Welcome to:

INTERNET OF THINGS

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Unit objectives

After completing this unit, you should be able to:

- To learn IoT History
- To define IoT
- To have brief overview on IoT Communications.
- To compare Telemetry Vs IoT
- To know applications of IoT Communications.

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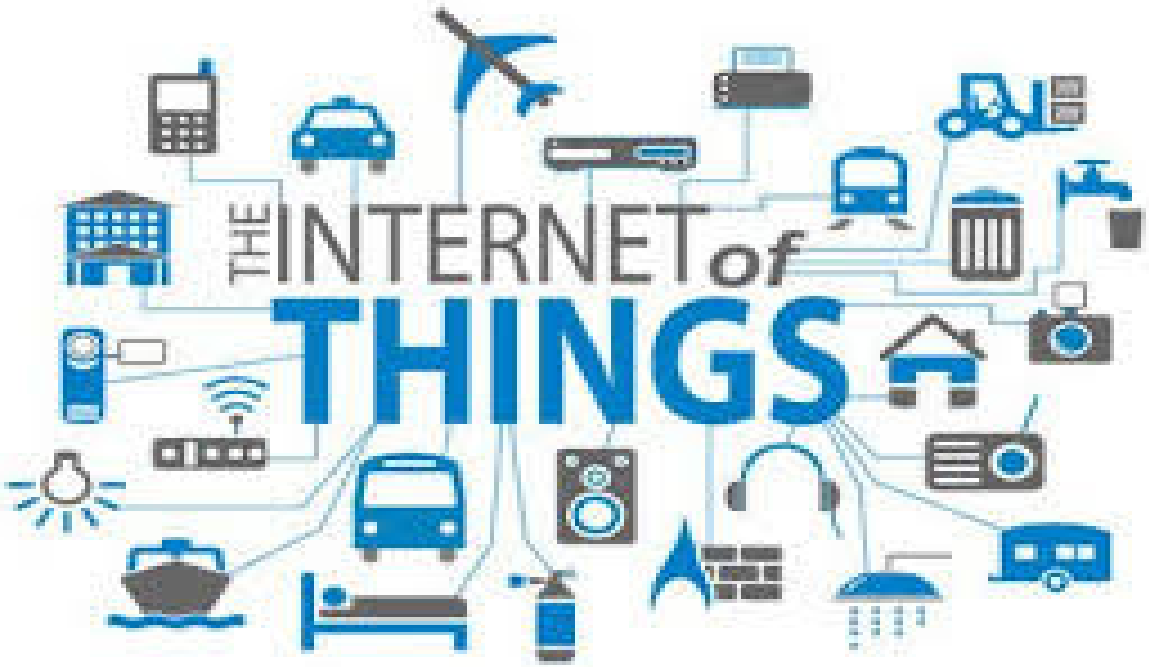
Introduction



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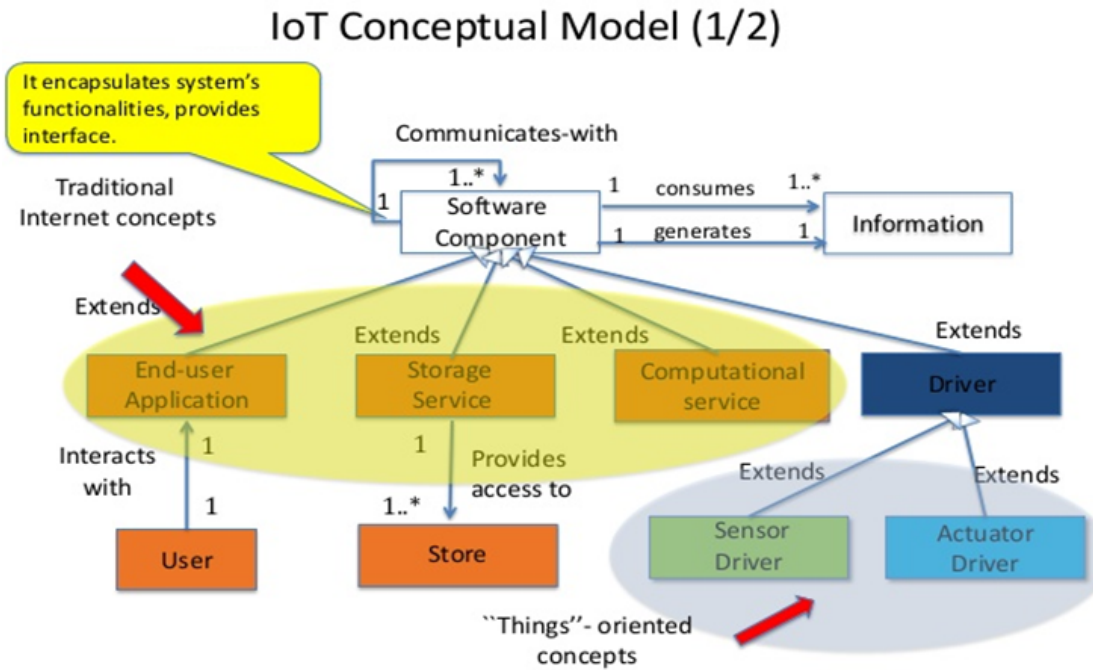
IoT Concept (1 of 2)



