TIMELINE

DESIGN PROCESS

1 UNDERSTAND

Polythene has always been a threat to the environment since its invention. It is non-biodegradable and very difficult to recycle.

2 DEFINE

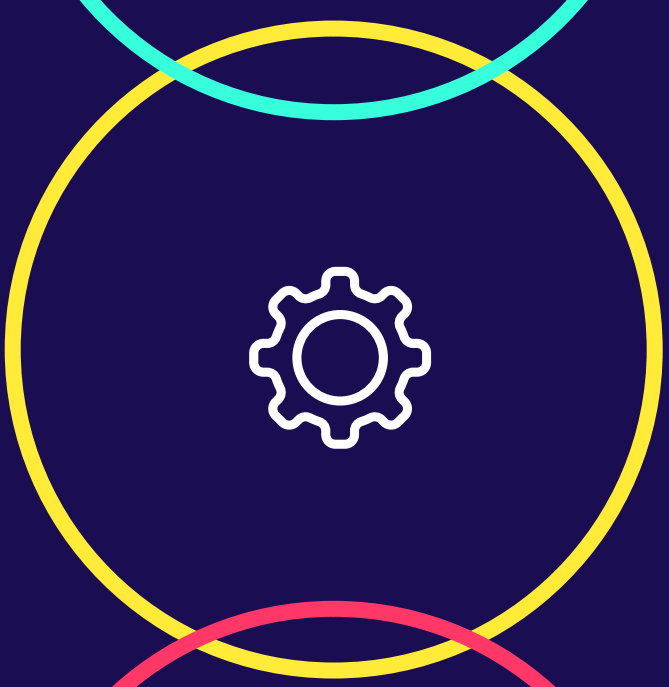
I investigated the extent to which disposal methods of plastic bag waste promote sustainability. The findings consistent with previous studies, which confirmed that uncontrolled dumping of waste in the city and open burning as a means of garbage removal are common and pose adverse impacts on the surrounding environment.

3 IDEATE

The HMW questions
Brainstorming ideas
The promising idea
Why my option better

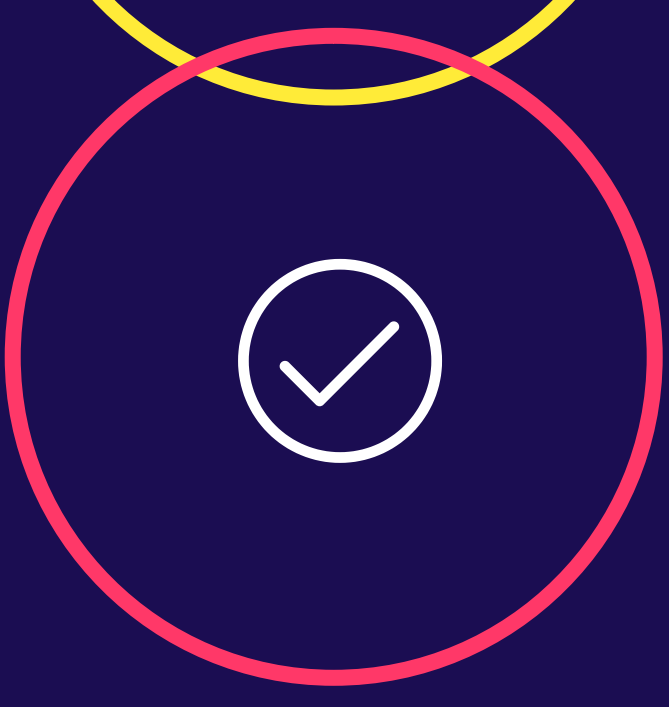
4 PROTOTYPE

An electronic billboard installed around the city's streets, public squares, and prone to polythene use and damping places.
This system includes a surveillance camera mounted on big poles or towers around places 360 degrees view to capture the whole area radius

