LAST MILE with CERC
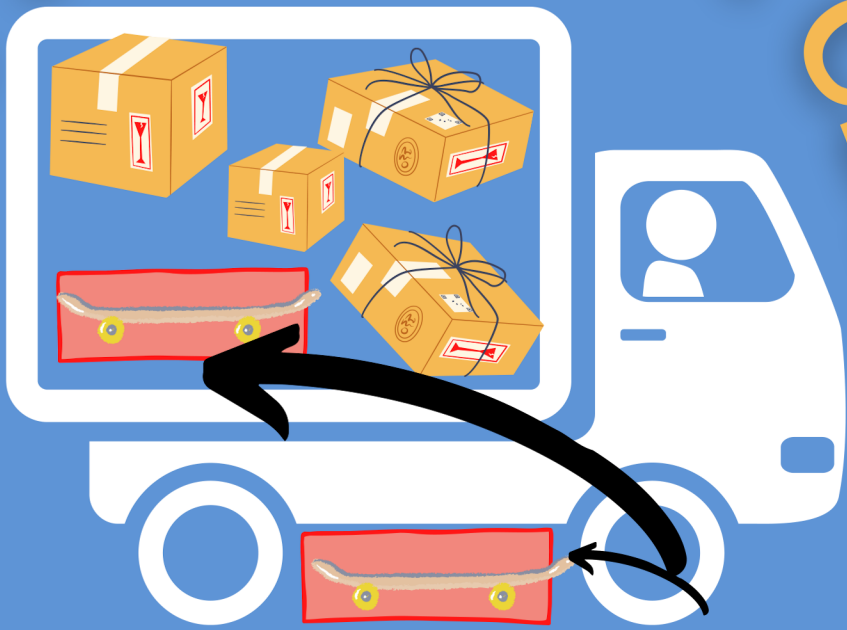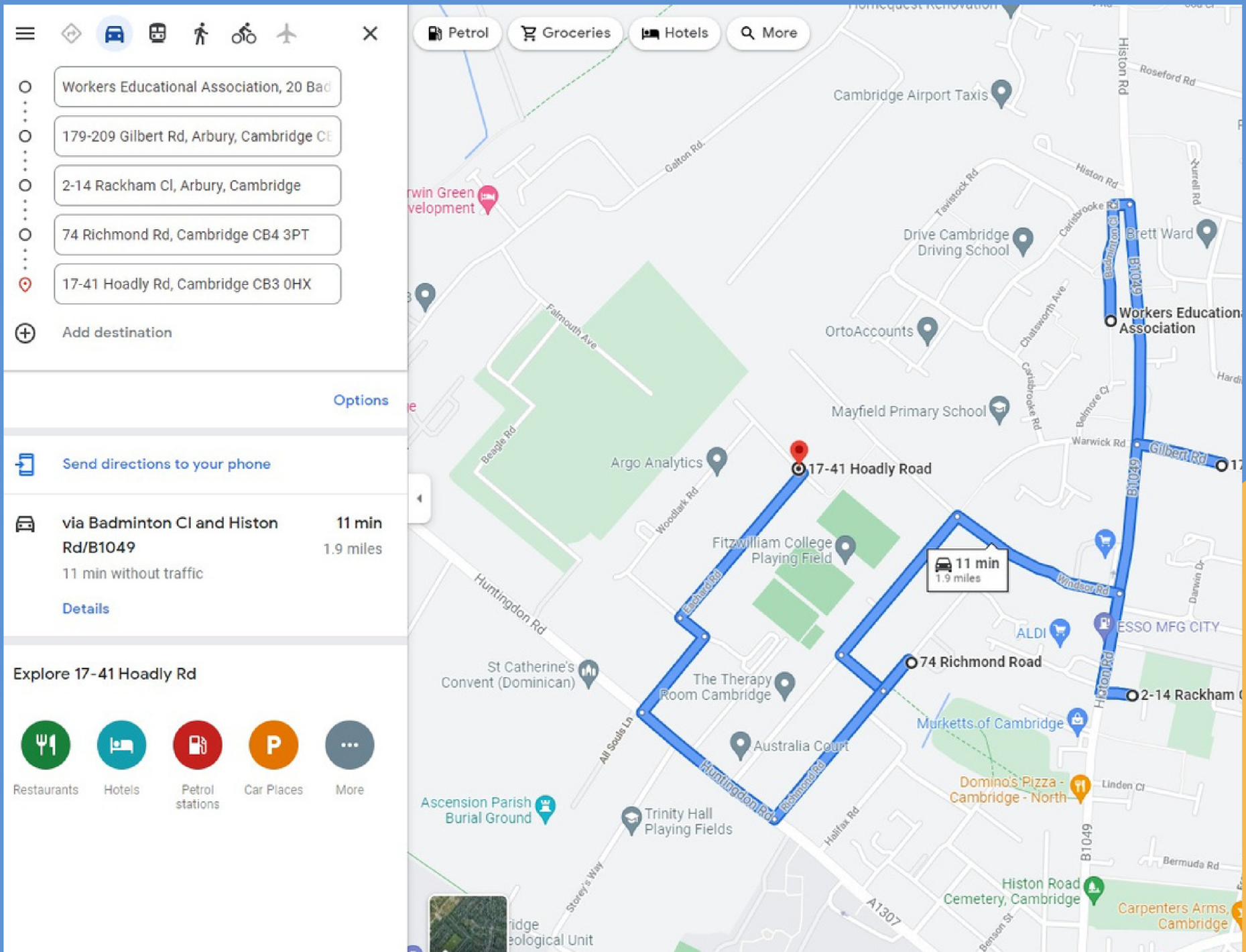
Docking station and charging point for scooter

