Welcome to:

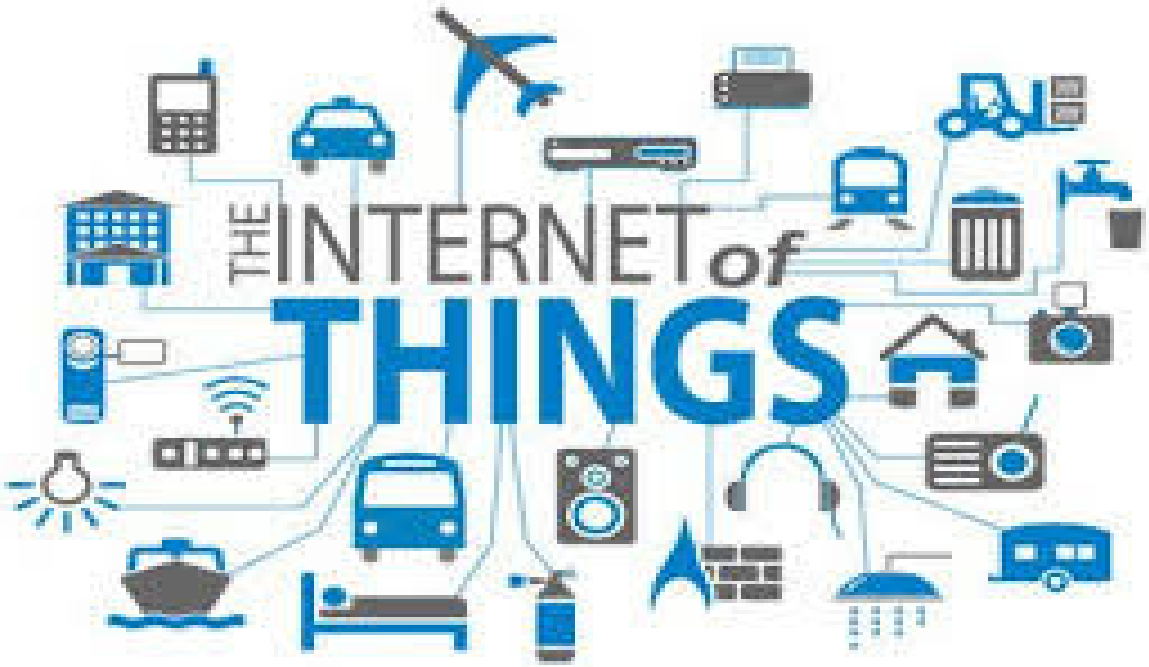
INTERNET OF THINGS

Unit objectives

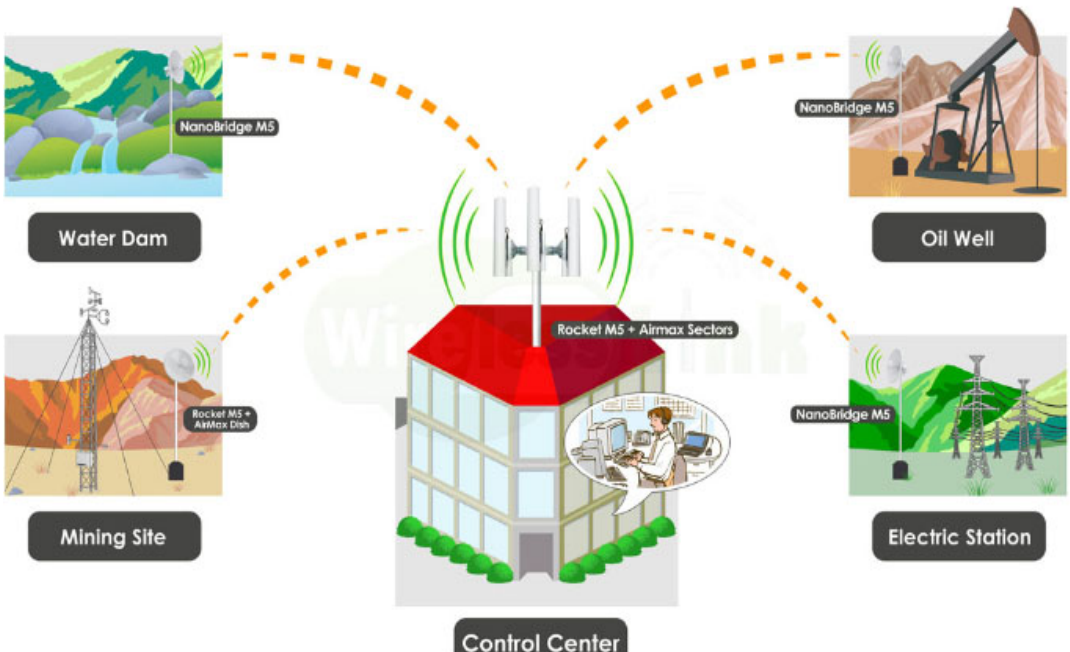
After completing this unit, you should be able to:

- To understand automation, asset management, telemetry, transportation, telematrics(Home Automation, Satellite Navigation)
- To describe the Telemetry and Telemetric
- To understand the features like the report location, logistics, tracking and remote assistance
- To understand the next generation kiosks-Self-service technology
- To learn the cellular IOT connectivity services..

