



MANDRED INDUSTRIES

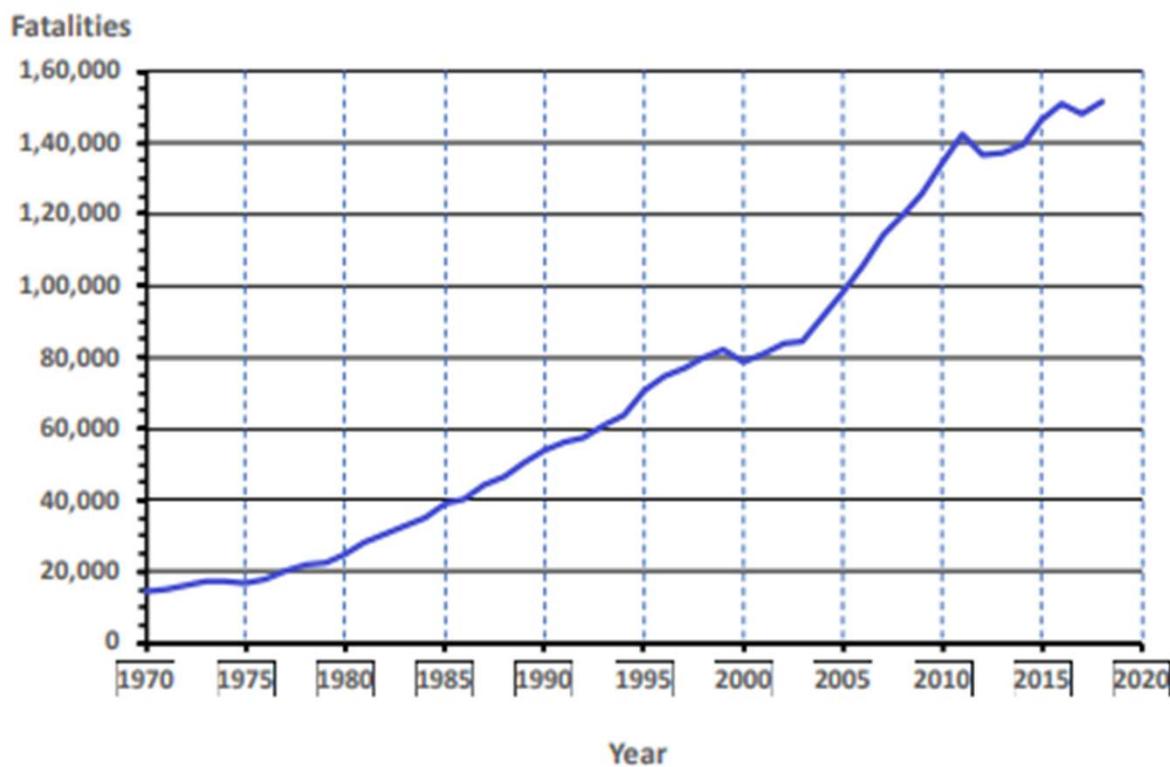
PRESENTS



GEOPPOLES AND COMBICON

USING DRONES AND ROBOTS TO INCREASE THE REACH , SECURITY AND SAFETY OF THE POPULATION

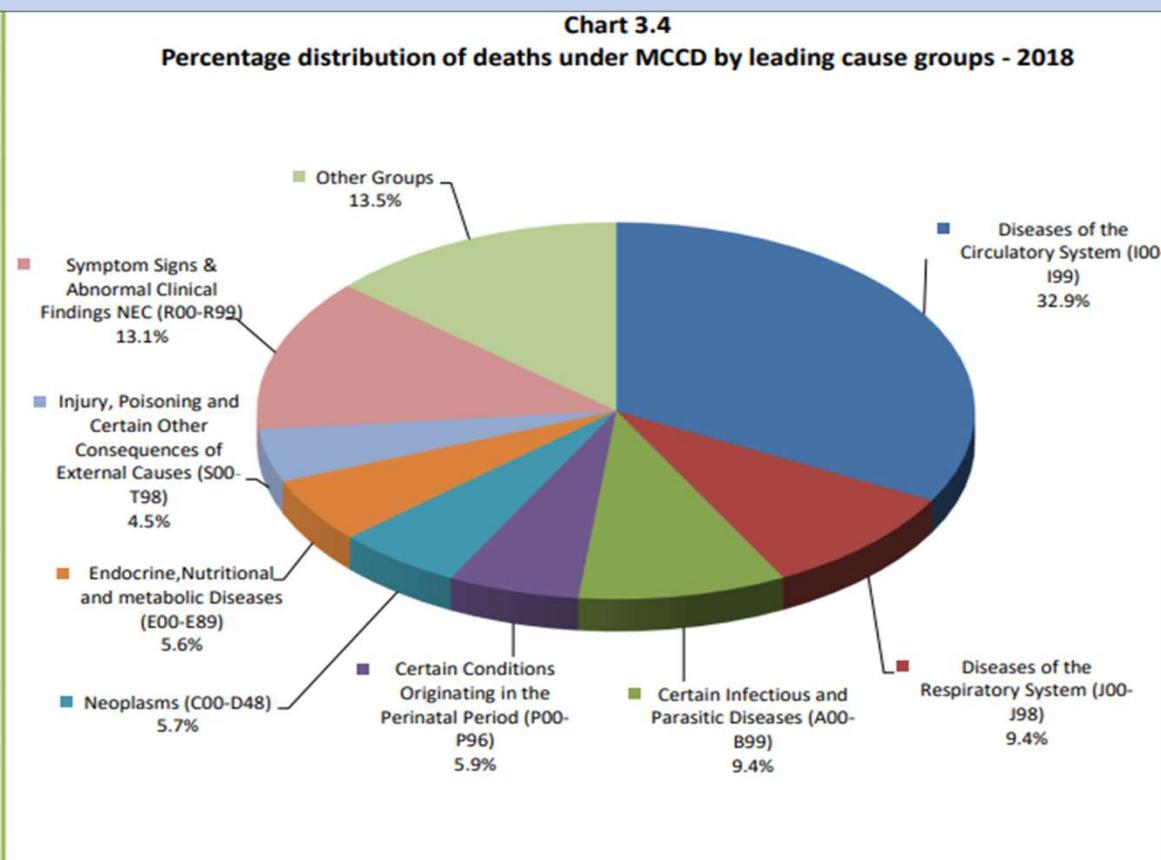
DEATH BY ROAD ACCIDENTS



- Around 1.6 lakh people die every year due to Road accidents.
- These accident happen mostly due to unchecked conditions of the roads.
- Other cause of the death is inefficiency of the emergency services.

Source: IIT Delhi research publication(Road Safety in India 2018)

