

IoT Tutorial (Internet of Things)

Introduction

A

B

Features

C

D

Advantages

Applications



4차 산업혁명이란 무엇인가?

파괴적 기술과

역사적 산업혁명의 전개



4차 산업혁명



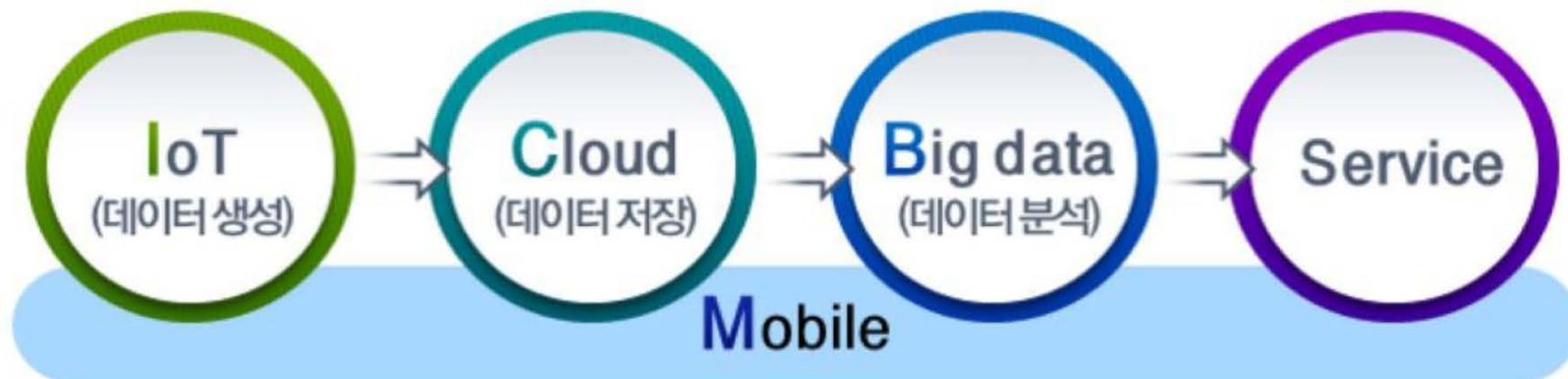
IoT (cf. IoE, IoST, WoT,...)



IoT Overview

사물인터넷(Internet of Things, IoT)은 사람, 사물, 공간, 데이터 등 모든 것이 인터넷으로 서로 연결되어, 정보가 생성·수집·공유·활용되는 초연결 인터넷

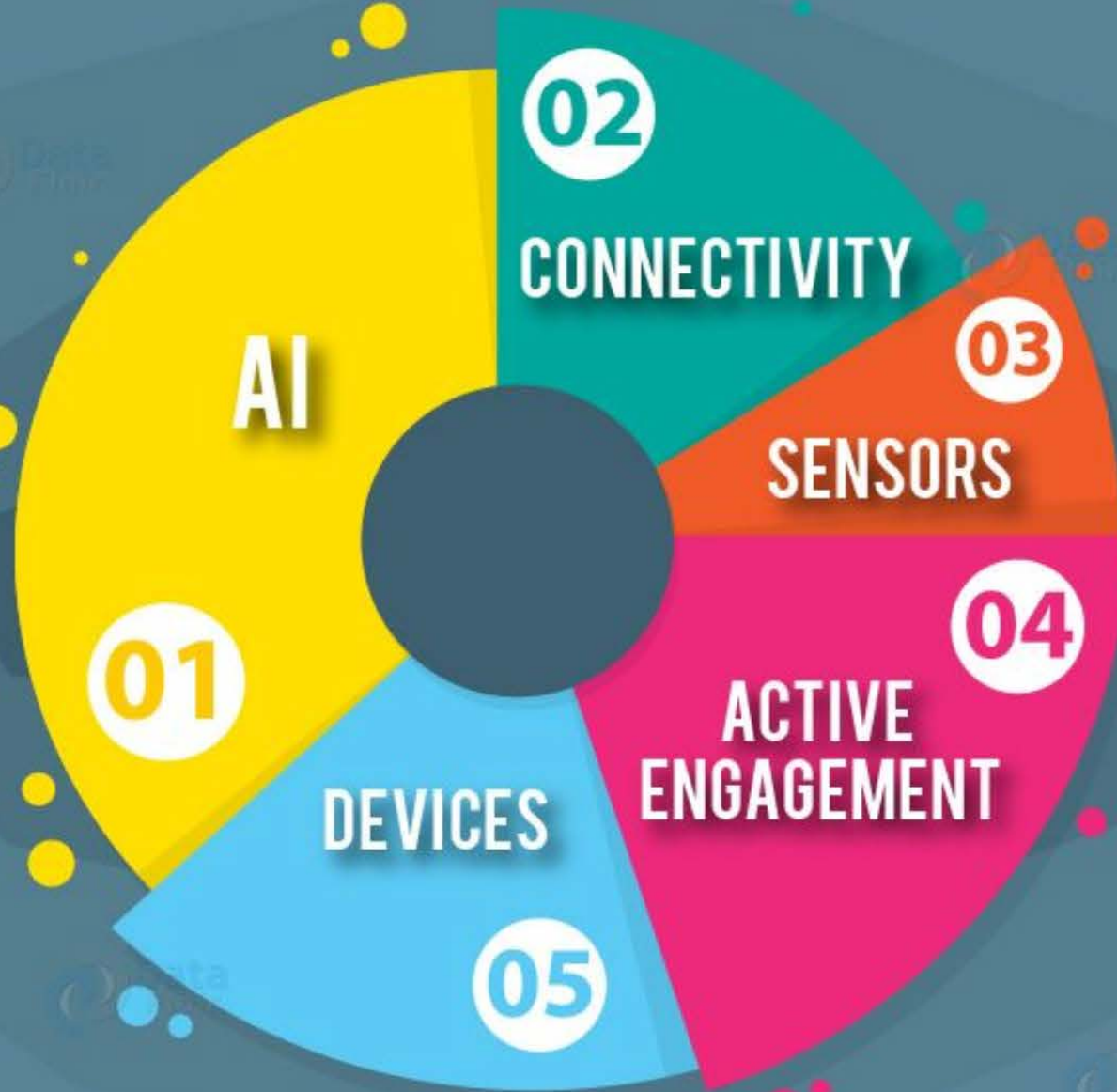
모바일 기반에서 IoT, 클라우드(Cloud), 빅데이터(Bigdata)가
연계된 새로운 가치와 서비스 창출



