Sr. No.	Use Cases
1.	Creation of a platform that intelligently manages the energy consumption in buildings, by monitoring and controlling lighting, heating, cooling, and other systems, to reduce energy wastage and promote sustainable practices. Below points may be considered, to come up with a solution: - Real-time adjustments/monitoring dashboard - Energy optimization - Predictive maintenance
2.	Improve the efficiency of solar energy technology. Below points may be considered, to come up with a solution: - Solar panel design: Design solar panels that are more efficient and cost-effective. - Solar panel cleaning: Develop more efficient and effective ways to clean solar panels. - Solar panel monitoring: Monitor the performance of in-use solar panels and identify potential problems before they cause damage. - Solar forecasting: Forecast the amount of solar energy that will be generated over a certain time frame. - Solar storage: Develop more efficient and cost-effective ways to store solar energy.
3.	Develop a solution that reduces the overall waste generation and optimizes waste management processes. Below points may be considered, to come up with a solution: - Waste sorting: Develop more efficient and effective ways to sort waste. - Waste collection: Optimize the routes that waste collection vehicles take. - Waste disposal: Develop more efficient and environmentally friendly ways of waste disposal.
4.	Develop a solution that improves the overall agricultural sustainability. It should enhance precision farming practices, including crop selection, monitoring of soil moisture levels, crop health, pest and disease control and weather conditions, irrigation scheduling to optimize water and resource usage, and reduce the usage of chemicals.
5.	Design a system that monitors water usage in residential, commercial, or agricultural settings, providing real-time data on water consumption patterns and enabling proactive conservation measures for sustainable water management.
6.	Create a platform that promotes sustainable transportation options, such as intelligent traffic management, optimized public transportation systems, and real-time monitoring of vehicular emissions to reduce congestion, promote alternative modes of transport, and also, lower carbon footprints/emissions.

Below are links to a few of the useful online platform/repositories that might help in the Use Cases:

1) Virtual Hardware – Software Development Without Hardware – Arm

URL: https://www.arm.com/products/development-tools/simulation/virtual-hardware

2) Connect Raspberry Pi web simulator to Azure IoT Hub (Node.js) | Microsoft Learn

URL: https://learn.microsoft.com/en-us/azure/iot-hub/iot-hub-raspberry-pi-web-simulator-get-started

3) The 4 Best Raspberry Pi Simulators for Testing Your Projects (makeuseof.com)

URL: https://www.makeuseof.com/4-best-simulators-for-raspberry-pi/

4) Wokwi - Online ESP32, STM32, Arduino Simulator

URL: https://wokwi.com/