-Smart Delivery

-Less CO2 emmisions

- Efficient delivery time

- Less road congestion
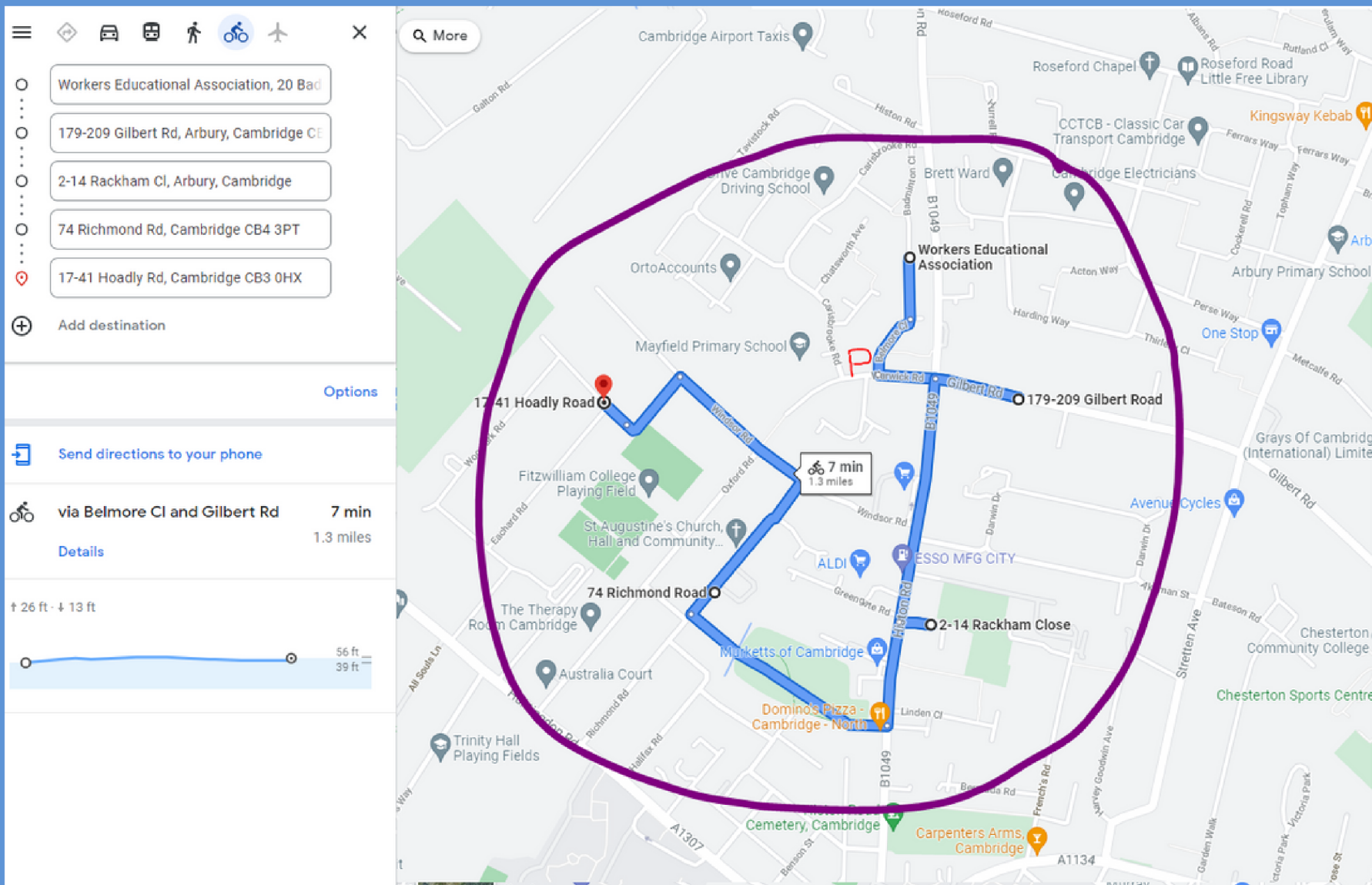
- Smart parking space

