**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID24697 |
| Project Name | Project - Smart Waste Management System For Metropolitan Cities |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

The Deliverable shall include the architectural diagram

There are three technologies included in this system, they are **IoT, AI, and web/app development**. The inlet section is provided with an open and close mechanism to regulate the flow of waste on to the **conveyor**. An **inductive proximity sensor** is used to detect metallic waste. The timing and movement of the conveyor belt are controlled by **Arduino Uno**. This system also includes an **incinerator.** So, when a person activates the button, the **sensors** get deactivated and the waste which is placed on the conveyor belt goes into the incinerator chamber. Incinerator walls are made up of clay and coated with aluminium foils. The **ECU board electrodes** and **thermo-generator** which are used to produce electricity from thermal power are placed inside the incinerator. The produced electricity is used to run the **DC motor**. When the process is completed, the sensors get activated again. This system also includes a facility, that whenever a bin gets filled an **alert SMS** is generated.**IR Sensor**- detects the motion, **Moisture Sensor-** dry and wet wastes, **Inductive Proximity Sensor**metal waste, **Ultrasonic Sensor**- bin filling monitoring, **Node MCU ESP8266-12E**- alert messaging, **OLED Display**- visual display**, hot wire sealer**- packing of waste