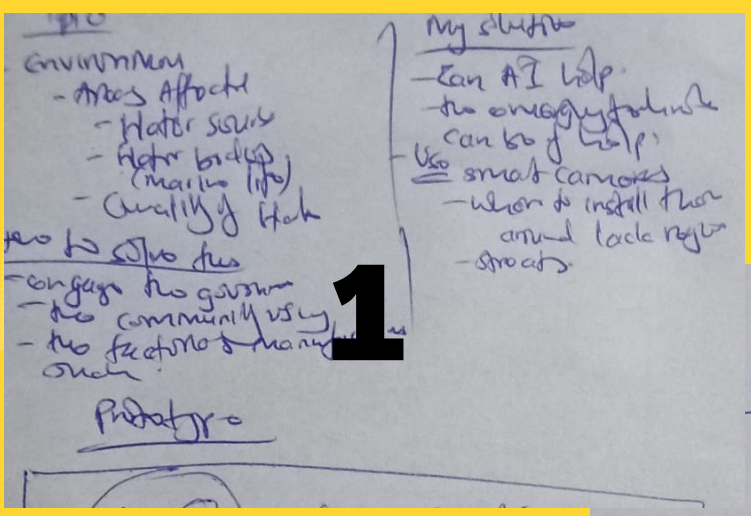


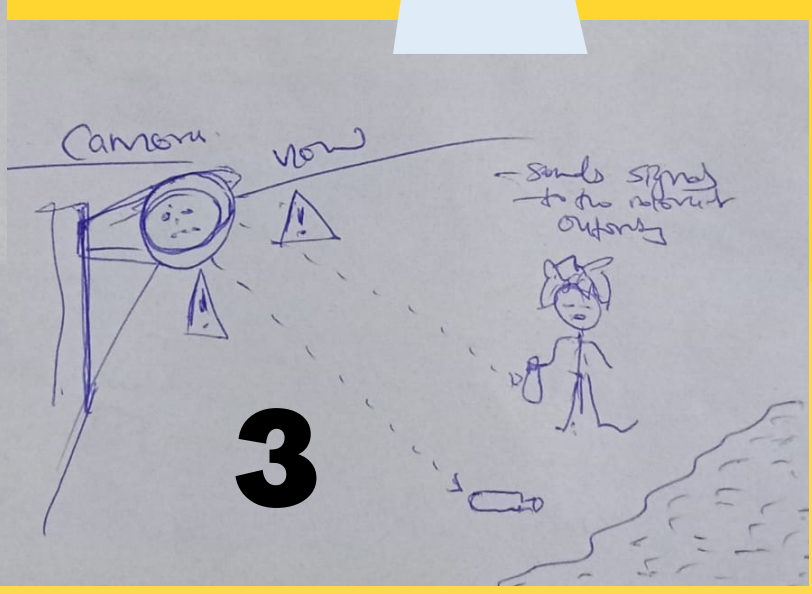
5 TEST

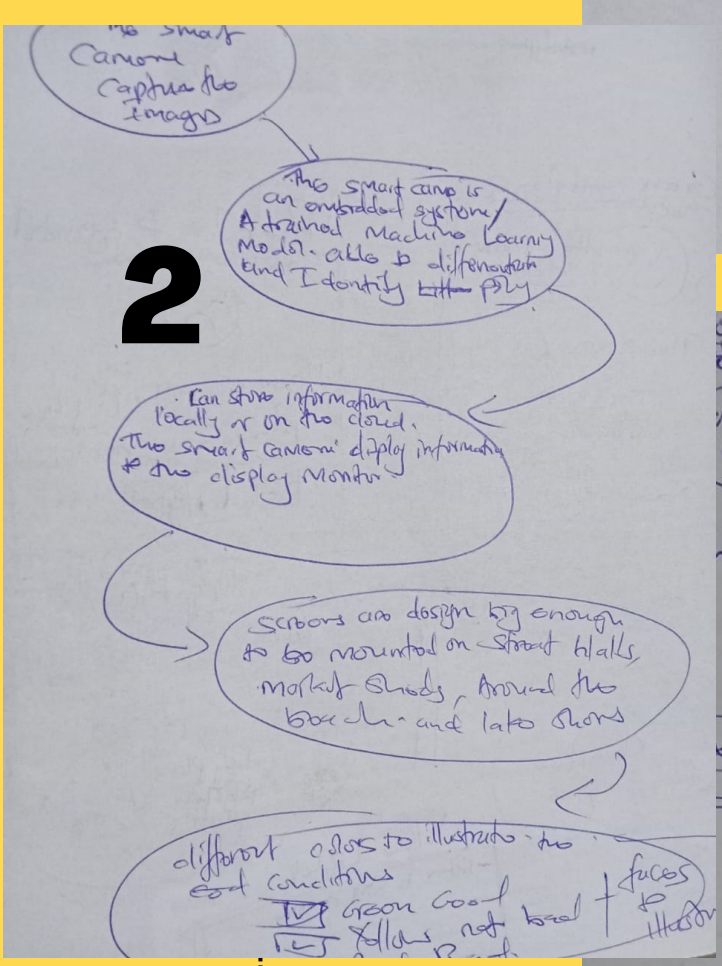
Effectiveness
Learnability
Utility
Safety
the users perspective about the smart billboard