TEAM CERC

On a typical day, this is a scenario of what a delivery driver faces

- Google maps shows that the journey takes 11 minutes without traffic
- With 7 junctions to the main road and 2 traffic lights, it might take a long time
- The total delivery time for all 5 packages to be delivered estimates to take 40-45 minutes
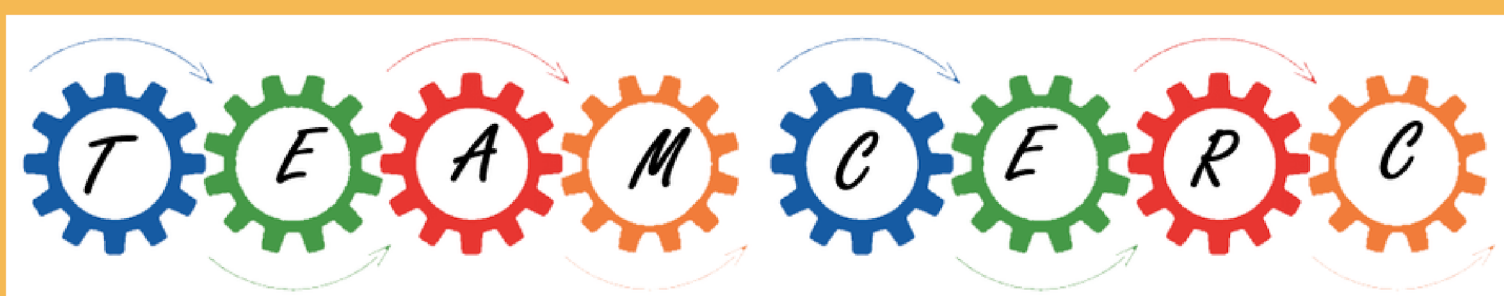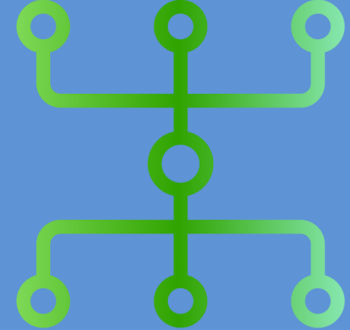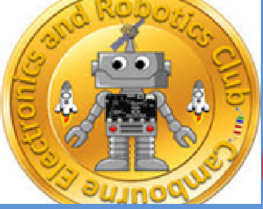
CERC's LAST MILE solution

- Google Maps shows the same 5 point journey takes 7 minutes using an electric scooter
- It takes less time by 2 minutes per delivery point
- The total delivery time for all 5 packages to arrive is estimated to be 20 minutes
- Saves half the time and keeps consistent delivery
- It allows better planning

Explanation of solution

- Solution decides in which area an electric scooter is quicker than a van
- So delivery driver uses that decision makes use of scooter along with Van.
- Our Program also suggests where to park based on the weight of the parcel, traffic ahead in the route and where the next delivery destination
- Logic: (Van Journey time + 1 min for each junction + 2 min for each traffic light + 5 min for each delivery points) > (Scooter Journey time + 0.5 min for each road crossing + 2 min for each delivery points)
- It's a web service similar to a credit check or a user authentication etc
- It Uses Google Maps API , Python and Machine Learning Models
- It just needs delivery addresses as input data
- Delivery companies are clients to this solution
- It can be a "pay-as-you-go" model based on subscription length

Reasearch behind

- At initial stage every children has come up with brainstorming ideas like Mileage Tag, Separate Compartment for Fragile Items, Eco Bins at Super market and many more. We iterate the each ideas and benefits of each solution then agreed to go with current Idea Smart Navigation and Smart Parking.

