

IEEE PES STUDENT CONGRESS 2020

IDEATHON

THEME : SMART CITY

You have a chance to build a city. Let's call it '**Nethrani**'. Nethrani is a remote island isolated from the peninsular mainland of India. Given that your resources are limited but adequate, Nethrani needs to be self-sustaining. There are certain major problems that need to be addressed in Nethrani which have been stated below. Choose one of them and come up with the best solution.

Sr no.	Name of the problem statement	Problem statement
1.	Waste Management	The developmental activities are in full swing in Nethrani. But there is one thing that was overlooked - waste management. Only 10% of the waste generated in Nethrani is recycled, and 0.7% of e-waste is being processed. As a fast growing city, the waste generation is also increasing day by day. The government has sanctioned around 60 dump sites. The garbage can't merely be dumped in open areas as it poses health risks to the nearby communities. The untreated garbage at landfills is a permanent and growing problem. Can we find a way to turn this waste into energy to power up the city? Come up with an innovative approach to detect, monitor and manage solid waste generated and to benefit from it.

2.	Healthcare	<p>Nethrani is facing a shortfall in emergency medical services due to its unavailability at the time of need. What exists currently in the form of fragmented services across the country falls way short of meeting the requirement. For instance, most of the corporate houses require dedicated ambulances at their workplace to provide immediate medical assistance to their employees in the case of emergency which is a very essential requirement. Also, the ratio of ambulance per person in India is currently 3:1000 which is quite less. A study on this by NCBI said that the ambulance response time of 5 minutes would increase the survival rate from 8% to 10%. How do you propose to improve the response of emergency services with the inadequacy of ambulances?</p>
3.	Smart Power grid	<p>A characteristic of a smart city is smart infrastructure. Connecting and automating things using IoT requires a variety of sensors. In many cases the sensors need to be on and working all the time. This increases the energy demand of the city. Resources have said that the energy consumption will grow by 50% in the coming years for which the CO2 emissions need to be halved and the society has to become 3 times more efficient. Renewable energy is the need of the hour. Can there be a separate power grid for generation and transmission of electricity by renewable means for the sensor system of the city? If so, how can you make it possible ?</p>

ALL THE BEST