



भारतीय प्रौद्योगिकी संस्थान  
INDIAN INSTITUTE OF  
TECHNOLOGY JAMMU



# TRAFFIC HACKATHON

**INSPIRE TO INNOVATE**



**PROBLEM  
STATEMENTS**

# **PROBLEM STATEMENT 1**

## **" Freight Traffic Management on National Highway (Jammu to Kashmir) "**

At present the NH condition allows heavy motor vehicles (HMV) to move on alternate days. Light motor vehicles (LMV) move in both directions on daily basis depending upon the status of NH from Qazigund to Udhampur and vice versa. Trailers and Large Trucks cross the NH in stages over a few days. In addition to this, time slots also have to be earmarked for the convoy movement of Security/Army /PMFs. Despite these constraints, approximately 9000 vehicles cross the stretch of NH on daily basis. However, HMVs usually pileup at Jakhane Udhampur, and Qazigund belt and the average delay for their movement varies between 2 to 3 days. We are looking for some innovative traffic management solution to tackle the above problem with a view to enhance throughput, and curtail travel time.

## Problem-1: Freight Traffic Management on National Highway (Jammu to Kashmir)



Frustrating right ?  
Same is for traffic police to manage it

Do you know how traffic police is managing the above menace?  
Here you go...

- We make the heavy motor vehicles move on alternate days
- Light motor vehicles move in both directions on a daily basis
- For HMV it takes around 2 to 3 days to complete the Jammu to Kashmir Journey



If you have some better ideas to manage it, share them with us and win exciting prizes and a chance to get your idea incubated in IIT/NIT labs

# **PROBLEM STATEMENT 2**

## **" Travel time and traffic flow optimization in Jammu and Srinagar city. "**

Traffic congestion on roads not only increases the fuel consumption but consequently leads to increase in carbon dioxide emissions, outdoor air pollution as well as increase in the exposure time of the passengers. There are constraints on making large scale additions/ improvements to the road infrastructure. There is also no baseline against which the quality of the traffic flow in Jammu/ Srinagar or any other city could be measured on any given day. This problem is looking for optimization solution of Traffic flow in Jammu and Srinagar City through Traffic Flow Analysis using open source data as well as development of a dashboard to objectively monitor the quality of traffic flow in a city on a given day.

**The objective analysis solutions will help to both monitor and manage traffic congestion and emissions through better utilisation of the available infrastructure and help identify the low hanging fruit infrastructure bottlenecks addressing which will lead to an immediate improvement in the traffic flow in the city.**



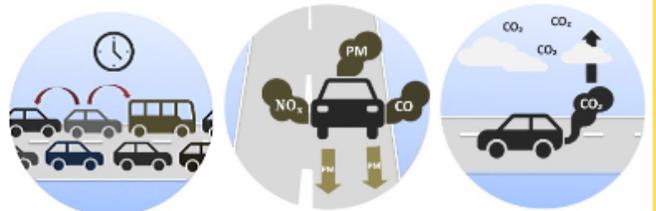
## Problem 2

Travel time and traffic flow optimization in Jammu and Srinagar city

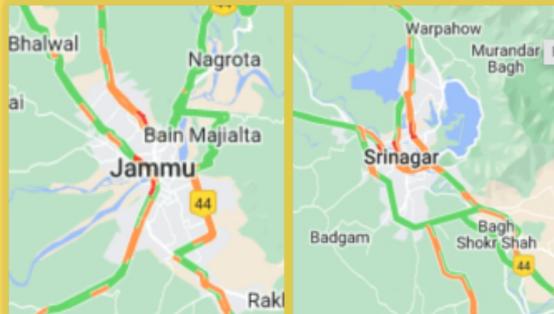


Do you want the city's traffic to look like this?

## Traffic Congestions and Traffic emission



Can you help us use the open data sources to manage the city traffic so that we have less congestion and air pollution?



Keep in mind that Jammu is a smart city so we need ideas from smart citizens like you

# **PROBLEM STATEMENT 3**

## **" Smart driver training problem for attitudinal change "**

While there has been a lot of emphasis given on Road Safety information by Traffic Police and other stakeholders yet an attitudinal change with willingness to adhere to traffic rules that impact safety has not been achieved. There is a need to devise programmes and interventions that bring about an attitudinal change in the citizens.



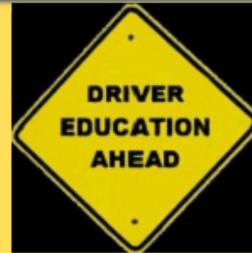
### Problem 3

Smart driver training programs for attitudinal change



You would all agree that it is necessary to teach drivers how to drive safely in our cities. Yes, we are aware that better enforcement is required. But we're still looking for some interesting ideas.

