A. Problem Statement/ Title:

Develop Smart Home solutions that are able to integrate with the Smart Distribution Boards (DBs) and sockets installed within HDB flats, while minimising the number of gateways and mobile applications needed to control smart homes devices.

B. Background:

HDB has been piloting Smart DBs and Sockets in flats at Punggol Northshore, to equip homes with enhanced infrastructure that supports the use of commercially available smart home devices. Examples of smart home devices that residents might use include motion sensors, smart lighting, and smart door locks.

The smart DB is able to identify certain household appliances and devices used in the home by analysing their energy usage patterns, and running its AI and Machine Learning Algorithm to identify each device. This allows the residents to monitor their energy usage at the device level, offering more detailed information than the aggregated consumption data in monthly household electricity bills. Information from the smart DBs can be visualised via a mobile app.

However, with multiple brands of smart home devices in the market, a resident owning multiple devices could end up needing many different gateways and mobile applications to control the various devices within the home. To provide residents with greater convenience, we are looking for solutions which could minimise the number of gateways and applications needed.

C. Technical Requirements/ Performance Criteria:

HDB is looking for smart home solutions that could be included in residents' homes to enhance convenience, safety, or contribute to sustainable living. These solutions should be compatible with HDB's Smart DBs and sockets, and should be safe and easy for residents to "plug-and-play" in their homes.

The Smart Home solutions would also need to meet cyber-security requirements, be commercially available in the market, and have a viable and sustainable operation model.