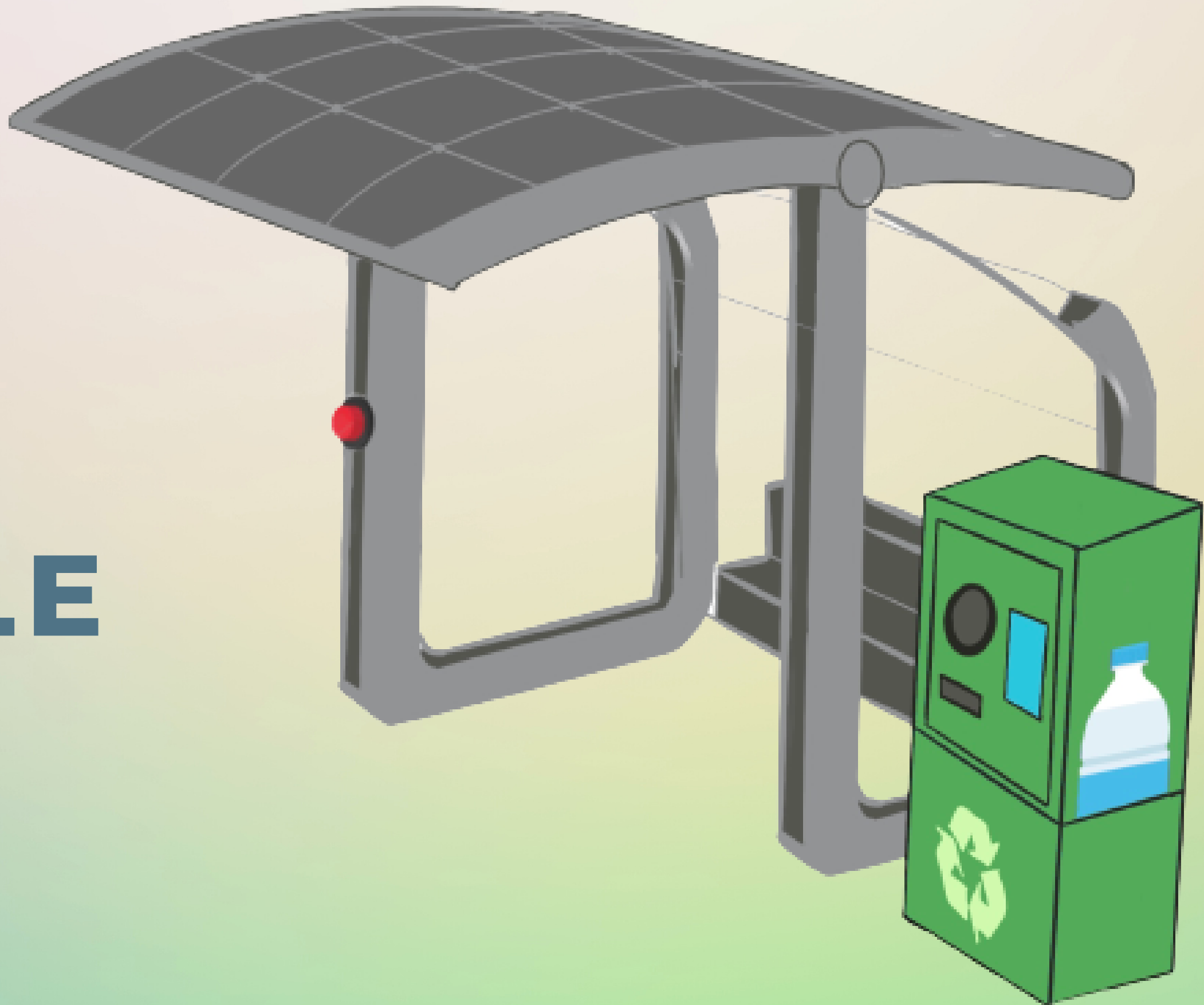


THE SUSTAINABLE BUS STOP

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WARWICK
SUSTAINABILITY
CHALLENGE





THE SUSTAINABLE BUS STOP

OUR DEFINITION OF SUSTAINABILITY

"maximize existent resources and efficiency. "