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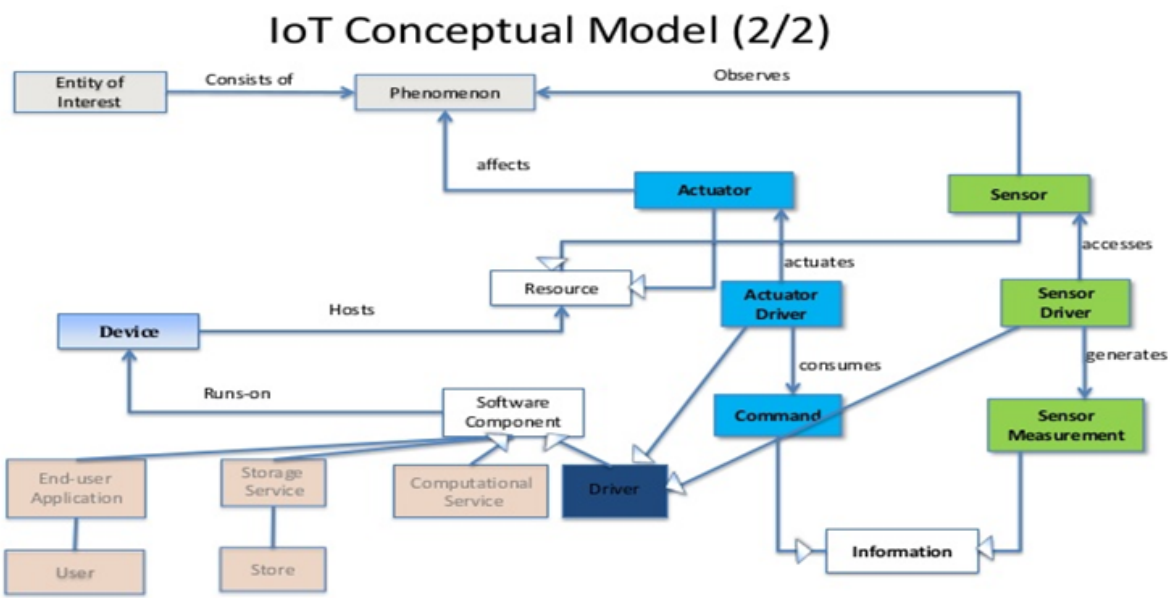
IoT Concept (2 of 2)



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IoT History

Rank	Country	Devices online	Relative size
1	South Korea	37.9	
2	Denmark	32.7	
3	Switzerland	29.0	
4	United States	24.9	
5	Netherlands	24.7	
6	Germany	22.4	
6	Sweden	21.9	
6	Spain	19.9	
9	France	17.6	
10	Portugal	16.2	
11	Belgium	15.6	
11	United Kingdom	13.0	
13	Canada	11.6	
14	Italy	10.2	
15	Brazil	9.2	
15	Japan	8.2	
15	Australia	7.9	
18	Mexico	6.8	
19	Poland	6.3	
20	China	6.2	
21	Colombia	6.1	
22	Russia	4.9	
23	Turkey	2.3	
24	India	0.6	

