SUCHAK ecoSystem

Your personal Informer

Theme: **Life In and after Lockdown**

What if we are in a lockdown situation for more than a year?

Date and Place: *May 2020*

Team :

Name : **Ashutosh Mishra**
Title: **Student**
UX Designer

Name : **Omprakash Sahoo**
Title: **Student**
Content Strategist

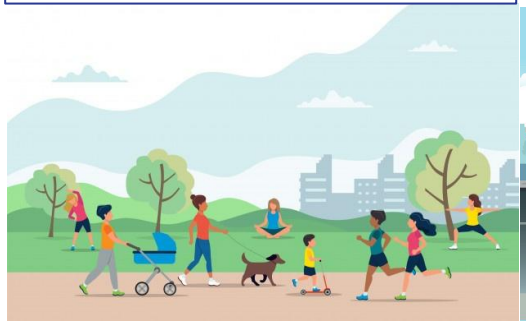
Name : **Subham Nanda**
Title: **Student**
UX Researcher

Name : **Arya Shreyas Das**
Title: **Student**
Visual Designer

MENTOR's Name: Zheeshan Durrani
Senior UX Designer, Cerner
Bangalore

LOCKDOWN SCENARIO: Daily life of Sundar.

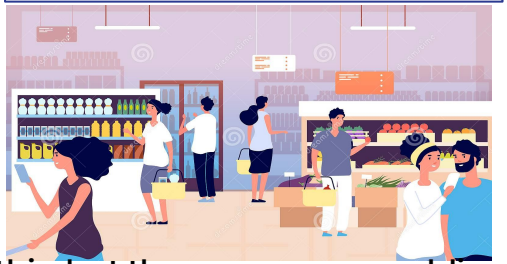
Early morning he goes to a PARK to keep his body fit.



Then he goes to office by BUS.

He works in a private corporate OFFICE.

Returning home, he buys vegetables and groceries from a SHOP.



As his uncle his ill, he also makes sure to pay him a visit in the HOSPITAL.

Sundar often goes to a nearby SHOPPING MALL with friends.

Not only this, but there are many public places like BANKS, RELIGIOUS PLACES, TOURIST DESTINATIONS etc. that we often visit, like Sundar, but are mostly unaware of the crowd nearby. As a result we often end up in thronged places with a high risk of virus transmission.

OVERCROWDING vs LOCKDOWN

PROBLEM DESCRIPTION

Urban places are crowded and they serve as hotbeds for the spread of COVID19. The governments across the world have enforced lockdowns which has its positives and negatives. On one hand it has slowed down the spread of the virus, on the other hand it has been the cause of economic crisis. The governments are struggling to find the right balance of restrictions to deal with this situation.

WHY IS IT AN URGENT PROBLEM?

WHO recommends a minimum distance of 6ft between two individuals to restrict the spread of this virus. This is a new norm and people in cities are not used to this.

Most often people feel it impossible/ difficult to follow this as we move towards a gradual re-entry to business as usual.

It is important to address this problem immediately and set this as a public space behaviour.

TARGET USER PERSONA

Sundar Kumar

"I have to get back to office and going through crowded streets is the only way there is"

Age: 53
Work: Employee at a Insurance provider
Family: Married with 3kids
Location: Bangalore, India

Personality

Introvert	Extrovert
Thinking	Feeling
Sensing	Intuition
Judging	Perceiving

Likes walking | Caring | Submissive

Goals

- Needs to go to the office
- Start commuting and return to the business to earn for the family
- Wants to be safe from the Coronavirus

Frustrations

- Office in a crowded market
- Is diabetic
- Social distancing is difficult as number of people around him are not in his control

Bio

I am a resident of Bangalore, it has become a very crowded city. I have been living in Rajajinagar with my family. My office is 15 minutes walk from my house. Coronavirus has become a major cause of concern for me and my family as it is hindering my source of income to provide for the family. I am getting old and have diabetic issues. Doctors say, I am highly vulnerable to get this novel virus. I know I have to be careful. But I also need to work, what do I do?

