

TEAM IMPECCABLES

Theme of Project

-Utilizing pickup trucks for Indian social problems

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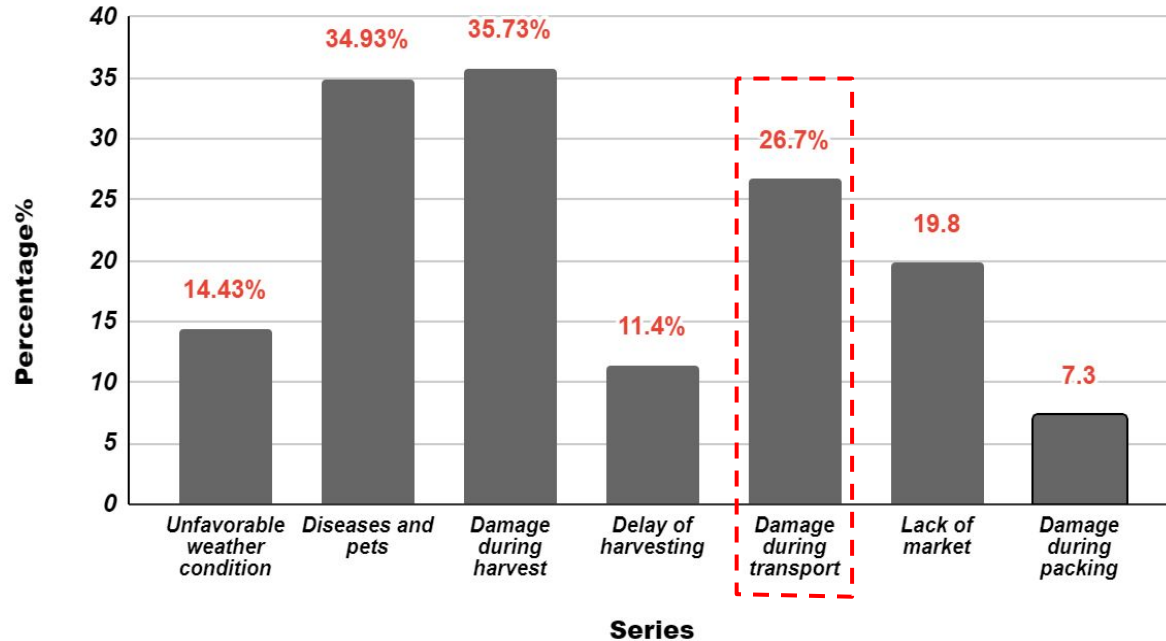
Problems

1. Transportation of Vegetables and Fruits is a common problem faced over the world especially in places where temperature varies vividly.
2. Due to delay in transportation because of traffic in urban areas or due to damaged roads in rural areas, we face a loss in both quality and quantity.
3. The vegetables might get rotten due to the variation in temperature, in the case of long distance transportation.
4. Vegetables need certain temperature to sustain (0°C - 1.67°C).

Analysis

- Indian farmers incur Rs 92,651 crore per year in post-harvest losses, for which, the primary cause is lack of transportation facilities.
- We did our research on tomato production and transportation.
- For past 7 years there is an average production of 19.4 million metric tons of tomatoes per year and a total loss of 5.65 million metric tons.
- In this total loss 1.46 million metric tons is due to lack of transportation i.e, every year we have an approximate loss of 68.5 crores.

