



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35**

**An Autonomous Institution**



Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## **DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

### **19ECE308- WIRELESS TECHNOLOGIES FOR IOT**

III ECE / VI SEMESTER

#### **UNIT 1 – OVERVIEW OF INTERNET OF THINGS**

##### **TOPIC 6 –Examples of IoT**



## A fitness tracker wearable band



- Track steps, distance, calories burned and active minutes
- See stats and time with a bright OLED tap display
- Automatically track how long and how well you sleep and set a silent, vibrating alarm
- Personalize with interchangeable metal, leather and classic bands
- Get calls, texts and calendar notifications at a glance when the phone is in a defined range.



# Smart Watch



| Samsung Galaxy Gear S Smartwatch Features   | Apple Watch  | Microsoft Wrist Band 2   |
|---|--|--|
| <ul style="list-style-type: none"><li>● Two-inch curved display</li><li>● Ability to make a phone call (completely independent of an actual smartphone) or send a text</li><li>● Wi-Fi and Bluetooth connectivity options</li><li>● GPS enabled</li><li>● S Health App measures heart rate and UV monitors and informs the wearer of a good time to eat, when he/she has had enough exercise and a good time to take rest</li><li>● Has navigational features to assist walking</li></ul> | <ul style="list-style-type: none"><li>● Apple iSmartwatch has Apps like Nike + Running to track morning or evening runs and health and fitness. It can:<ul style="list-style-type: none"><li>○ track walks</li><li>○ measure heart rate</li><li>○ make payment using a payment wallet</li><li>○ enable listening to songs while exploring parks without the phone</li><li>○ enable chat with family</li><li>○ update email</li><li>○ find a taxi</li><li>○ update news</li><li>○ navigate for long car trips</li><li>○ control Apple TV</li><li>○ set reminders for baseball games to be watched</li></ul></li></ul> | <ul style="list-style-type: none"><li>● Fitness tracking</li><li>● Can help with productivity by displaying email, calendar and message notifications</li><li>● Works with Windows phone, iOS devices and Android devices</li><li>● Sensors: Optical heart rate, 3-axis accelerometer, gyrometer, GPS, ambient light, UV, skin temperature, capacitive sensor, galvanic skin response, Barometer</li></ul> |



# Smart Home

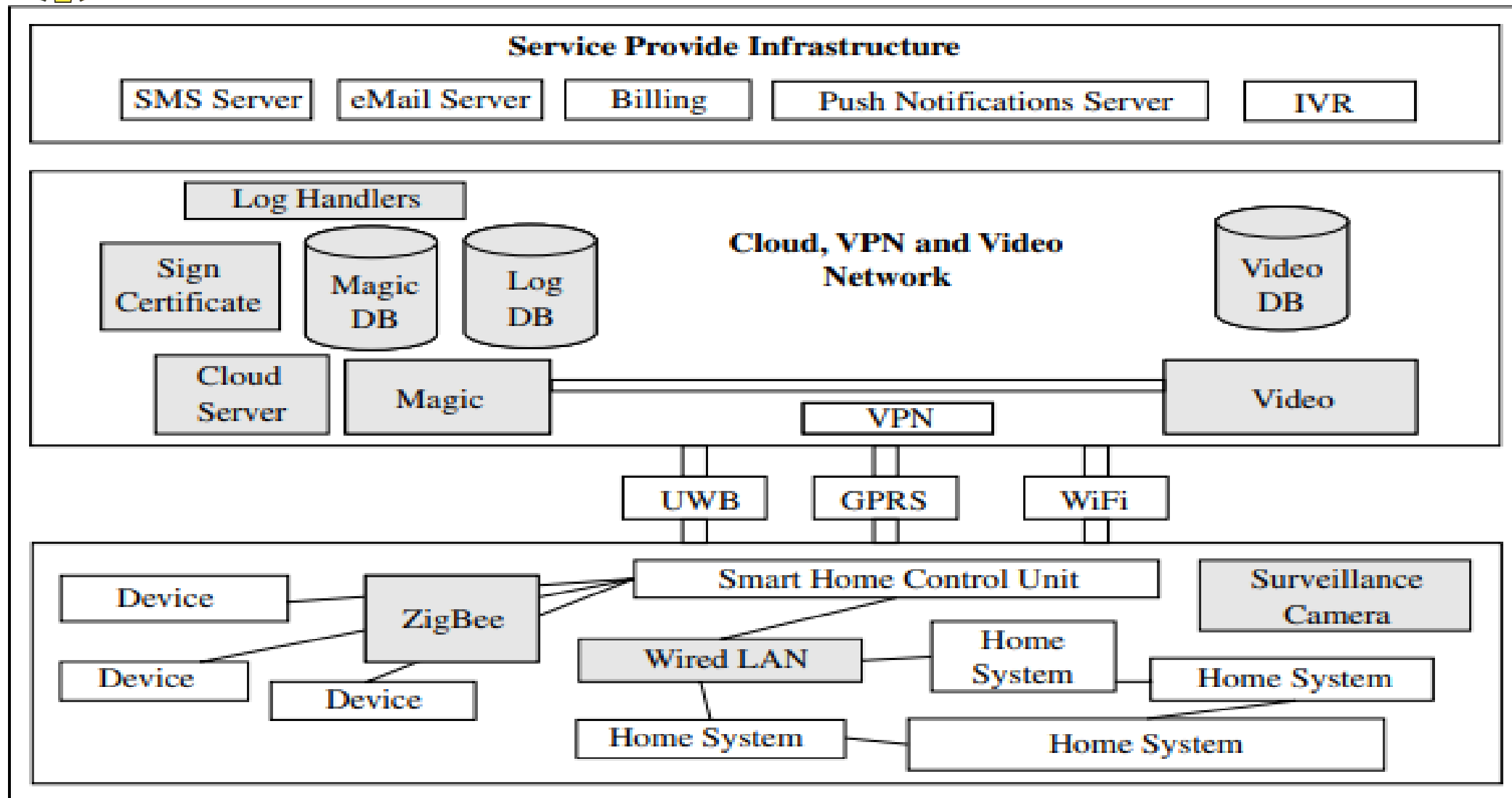
Sensors and actuators manage a smart home with an Internet connection. Wired and wireless sensors are incorporated into the security sensors, cameras, thermostats, smart plugs, lights and entertainment systems. Do-it-Yourself (DIY) sensors and actuators, include smart plug, motion detector, door/window detector, smoke detector, energy meter interface (electric, gas, water), remote control (built-in authentication), smart relay, surveillance camera, Wireless Hi-Fi speakers, HUE LED lights, electric utility meter etc.<sup>24</sup>