### DRIVER EDUCATION



**If you have some better ideas, share them with us and win exciting prizes and a chance to get your idea incubated in IIT/NIT labs**

# **PROBLEM STATEMENT 4**

## **" Parking Management following system approach for the city "**

Parking is a major problem in urban areas in both developed and developing countries. Following the rapid incense of car ownership, many cities are suffering from lack of car parking areas with imbalance between parking supply and demand which can be considered the initial reason for metropolis parking problems. This imbalance is partially due to ineffective land use planning and miscalculations of space requirements during first stages of planning. Shortage of parking space, high parking tariffs, and traffic congestion due to visitors in search for a parking place are only a few examples of everyday parking problems. We are looking for solutions proposing effective parking system and its optimum utilization within cities.



### Problem 4

#### Parking Management – Systems Approach for the City



### On street and off-street parking

Rising parking problems of Jammu and Srinagar City

- 1. Illegal parking
- 2. On-street parking management
- 3. Off-street parking prices and management



**If you have some better idea to manage the parking in your city, share that with us, and we will implement it. Also, incubate your idea at IIT/NIT**

# **PROBLEM STATEMENT 5**

**" Low cost urban space transformation for the vulnerable road users like pedestrian and cyclists. "**

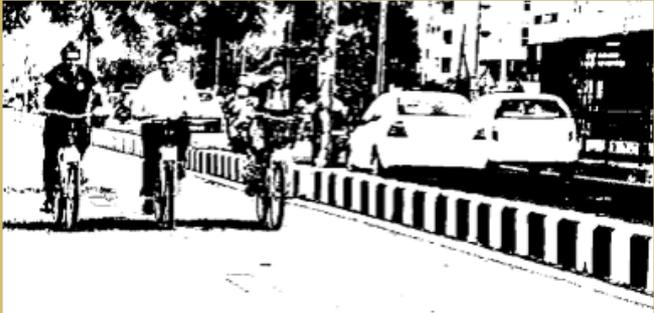
In Indian cities, the focus on car-centric infrastructure, traffic congestion, narrow roads, and a general disregard for cyclists and pedestrians has created an environment that favours motorised transport over walking and cycling. Re-purposing streets to ensure equitable distribution among road users and focusing on the most vulnerable users like cyclists and pedestrians are key to creating a bicycle-friendly environment. However, in India's space constrained cities, there are practical limitations on creating more infrastructure.

**Thus, while encouraging bicycle and pedestrian transportation in cities is a laudable objective, however from the standpoint of the traffic police, there is a need for a plan or idea to adopt pro-pedestrian and cyclist policies without compromising safety. Therefore, to manage the above, we are looking for some better ideas from you all**



### Problem-5

Low-cost urban space transformation for the vulnerable road users like pedestrian and cyclists



### On street and off-street parking

The city corporations are all gaga about encouraging bicycle and pedestrian transportation around the city. However, from the standpoint of the traffic police, there is a need for a plan or idea to adopt pro-pedestrian and cyclist policies without compromising safety.



If you have some idea to help and improve the movement of vulnerable road users, share that with us and we will implement it. Also, get a chance to incubate your idea at IIT/NIT

# **PROBLEM STATEMENT 6**

## **" Innovation for improving occupational safety health for traffic Personnel "**

Traffic management and regulations in JK is still manpower intensive and heavily dependent on having feet on ground. This exposes the Traffic personnel to high levels of air and noise pollution, discomfort due to weather and stress. Therefore, there is an urgent need for innovation to improve the occupational safety health of traffic personnel. We are looking for innovative and smart ideas from you all to help the traffic police of your city.



### Problem 6

Innovation for improving occupational safety health for traffic Personnel



### OSH for traffic personnel

Have you ever thought how difficult it is for traffic police to be physically present on roads irrespective of rising air pollution and extreme weather conditions in your city?



If you have an idea to reduce the traffic personnel exposure to extreme conditions, share that with us, and we will implement it. Also get a chance to incubate your idea at IIT/NIT

# **PROBLEM STATEMENT 7**

## **" Vigilance and Integrity monitoring of traffic personnel "**

Preventive vigilance is one of the tools in ensuring the integrity in public governance. With the advent of smart phones and other gadgets there is a need to innovate on technical solutions that help promote greater integrity and transparency in the service delivery by Govt. functionaries including Traffic Personnel.



## Problem-7

Vigilance and Integrity monitoring of traffic personnel

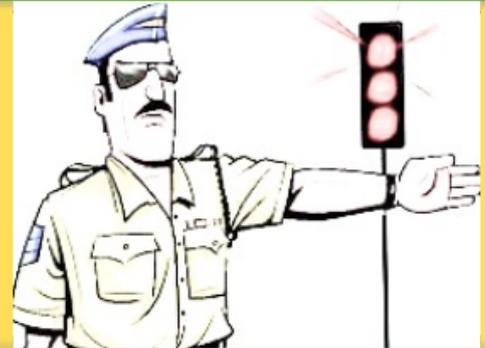


Stop Corruption



## Preventive vigilance

Preventive vigilance is one of the tools in insuring the integrity in public governance. We are in search of some ideas to implement the preventive vigilance using smart devices.



If you have an idea, share that with us and we will implement it. Also, get a chance to incubate your idea at IIT/NIT