Smart Trash Bin

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Application Scenario

50 million water bottles are produced each year.

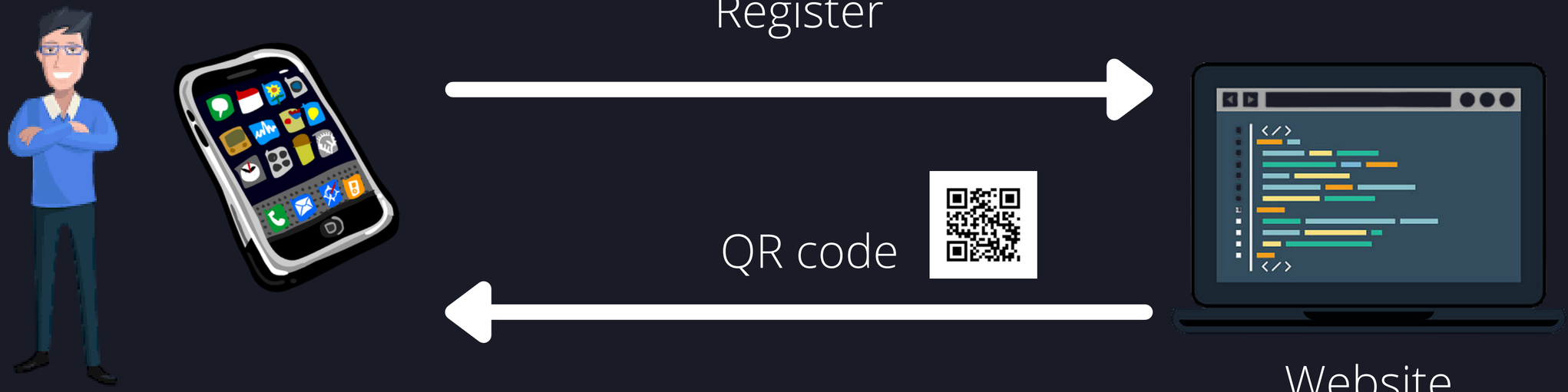
80% of the bottles end up in a landfill.

Ingestion, suffocation and entanglement of hundreds of marine species.

People doesn't care about recycling even though recycling programs exist.

My Solution

We introduce reward system based smart trash bin.