IOT Technologies behind smart and intelligent devices



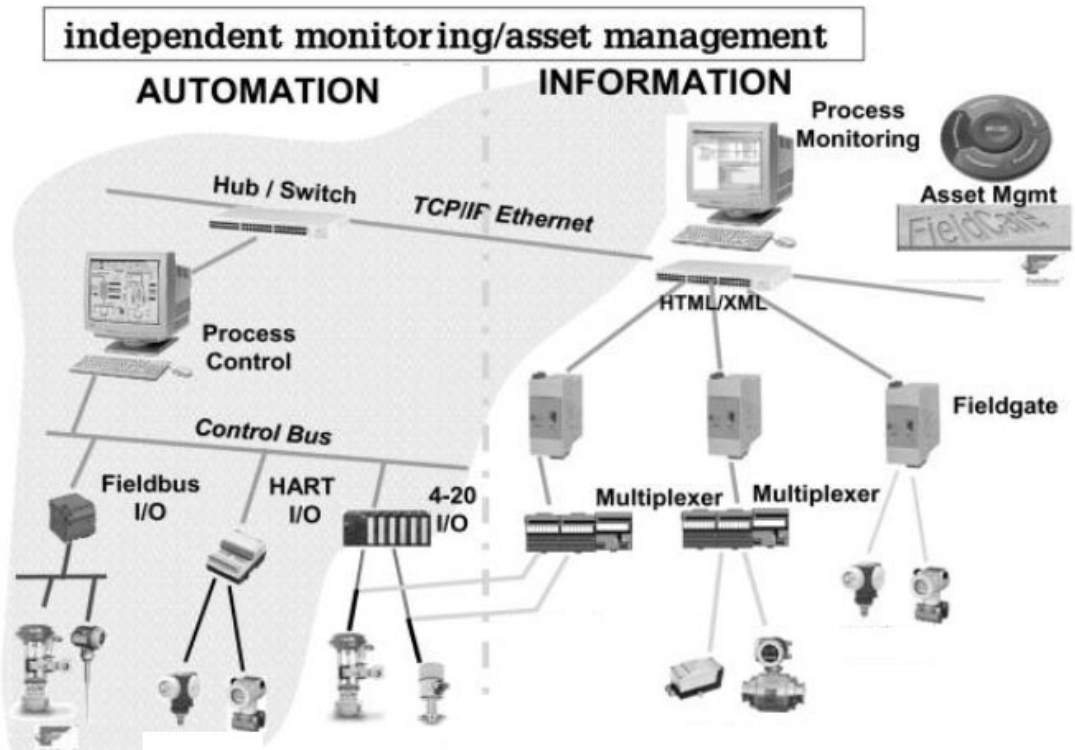
Automation (1 of 3)



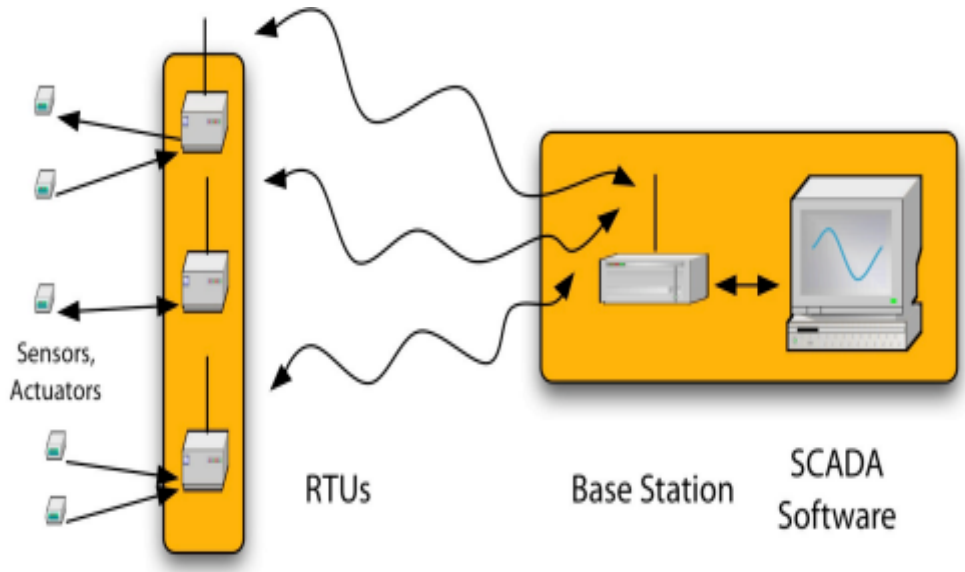
Automation (2 of 3)