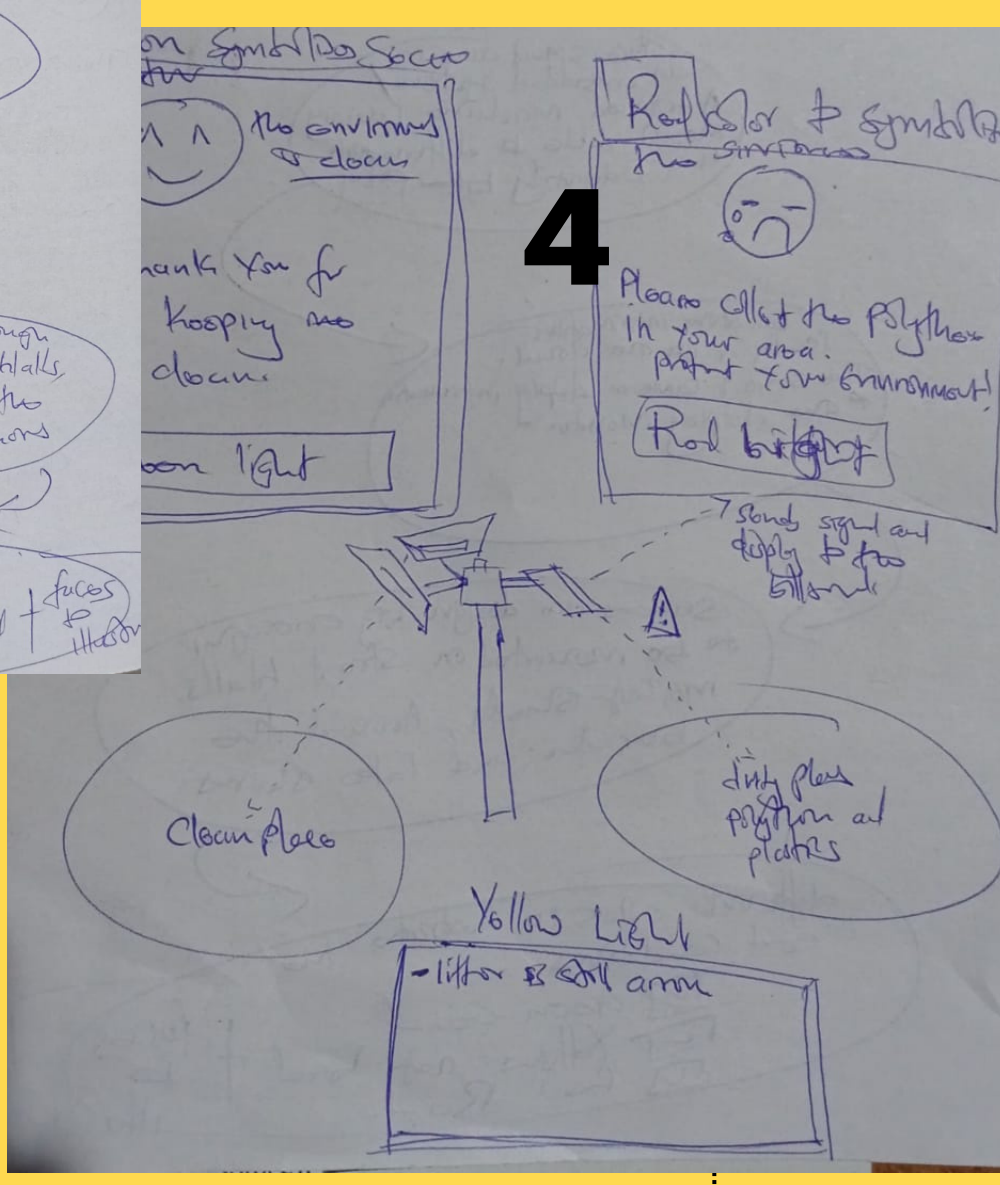


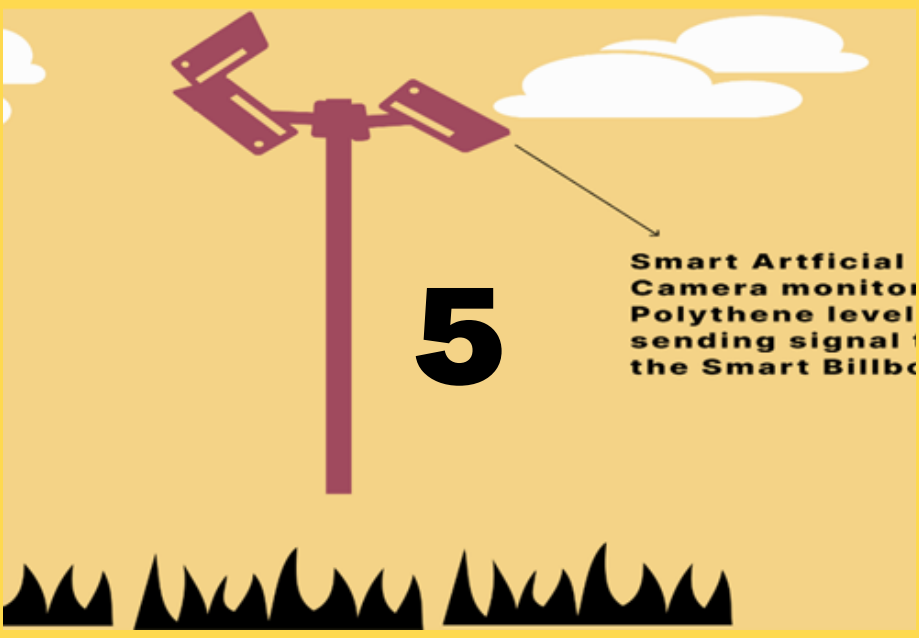
IDEATION


1


3

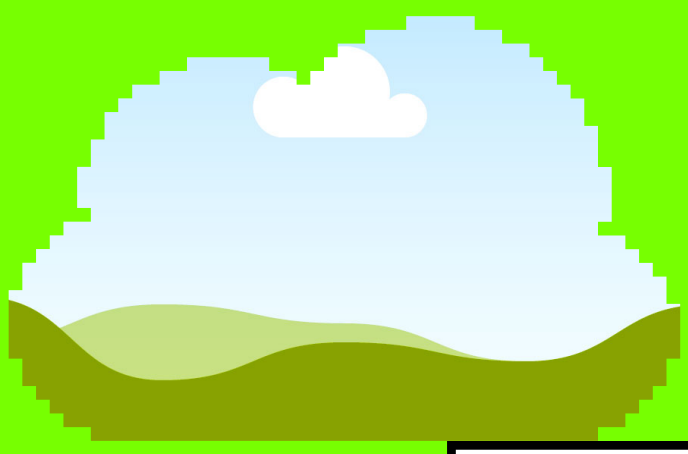

2


4


5

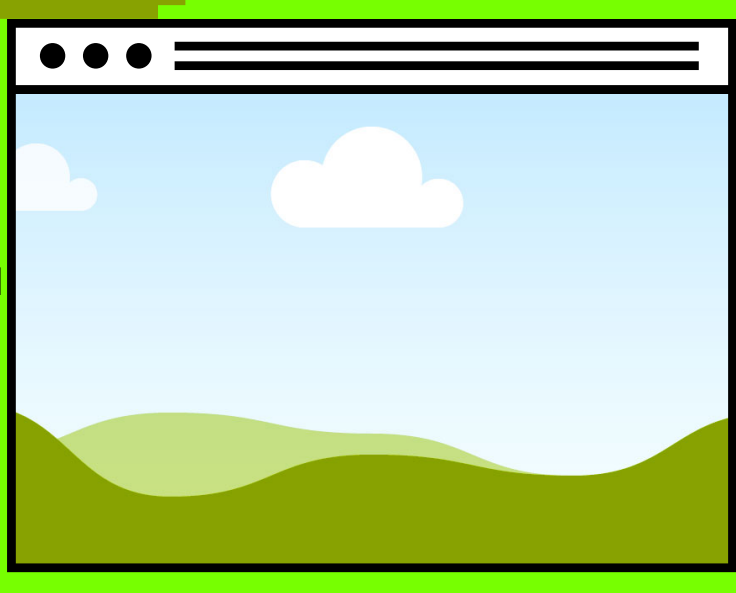

Please Collect the Polythenes in your area. Protect your Environment!
6

HOW THE ALGORITHM WILL WORK



Check Online

the smart camera should be able to identify carried or littered objects and should be able to Identify plastic or polythene.