"Taking actions that minimize environmental consequences create long time benefit"

"Making the resources of the planet last longer"

"making our impact on the planet less harmful"

"Fully utilize any public facilities to minimize our carbon foot print"

THE UN DEFINITION OF SUSTAINABILITY

"Meeting the needs of the present without compromising the ability of future generations to meet their own needs"



Wireless solar panel charging method



Wireless solar panel charging method

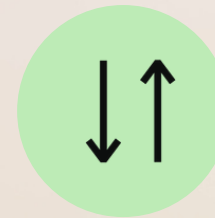
- Solar panel energy efficiency can reach up to 25% in the UK
- Faster and easier charging method
- Good investment in the long term as Coventry is going to become the first city in the UK to have 100% of their buses electric
- Will encourage people to take buses as they will see the effort put in + the tickets would be cheaper



REVERSE VENDING MACHINE (RVM)



Step 1. Insert the containers at RVM at the stop



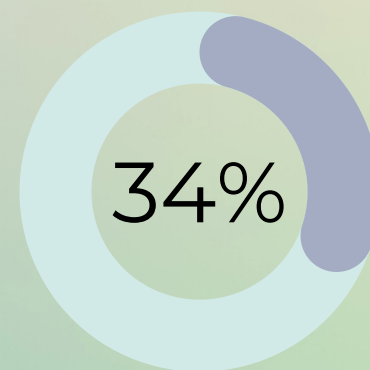
Step 2. Containers identified, sorted, and collected



Step 3. Points awarded to the account



Step 4. Bus ticket/rewards claimed



Coventry Recycling Rate 20/21

Future implementation:

- More allocation of RVMs in the city
- The reward system based on revenue analysis to ensure revenue
- Category of accepted recyclable items and size

EMERGENCY ALARM BUTTON AND SURVEILLANCE CAMERA



Current difficulties

- For many people, fear of crime and crime itself impact on/change their lifestyles, including transportation.
- Huge pressure on policing and criminal justice system - In the West Midlands, the government spending on policing was cut by £175 million and lost 2,221 officers. (West Midlands police and crime plan)

Aims

- Improve public safety. (Preventing and reducing crime.)
- For passengers and residents to summon urgent assistance.
- Encourage more citizens to take buses by reducing their fear of crime.

How will it work?

- 24/7 CCTV accompanied by an emergency alarm button at the bus stop.
- To summon police assistance by simply lifting the lid and pressing the red button.
- When you press the button, the real-time image from the surveillance camera will be transmitted directly to the police station nearest to the bus stop.
- This action also connects you to the police.
- All the video contents will be stored in the cloud and can be used as evidence in the future.



EMERGENCY ALARM BUTTON AND SURVEILLANCE CAMERA

Potential benefits

- **Preventing** criminals from harming others.
- Police could **respond quickly** and assist effectively.
- The facility could **adapt** to different situations.
- **Reduce workload** for the police and the criminal justice system.
- **Increase people's trust** towards public safety in transit environments.

Future implementation

1. The **location of the surveillance camera** at each bus stop can be decided afterwards based on specific requirements.
2. The **distribution of this facility** can be based on the **crime rate** in Coventry. Before we officially put it into use, we could conduct several "**trial points**" and install it in areas with high crime rates.
3. The **penalty** of mistaken pressing (invalid emergency call) can be assessed by Coventry City Council.

FUTURE IMPLEMENTATION

Sustainable bus stop can be implemented as a whole or install each solution separately based on the location, characteristics, and needs of the bus stop.

- Type of bus stop
- Volume of passengers
- Space available
- Crime rate



VALUE PROPOSITION

'Create an city that is **safe, sustainable, economic** to travel on public transportation, and most of people do not need cars for their day-to-day life '

Wireless Solar Panel Charging

- Increase the reliability of electric buses

Reverse Vending Machine

- Reward marketing through points reward system to increase passenger rate and enhance sustainable choices
- Incentive based waste management to increase recycling rate

Emergency Alarm Button and Surveillance Camera

- Improve public safety and protect civilians' wellbeing.
- Increase people's confidence in taking buses in Coventry as they feel safer and more comfortable in transit environments.