Automation (3 of 3)

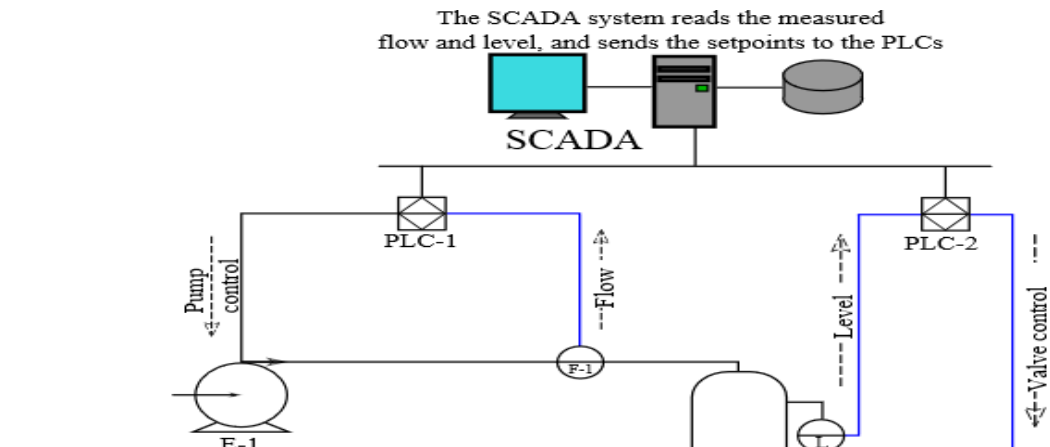
Asset Management



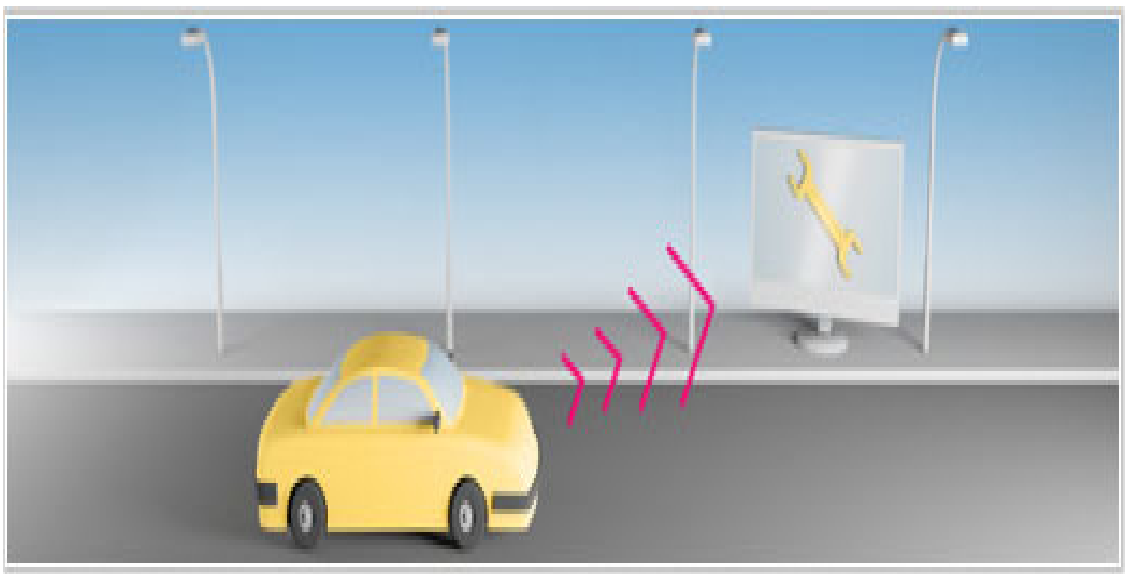
Telemetry (1 of 2)



Telemetry (2 of 2)