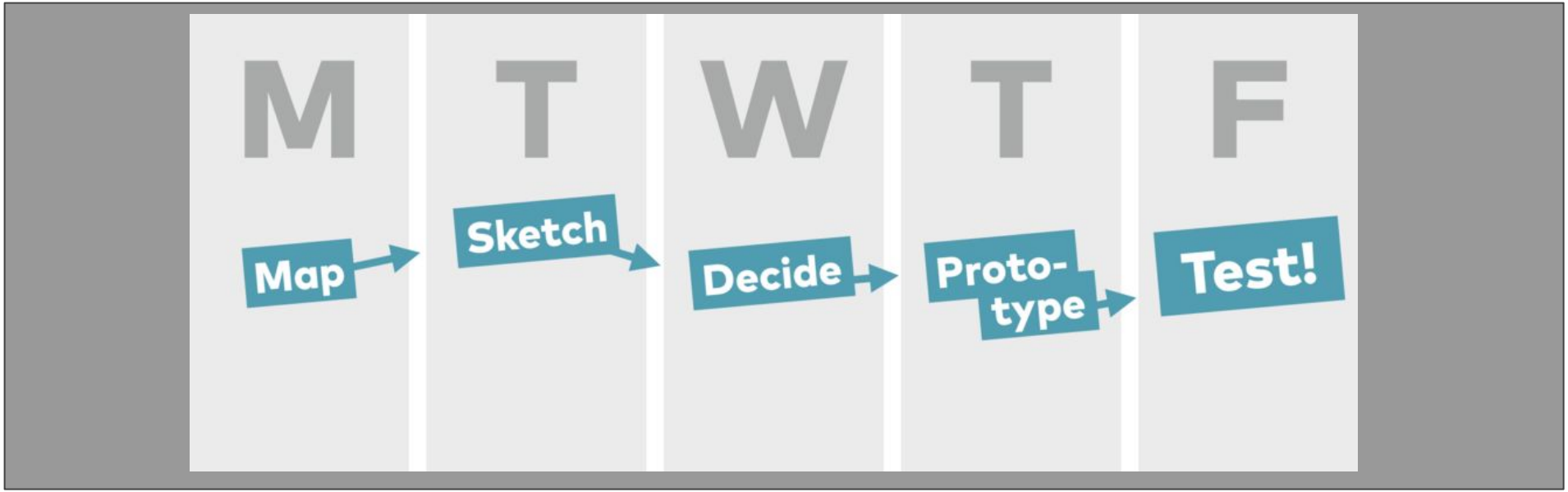
Motivation

Incentive
Fear
Growth
Power
Social

Brands & Influencers

Preferred Channels

Traditional Ads
Online & Social Media
Referral
Guerrilla Efforts & PR



DESIGN PROCESS

For this product we used the google design sprint.
We initially diverged our thought process by thinking across the board of possible solutions and then converged it to come to our final solution

Exploration of Ideas:

With the google design sprint in place, in the first phase we diverged to as many ideas as possible -

- **QR CODE BASED ENTRY**

  Regulating the entry and exit of people in public spaces via assigning individuals QR codes on an application with timers.

- **HAND BANDS FOR PUBLIC SPACES**

  Handing over sanitized hand bands to individuals entering an enclosed area to keep the number of people in check and also enable required social distances.

- **SOME OTHER HANDY IDEAS**
  - Implementation of drones and GPS activity.
  - App based, public transport

UCHAK

- An ecosystem for Crowd Analysis

SUCHAK

SUCHAK

COLOUR OF LIGHT DEPICTS CONGESTION LEVEL

ANONYMOUSLY COUNTS TOTAL NUMBER OF PEOPLE INSIDE A PUBLIC PLACE

USES DEEP LEARNING , ML, COMPUTER VISION

COLOUR OF LIGHT DEPICTS CONGESTION LEVEL

SPEAKER ALERTS PEOPLE IN THE PROXIMITY IF CONGESTION IS HIGH

IP CAMERAS FIND TOTAL NUMBER OF PEOPLE IN THE PROXIMITY

VIDEO PROCESSING ENGINE

STREAM PROCESSOR

INTERNET

INTERNET

VIGILANCE OFFICER (OF THE AREA)