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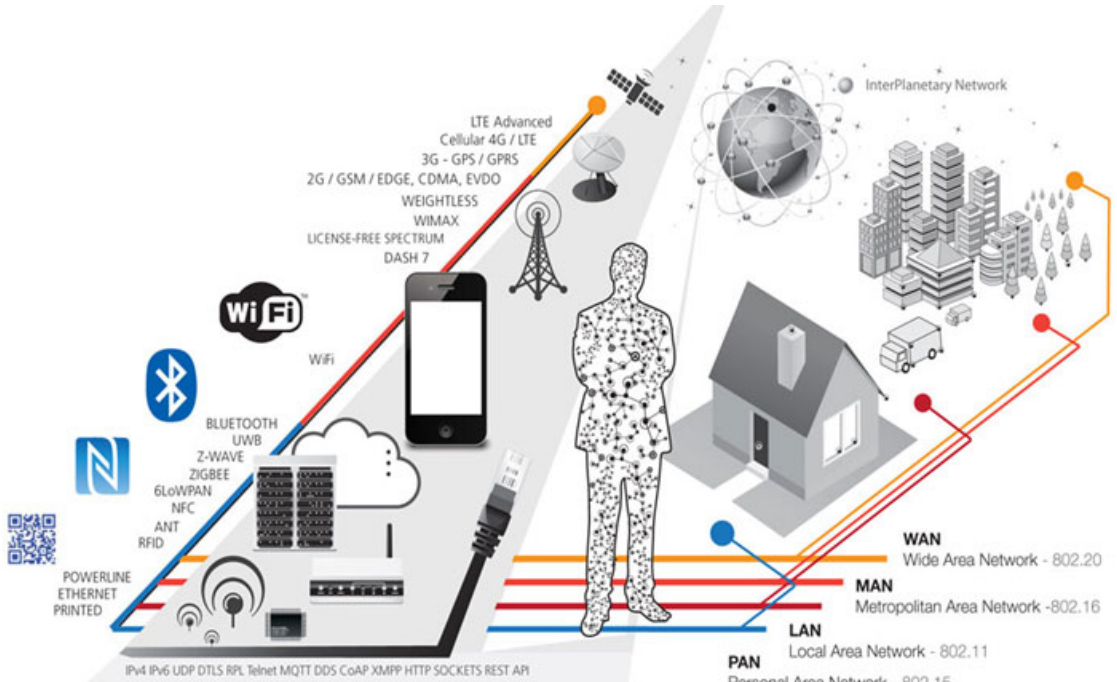
Introduction to IoT Communications (1 of 2)



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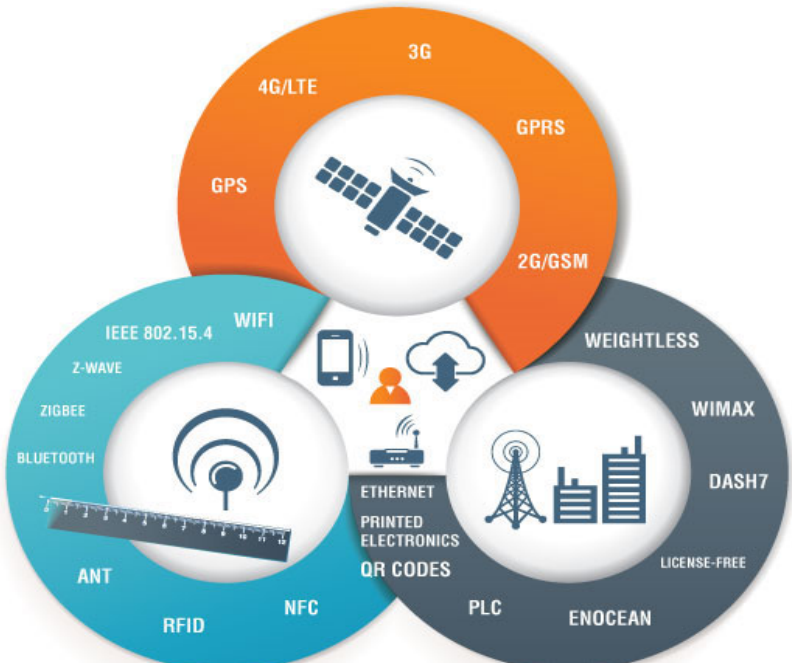
Introduction to IoT Communications (2 of 2)