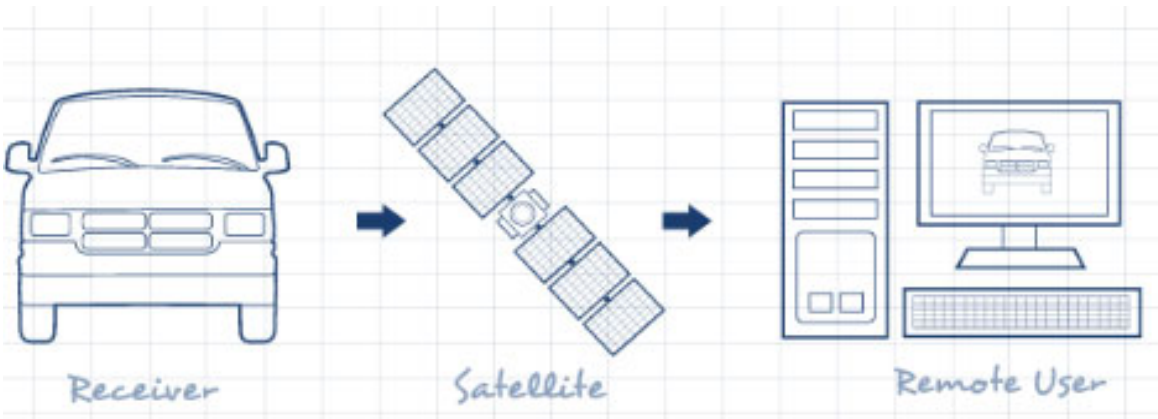


Transportation

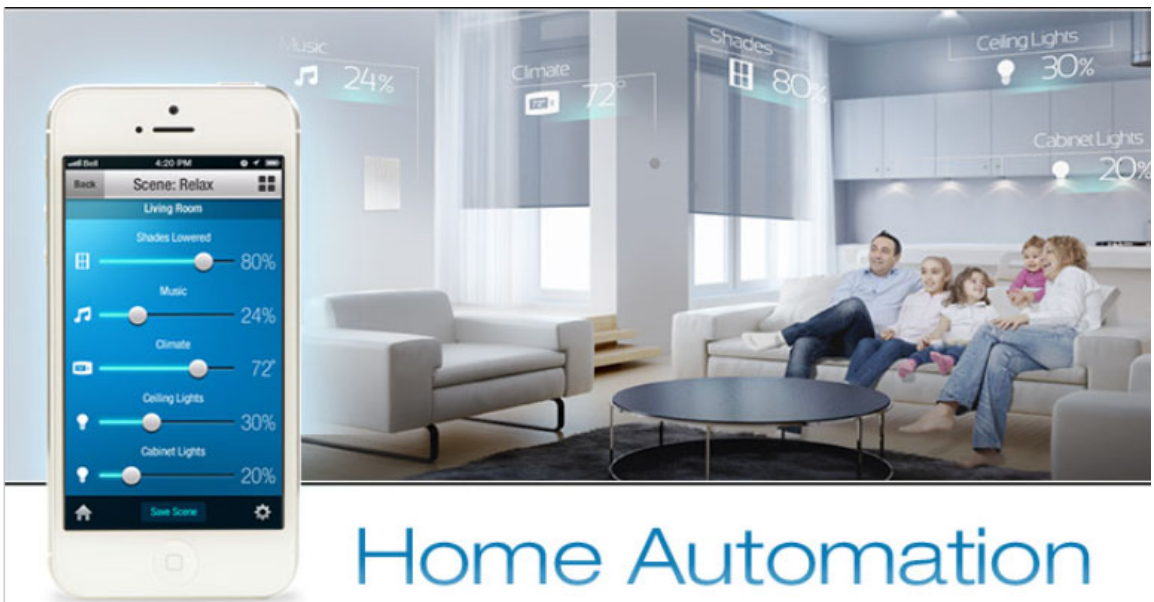


Telematics (1 of 2)

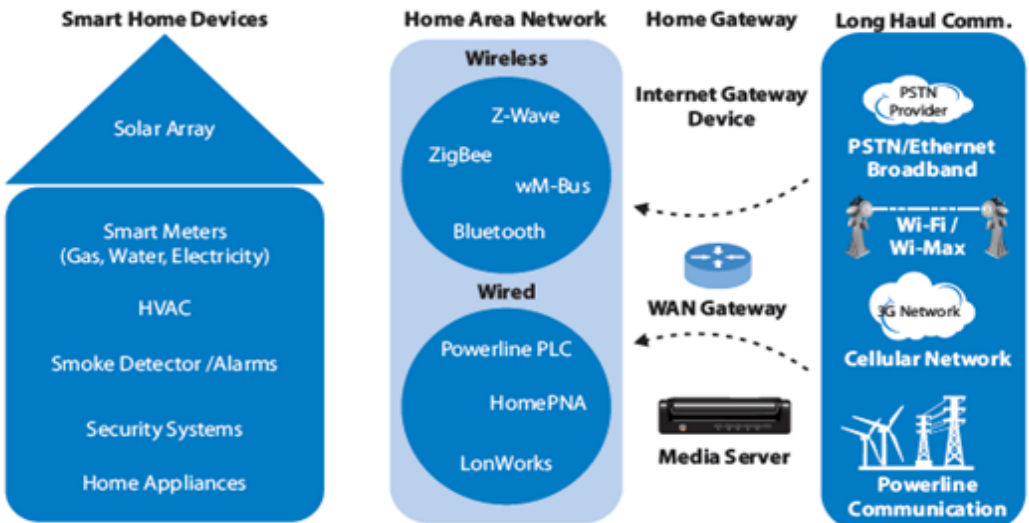
Telematics (2 of 2)