- We presented our solution to Zedify Cambridge, JSG Home delivery, Fireaway Pizza delivery in Cambridge based on their feed back we changed our basket design suits for each individual business based on their needs. Proto type of basket shown below which can be lockable and foldable.
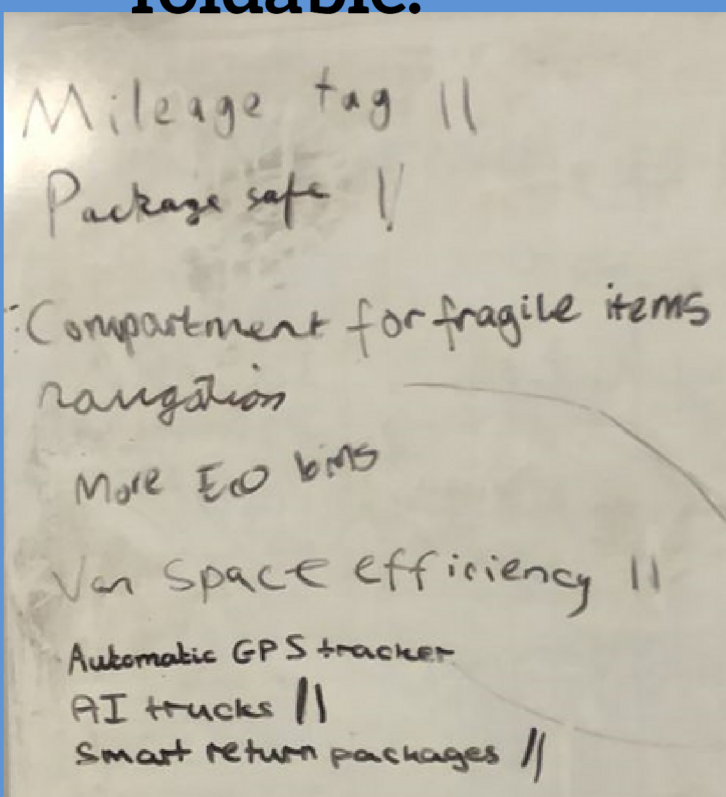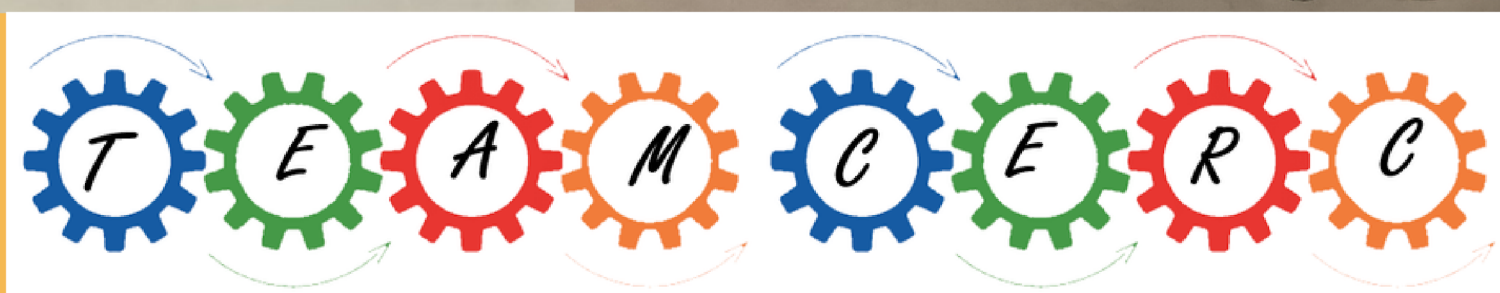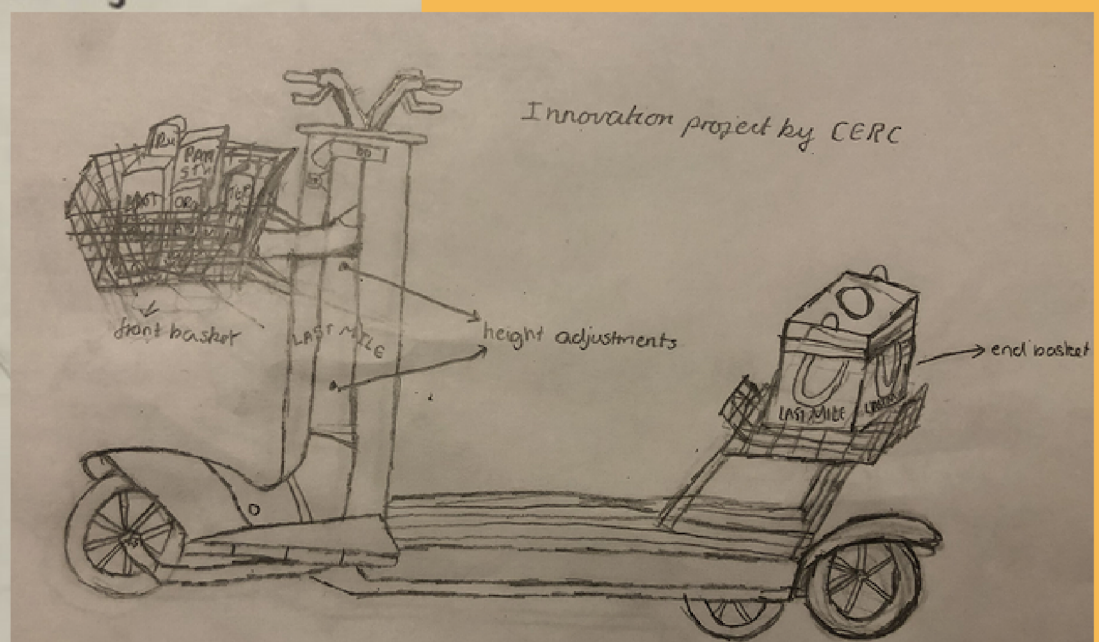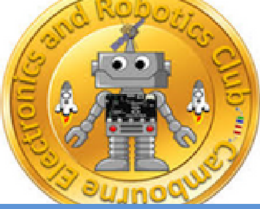
Industry Expert Feedback