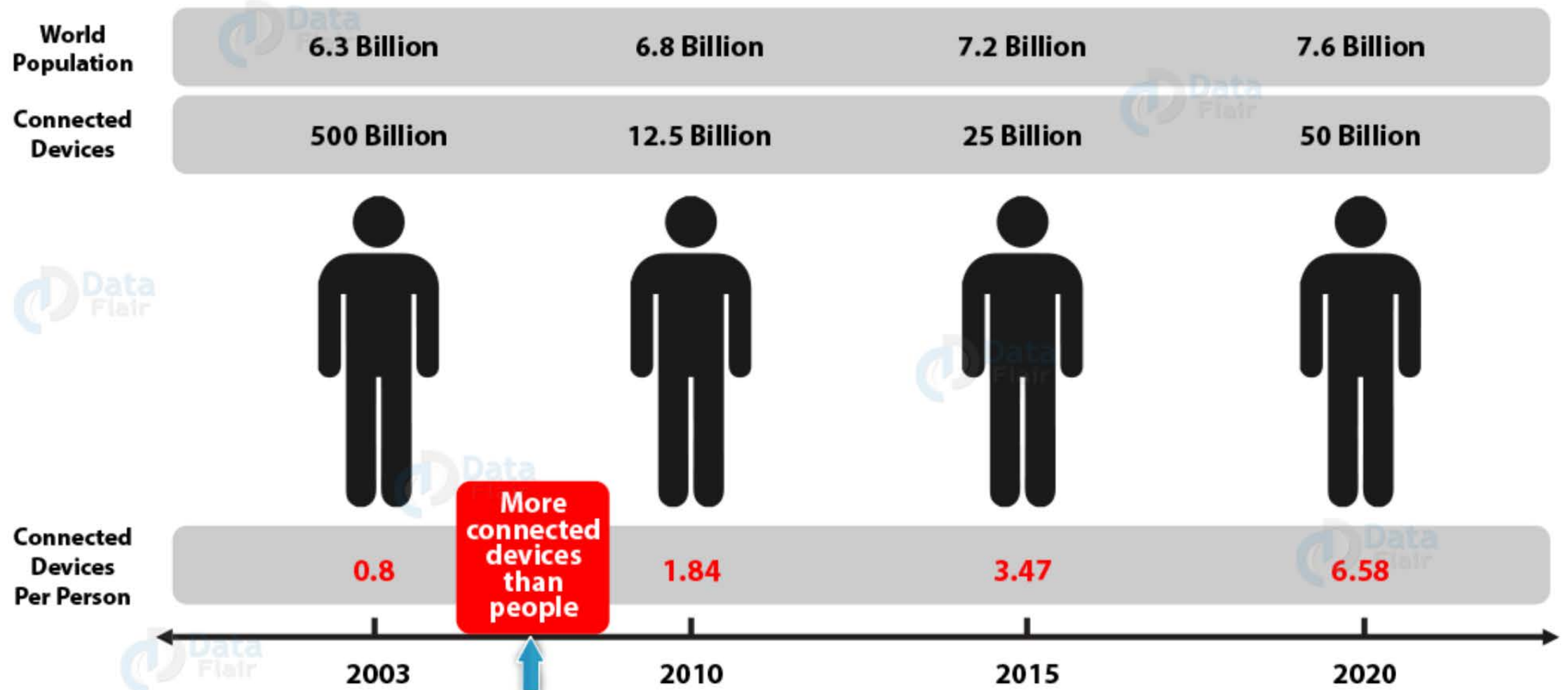
IoT Overview



IOT FEATURES



Current Status & Future Prospect of IoT



"change is the only thing permanent in this world"