DEATH DUE TO MEDICAL EMERGENCY



- Around 33 percent death in India is due to cardiovascular failure like heart attacks.
- Many of the emergency services fail to reach the patient on time either due to miscommunication or irresponsibility of neighbors.
- Other medical emergencies are also facing the similar plight.

Source: censusindia.gov.in (MCCD_Report-2018)



Geopole



Drones



Application

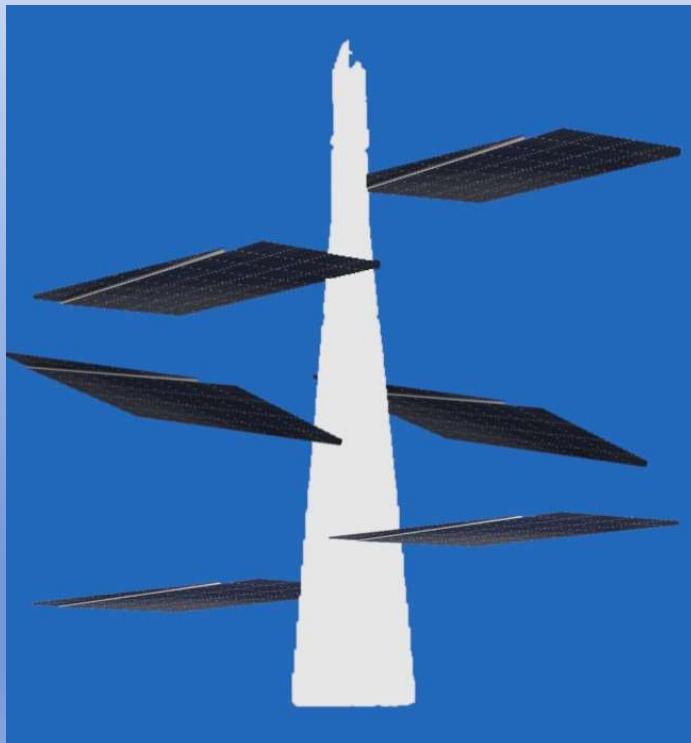
THREE COMPONENTS OF THE SYSTEM

HOW CAN DRONES HELP ?



