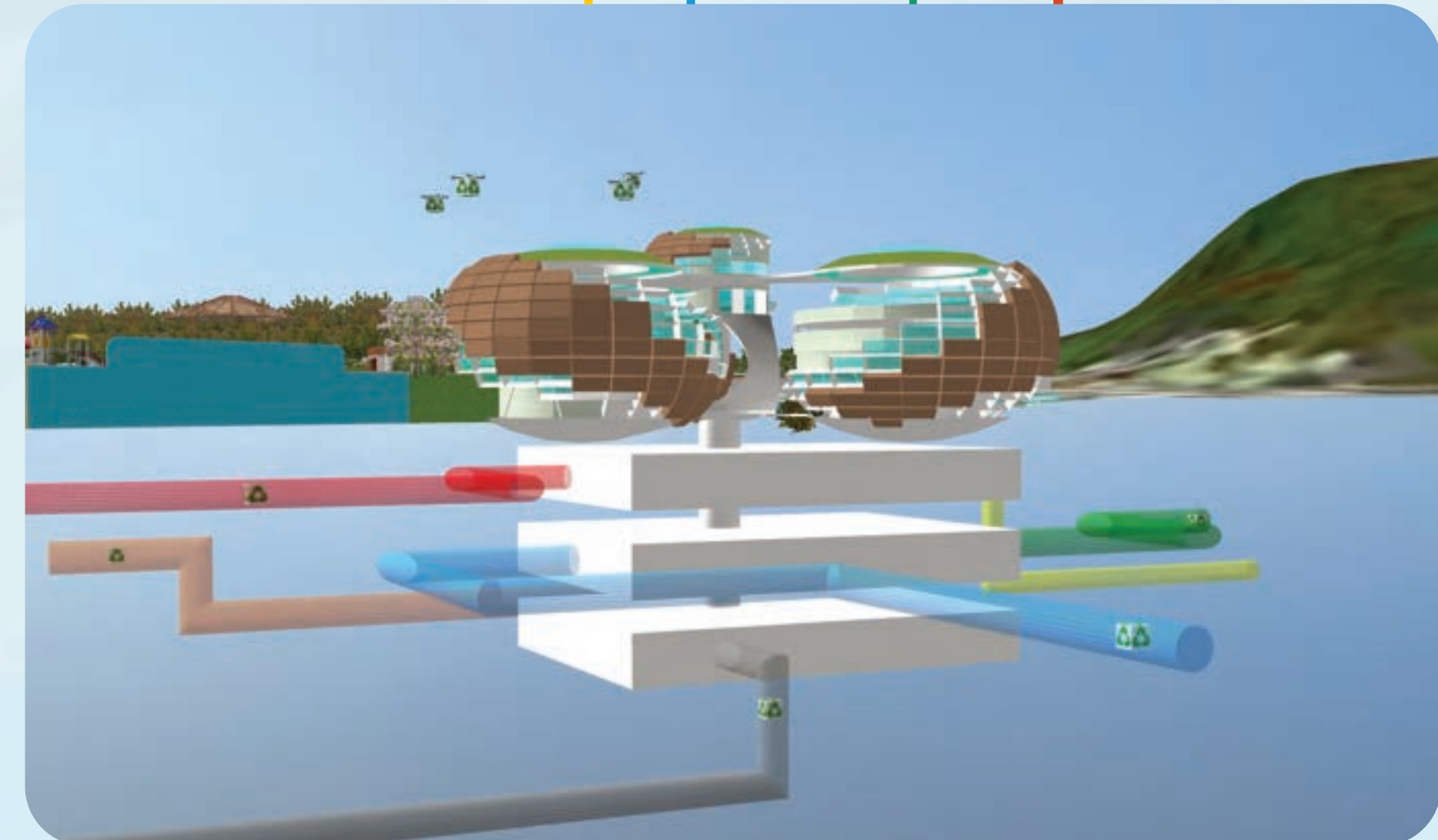
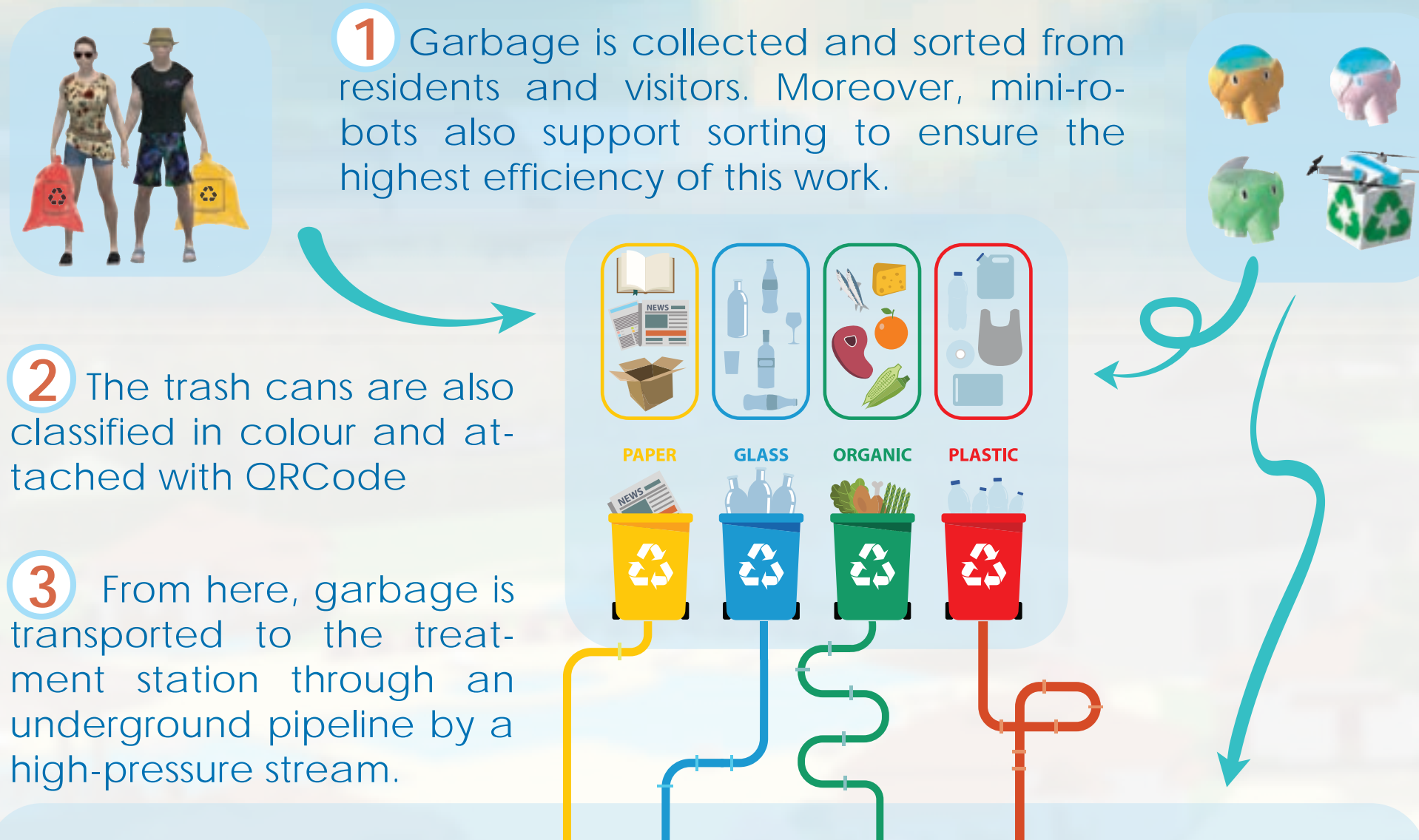
- **Green and recycling-friendly tourism**
- **Hospitality digitalization with Smart IoT**
- **Disease prevention**