Home Automation (1 of 3)

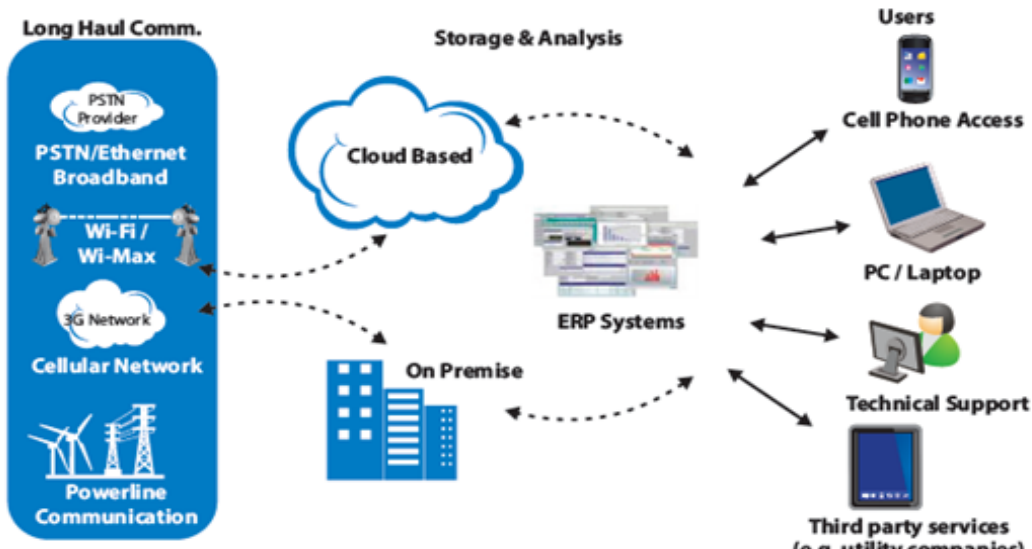


Home Automation (2 of 3)



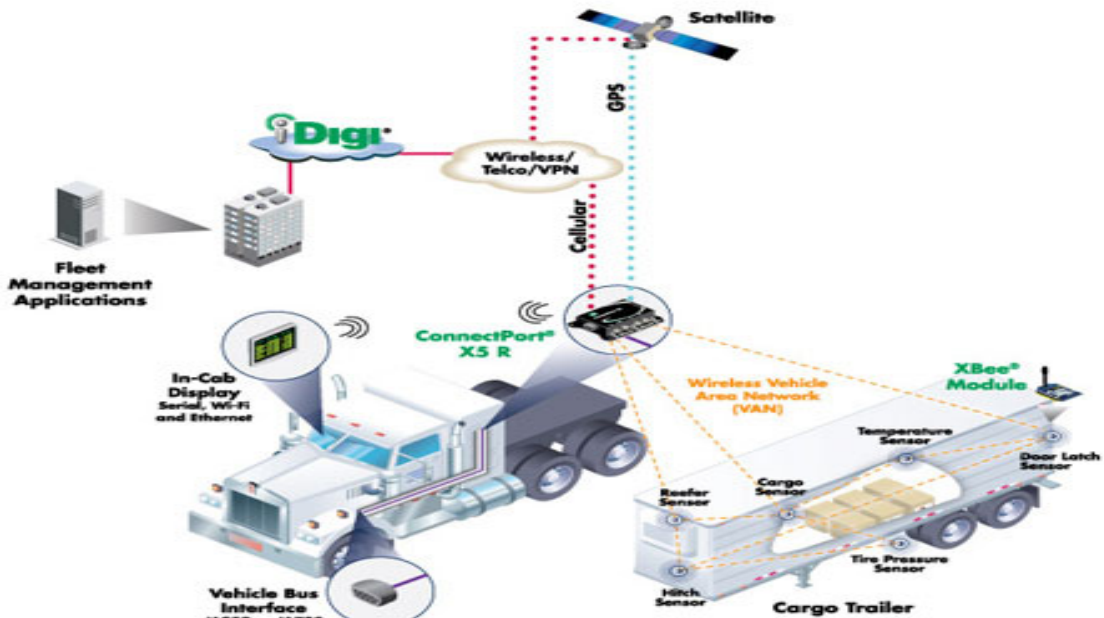
Smart Home Data Collection

Home Automation (3 of 3)