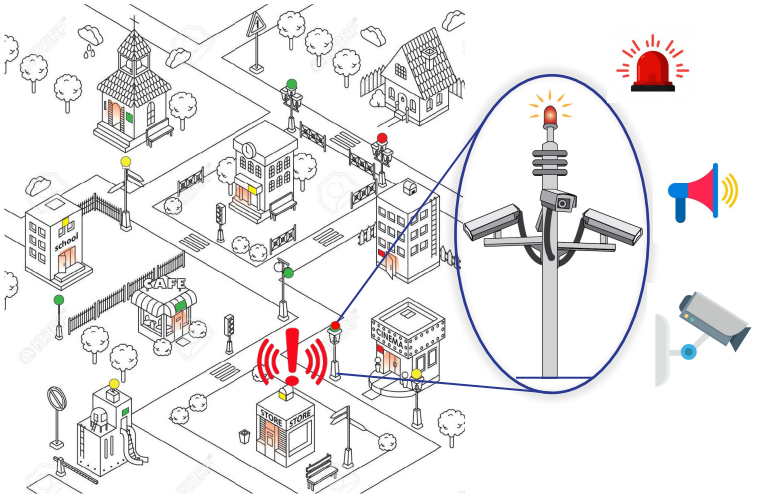
MOBILE APPLICATION SHOWING DETAILED ANALYSIS OF OVERCROWDING

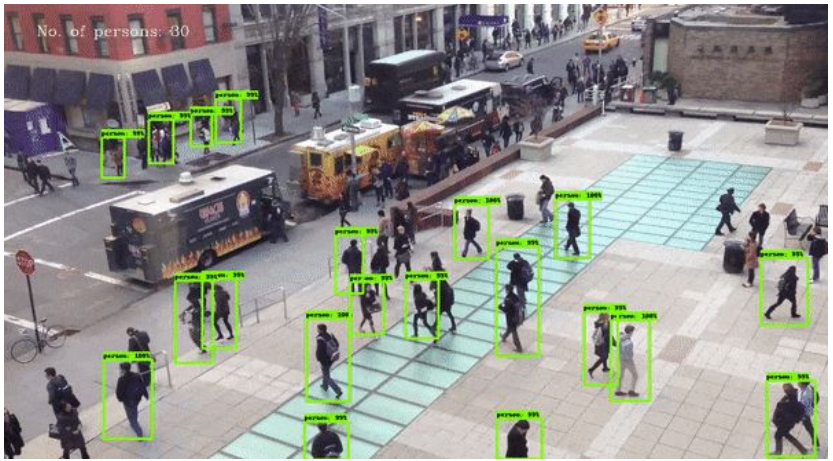
DATABASE SERVER

MOBILE APPLICATION TO VIEW CONGESTION LEVELS IN LOCALITY

USERS

1. Decongestion Towers



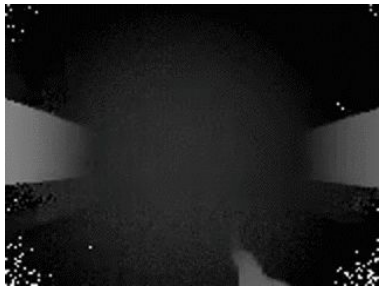


- These towers consist of CCTV cameras, a siren and flashing lights.
- The cameras analyse the surrounding and send the data to cloud/ process it via embedded microprocessors.
- The algorithm identifies the density of people within the area. Number of people/ sqmt and uses this data to assess the criticality of congestion as low, medium or high
- Upon reaching medium level congestions the lights start to flash and upon reaching high density triggers the siren to indicate immediate dispersion of the crowd

2. Entry and Exit system for closed Public Places :

The flow of people in enclosed public spaces such as malls, parks, transport terminals, religious places can be regulated by setting up thermal CCTV cameras at entry and exit points