- **The infrared enabled solar drones can help by covering the entire area of the city and sending the data back to the supercomputing center.**
- **There the entire population and their activity can be modeled by a neural network.**
- **The infrared can especially be helpful to identify abnormally high rise in temperature in industrial area and taking action before any mishap can occur.**
- **Similarly the data can be used to identify super spreaders of diseases like coronavirus and help us to isolate the community where the vector has interacted.**

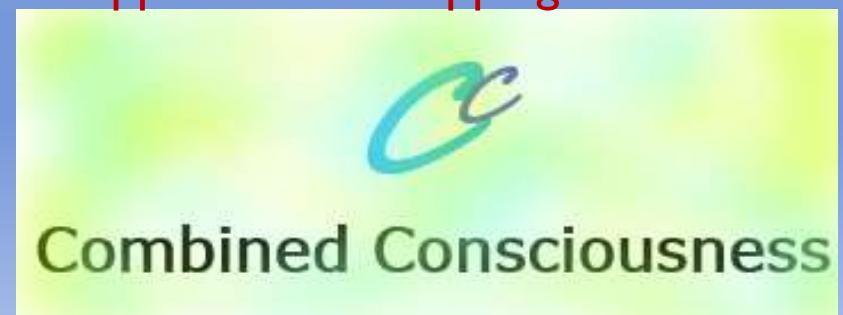
WHAT IS GEOPOLE ?



- Geopole is the structure responsible for collecting the drone data and sending it to the supercomputing center.
- It also has solar panels as well as the platforms to recharge the drones at regular intervals.
- Its height could vary from place to place.
- It is preferable to install it from the ground up even though it might cost more.

WHAT IS COMBICON ?

- COMBICON is the short form of Combined Consciousness.
- It is an app which can be accessed using Aadhar Number of an individual.
- It acts as a platform to post different problems faced by people.
- Example there is a pot hole in the road then a person can use the app to post the photo.
- The drones will then forward the message to the Geopole. Later we can send a professional to fill up the holes.
- Similarly the people who point out such problems in the society will be awarded with CC POINTS which they can redeem in the app itself for shopping and various ventures.
- This way people would have an incentive to help other people as well as take an active part in shaping the society.

