



# Problem Statements: The Innovation Challenges

## Agriculture and Food Security

### **I. Live to monitor crops and soil health.**

Farmers face a lot of challenges due to lack of knowledge in the basics of proper farming. They observe huge loss as they are concealed about the facts related to properties of Soil, nutrient cycling of Soil, and many other soil-related problems. Frame a solution for farmers regarding these problems to process it.

### **II. Alert farmers of the outbreak of pests and diseases.**

Pests and crop diseases act as havoc on farmers. They can spread quickly from one farm to another, wiping out whole crops and leaving them with no food and no money. It is observed that farmers find out much later about the outbreak of pests/diseases. There are things that they can do to reduce the likelihood that their crops will be affected. Come up with an innovative, easy, and appropriate solution for farmers regarding this problem.

### **III. Accurate weather information for optimizing irrigation.**

Weather has an enormous impact on the lives of farmers. If the monsoon comes early and farmers haven't finished their harvesting; they are in real trouble. If a storm is approaching and they don't prepare their crops, again they will be in big trouble. Over-exposure or under-exposure to water can be detrimental to the vegetables. Design a solution technology for addressing this problem.

### **IV. Improving data collection processes to address issues of food security.**

Many people in the country face scarcity of food. There are organizations to help these people, but to know how to help them; organizations need accurate data about the specific issues that they are facing. Slow and inaccurate data hampers effectiveness in work. Come up with a technological solution to improve the speed and accuracy with which it collects critical data about food security.

# **Disaster and Hazard Management**

## **I. Flood Management**

The cases of Uttarakhand and Bihar Floods are still in the mind of people. We faced massive loss of Lives and Property. Devise an application/technology to manage the situation during these floods.

## **II. Earthquake Management**

The Earthquake of Nepal, the Earthquake of Bhuj, or the regular seismic activities affecting the lives on earth needs proper warning and design considerations of buildings. Build up an innovative technology for managing the pathetic conditions of food and facility delivery during the calamity.

## **III. Problems related to building constructions**

Engineers are building blocks of the nation. The success of any country can be seen through the quality of infrastructure it has. But still, there are various problems in the construction industry regarding design, water leakage (DPC), and many others. Address the issues and come with an innovative technology or solution.

## **IV. Chemical factories disaster management**

We recently experienced the case of Visakhapatnam Gas Leak in LG power plant. Outline the problems faced in chemical factories and design a solution technology that can eradicate the hazards eventuating in the country.

CONTACT US:

Pravin Kr. Tripathi: +91-6205906281

Deepali Kumari: +91-8226918558

Rishab Mallick: +91-9534140905