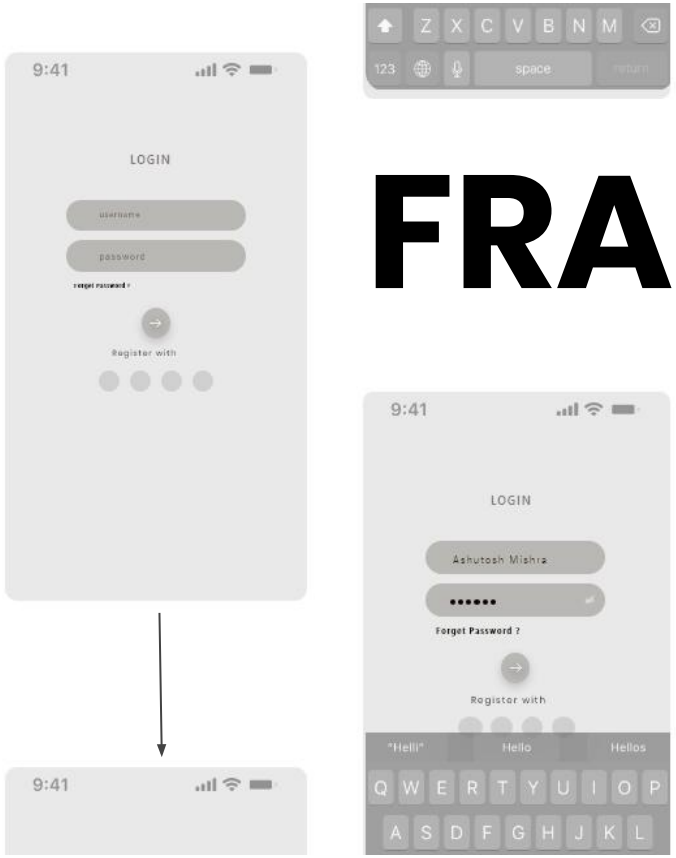
This will help us determine the exact number of people within that area and therefore can be regulated by the enforcement authorities



3. Application to view the congestion across city

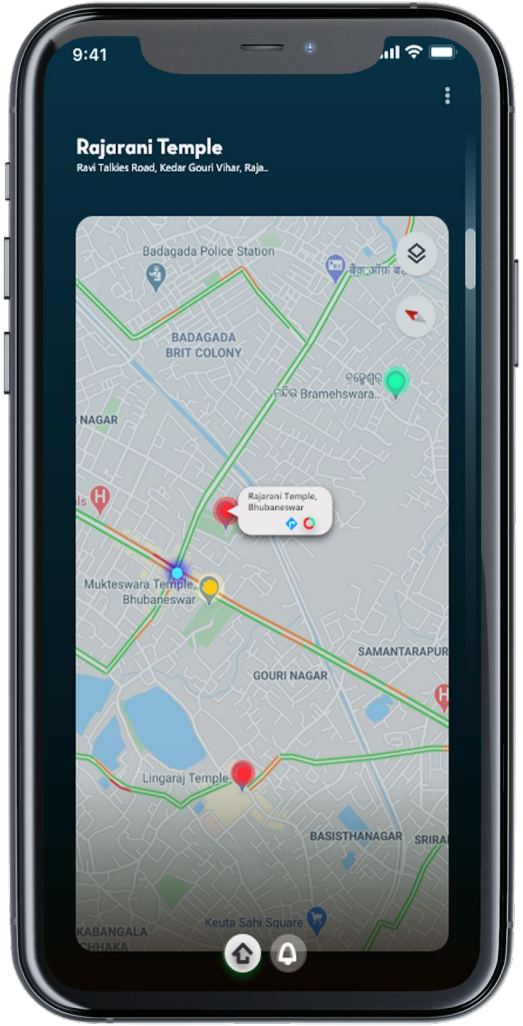
- Suchak App can be used to keep a live track of all the activities carried out in 1 and 2.
- Suchak application when implemented can help people, sitting at home to view the congestions in various public places and help them make wise decisions.
- The application also keeps a track of historic data that can help authorities to regulate the crowd further.

WIRE FRAME


9:41
LOGIN
username
password
forget password ?
Register with
9:41
Z X C V B N M
123
space
return
9:41
LOGIN
Ashutosh Mishra
Forget Password ?
Register with
"Helli"
Hello
Hellos
Q W E R T Y U I O P
A S D F G H J K L