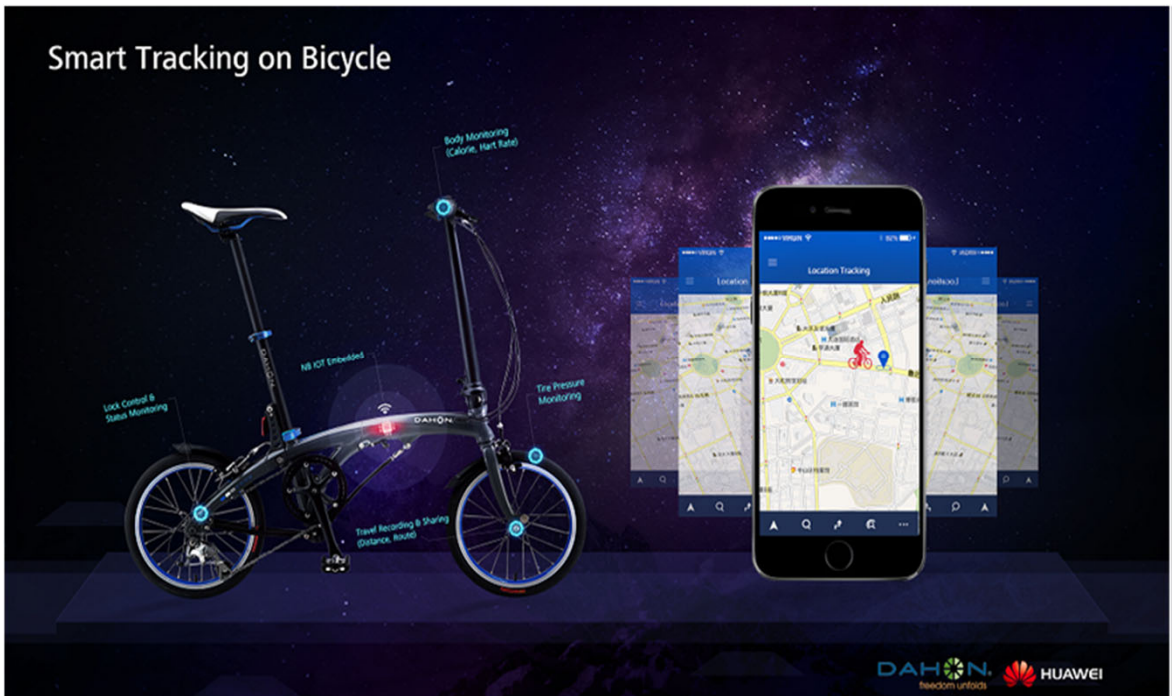
Smart Home Data Analysis and Usage

Satellite Navigation

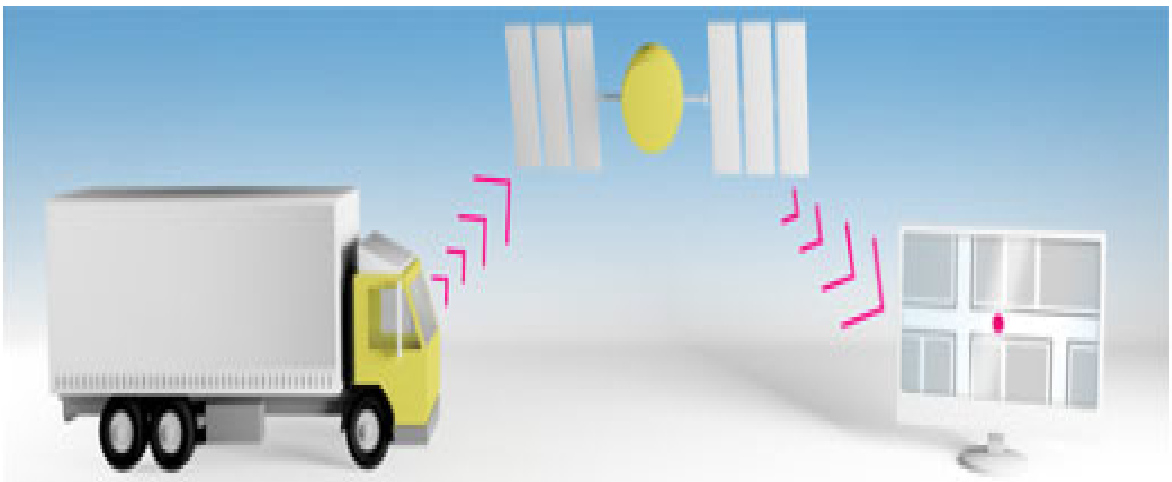


Telemetry and Telemetrics

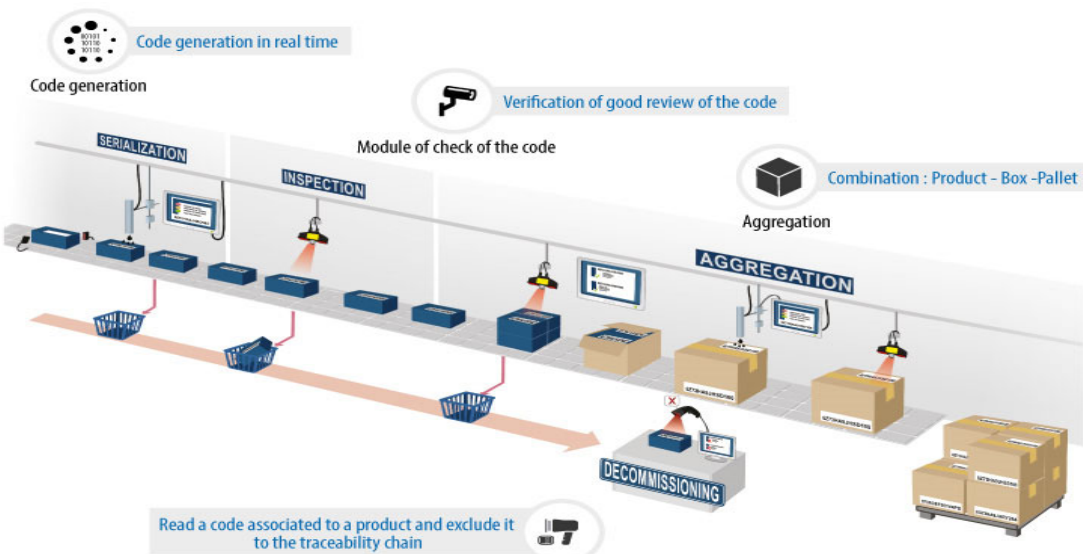
Report location



Logistics

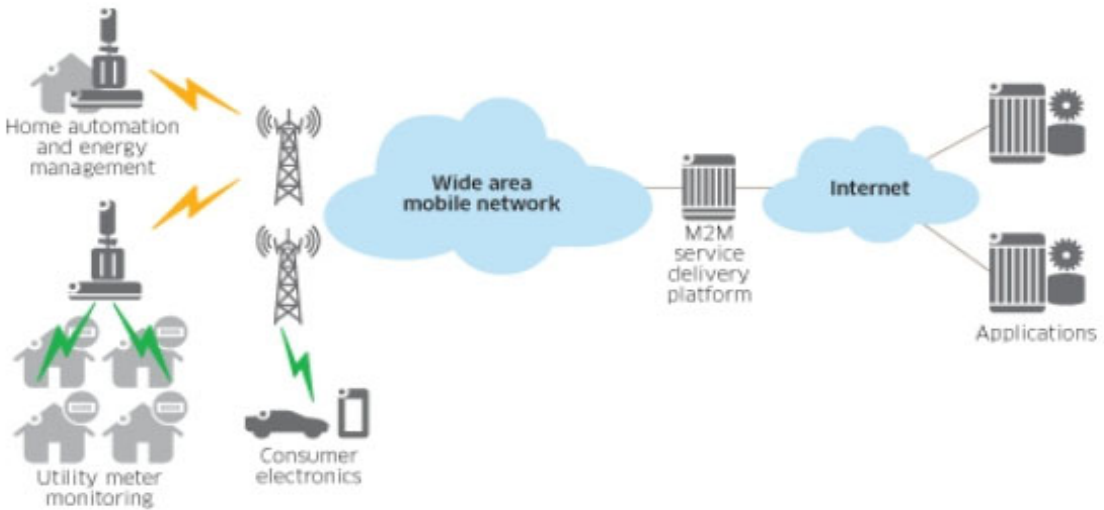


Tracking and Remote Assistance

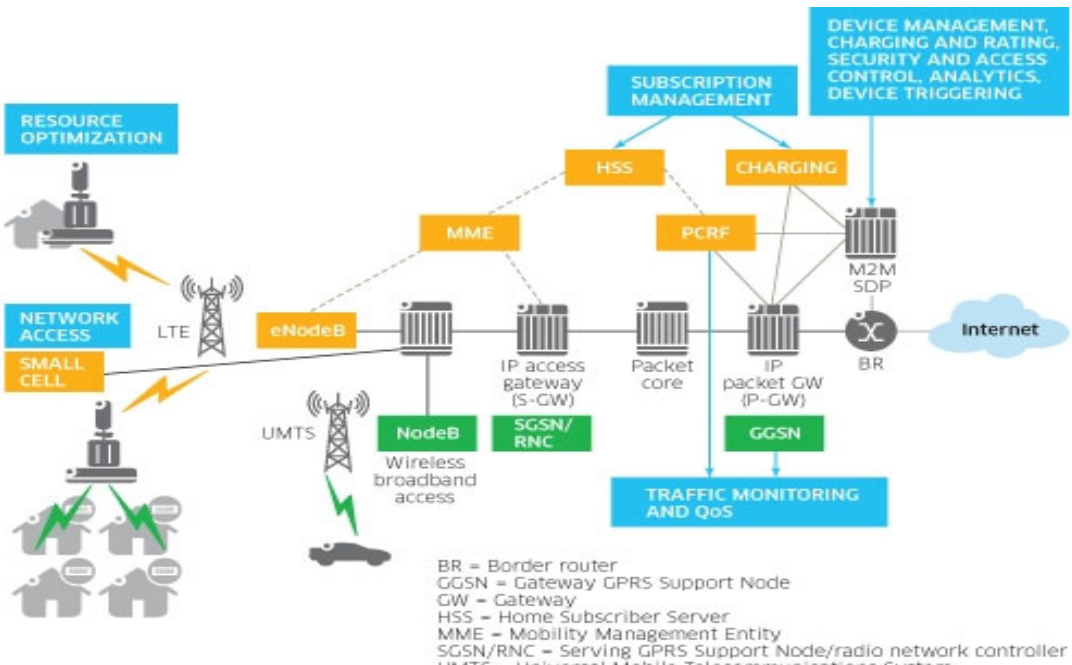


Next Generation kiosks-Self-service Technology

Cellular IOT Connectivity services (1 of 2)



Cellular IOT Connectivity services (2 of 2)



Checkpoint (1 of 3)

1. Automation system helps us to control electronic functions remotely in the house for
    a) Thermostats, alarm systems
    b) Comfort, security, convenience and energy savings
    c) Environmental Controls
    d) Telephones & Intercoms
2. M2M capabilities can be used to
    a) monitoring
    b) network technologies
    c) wireless access points
    d) Improve efficiency, reduce resources and enhance safety
3. the principle aim of M2M asset management solutions is
    a) Change life from day to day
    b) Include heavy duty vehicles, cranes, tractor, logging equipment, pipe line equipment and combines.
    c) To address both the financial and operational influences of managing and using them for heavy equipment and dispersed assets.
    d) cloud based services
4. Remote Terminal Unit (RTU) is a device that assures the information from the
    a) Sensors or actuators to the base station and in the same way it gets the information from the base station sends to the sensors or actuators.
    b) Electrical impulse which is sent by the user to enable or disable a function
