NOISE POLLUTION MONITORING

Innovation:

Innovation in noise monitoring pollution involves the development and deployment of advanced technologies to better understand, measure, and mitigate noise pollution. Some key innovations in this field include

Acoustic Barriers: Innovations in acoustic barrier design and materials can help reduce noise from highways, railways, and industrial areas.

Noise-Reducing Materials: Development of noise-absorbing and noise-reducing materials for urban infrastructure, such as quieter road surfaces or quieter construction equipment.

Noise-Blocking Green Spaces: Urban planning that incorporates green spaces and vegetation to act as natural noise barriers and reduce noise pollution.

Public Awareness and Education: Innovative campaigns and tools to raise public awareness about noise pollution and its health impacts

Sensors:

Sound Level Meters (SLMs): These are the primary sensors for measuring noise levels. They capture sound waves and convert them into electrical signals that can be analyzed.

Microphones: High-quality microphones are often used in conjunction with SLMs to capture sound data. These microphones are specifically designed for environmental noise monitoring.

GPS (Global Positioning System): GPS is used to geotag noise data, allowing you to pinpoint the location of noise pollution events.

Weather Sensors: Environmental factors like temperature, humidity, and wind speed can affect noise propagation. Weather sensors help in correlating noise data with environmental conditions.

Connectivity :

IoT noise monitoring systems often use wireless connectivity methods such as Wi-Fi, Bluetooth, Zigbee, or cellular networks (2G/3G/4G/5G) to transmit the collected noise data to a central server or cloud platform.

Cloud:

most of the cloud services are available like Amazon,google and other cloud services , it is available in cost version.

So, Select BEECEPTOR cloud which supports Hypertext transfer protocol for services

Protocol:

A noise monitoring system based on the Internet of Things (IoT) can be implemented using various protocols for communication and data exchange. One common approach is to use MQTT (Message Queuing Telemetry Transport) or HTTP (Hypertext Transfer Protocol) for connecting IoT devices to a central server or cloud platform.

MQTT: If low latency, real-time data is essential, MQTT is a good choice. Each sensor node can publish noise data to a central MQTT broker.

HTTP: If simplicity and ease of integration with web services are preferred, HTTP used to send data to a web server.

Public platform:

There are several public platforms and websites that provide noise pollution monitoring systems and data. Some popular options include:

NoiseTube: This is a mobile app and website that allows users to measure and report noise levels in their area. It crowdsources noise data for analysis.

OpenStreetMap: While not exclusively for noise monitoring, OpenStreetMap is a collaborative mapping platform that allows users to add and access geospatial data, including noise-related information.

The National Park Service's Natural Sounds and Night Skies Division: They provide data and resources related to noise pollution in natural areas.

Local Government Websites: Many local governments have noise monitoring systems in place and may provide access to the data through their websites.

Environmental Protection Agencies: In some countries, environmental protection agencies offer noise pollution data and information on their websites.

Remember that the availability of such platforms can vary by region, so it's a good idea to check with local authorities and environmental organizations for noise pollution monitoring resources specific to your area.