IoT Applications

Smart appliances

37%

Smart energy meters

25%

Wearable devices

13%

Connected cars

10%

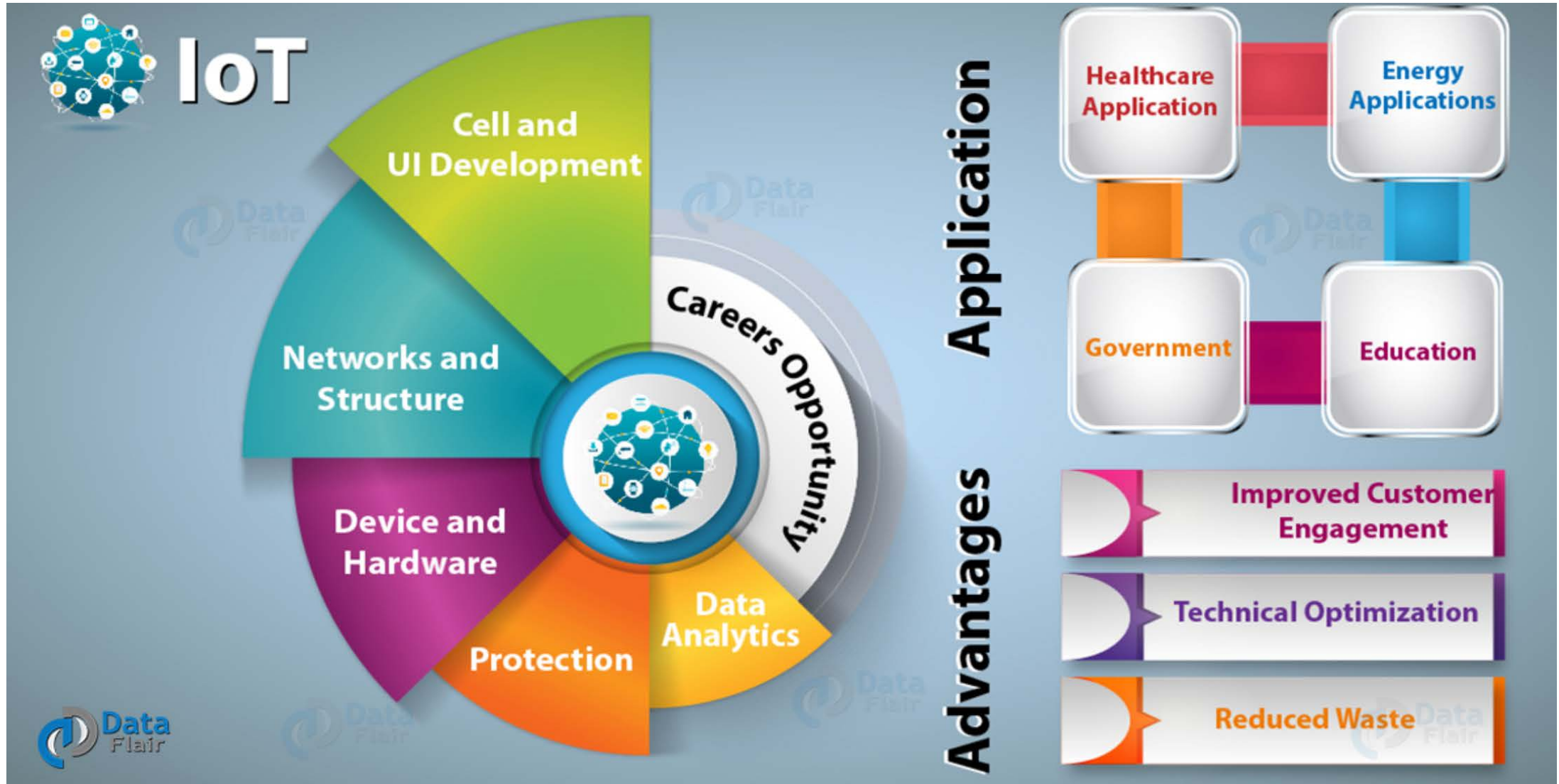
Smart healthcare devices

10%

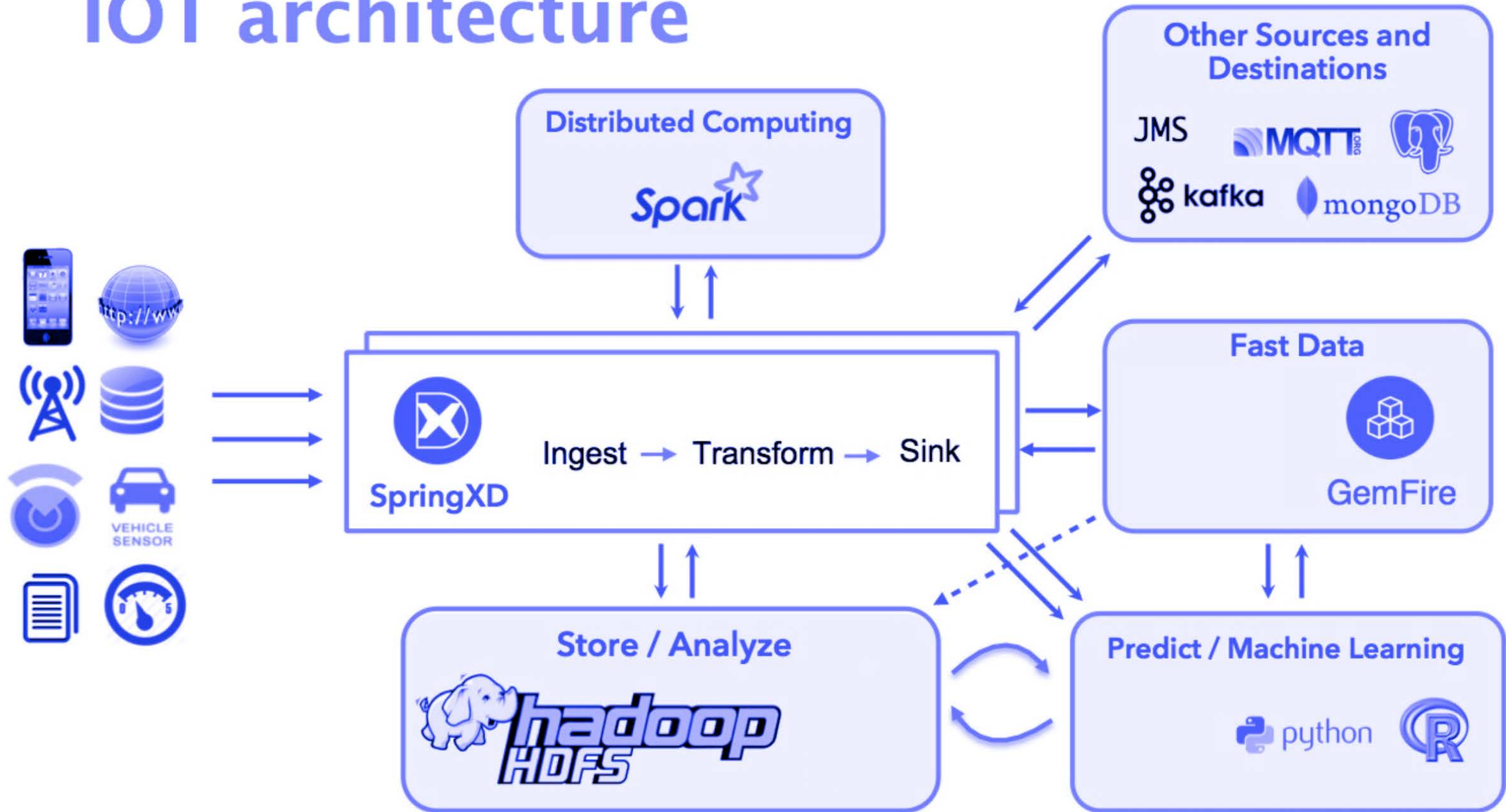
None of these

5%