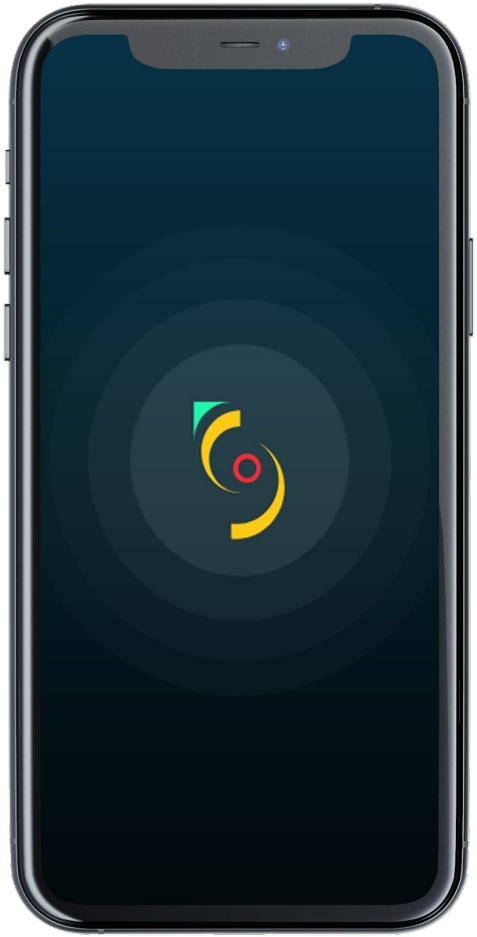
HOME SCREEN

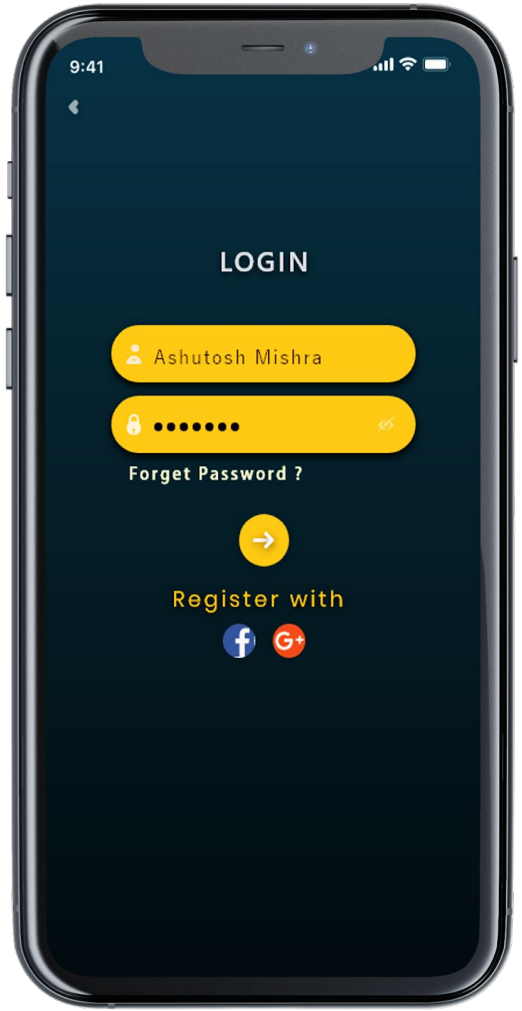

9:41
Locality
Rabi Talkies Chhak
Congestion
MODERATE
65.5%
Rabi Talkies Chhak
Ravi Talkies Road, Kedar Gouri Vihar, Raja..
Analysis
Today
3:00 PM
4:00 PM
5:00 PM
6:00 PM
Badagada Police Station