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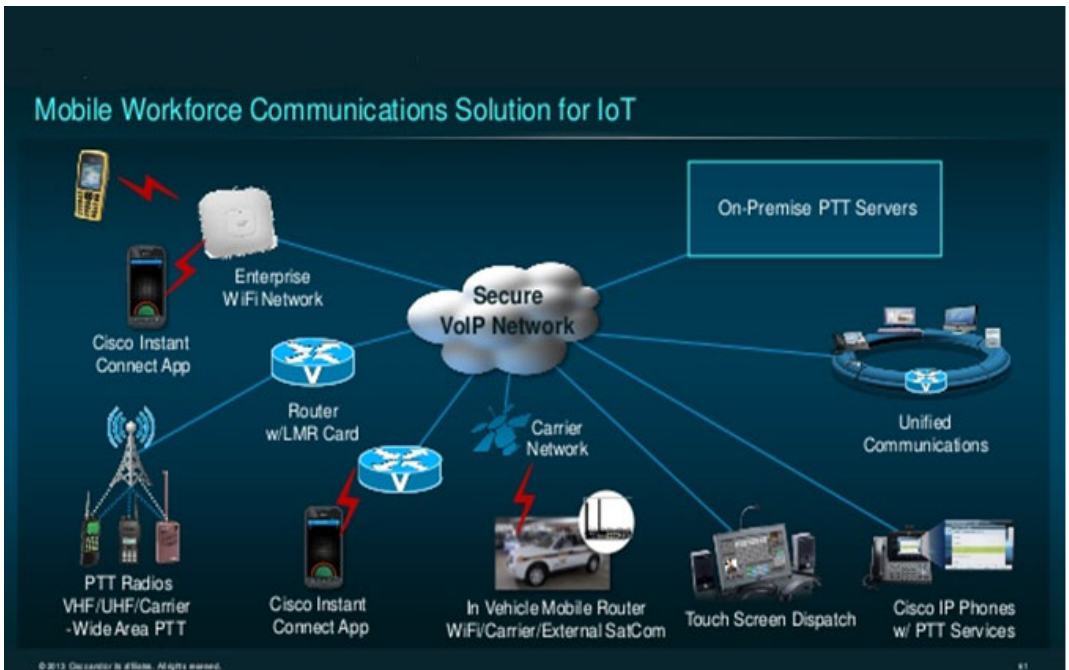
What is IoT (1 of 2)



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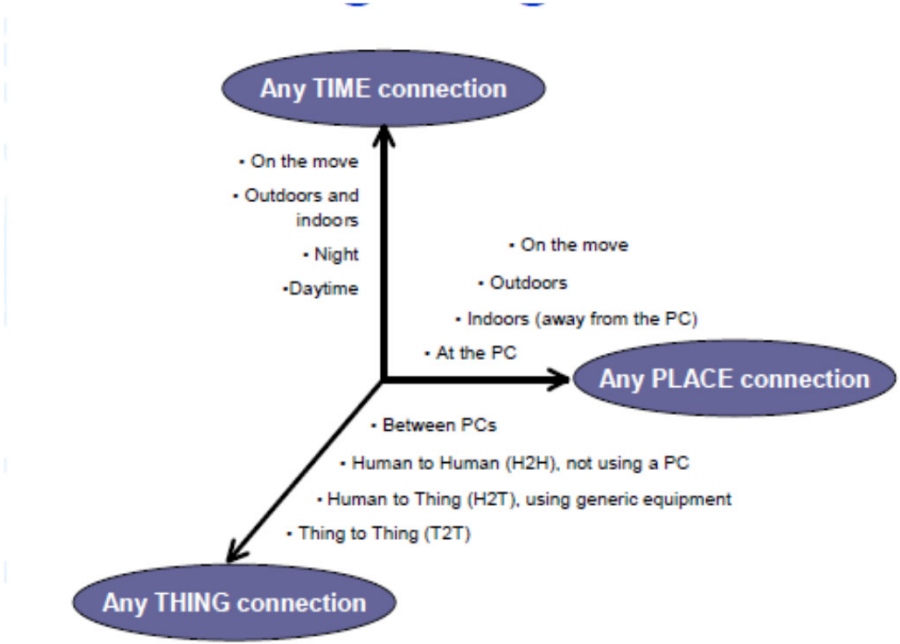
What is IoT (2 of 2)