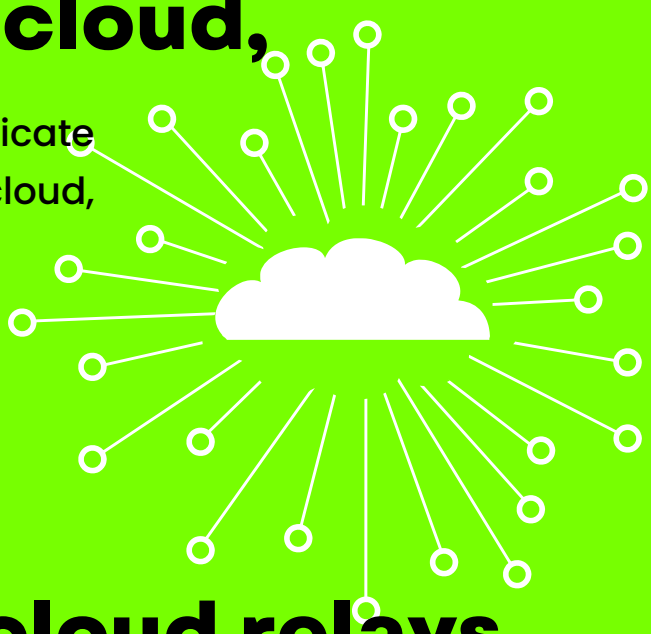


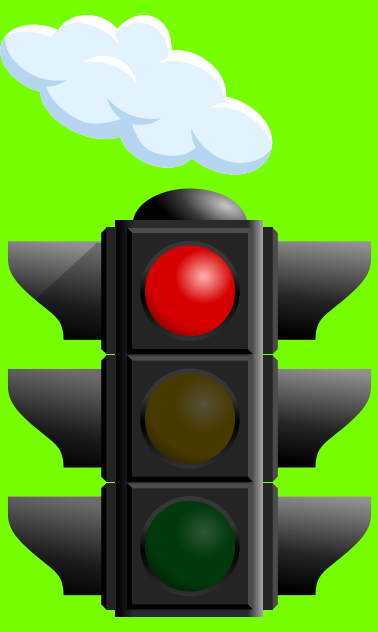
Trained model

the trained algorithm is called model, its trained with data about plastic hence it will be able to identify the image of plastic and polythene.

connected to the cloud,

the system can store data and communicate locally through wired connection or via cloud, with the connected displays.





the cloud relays

green light would show secure environment, the yellow shows neutral and the red light shows damage of littered environment.

Alert the Authority

the algorithm will be able to automatically contact the relevant authorities whenever there is ignorance.

EMERGENCY SCENARIO?

CARELESS USE OF POLYTHENE AND DISPOSAL

1) WHAT?

The use of plastic and polythene and the careless dumping on the environment

2) HOW?

How might we encourage people to stop using plastic bags?

How might we use technology in reducing plastic pollution?

How might we make the community around us aware of the importance of reducing the consumption of plastic?

3) DISCUSSING THE IDEAS,

