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Emergency response automation in life emergency management

K. Chaitanya[1], Y. S. Aashritha[2]

[1,2]Student, Gandhi Institute of Technology and Management, Visakhapatnam, Andhra Pradesh

ABSTRACT

Traffic has become the major problem in present situation , therefore management of life Emergency situations at the time of accidents on road , reaching hospital on time has become a major constraint for ambulances because of traffic was considered as the highlighting in theoretical form of the main aspects of the life Emergency management . The project will also bring the solution and technologies that are used by western countries in life Emergency management using Emergency Response Automation.

Keywords: *Emergency management, Automation in Life, Emergency response.*

1. INTRODUCTION

Background of the business - An integrated IoT emergency response automation to save more lifes by enabling smart grid system.

Ambulance - The IoT platform for ambulance provides an optimal route suggestion between patient/victim location and hospital

Traffic - An IoT device which runs the signal control algorithm based on ambulance priority and enables traffic signal.

Hospitals - Our hospital platform enables to track the patient condition accurately from a remote loaction and track ambulance position.

2. CUSTOMER'S PROFILE

- The main concentration of the project is targeting hospitals.
- Long and short term Corporate Objectives
- To perform a viability assessment of the proposed new business ideas in terms of marketability, technical feasibility, financing and authorities
- To be able to prepare a relevant business plan
- To recognize fundamental startup issues

3. Market Analysis

Product is exclusively designed for hospitals.

The main advantage is to make ambulances avoid traffic and reach hospitals at the earliest.

The product has got good response from the hospital authorities in the survey conducted.

The government is encouraging new technologies to enter into market.

Permission need to be taken for installing the device in signal point from the traffic department.

4. FINANCIAL ASSESSMENT

Investment expenditure - The project requires an initial investment of 15lakhs-20lakhs for starting this project. For each hospital it will be charged around Rs.18000 to Rs.20000 per month.

Areas of investment -

- Engineers recruitment
- raw materials (motherboard, sensors, transmitter, receiver, GPS devices)
- Marketing Assessment

Product - Emergency response automation.

Price - Rs.18000 to Rs.20000 per device

Place - metropolitan cities and semi-metropolitan cities.

Promotion - Executives directly contacting with the hospitals.

Management Structure - As a startup we would recruit a team of 5-7 people of employee who would be able to do perform multi-tasking.

5. APPENDICES

Break-Even Assessment: according to the surveyed information the project would take around 1.5-2 years if the product is sold for minimum of four hospitals to attain break-even point.

6. CONSTRAINTS

Ambulance constraint - On the process of data collection from ambulance service people, from questionnaire to the data incurred from the interview process through telephonic and face to face, here we are obtained with few details regarding the problems faced by the ambulance authority.

The product is new in to the market, so they require some workshop for acknowledging the new system.

They never knew such product exist before.

They are much privilege to use the technology because it could save lives of the victims suffered due to traffic.

The traffic congestion is the main problem faced. The peak time it occurs in a day is between 11.30 am to 2.00 pm and 4.30 pm to 6.30 pm in Vizag city.

And also some specific places like commercial areas where population density is bit higher than the ordinal areas. In such cases, reaching of the ambulance takes a high time to the victim where we have to face many hurdles to overcome with the situation. If we have access to any such devices which would make it simpler for us drivers to make the patient reach hospital on time it would be justice to our jobs.

Getting traffic clearance in today's traffic is a very tough situation to handle. Many loose lives in getting stuck in traffic. In a year there are around so many cases where we are unable to make them on time to reach hospital.

Hospital constraint - Hospital authority has already knew about the product as it is been in implemented and used in western countries.

The most generic problems faced by the hospital authority is the reaching of the patient on time when there is any emergency.

Traffic has become one of the terrific problems for them as many victims are losing lives even after setting up the basic requirements for any patient to survive before reaching hospital like primary doctor and nurse in Ambulances.

If the product is introduced in the market we are ready to buy. But we have to upgrade the existing ambulances with latest technology by installing GPS service in it.

The product must be easily understandable and easy to use. We require some training for the usage of this product as it is very new to the society and market none are aware about the usage of product.