NAVIGATION SCREEN

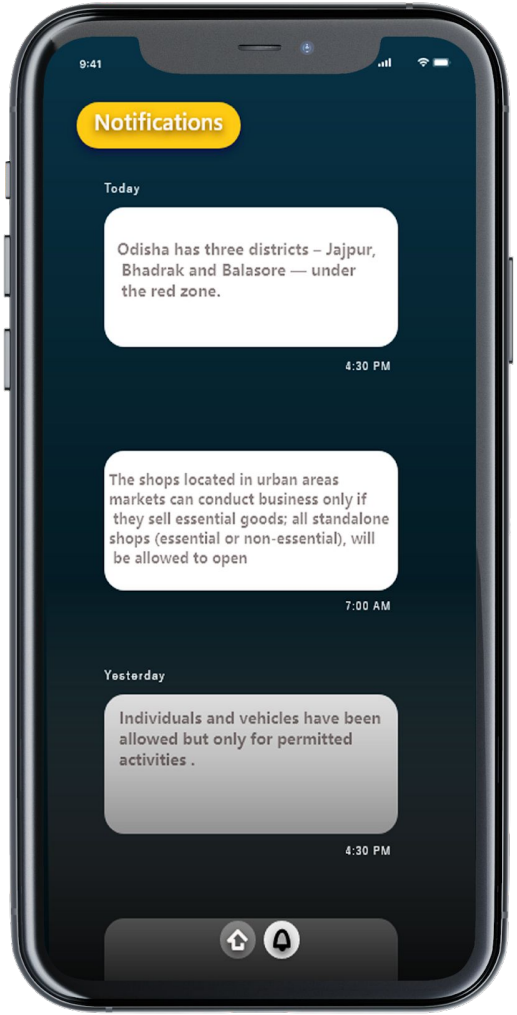
SPLASH SCREEN





LOGIN / SIGNUP SCREEN

NOTIFICATION SCREEN



PROTOTYPE VIDEO

https://drive.google.com/file/d/1OJBRwXCyKZr4ZJrw6EoE8ruKkxdZHTLt/view?usp=sharing

Impact

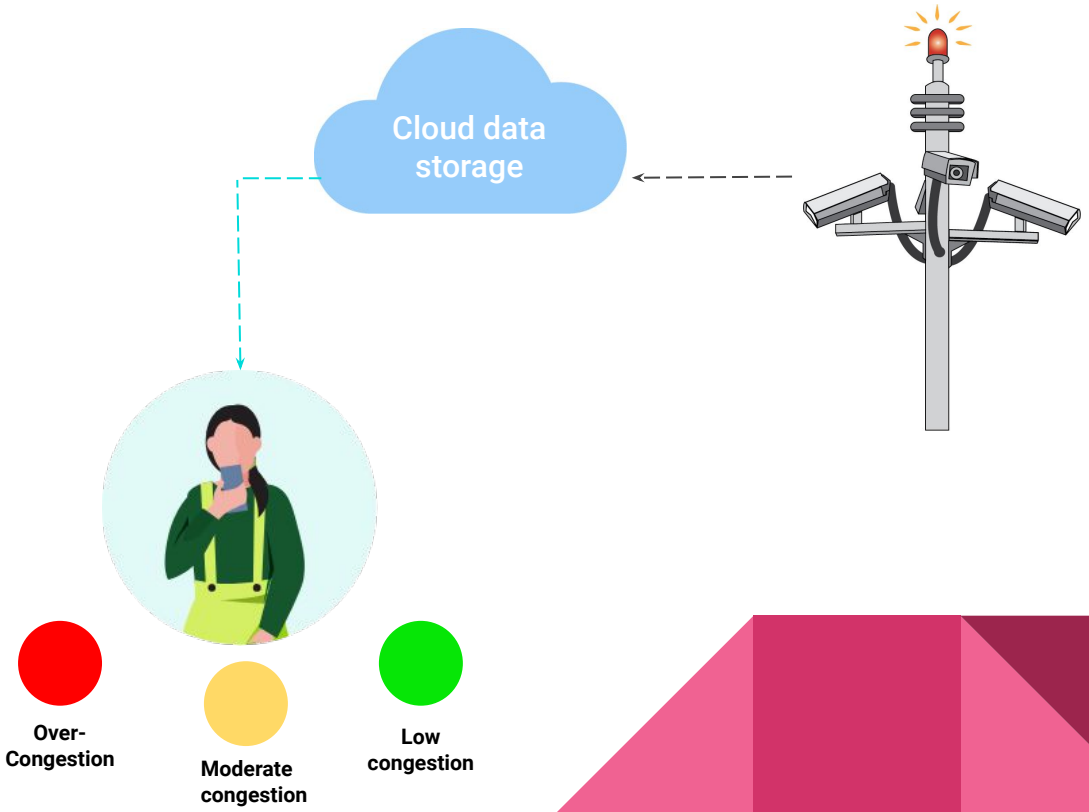
IMPACT OF YOUR SOLUTION

- Long term solution to enable social distancing
- People can have sufficient data to view the crowdedness of a area and plan their commute accordingly
- Avoid the gathering of large crowds in a smaller area
- Provides necessary alerts and information to the relevant authorities

Execution & Viability :

- The ecosystem can be implemented phase by phase starting with the CCTV tower integration and subsequently setting up the application

- The solution is cost effective and will require minimal attachments to the existing array of CCTVs within the city



Thank You !

Being an individual, it is not an easy task to deal with a project. But with a team everything seems quite easy and effortless. It is a great opportunity for all of us. We thank our mentor who showed the most effective path and has helped us in every possible step he could. We are also thankful to the team of UMO design foundation who came up with such a competition for the development of our country . We are delighted to be a part of this foundation.