Advantages of IoT



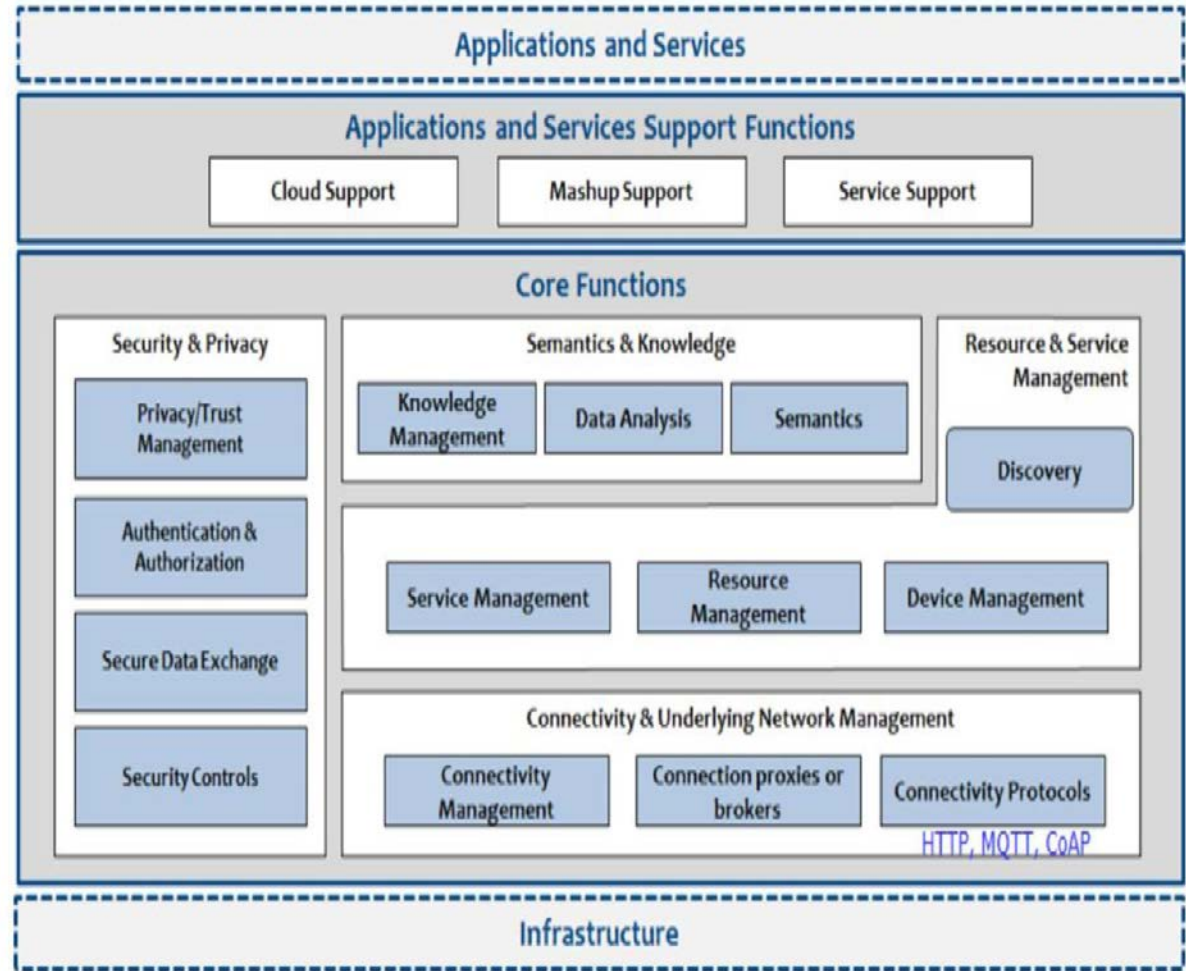
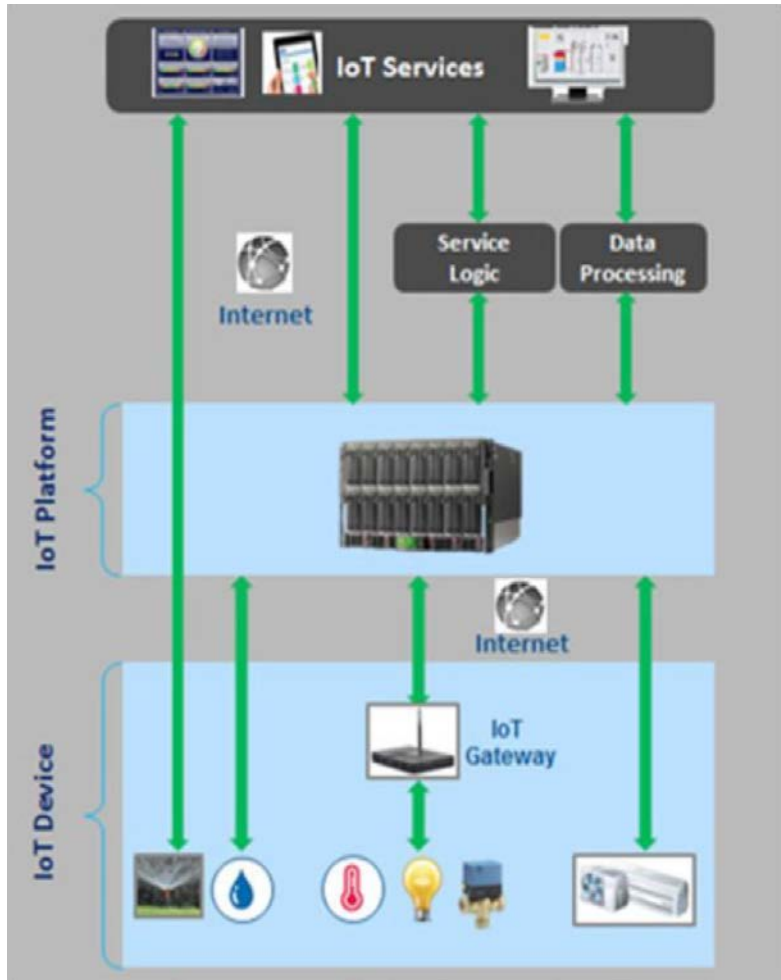
IOT architecture