Dispose

Cluster

Rewards

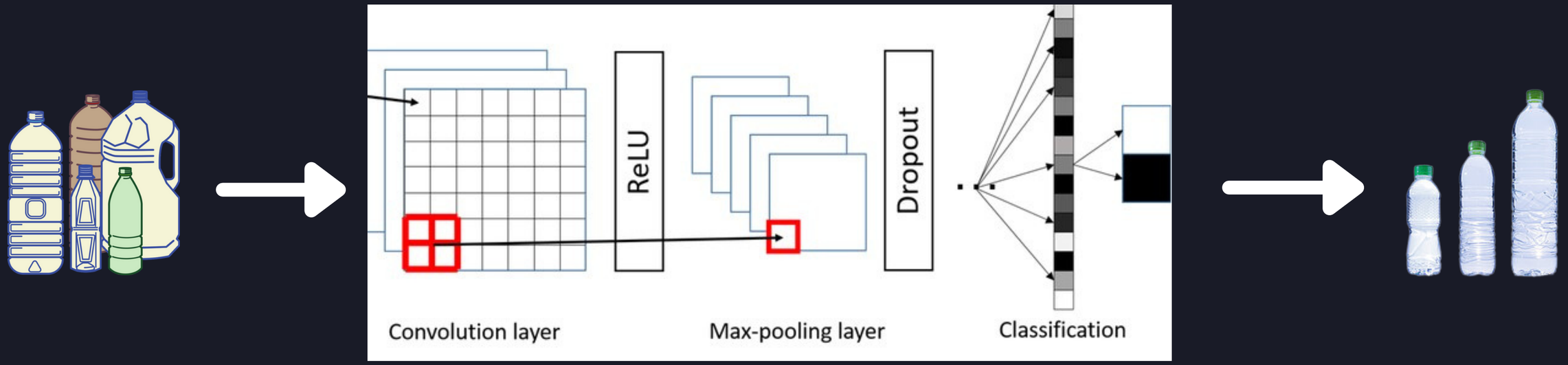
Scan QR code

Upload data to cloud

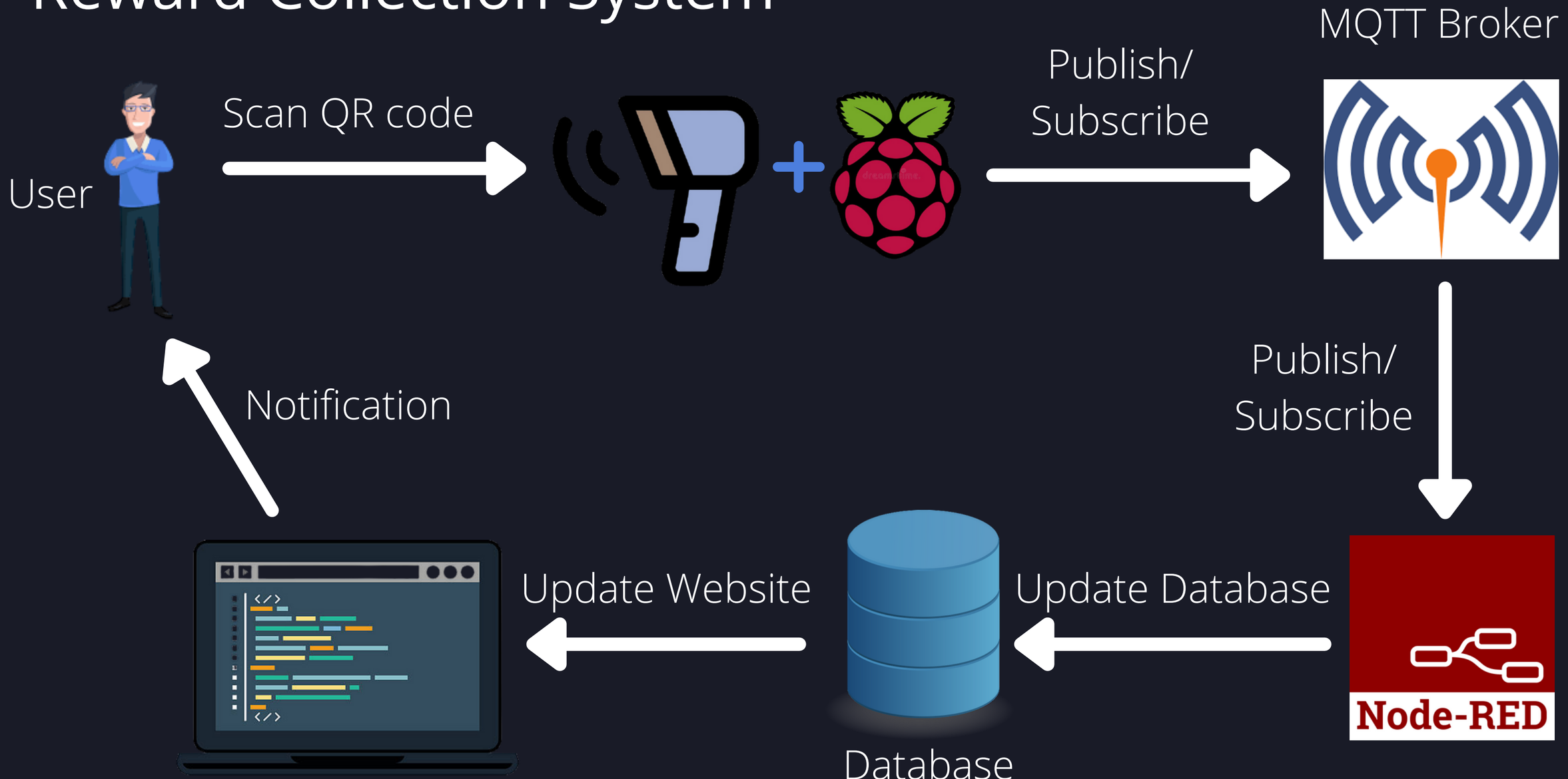
send data to the website

How It Works

Cluster the bottles



Reward Collection System



Notify Garbage Collector

Sensor

Sensor Data

Publish/
Subscribe

MQTT Broker

Publish/
Subscribe

Node-RED

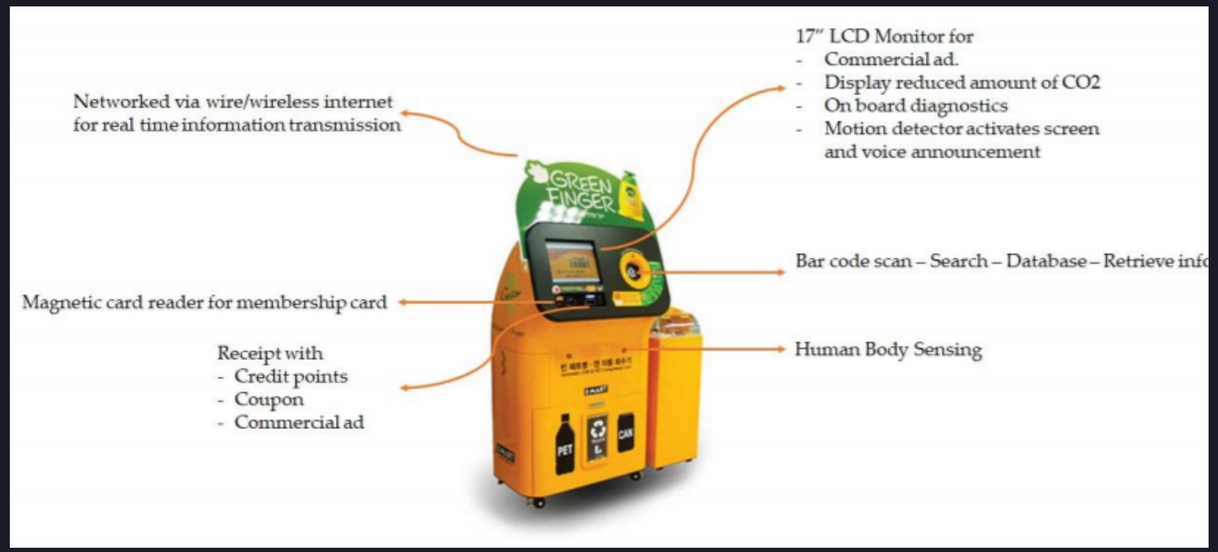
Update Database

Database

Update Website

Notification

Existing Solutions



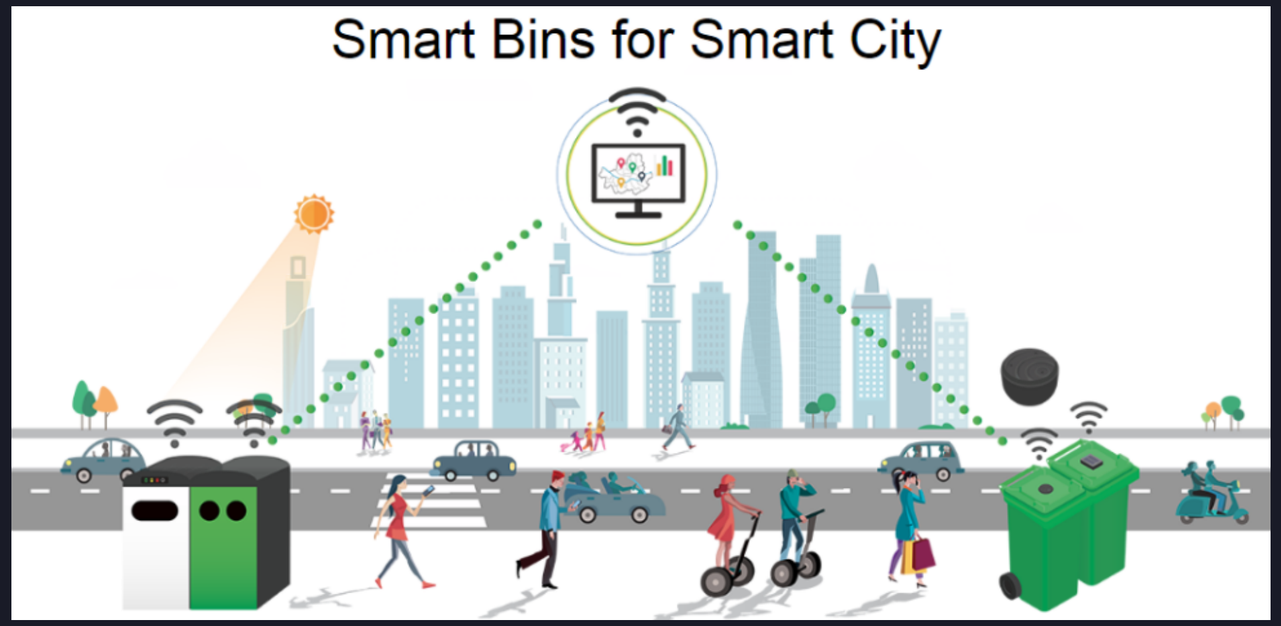
DR.Boomerang by Ecosave.

Plastic bottles and cans

Trash classfication using barcodes

Reward Provided

Melbourne’s future waste management system



IOT based

Powerd by solar energy

Sensitive for footsteps and opens automatically.

Notify garbage collector when bin is full.

The Cashback system in Shanghai

For plastic bottles

Reward provide

Trash classification using image processing.

Demonstration

Bottle Classification - Represent using LEDs

Use a display to show the current procedure

Deliverables - Website
Neural Network(Bottle Classification)
Final Prototype

Thank You!