SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Coimbatore-35

DEPARTMENT OF BIOMEDICAL ENGINEERING

19BMT205 IoT in Healthcare

Unit-1 -**Introduction To Internet of Things**

II Year/IV Sem

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ASP / BME / SNSCT

Unit-1 -**Introduction To Internet of Things**

- Introduction
- IoT definition
- Characteristics of IoT
- Physical Design of IoT
- Logical Design of IoT
- Major Components of IoT System

IoT definition

- The internet of things (IoT) is a computing concept that describes the idea of everyday physical objects being connected to the internet and being able to identify themselves to other devices. It has dynamic global network infrastructure with self-configuring capabilities based on standard and interoperable communication protocols where physical and virtual "things" have identities, physical attributes and virtual network and use intelligent interfaces.

The Internet of things describes physical objects that are embedded with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks.
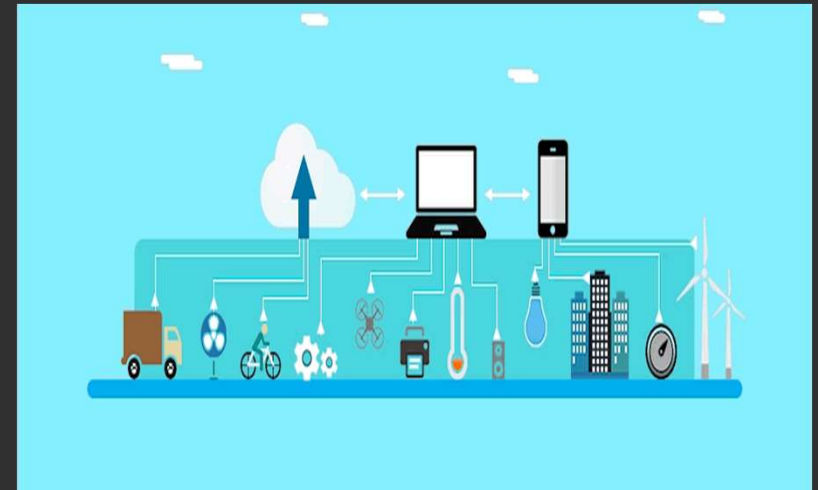
Technologies for IoT

- **What** While the idea of IoT has been in existence for a long time, a collection of recent advances in a number of different technologies has made it practical.

- **Access to low-cost, low-power sensor technology.** Affordable and reliable sensors are making IoT technology possible for more manufacturers.

- **Connectivity.** A host of network protocols for the internet has made it easy to connect sensors to the cloud and to other "things" for efficient data transfer.

Technologies for IoT

- **Cloud computing platforms.** The increase in the availability of cloud platforms enables both businesses and consumers to access the infrastructure they need to scale up without actually having to manage it all.

- **Machine learning and analytics.** With advances in machine learning and analytics, along with access to varied and vast amounts of data stored in the cloud, businesses can gather insights faster and more easily. The emergence of these allied technologies continues to push the boundaries of IoT and the data produced by IoT also feeds these technologies.
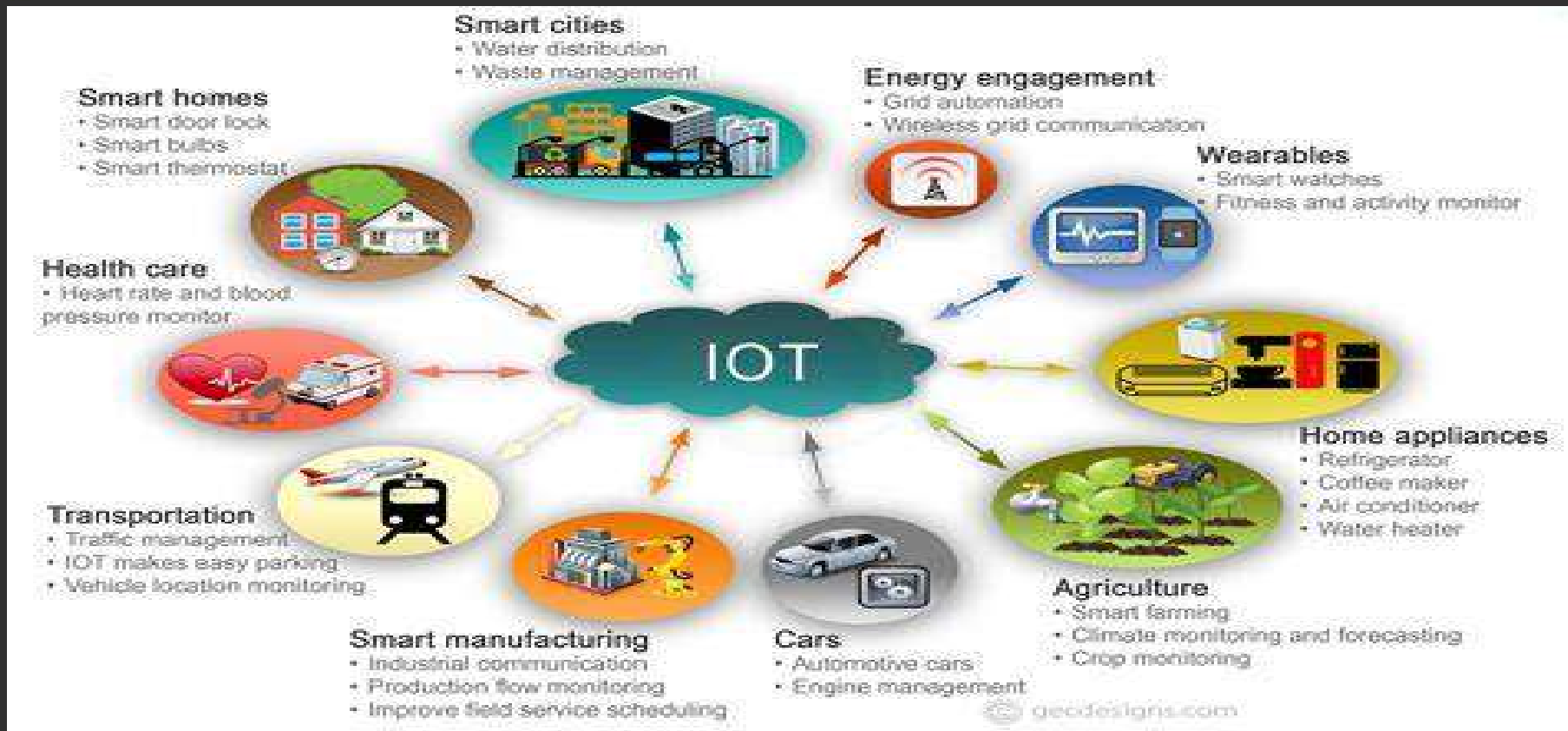
Technologies for IoT

- **Conversational artificial intelligence (AI).** Advances in neural networks have brought natural-language processing (NLP) to IoT devices (such as digital personal assistants Alexa, Cortana, and Siri) and made them appealing, affordable, and viable for home use.

Application

Example: IoT in Home