Team Leader name : AKASHDIP MAHAPATRA

Team leader email : akashdip.mahapatra.21@aot.edu.in

College/ Institution name : Academy of Technology (AOT)

Address of  Institution of the Team Leader : Grand Trunk Rd, Adisaptagram, Krishnapur Chandanpur, West Bengal 712502

Department : Mechanical Engineering

Number  of Team Members (Min 3 members - Max 5 members). - 4

State – West Bangal

City - hooghly

Pincode - 712502

Contact number - 9831773756

Alternate contact number - 9836699235

Team Member  1 - AKASHDIP MAHAPATRA , 7076033011, Mechanical Engineering , Academy of Technology (AOT) ,WB)

Team Member  2 - HARSHADEEP DAS, 9831773756, Mechanical Engineering , Academy of Technology (AOT) ,WB)

Team Member  3 – SOUMYADEEP KOLEY, 7044073925 , Mechanical Engineering , Academy of Technology (AOT) ,WB)

Team Member  4 – AKASH ROY, 7810887562 , Mechanical Engineering , Academy of Technology (AOT) ,WB)

Cargo cycle

Non EV

Brief Explanation of your Design / Innovation  component  (In 100 Words).

This cargo cycle is powered by a four bar mechanism. The crank goes for a full rotation where as the handle movers up and down. The person in the front seat only steers the vehicle. The people who are seating on the platform carries are driving the four bar mechanism.

A separate mechanism we are innovating here, in normal cycle the full load depends only on one man , But there 2 men easily generate more power.

And, in future, if we add a Cycle Crank Set ( Single Speed Cycle 6Gear for Universal Fit Cotterless Bicycle Brake Disk ) , then The person sitting in front can also generate power by padel.

So, the innovation is - there are two to three power sources in normal cycle ( rickshaw ).

So that we can easily carry many humans or luggage & anything

Your design /Innovation is addressing which kind of problem (In 100 Words).

Our design/innovation of the cargo bike addresses the problem of increasing urban congestion and pollution caused by traditional modes of transportation for goods. By providing a sustainable and efficient alternative, our cargo bike tackles the issue of limited space and accessibility for deliveries within busy urban areas.We can carry a certain amount of goods, like vegetable fruits etc so in this way those goods are hygienic.It is also easy for a farmer to carry there fram products. It aims to reduce time and man power and improve air quality by promoting eco-friendly transportation. With its innovative features and smart design, our cargo bike offers a solution that not only addresses the logistical challenges faced by businesses and individuals but also contributes to creating cleaner and more livable cities.

Who are ultimate users of your Design/ Innovation  (In 100 Words)

The ultimate users of our invitation of cargo bikes are individuals and businesses looking for a sustainable and efficient mode of transportation for their goods. It is ideal for small businesses and local vendors who need to carry and deliver various items within urban areas. Additionally, individuals who prioritize eco-friendly alternatives for their daily commute or personal errands can benefit from the cargo bike's spacious design and durability. Whether it's transporting groceries, packages, or equipment, our cargo bike provides a reliable solution that reduces carbon emissions and promotes active transportation. With its user-friendly features and versatile design, our invitation welcomes all who seek a sustainable and practical alternative for their transportation needs.

How your design innovation is better than existing  options available in the market (In 100 Words)

As we know that the existing cargo cycle which is affordable in the market is Trolly Van which are both available in man power and EV. It can only carry goods but there is no convenience for passenger carriage in those cargos, and if it is for passenger carriage it cannot be used for goods carriage. But what we are making in our project i.e. is the cargo cycle which can also be used for passengers as well as goods carriages. Moreover the cargo cycles that are available in the market are only one man driven, but what we are making is multiple man driven i.e. more than one person has to drive the cargo cycle. In the existing options one man has the total workload but in our design as it is a multiple person driven so the total workload is distributed. In that way we can say our design is better than the existing options available in the market.

Is there any Intellectual Property(IP) component associated  with your design/Innovation

NO

Upload CAD Design in 2D PDF format.

Technical drawings are typically created in 2D and saved in " PDF" formats max Size 5MB.

**3D CAD Model in STP format** The primary file you need to provide is a 3D Computer-Aided Design(CAD) model of your cycle design.This model should represent all the components and details of the deisgn in a three-dimensional format.3D models should be submitted in the "STP" formats for 3D CAD models STEP(.stp) max size 25 MB

Upload the Bill of Material (BoM) and approx. cost in pdf format