

S.No.	Area	Problem Statement	Possible Approach /Simplified Statement
1	5G O-RAN	Develop industry automation use case(s) using 5G O-RAN features	5G O-RAN supports digital transformation of multiple industries -Industry 4.0, viz. Agriculture, Robotics, Smart Cities etc. Develop innovative applications in various fields using 5G and beyond technologies such as network slicing, private networks, ultra reliable networks.
2	5G Broadcast	Human-animal encounters across country is a common problem for all the roads in remote forest areas	Live Video broadcast and Alerts for the area based on animal proximity, directly accessible on the Cell phone or vehicle telematics using 5G Broadcast.
3	5G Broadcast	Lack of visual information on natural calamity prone areas such as landslide areas of motorable sections of the highways/roads, water levels at bridges in flood prone regions, areas affected by cyclones leads to loss of life and property.	Access to live video broadcast from the impacted areas along with alerts based on sensors and other historical data, directly accessible to users on their 5G devices (such as cellphones, vehicle telematics, standalone devices, etc) using 5G Broadcast technology.
4	Non-Terrestrial Network (NTN) communications	IoT's applications in remote areas are resource constrained in terms of power, data management, and network scalability. Design a NTN-Enabled IoT solution to address the above-mentioned challenges.	Design a solution that enables large-scale IoT deployments via NTN's, focusing on applications such as environmental monitoring, smart agriculture, or maritime connectivity. Solution should address challenges related to power efficiency, data management, and network scalability.
5	Digital Twin	Design a digital twin application that solve a real life problem in India	Design a platform that seamlessly integrates physical and digital environments, allowing users to transition between real-world and virtual settings without noticeable disruption. This could involve spatial mapping, environment-aware holograms, or mixed-reality interfaces.
6	Applications	Real time control of advanced drones with intelligent computing features such as Computer Vision (CV), AI/ML, Autonomous functionality.	5G connected drone with CV/AI/ML for agriculture(crop health, disease diagnosis, fertilizers/pesticide application), logistics (medicine delivery, sample collections)
7	Applications	Rural schools and colleges lack laboratory infrastructure for hands-on experience to augment theoretical learning.	5G enabled consoles/devices for students in remote villages to access, control and read results from various connected lab equipment for conducting experiments.
8	Applications	With a very poor doctor to patient ratio in the country, access to medical practitioners and health care workers remains a big challenge for even the first level diagnosis at the primary health care centers across rural India.	To enable a 5G kiosk, for application such as tele consultation, AI enabled suggestions, detections, live vitals monitoring of patients, centralized information systems

9	Applications	Design of Multi-Modal Interactive system	Multi-modal interaction system that combines visual, auditory, and haptic feedback for a fully immersive experience. This could include realistic gestures, voice commands, and tactile responses, all synchronized
10	Applications	AI-Driven Maintenance Network	Develop an AI-powered system that predicts network failures, optimizes maintenance schedules, and reduces downtime.
11	Others	Suo Moto	<p>Solution using 5G, 6G and Emerging Technologies for the following Application verticals:</p> <ul style="list-style-type: none"> ● Automobile/ Transport/Logistics ● Industry 4.0 ● Tourism ● Enterprise & Emergency Communication ● Smart Cities ● Railways ● Mining/ Ports/ Airports ● Power ● Rural & Remote Communication ● FinTech ● Water Management ● Sports ● Cyber Security, Quantum communications and security ● Environment, Public Safety & Disaster Management