

# Samaritan Aerospace

## CaeliPartum-DPS RK Puram



Delhi Public School R.K.Puram, New Delhi, India- 110021

Name	Email ID	Course	Contact Details
Advitya Singhal	advityasinghal2022@gmail.com	Science	+91 8527076270
Siddhansh Narang	siddhansh.narang@gmail.com	Science	+91 9650411440
Garv Jain	garvj03@gmail.com	NA	+91 9625902617

### Team Members

Climate change is wreaking havoc around the world, from floods in Europe to Wildfires and Droughts across the globe. The rising water level also poses a threat to coastal regions. Fortunately, global leaders and governments have come to realize that financially as well as morally, preventing climate change is the priority. Sustainable development is necessary for that, however, the sustainable development and emission goals are not being met, largely due to economic

reasons.

Greenhouse gases are a major contributor to climate change. A calculator from MIT predicts that it's too late to act on an individual level, and major govt. and industrial reforms are necessary to get the emissions under the regulation; in fact, air pollution is the cause of close to 9% of global deaths. A major contributor to air pollution are the commercial vehicles of services like amazon, etc. Unfortunately, in the relatively self-focused world, swift adaptation of any reform requires it to be financially viable as well. Therefore, we believe that our idea, CaeliPartum, is the way to proceed.

Caelipartum is a fully electric, autonomous Unmanned Air Vehicle(UAV) which is designed for package delivery by replacing small commercial vehicles like vans. Infact, the Indian government. has been pursuing this space actively by releasing tenders for UAV based vaccine delivery, and it estimates the turnover of the UAV industry at \$2bn by 2026.

Although UAVs on a smaller scale exist, our UAV outperforms them in various aspects:

1. The innovative design is highly efficient and streamlined, which maximises performance.
2. Plethora of sensors, inspired from tesla, ranging from radar to cameras allow it to operate in a fully autonomous fashion.
3. It is safe from cyber threats
4. The design can take off and land in small spaces and is designed for urban airspace, thus is highly mobile.
5. Civilian well-being was a priority, therefore it's extremely quiet and has a lot of safety measures in place.
6. The design has been tested by using industrial simulation softwares like Simscale, ANSYS, Nasa's Open VSP, just to name a few.
7. The design has a maximum take-off weight of 97 Kgs, enabling it to deliver a bunch of packages in one go.
8. Contactless loading and unloading system keeping Covid-19 in mind.

There were over 100bn packages in 2019, and is rising at a rate of 22%.

We will work with e-commerce giants like amazon, flipkart, etc and we'll take a share for each package. In 2020 this industry was worth \$375bn, getting a small chunk of this industry will generate high revenues, while being profitable for the companies as well.

Ripple effect of initiating this will be lower traffic on roads, low noise pollution and much needed skilled and unskilled jobs, therefore boosting the economy as well. The idea can also be used for vaccine delivery, emergency supplies, aerial surveillance for law enforcement agencies, cloud seeding and agriculture with little modifications.

Therefore, our solution fosters and promotes ***sustainable development*** in a manner that promotes the well-being of the whole society.