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### 1. CUSTOMER SEGMENT(S)

Working people , college and school students , common peoples and childrens



#### 6. CUSTOMER CONSTRAINTS

Networks connections sectors , sensors and GNSS tracker. It gives accuracy and reduces the man power .



#### 5. AVAILABLE SOLUTIONS

To avoid accidents and to safeguard things, we need to maintain track to find out defects and repair and service them

Explore AS, differ

Focus on J&P, tap

# 2. JOBS-TO-BE-DONE / PROBLEMS

When a train suddenly breaks down in the middle of the track it disappoints the passenger who are in emergency, that leads to delay across the network and throw out the system off-gear



#### 9. PROBLEM ROOT CAUSE

.The problem root cause in the entire railway system may cause an accident, can lead to delay the access and makes risk for the passengers who are in emergency.

# RC

#### 7. BEHAVIOUR

lot based rail track defects detection to reduce sudden breakdowns and accidents, delivering foods and medicines through drones, automatic santitization for the safety of passengers, safety sensors and gears to help alert operations of any issues. us on J&P, tap into BE, ur

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### 3. TRIGGERS

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Railway announced various helpline numbers/Contact Information to help passengers in order to guide them and instruct them in train while traveling ,related issues at the time for needs , and to provide safety and security to the passengers especially Women and Children.

## 4. EMOTIONS: BEFORE / AFTER



The passenger while traveling before have lots of insecurities like may get robbed ,losing things etc.

The passengers while traveling after they get more comfortable around the surroundings and feels safe.

#### 10. YOUR SOLUTION



. To reduce the sudden accidents, check whether the train is in good condition and location is safe to travel and reliable. By using IR sensors to detect objects in the surroundings, GNSS tracker used to track the fault in track, By using Ultrasonic sensor to detect the track in railway with measuring the distance from the track to sensor to reduce the accidents.

# **8.**CHANNELS of BEHAVIOR



#### B.1 ONLINE

QR Code scanner for emergency ticket booking at the ticket counter. We can visualize the 360degree view of the train and surroundings around it through our mobile. Through applications we can know the locations of the train and can see the arrival times.

#### 8.2 OFFLINE

Notification message that intimate the starting point of the train in all stations. When the passenger reaches the destination feedback link is sent as notification for further improvements to overcome the user side defects.

We can know the details of the train at the booking station, railway managers.