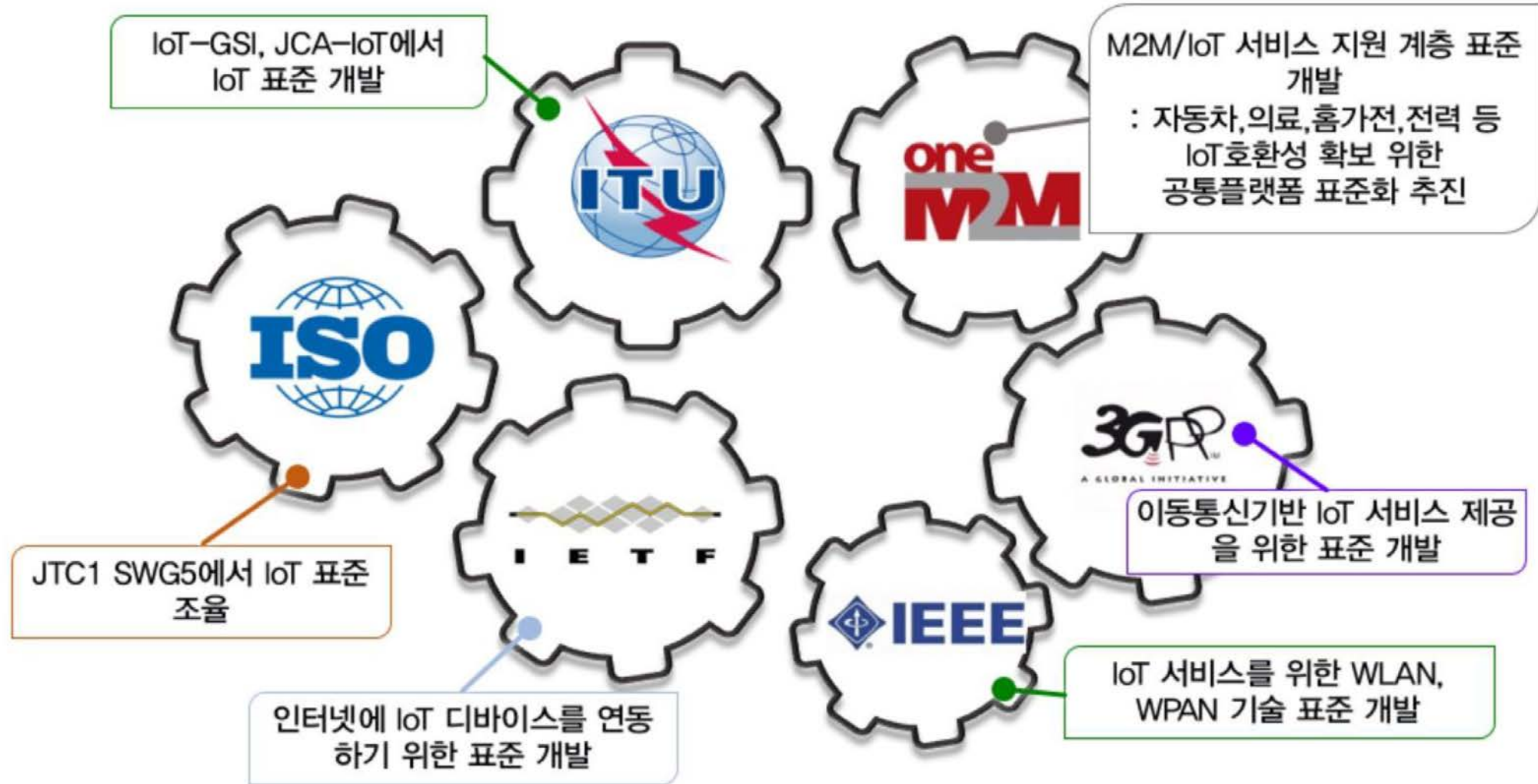
IoT Service Architecture