Source: ITU Internet Reports 2005: The Internet of Things

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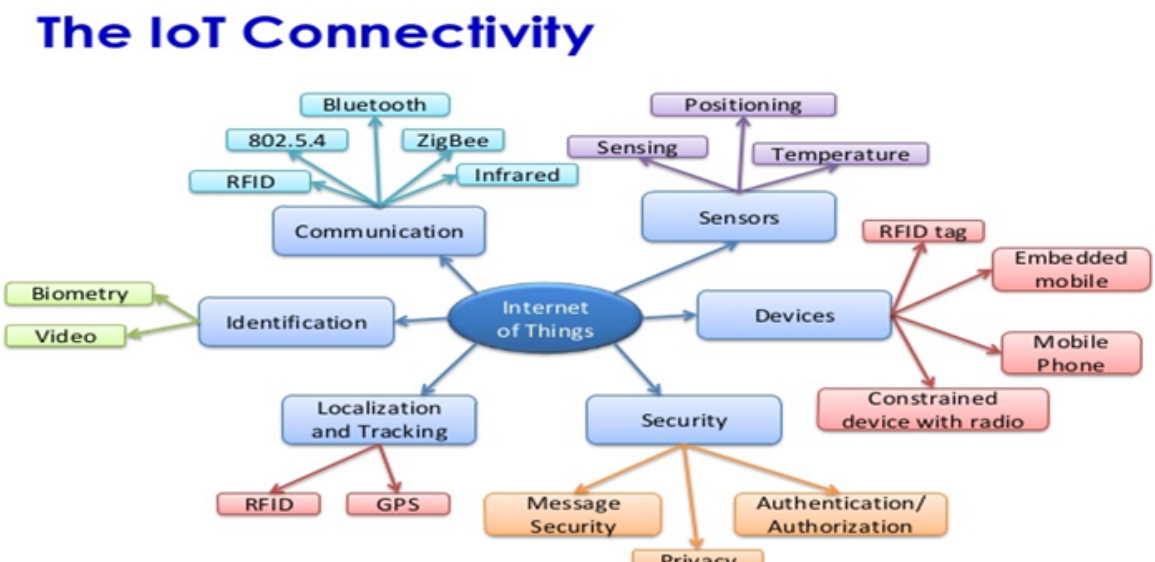
Why IoT (1 of 2)



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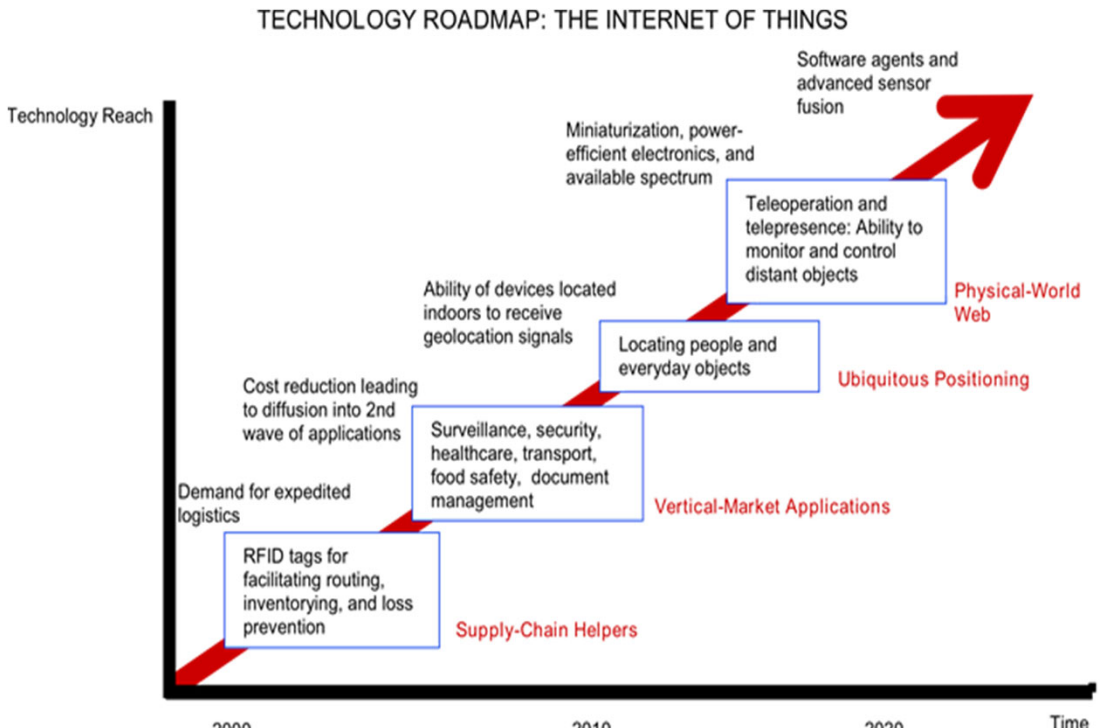
Why IoT (2 of 2)



