**Phase 1: Problem Definition and Design Thinking**

**Problem definition:**

To develop an AI-based project to calculate the amount of energy used by a certain device or group of devices over a specified period of time.The data must then be analyzed and visualized for better decision-making. The goal is to provide a reliable, accurate, and simple way to assess how much energy is used in a specific sector.

**Design Thinking:**

* Determine the hardware required to collect the energy consumption data from the devices
* Make available of the collected data set and analyse the data set
* Extract relevant features and metrics from the energy consumption data.
* Utilize statistical analysis to uncover trends, patterns, and anomalies in the data.
* Develop visualizations (graphs, charts) to present the energy consumption trends and insights.
* Build a script that automates data collection, analysis, and visualization processes.

**What we are looking in measure of energy consumption?**

* Reduce energy waste and utilize in a wise and effective manner.
* Maintain the data on energy use to prevent excessive energy use.
* Conservation of energy can be followed.
* It is possible to prevent unnecessary power waste and power loss due to defects.