My S-SmartHome description

The name of my smart house project is "*My S-SmartHome*" and the likely components of my would-be smart home are:

- Smart energy meter
- Smart water meter
- Smart gas meter
- Smart lighting system
- Smart refrigerator
- Smart air conditioner with programmable smart thermostat
- Smart coffee maker
- Smart viewing theater/smart TV
- Smart surveillance system
- Smart locking system
- Smart car garage
- Smart waste bin
- Smart vacuum cleaner
- Smart fire alarm/alert system
- Smart oven

Installing any or combination of the above smart devices/systems is an equivalent of home automation system meant to control lighting, climate, entertainment systems, alarm systems and appliances, as well as access control for security purposes. When any of these devices or systems are connected to the internet, they simply become an important part/constituent of "*My S-SmartHome*" Internet of Things (IoT) framework.

The intended purpose of "My S-*SmartHome*" is to connect into a common network of systems any suite of devices, appliances, or systems listed above and more such that they can be controlled both remotely and independently.

My S-SmartHome potential Benefits

- Managing all home devices from a single platform
- Maximizing home security
- Providing remote control of home function
- Providing seamless and flexible integration of new home devices and appliances to existing common network
- Providing home management insights
- Increasing utilities efficiency
- Improving appliance functionality

Having all home devices connected through a single interface comes with huge convenience. In theory, all one need to learn and know, is how to use an app on smartphone and tablet to access countless functions and devices in the home. This would effectively cut back on the learning curve for new users as well.

Replacing old home devices or upgrading to latest ones or adding new ones is a lot easier, cost and time saving.

With connected motion detectors, surveillance cameras, automated door locks, and other tangible security measures in the home, one can activate them from a mobile device at your convenience before bedtime. Also, activities can be monitored effortlessly in and around the house whether being in the house or halfway around the globe.

Utilities such as light, gas, and water as well as entertainment media can be turned off remotely. This comes with a lot of cost savings and safety to the house and homeowner. Also, oven can be preheated before getting home from work to make dinner faster as well as preheating the house in exceptionally cold winter before reaching home. Remotely controlling a vacuum cleaner to tidy up the floor when returning from vacation or coming with VIP visitors is convenient, hustle free, and face-saving.

Smart home theater and audio system can make managing home movies and music collections effortless when entertaining guests. This has the propensity of making home life much easier and enjoyable.

Monitoring commodities and utilities in the home using smart devices can provide an insight for example, what type of foods are kept in the refrigerator, meals cooked in the oven, as well as energy, gas, and water consumption over time. Analyze of this daily habits and behaviors can bring about desirable lifestyle adjustments (BlueSpeed AV, 2016).

My S-SmartHome architectural description

Table 1 represents a brief description of my S-SmartHome architectural components details while also indicating where the devices are to be used or installed and how they connect to other smart devices in the common network scheme for proper functioning/workings.

Table 1. a brief description of my smart house devices, appliances, and systems

Smart devices	**Perception/Performance**	**Communication**	**Application**	**Power source**	**Environment**
Vacuum cleaner	**Sensor:** obstacle sensor, edged sensor **Actuator:** brush, pads	wifi	Sweep, vacuum & mob floors	battery	Indoor
Energy meter	**Sensor:** light sensor, current sensor **Actuator:** display screen	wifi	Personal or self, energy consumption monitoring	Mains outlet	Indoor/outdoor
Refrigerator	**Sensor:** cameras **Actuator:** display screen	wifi	Report missing items and place order online	Mains outlet	Indoor
Lighting system	**Sensor:** motion detector, luminous sensor **Actuator:** LED, bulbs	wifi	Lighting control	Mains outlets	Indoor/outdoor

Surveillance system	**Sensor:** cameras **Actuators:** display screen	wifi	Access monitoring & security control	Mains outlets	Indoor/outdoor
Fire alarm/alert system	**Sensor:** heat detector, smoke detector **Actuator:** bell, phone alert	wifi	Safety control	Mains outlets	Indoor/outdoor
Car garage	**Sensor:** motion detector/sensor **Actuator:** motorized door	Bluetooth	Access control	Mains outlet/ battery	Outdoor
Air conditioner	**Sensor/Actuator:** programmable smart thermostat	wifi	Heating and cooling	Mains outlet	Indoor
Oven	**Sensor/Actuator:** programmable smart thermostat	wifi	Oven preheating	Mains outlet	Indoor
TV/viewing theater	**Sensor:** noise, motion, & light sensors **Actuators:** display screen	wifi	Volume control, brightness control, energy conservation	Mains outlet	Indoor
Coffee maker	**Sensor/actuator:** smart timer	wifi	Make coffee ready at specific timing	Mains outlet	Indoor
Waste bin	**Sensor:** level detector **Actuator:** LED display	wifi	Request emptying bin	battery	Outdoor
Water meter	**Sensor/actuator:** smart water flow detector	wifi	Consumption monitor	Mains outlet	Indoor/outdoor
Gas meter	**Sensor/actuator:** smart gas flow and level detector	wifi	Consumption & level monitor	Mains outlet	Indoor

Reference

BlueSpeed AV (2016). The 7 greatest advantages of Smart Home Automation and how it adds convenience, comfort, and peace of mind. Retrieved May 14, 2020 from https://bluespeedav.com/blog/item/7-greatest-advantages-of-smart-home-automation