# SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

**An Autonomous Institution**

Accredited by NAAC – UGC with 'A' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE NAME : 19EE603 IOT FOR ELECTRICAL ENGINEERS

III YEAR /VI SEMESTER ELECTRICAL AND ELECTRONICS ENGINEERING

Unit 1 –Introduction

Industrial IOT

# Industrial IoT

- The industrial internet of things (IIoT) is the use of smart sensors, actuators and other devices, such as radio frequency identification tags, to enhance manufacturing and industrial processes.
- These devices are networked together to provide data collection, exchange and analysis.
- Insights gained from this process aid in more efficiency and reliability.
- Also known as the industrial internet, IIoT is used in many industries, including manufacturing, energy management, utilities, oil and gas.

# Contd...

- In manufacturing specifically, IIoT has the potential to provide quality control, sustainable and green practices, supply chain traceability and overall supply chain efficiency.
- In an industrial setting, IIoT is key to processes such as predictive maintenance, enhanced field service, energy management and asset tracking.

**How does IIoT work?**

IIoT is a network of intelligent devices connected to form systems that monitor, collect, exchange and analyze data. Each industrial IoT ecosystem consists of the following:

# How does IIoT work?

- IIoT is a network of intelligent devices connected to form systems that monitor, collect, exchange and analyze data.
- Each industrial IoT ecosystem consists of the following:
- Connected devices that can sense, communicate and store information about themselves.
- Public and private data communications infrastructure.
- Analytics and applications that generate business information from raw data.
- Storage for the data that's generated by the IIoT devices.
- People.

# Contd…

- These edge devices and intelligent assets transmit information directly to the data communications infrastructure, where it's converted into actionable information on how a certain piece of machinery is operating.
- This information can be used for predictive maintenance, as well as to optimize business processes.

# Difference between IoT and IIoT

- Although the internet of things and IIoT have many technologies in common -- including cloud platforms, sensors, connectivity, machine-to-machine communications and data analytics -- they're used for different purposes.
- IoT systems connect devices across multiple verticals, including agriculture, healthcare, enterprise, consumer, utilities, government and cities. IoT technology includes smart devices, fitness bands and other applications that generally don't create emergency situations if something goes amiss.

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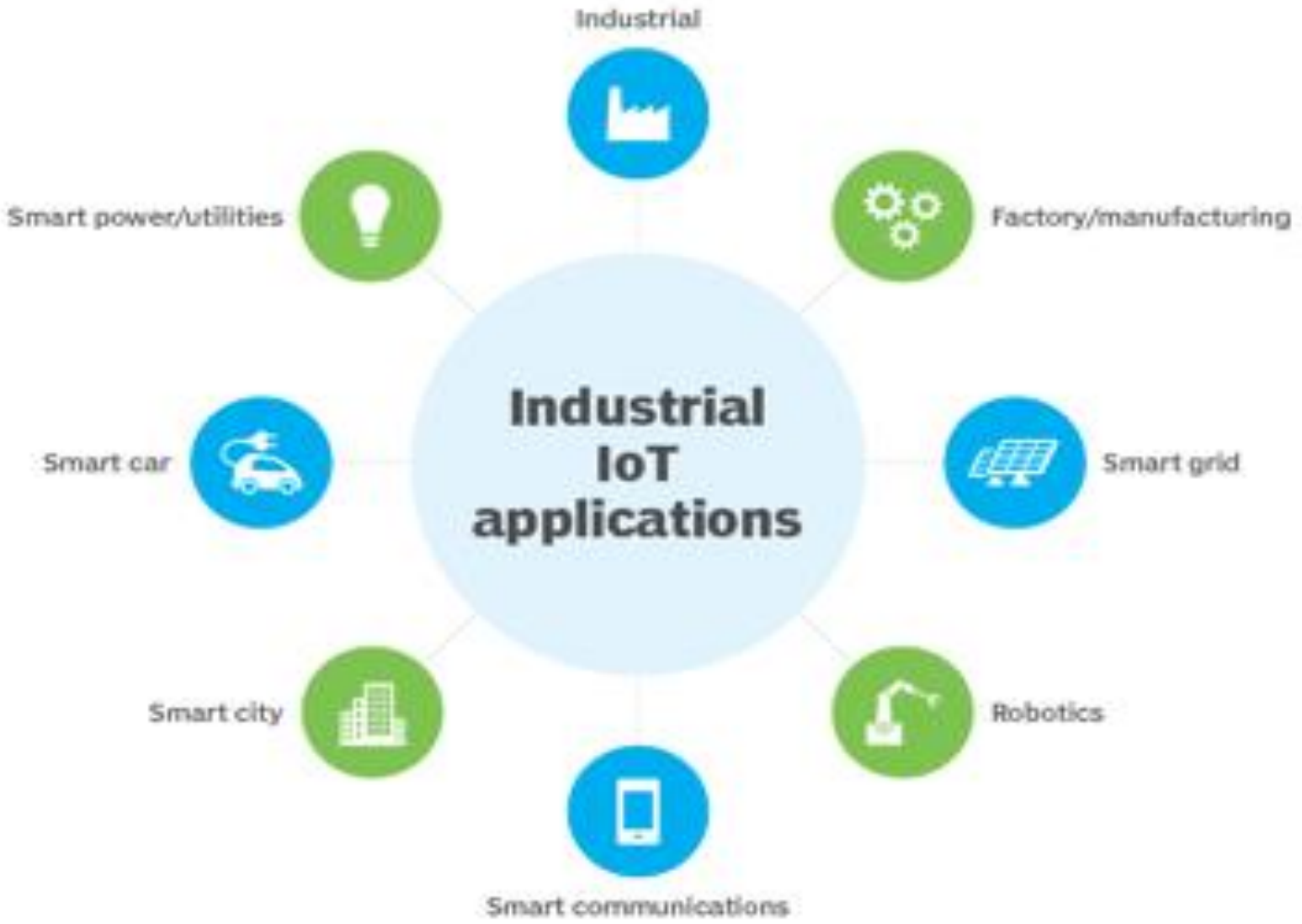
- IIoT applications, on the other hand, connect machines and devices in sectors such as oil and gas, utilities and manufacturing. System failures and downtime in IIoT deployments can result in high-risk or life-threatening situations. IIoT applications are also more concerned with improving efficiency, health or safety versus the user-centric nature of IoT applications.


Industrial
Smart power/utilities
Factory/manufacturing
Industrial IoT applications
Smart car
Smart grid
Smart city
Robotics
Smart communications

# Thank You