7. HOW IT WORKS?

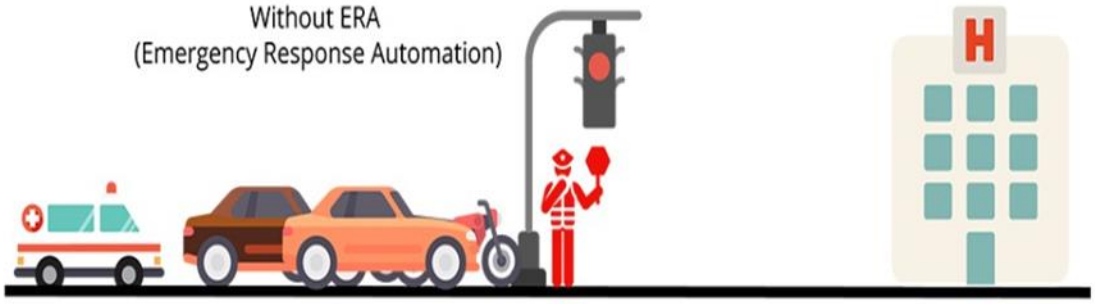
Ambulance IOT - A device which navigates from the hosiptal for an easy way to pick-up the victim from the location. Our interactive module helps the para-medic team for a accurate response to reach the destination and resuce of the victim.

Traffice command centre - A dynamic platform to manage the complete smart traffic grid system from a command control centre.The traffic lights in the city can be operated from a single window without any physical intervention.

Emergency Reporting Platform - A unique way to assigning an emergency case to a particular ambulance which is easy to pick-up the victim from the location.Our easy interactive dashboard helps the para-medic team for a quick response towards the rescue of the victim.

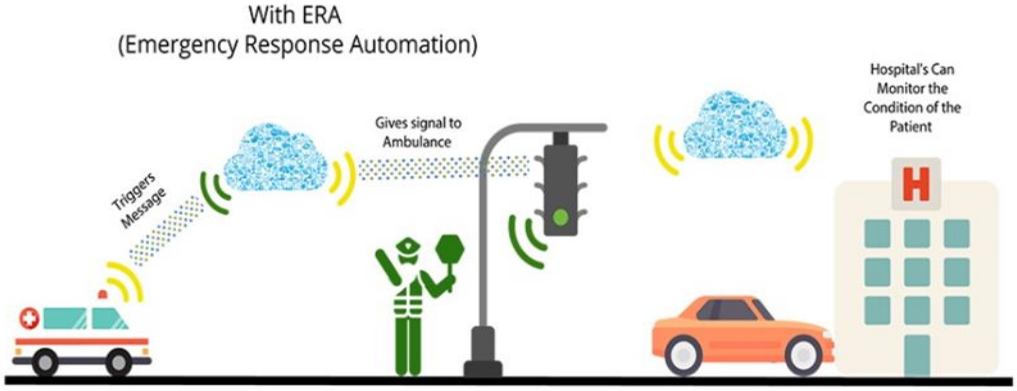
8. WITHOUT ERA

The ambulances without ERA are not accurately reaching hospitals on time, so that there is a less scope of saving the patient's life, and also no chance of monitor the condition of the patient continuously and also the traffic notifications cannot be sent, where the traffic is less as the GPS does, so the ambulance drivers cannot choose the lowest traffic road and cannot reach the hospital on time.



9. WITH ERA

The ambulances with ERA are more accurately reaching hospitals on time, so that there is a scope of saving the patient's life, and also monitor the condition of the patient continuously and also monitor the traffic in any area by getting notifications where the traffic is less as the GPS does, so that the ambulance drivers can choose the lowest traffic road and reach the hospital on time.



10. MAIN ELEMENTS OF PROJECT

Ambulance - The IoT platform for ambulance provides an optimal route suggestion between patient / victim location and hospital.

Ambulance

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Traffic Signals - An IoT device connected to cloud which runs the signal control algorithm based on ambulancepriority and enables traffic signal preemption.

Traffic

An IoT device connected to cloud which runs the signal control algorithm based on ambulance priority and enables traffic signal preemption.

Hospital - Our hospital platform enables to track the patient condition accurately from a remote location and track ambulance position.

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11. FEATURES

- Emergency Location - Audio-Visual navigation assists the ambulance driver to reach the emergency spot without any hassle.
- Increased Efficiency - Reduced lead times and controlled traffic ensures maximum efficiency.
- Route Mapping - Smart algorithms provide optimal routes for faster arrival at the destination.
- Live Tracking - The user is notified with the live status,accurate ETA of the ambulance from a central facility.
- Smart Grid - An embedded system which allows the control of any and every traffic signal from a command centre
- Health Monitoring - Realtime update of the situational report and patient condition during transit to the hospital.

12. REFERENCES

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