CARBON EMISSION TRACKING AND OPTIMIZATION FOR SUSTAINABLE SUPPLY CHAINS

Problem Statement:

As companies strive to reduce their carbon footprint, managing emissions across their supply chains becomes crucial. These emissions are often the most challenging to track, as they span multiple stages from raw material sourcing to transportation and manufacturing. Businesses require a real-time solution that not only tracks carbon emissions but also provides actionable insights to optimize supply chain processes, reduce emissions, and ensure sustainability.

This hackathon challenges participants to create a unified platform that combines carbon emission tracking, supply chain optimization, and data analytics. The system should provide real-time visibility into carbon emissions from all stages of the supply chain, including transportation, production, and raw material sourcing, and generate dynamic recommendations to reduce emissions.

Create a solution in any of the following areas. The ideal team would include at least one technical and one MBA graduate:

1.   Real-Time Carbon Emission Monitoring:

o   Track carbon emissions at every supply chain stage using IoT sensors, machine learning, and AI. The system should consider factors like transportation mode, energy consumption, and raw material sourcing to calculate real-time emissions.

2.   Supply Chain Optimization:

o   Provide AI-driven recommendations to reduce emissions, such as optimizing transport routes, choosing low-emission vehicles, and sourcing from more sustainable suppliers.

3.   Dashboard for Emissions Insights:

o   Develop a user-friendly dashboard that aggregates emissions data, visualizes carbon hotspots, and tracks emissions reduction progress. The dashboard should include real-time tracking, alerts, and emissions reduction reports.

4.   Sustainability Reporting & Compliance:

o   Automate carbon emissions reporting for compliance with standards like the Greenhouse Gas Protocol and global sustainability regulations, providing businesses with the data they need to report emissions transparently.