Source: SRI Consulting Business Intelligence

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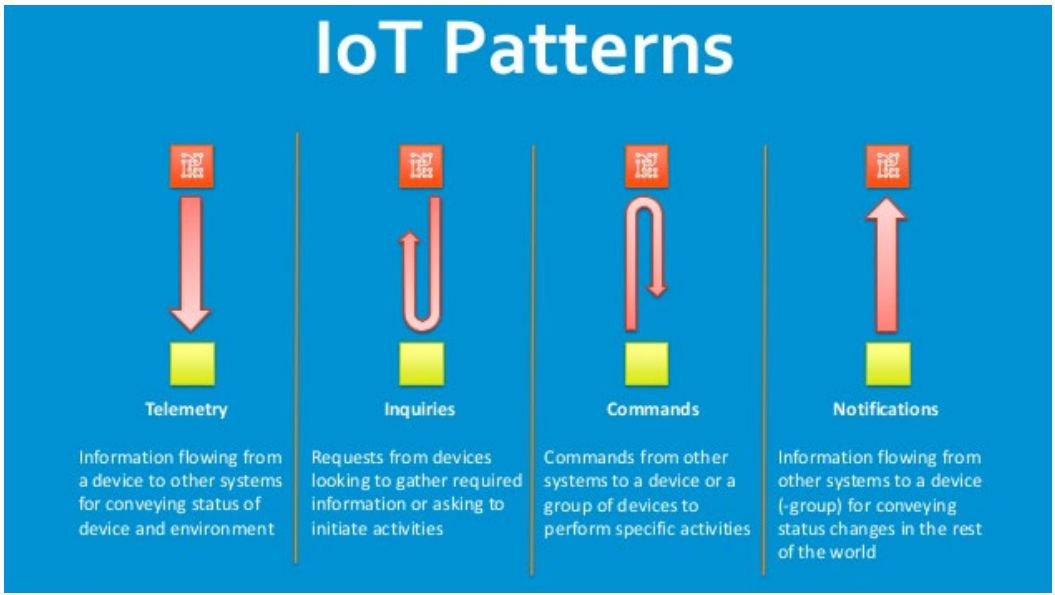
Telemetry Vs IoT



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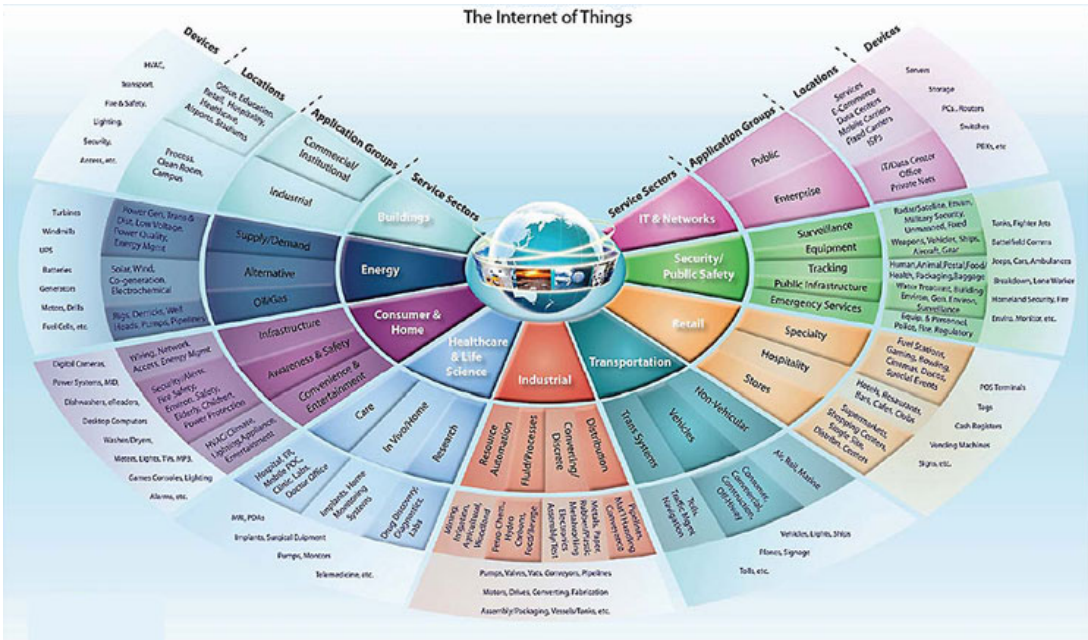
Applications of IoT Communications