A connected home has the following applications deployed in a smart home:

- Mobile, tablets, IP-TV, VOIP telephony, video-conferencing, video-on-demand, video-surveillance, Wi-Fi and internet
- Home security: Access control and security alerts
- Lighting control
- Home healthcare
- Fire detection or Leak detection
- Energy efficiency
- Solar panel monitoring and control
- Temperature monitoring and HVAC control
- Refrigerator network with maintenance and service centres
- Automated meter reading

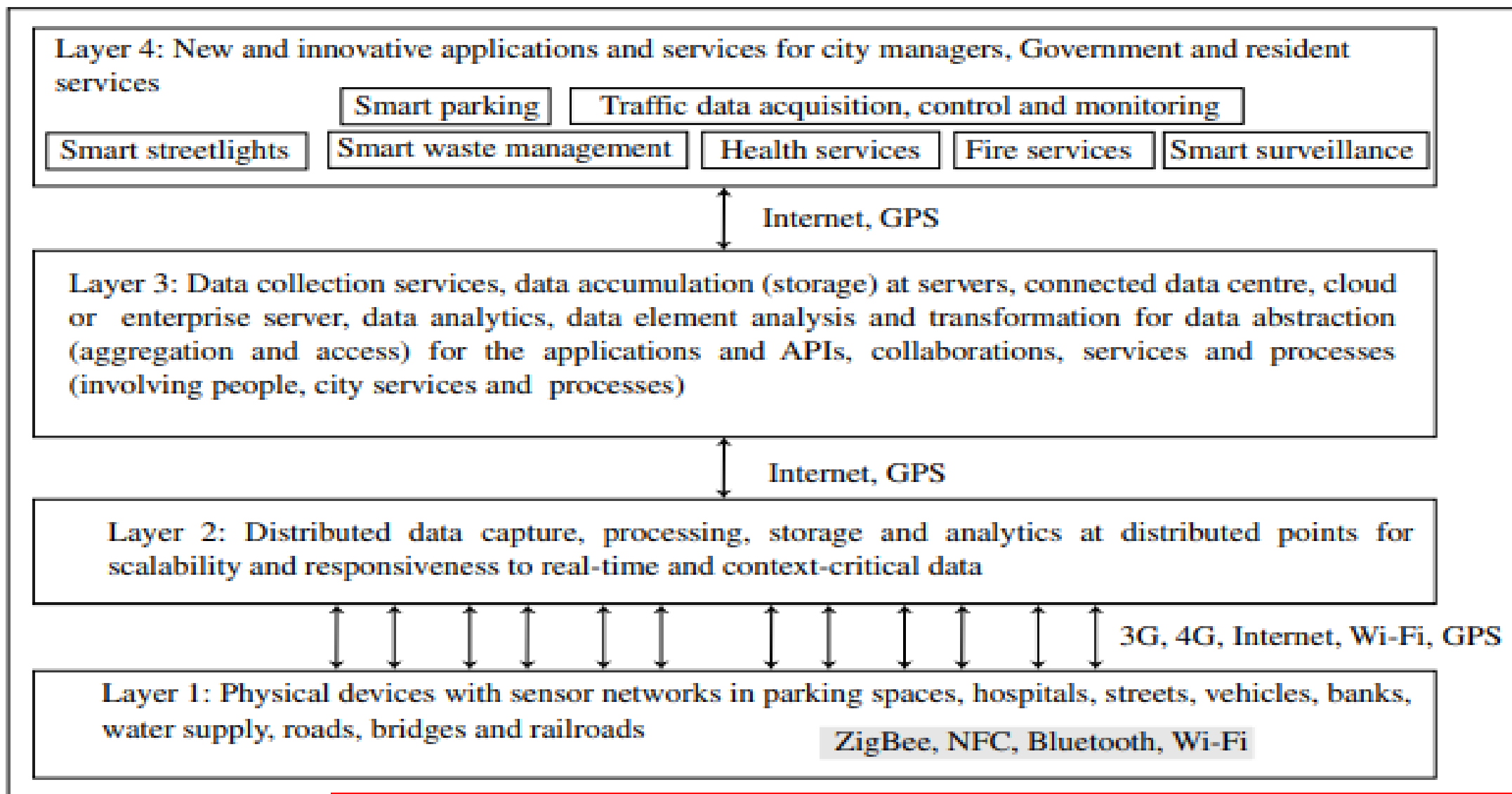


# An architectural view of cloud based IoT platform for smart home





# 4layer architectural framework at CISCO for a city





THANK YOU