Reasons for post harvest losses of tomatoes



Our Solution

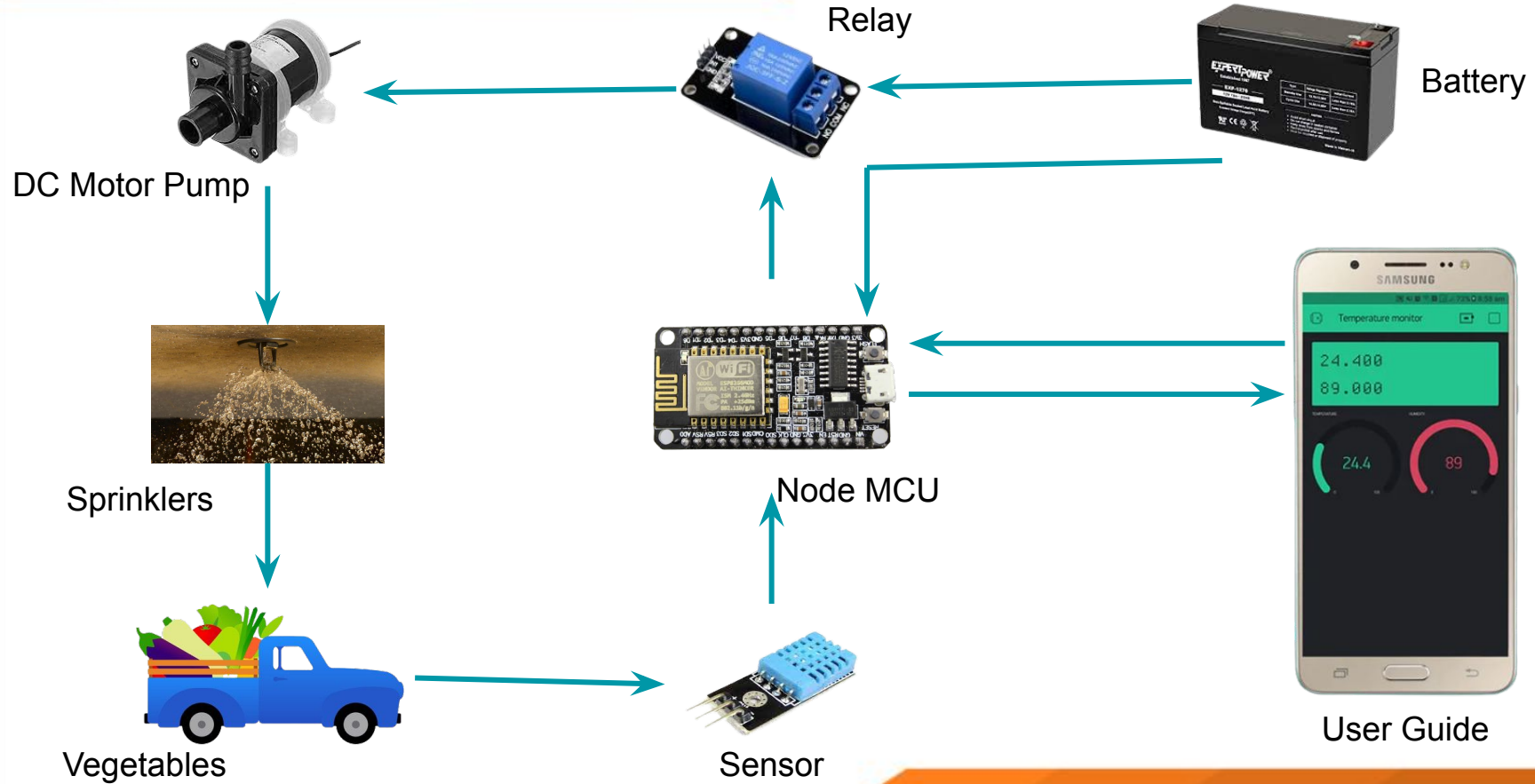
1. Through IOT system, we can monitor temperature and humidity profile of the vegetables and fruits in the cargo bed.
2. With the help of NodeMCU, we can control temperature and humidity of the vegetables and fruits in cargo bed.
3. Sprinkles are sprayed as per the requirements of temperature and humidity in the cargo bed.



4. We can add foam sheet with springs attached to the base of the cargo bed such that the vegetables and fruits doesn't get crushed while travelling on uneven roads.

