Institution's Innovation Council

MHRD's Innovation Cell, AICTE

Idea Submission Form

PART A: Idea/PoC (Product/Service/Process)

Team Details

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Add more fields if required

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Institute Name and Address: C K COLLEGE OF ENGINEERING AND TECHNOLOGY

Name of the Idea/Proof of Concept (PoC)	Vehicle management and routing
Theme	• Smart Vehicles/ Electric vehicle/ Electric vehicle motor and battery technology. • IoT based technologies (e.g. Security & Surveillance systems etc) *Chose most appropriate theme (max 2) from **Annexure 1***
Define the problem & relevance to today's market/society/industry need *(Max 100 words)*	Emergency vehicles like Ambulance. Fire engine needs fast access to the destination. The increased number of vehicles causes delay to these vehicles. The normal vehicles also need assistance for proper driving and parking.
Propose the solution to Problem Identified *(Max 100 words)*	By connecting all the vehicles in a system that manages the traffic and clears way for emergency vehicles by instructing when to slow down and where to stop the other vehicles.
Describe the product/process/ service and write how it is innovative / unique. *(Max 100 words)*	When the vehicle is started the current location of the vehicle is updated onto the server and it asks for the destination. After getting the destination it marks it into the map and calculates the path. The server also considers the other vehicles which are on the same path and instructs each vehicle carefully. If any emergency vehicles mark the path, it informs to the all other vehicles to slow down the speed and give way to the emergency vehicles. The nearby vehicles can exchange informations with each other through Wifi or Bluetooth.

How is your proposed product/ process/service being different/ better from a similar product/ process/ service, if any, in the market *(Max 100 words)*	By this concept each vehicle can share information about their destination. So the way can be managed efficiently.
If your Idea is technology based, then specify the TRL Level (Technology Readiness Level) and Expecting the features of Idea/PoC. ***Note:*** *For the Idea level, TRL 0 – 2 is expected.* *For the PoC level, TRL 3 is expected.* *(Max 100 words)* *Chose most appropriate TRL level from* ***Annexure 1***	TRL 0 : Idea. Unproven concept, no testing has been performed.
Feasibility of Idea/PoC solution (SMART) *(Check the appropriateness of the Idea/PoC)* *(Max 50 words for each from a-e)*	
(a) Specific- Specify the features of Innovative Idea/PoC.	Instruct every vehicle in the road. Calculate best possible way for reaching the destination.
(b) Measurable- Mention the approach to convert idea/PoC to Prototype/Innovation with milestones.	Creating centralized server Create required number of clients program. Accessing GPS of the client and upload it to the server.
(c) Attainable- Explain how you are going to achieve the prototype development objective with the available resources at your disposal.	Creating one main server and required number of clients programs. Clients have to import their location and other details into the server. The server calculates the way and returns it to the client.
(d) Realistic- what kind of skillset of team and resources required to achieve the goal in specific time period?	Knowledge on IOT, Google maps API, Android Studio.

(e) Timeline- Develop a timeline against the milestones for taking Idea/PoC to Prototype Development and (or) Commercial level/start-up stage.	Two Months
Applicability of Solution 10 Marks *(Max 50 words for each from a-e)*	
(a) **Usability:** what is the usability of your innovation. *(Level of acceptance of innovation and its Features among target group)*	In few years all vehicles can be Smart and capable of connecting with each other and the traffic management system. It can be used to provide fast access to the emergency vehicles. Management of traffic in large cities can be done easily with this method.
(b) **Scalability:** how your innovation will be scalable at market level.	The concept is largely depends on the software side. So it is easily scalable.
(c) **Economic sustainability:** Explain the potential of innovation to become profitable or financially viable.	It costs less compared to the other items used in the vehicles. Almost all vehicles come with onboard processor and GPS and Wifi it is no more need any other components. So it costs very less.
(d) **Environment Sustainability:** How your innovation is environment friendly or address environmental problems.	It not affects environment.
(e) Is there any Intellectual Property (IP) Component associated with innovation? if yes, explain.	No
Define the potential market size (in terms of INR) and target customers. *(Max 100 words)*	As the community needs better management for traffic and fast access to the emergency vehicles, the market is very huge. We can target all types of vehicles including cars, vans, buses, etc.

Annexure 1

Themes:

1. Healthcare & Biomedical devices.
2. Agriculture & Rural Development.
3. Smart Vehicles/ Electric vehicle/ Electric vehicle motor and battery technology.
4. Food Processing.
5. Robotics and Drones.
6. Waste management.
7. Clean & Potable water.
8. Renewable and affordable Energy.
9. IoT based technologies (e.g. Security & Surveillance systems etc)
10. ICT, cyber physical systems, Block chain, Cognitive computing, Cloud computing, AI & ML.

9 stages of TRL:

TRL 0 : Idea. Unproven concept, no testing has been performed.

TRL 1 : Basic research. Principles postulated observed but no experimental proof available. TRL 2 : Technology formulation. Concept and application have been formulated.

TRL 3 : Applied research. First laboratory tests completed; proof of concept.

TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype).

TRL 5 : Large scale prototype tested in intended environment.

TRL 6 : Prototype system tested in intended environment close to expected performance. TRL 7 : Demonstration system operating in operational environment at pre-commercial scale. TRL 8 : First of a kind commercial system. Manufacturing issues solved.

TRL 9 : Full commercial application, technology available for consumers.

For any Query:

Write us at email: iic.mhrd@aicte-india.org with email subject line: "***Innovation Contest 2020 Query"***