Venkatesh Kommi 📎 1 Feb 2022, 19:19 (2 days ago) ☆

Dear Marin, Resend PDF file again for your reference. Kids came up with a catchy nam...

Zedify Cambridge 14:23 (44 minutes ago) ☆ ↩ ⋮

to me ▾

Hi Venkatesh,

Thank you for getting in touch about this project. I'm really impressed with the idea. I think the flexibility your model shows is really intelligent. Large heavy items can be delivered by van (electric I hope), and smaller items can be completed by electric scooter. I'll outline some questions that immediately spring to mind, but I do like it.
Have you thought about the security of the items while you are delivering by scooter? Is it possible to have a lockable box on the scooter? Will the scooter be locked to anything? Where will the van be parked while undertaking scooter deliveries?

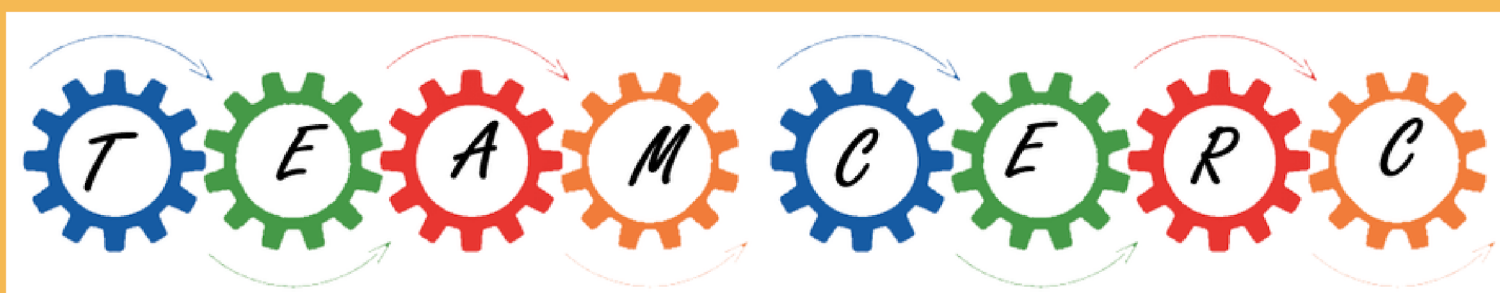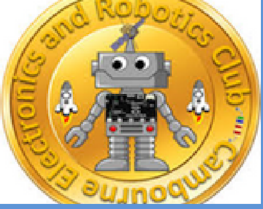All the best with your project.

Kind regards,

Richard
•••
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ZEDIFY

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Conclusion

- It works in conjunction with user's IT infrastructure or Raspberry PI computer
- It saves money and reduces companies carbon footprint
- It causes less traffic in peak times for other road users
- We believe, with the current trend, that the delivery industry will increase in a tenfold, so it's inevitable that efficiency in delivery is essential for everyone
- The aim of this project is not to sell electric scooters or software that helps delivery companies how to operate. What we are hoping here to provide an idea that will help the future generations