Development strategy paradigm
DOT-LINE-SURFACE-CUBIC



Green And Recycling-friendly tourism

The garbage produced by tourists in Phuket has exceeded the disposal capacity of the incinerators factory, thus waste management is a noticeable problem. On the other hand, finding a new energy supply that can replace fuel is another emerging issue. To solve these problems, we came up with the idea of setting up an energy recycling plant, named Octopus Energy. The power plant is inspired by the image of an octopus. with tentacles known as pipes, and the suction points on those tentacles are where the smart trash bins are located.



THE 11TH VIRTUAL DESIGN WORLD CUP

VDWC2021-005

WAVE BLADE

Phuket Eco-Smart Resorts

Theme 2021 "Phuket Smart Resort Design Challenge"



4 In the garbage station, trash is filtered and sorted before the treatment process:



Smart Application For Big Data Management

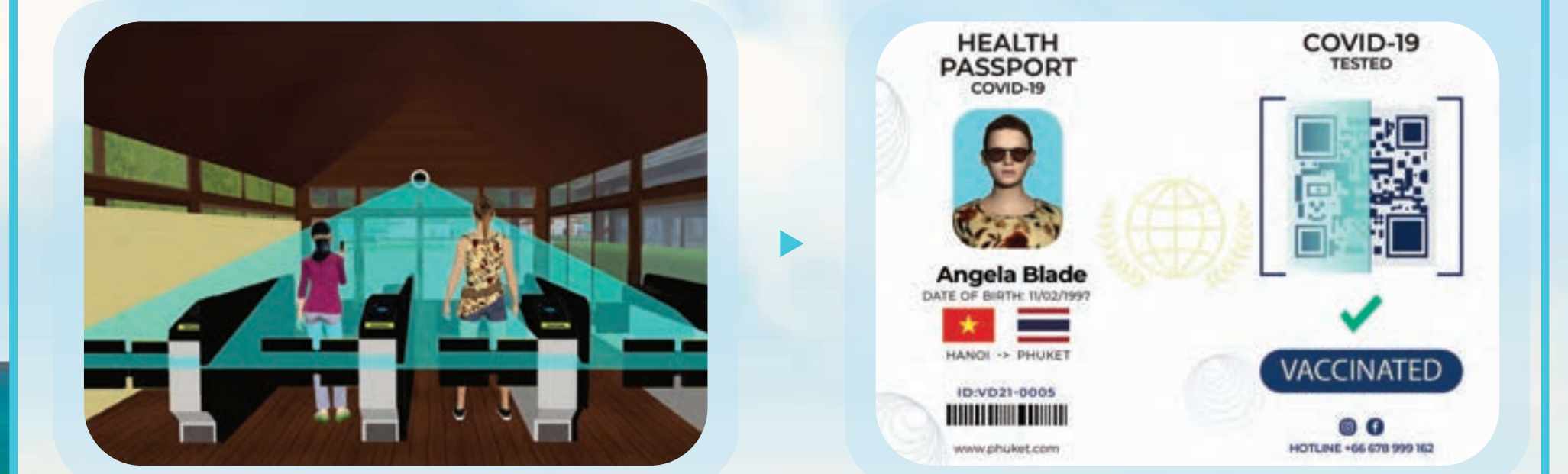
Not only a green island but Phuket will also be equipped with the most state-of-the-art technology: an application will be developed for the authorities to manage and encourage travelers to be green tourists.

- A point system and QR code for every "green activity" such as garbage sorting, reduce plastic bags, more walking...
- With every earned point, you can exchange gifts and vouchers
- Manage traveller's profile with travelling journey, vaccine passport

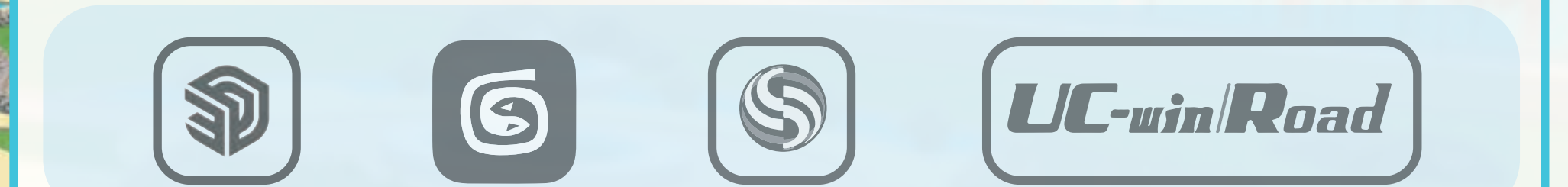


Smart Electronic Health Passport

The Electronic Health Passport program is our first step to contactless hospitality - the most promising post-pandemic recovery solution in tourism. Sensors attached in autonomous robots scan visitors for health checking then automatically update to the "health passport" and synchronized to the big data system.



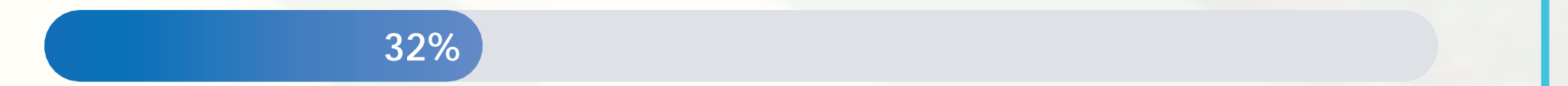
Software Diagrams



5 Waste is collected and treated

The current amount of solid waste sent to incinerators has been more than 500 tons/day while the disposal capacity is limited at 250 tons/day with 2.5 MW electricity generation capacity. Therefore, this leading - edge waste management system is the perfect solution to reduce the waste amount and at the same time to increase the disposal capacity of the incinerator.

OLD waste treatment process



NEW waste treatment process



This new method will reduce a large amount of waste and help this island become an ideal **ECO SMART** tourism island.