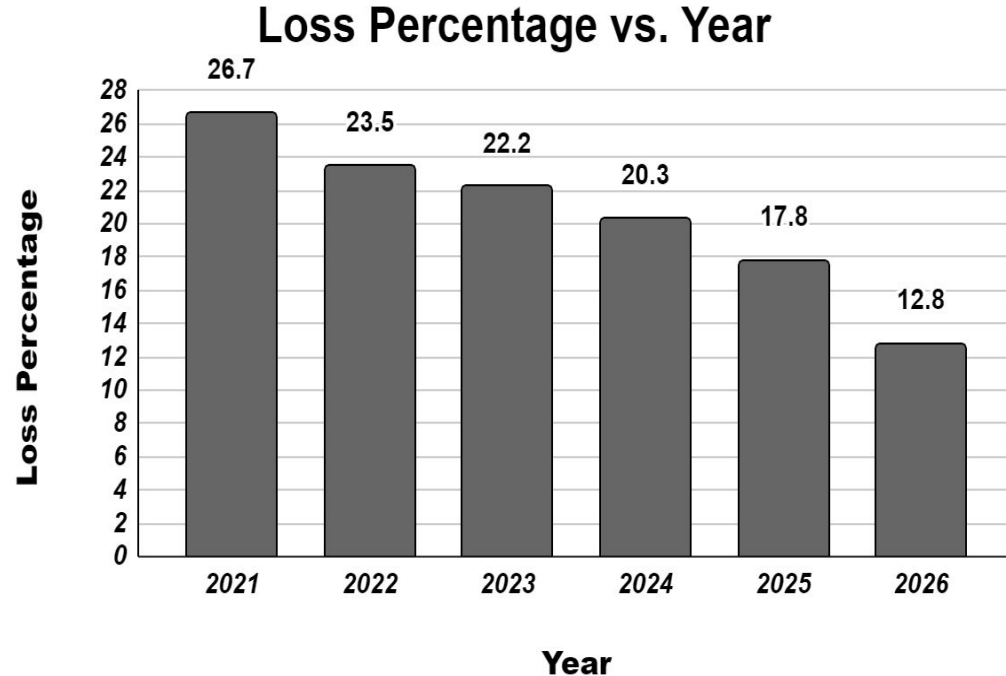


Model

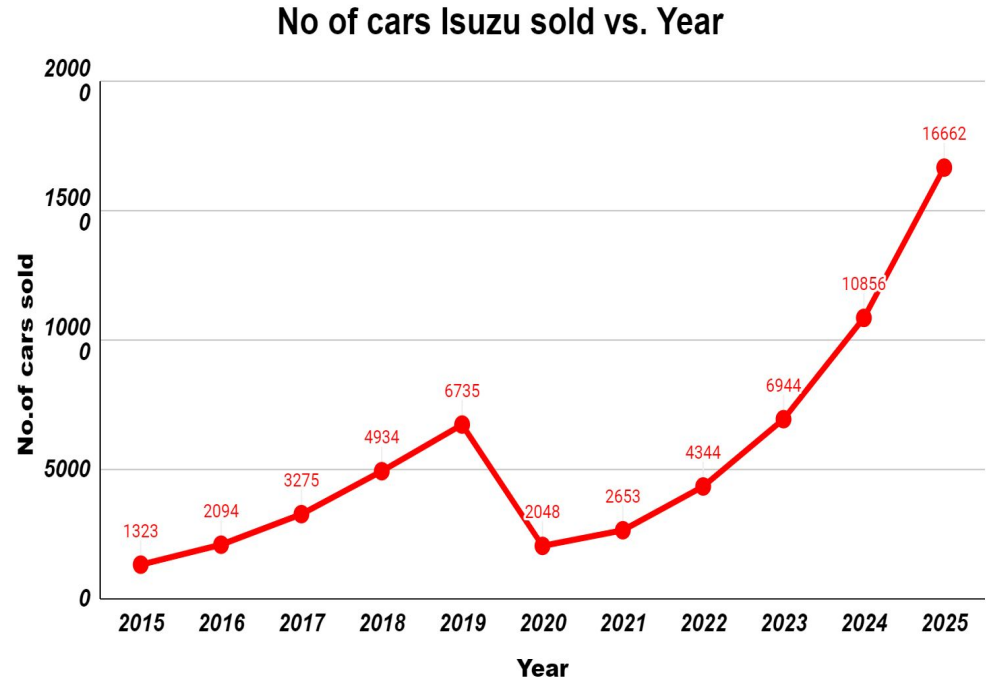


Effects and cost comparison

- After our customized vehicle is launched into the market, we are sure that the loss that incurs due to improper quality of transportation will reduce.



- According to the trend observed in the Number of cars sold per year graph, it can be noted that people are interested in buying pickup trucks, so now the sales of car are expected to rise much more once the vehicle is customized with the changes.



Money Savings

1. If a single farmer loses Rs.200/- per crate due to the wastage, then the total loss due to damaged goods will be huge. So, we can reduce the loss to minimal using this technology.
2. The customers who buy this pickup truck can use this both for personal and professional uses.

Business plan

- ❖ We can start a business that carries fruits and vegetables from farming land to the nearest mandis, by owning this type of pickup truck.
- ❖ Through the technology used in the pickup trucks, we can ensure customers that the goods will not get spoiled because of the transportation.
- ❖ The probability of getting success is high because most of the farmers lose quality of their goods in transportation.
- ❖ By this customization we reduce food wastage that has been occurring in agriculture industry.



Thank You

Thanks for your attention

-By Team Impeccables