Almost all establishments from supermarkets and restaurants to banks (cash bags), boutiques, bookshops, and roadside shops use polythene.

AI machines in companies that manufacture polythene, such a certain limit of polythene production is not exceeded.

Mass plastic ends up in the water, develop an ai generated robot that travels along the water surfaces and uses machine vision to recognize and catalog traces and picks them.

4) CHOOSE THE RIGHT IDEA

Designing an electronic billboard with monitoring system. green indicator whenever the streets are clean and a redlight alert icon whenever there is plastic nearby,

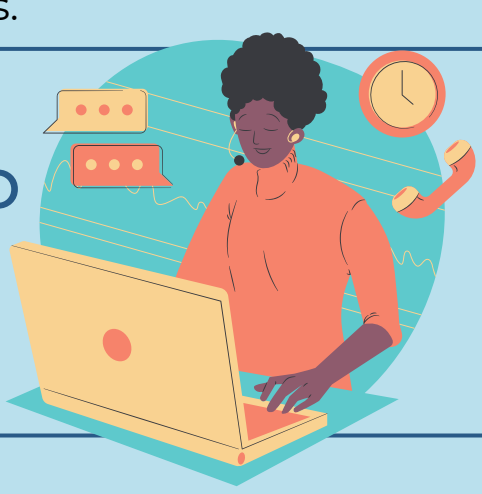
5) ENGAGE THE USERS

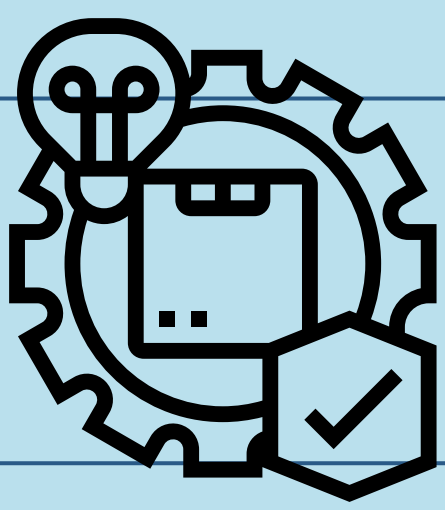
Conduct interviews with the users and collect their perspectives about the designed prototype. how it's supposed to function, measuring the usability in terms of the criteria of efficiency, effectiveness, learnability, control, and helpfulness.

6) DESIGN WITH USER IN MIND

Choose the right location.

Determine: style, colors, images, icons.





TESTING THE PROTYPE,

This is the time to check the prototype is functioning and ready to be implemented.

IMPLEMENT THE IDEA