    c) PLC functions (programmable logic controller)
    d) Separate wireless unit and the storage unit

Checkpoint (2 of 3)

5. The AEMP's telematics data standard was developed to
   a) Standard was primarily intended to facilitate importation
   b) End users to integrate the key telematics data (operating hours, location, fuel consumed, and odometer reading where applicable) into their existing fleet management of reporting systems.
   c) Mixed equipment fleets without any need to work across many more multiple telematics provider applications.
   d) Draft Telematics API

6. Display of data to various authorized users for
   a) Web based or on premise collection of data
   b) Based on the remote activation HVAC system start function through mobile.
   c) Alerts can go to security services based on certain violations at home.
   d) monitoring, control, reporting, billing of home devices through multiple user friendly interfaces

7. GPS receivers receive signal from
   a) orbiting satellites enabling them to determine latitude, longitude and altitude with enough precision to be used for most navigation tasks
   b) ground based radio beacons
   c) concept of vehicle telematics
   d) Intelligent network has made possible intelligent transportation.

Checkpoint (3 of 3)

8. The process of measuring data at source and transmitting it automatically is called
   a) Transmission
   b) Sensors
   c) Telemetry
   d) Actuator

9. kiosks are notoriously vulnerable to
   a) tampering and theft
   b) Enterprise customers.
   c) children
   d) students

10. Storing data from the indirectly connected M2M devices in the SDP means
   a) Separating the traffic into application specific flows gives
   b) MSPs can even authenticate applications which are trying to access data for a specific device.
   c) Device data models which allow MSPs to offer remote parameter configuration
   d) MSPs which provides network access for devices and sensors that communicates using non-cellular protocols

Checkpoint solutions

1. b) comfort, security, convenience and energy savings

2. d) Improve efficiency, reduce resources and enhance safety.

3. c) To address both the financial and operational influences of managing and using them for heavy equipment and dispersed assets

4. a) Sensors or actuators to the base station and in the same way it gets the information from the base station sends to the sensors or actuators

5. b) End users to integrate the key telematics data (operating hours, location, fuel consumed, and odometer reading where applicable) into their existing fleet management of reporting systems.

6. d) monitoring, control, reporting, billing of home devices through multiple user friendly interfaces

7. a) orbiting satellites enabling them to determine latitude, longitude and altitude with enough precision to be used for most navigation tasks.

8. c) Telemetry

9. a) tampering and theft

10. b) MSPs can even authenticate applications which are trying to access data for a specific device.

Unit summary

Having completed this unit, you should be able to:

- To understand automation, asset management, telemetry, transportation, telematrics(Home Automation, Satellite Navigation)
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