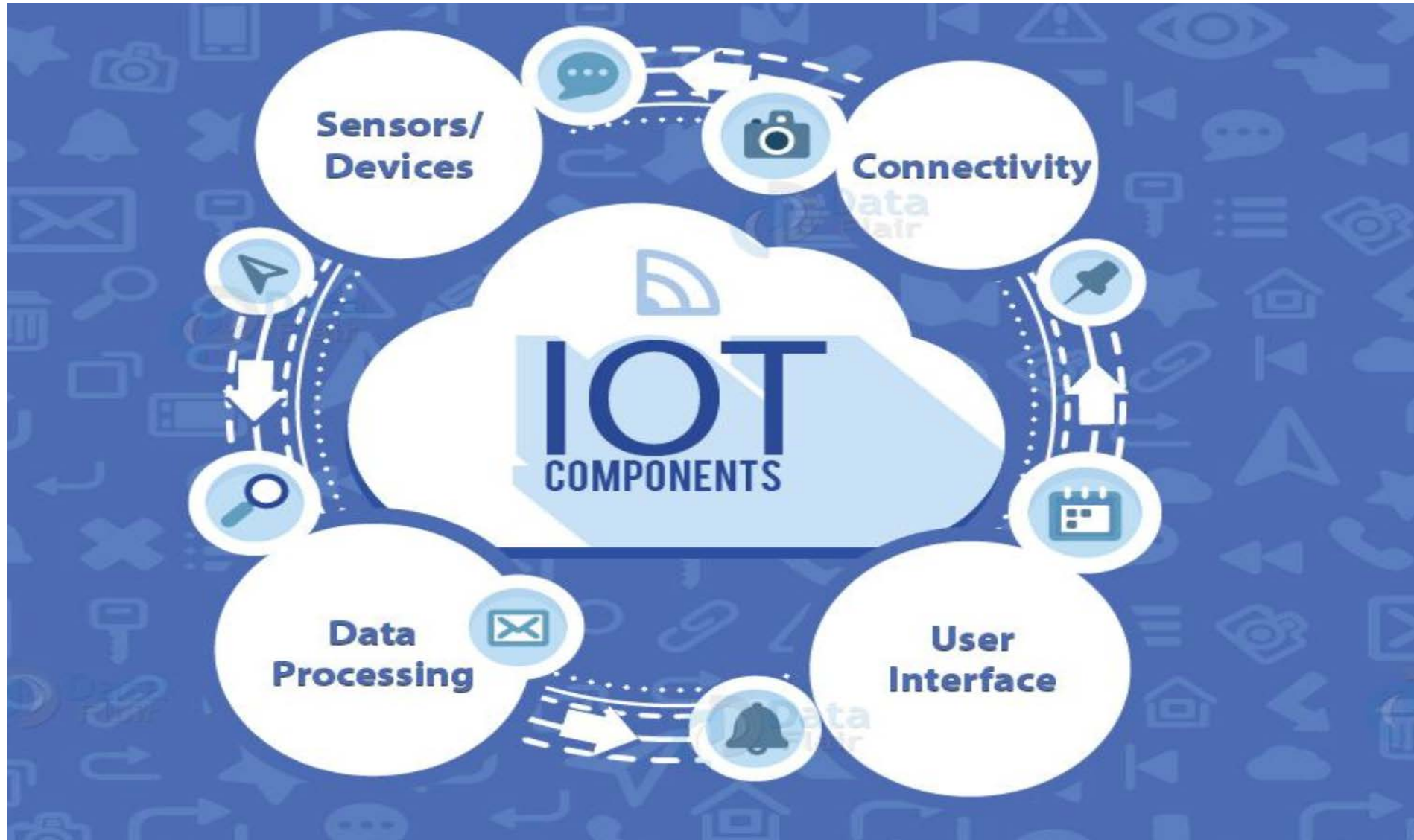
IoT Platform