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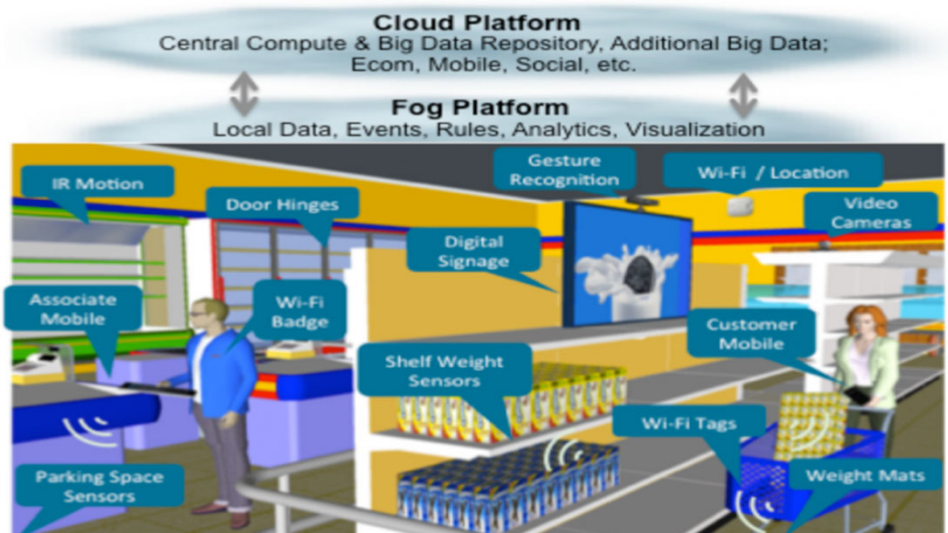
Shopping



Flexible, hyper-local, real-time, sensor fusion, and big data analytics driving the next generation of Retail Value Chains

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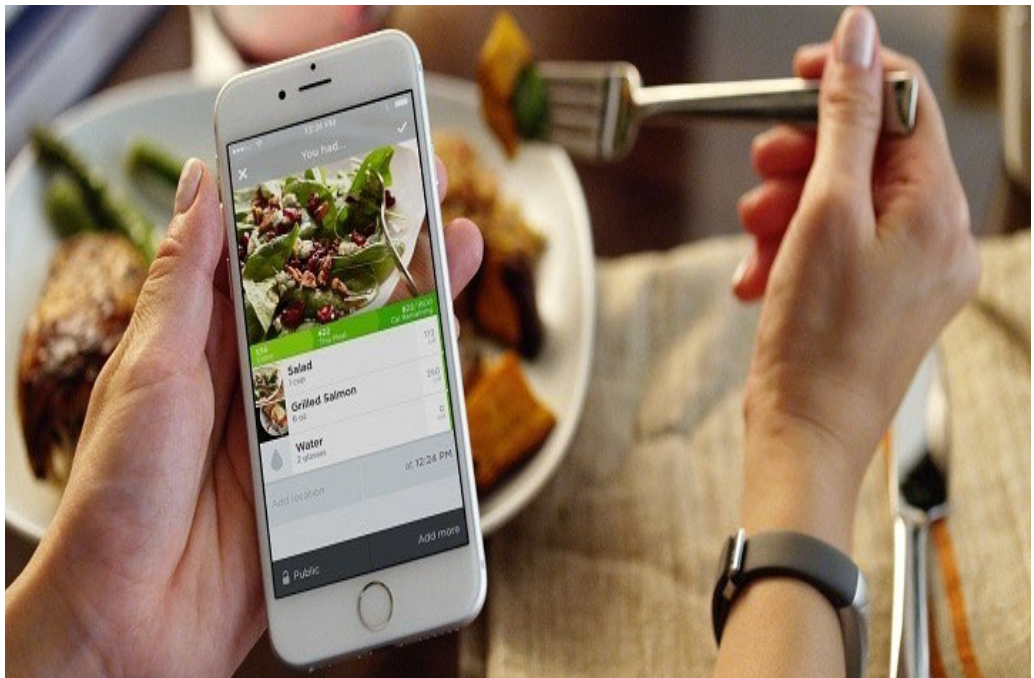
Food Nutrition