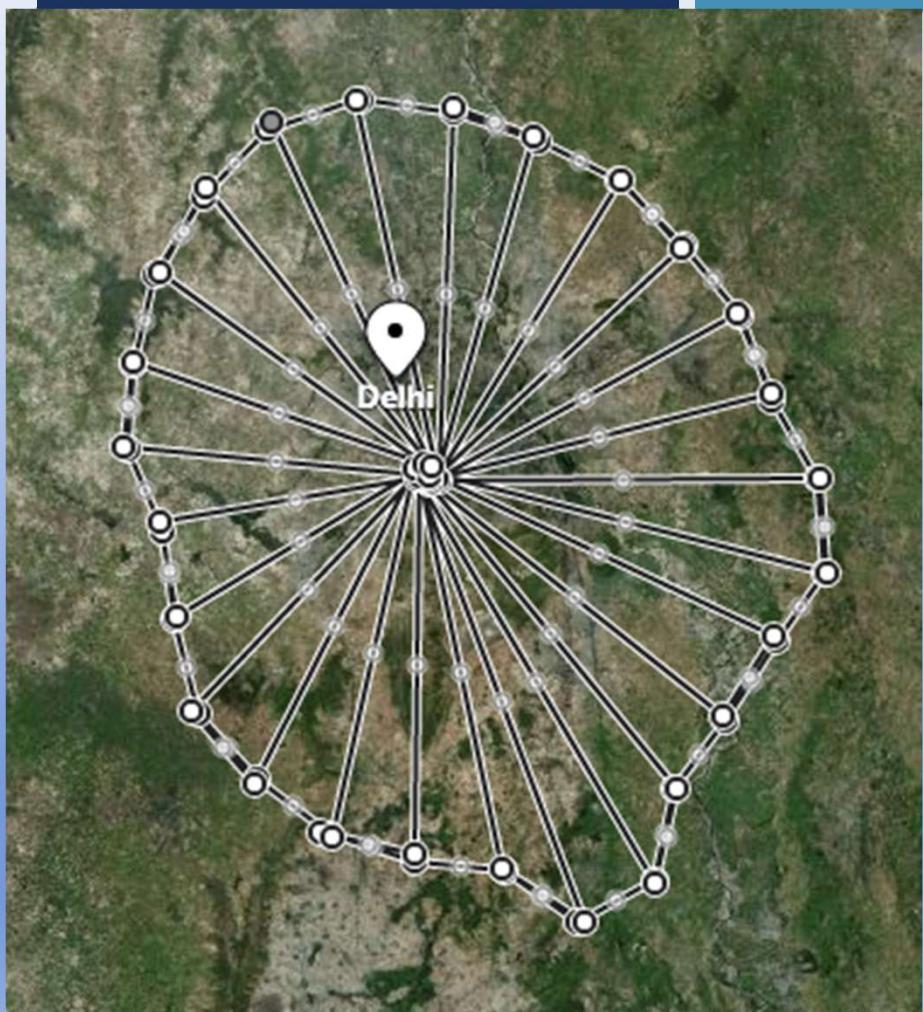


LET US TAKE A LOOK AT HOW THE SYSTEM CAN BE ESTABLISHED (CITY: NEW DELHI REGION)



We can consider the entire area covered by the KMP Expressway and Eastern Peripheral Expressway as one region.

AREA: 4900 sq KM(approx.)



- We can split the entire area into approximately 26 sections .
- These sections were divided taking into consideration the range and efficiency of the drones.



- This is one of the 26 sectors. Each sector has the supercomputing facility at the base.
- The white dots represents the placement of the Geopole.
- The red lines are the paths taken by the drones for surveillance.
- Each sector can have approximately twenty drones which survey all the time but take alternative turns depending on their limit.
- They are also capable to detect moving objects and evade them according to the preset conditions.

WHAT ROLE WILL OUR COMPANY PLAY IN THIS ?

- The role of the Mandred Industries is to build all the infrastructure including drones, Geopole and the app Combicon.
- We will also look after the maintenance of the system and model the data for various purposes under the rules and regulations of census department of India.
- Our responsibility also lies in repairing the said infrastructure or at the very least inform the concerned authorities about people's complaints.
- The data of the people will be safe and would not fall into wrong hands.
- The supercomputing facility can use this data for teaching and training students and other emergency service officials as well as improving the existing machine learning models.

BUDGET (ONLY DELHI REGION AS PARTITIONED EARLIER)

DRONES EXPENDITURE

Number : 20 per sector

Cost Per Unit: Rs. 30,000 (approx.)

Total Expenditure:
Rs. 1,60,00,000

GEOPOLE EXPENDITURE

Number : 10 per sector

Cost Per Unit: Rs. 1,50,000 (approx.)

Total Expenditure:
Rs. 4,00,00,000

MISC. EXPENDITURE

Including the servicing of infrastructure and training of professionals:

Rs.2,00,00,000 to
Rs.3,00,00,000

APPROXIMATE TOTAL SPENDING

RS. 8,60,00,000

BENEFIT(W.R.T DELHI REGION)

- The main income would be from the advertisements and the shopping done by the people in the COMBICON application.
- Approximate Population of the Delhi Sector : 1,87,10,922 (Source: udai.gov.in)
- Approximate Ad revenue earned per person per year: Rs. 25.5 (Source: The Economic Times)
- Total Approximate Revenue form the app considering only 10 percent of Delhi Population uses it: Rs. 4,80,00,000
- Hence the spent budget can be covered within 2 Years.

FUTURE PLANS



- In the future we would like to increase the efficiency of our drones and establish various rapid response units across the city.
- We would also like to add terrestrial robots to help with the proper functioning of the traffic and acts immediately in case of emergencies.
- Our eyes are also set on incorporating a transit system across the various streets for emergency vehicles only.



MANDRED INDUSTRY

THANKS YOU

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