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Healthcare

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Intelligent Home

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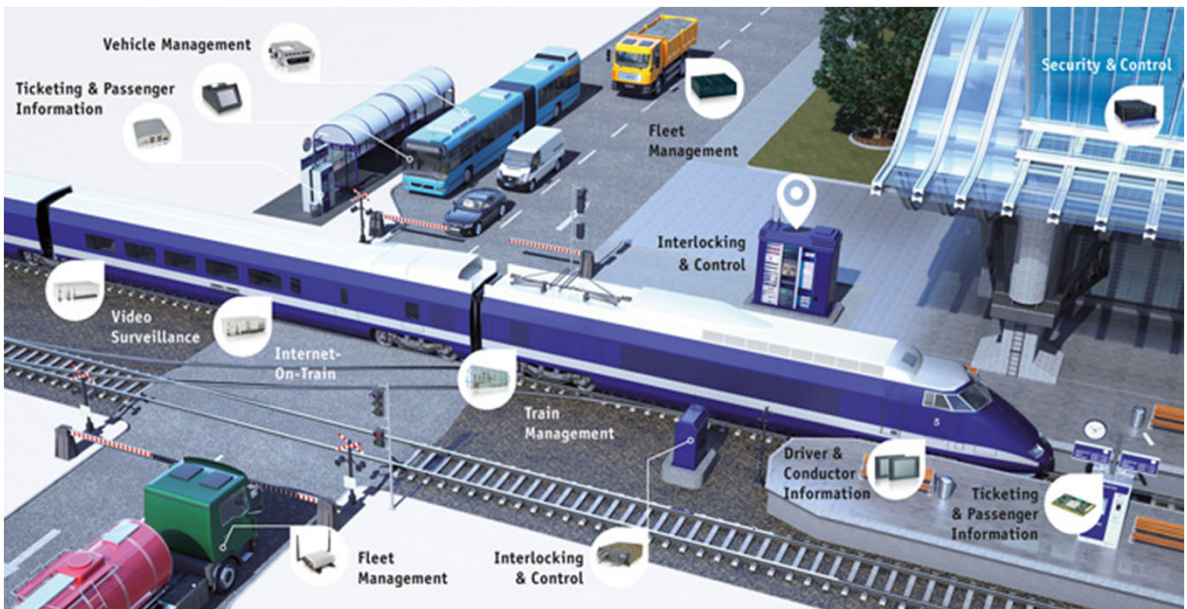
Transportation



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Checkpoint (1 of 3)

1. IOT is much familiar with
    a) machine to machine communication
    b) wireless sensor networks
    c) embedded systems
    d) micro-electromechanical systems

2. In which year the IOT started developing
    a) 1994
    b) 1982
    c) 1999
    d) 1991

3. Sensors are used for
    a)Business to deliver real-time tracking
    b) Sensing and alert the human regarding the issue
    c)Transmission of data
    d)Tracking the location

4. What is meant by Modem
    a)Analog or Digital Topology
    b)Mesh network topology
    c)Personal area network
    d)Modulator and Demodulator

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Checkpoint (2 of 3)

5.IOT expands with objective

a) Detecting changes in the physical status of connected things in real-time.
b) Identifying and localizing the smart objects.
c) Identifying and localizing the smart objects.
d) All the above

6. The main difference between the telemetry and the M2M technologies are_____.

7. Telemetry operators can also communicate with

a) Customers
b) Information screens
c) Vending machines, to adjust settings, or change prices.

8. Machine-to-machine solutions enable

a) communication between the physicians and patients
b) patient tracking systems to keep an eye on a patient's location
c) Allows doctors to see more patients or to have longer consultancies every day
d) None of the above

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Checkpoint (3 of 3)

9. Present Home Network Gateway collects the data from the
    a) HAN
    b) Bluetooth
    c) Power line
    d) Automation Protocol

10. Now days most drivers rely on
    a) automatic emergency
    b) Vehicle telematics
    c) in-car navigation systems
    d) Automotive fleet.

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Checkpoint solutions

1. a) Machine to machine communication
2. c) 1991
3. b) sensing and alert the human regarding the issue
4. d) Modulator and Demodulator
5. d) All the above
6. Telemetry uses the random radio signal and M2M technology uses the existed networks such as wireless networks
7. c) Vending machines, to adjust settings or change prices
8. b) patient tracking systems to keep an eye on a patient's location
9. a) HAN
10. c) in-car navigation systems

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Unit Summary

Having completed this unit, you should be able to:

- Understand IoT Concepts and
- Applications of IoT

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