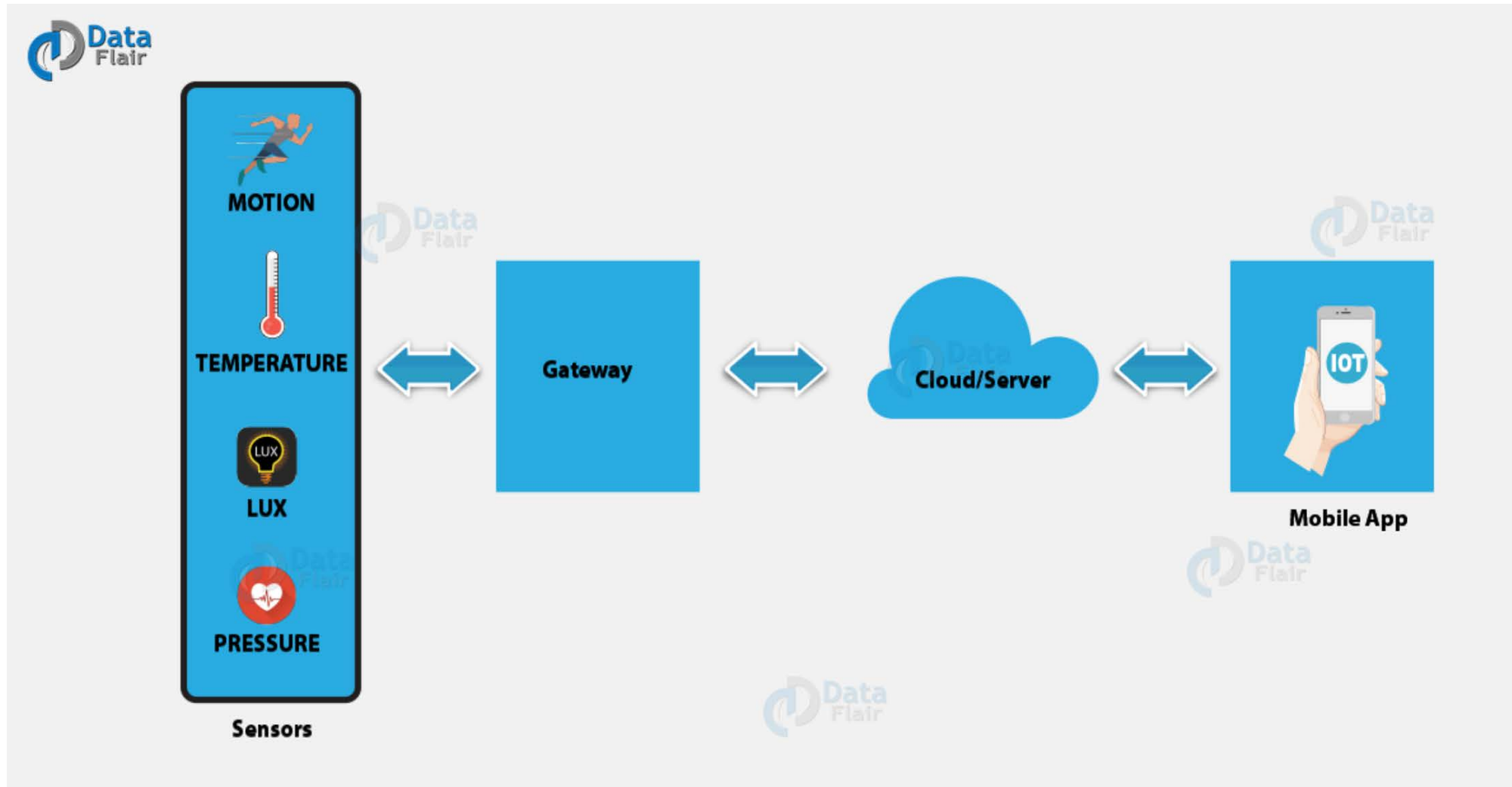
IoT Standards



IoT Components

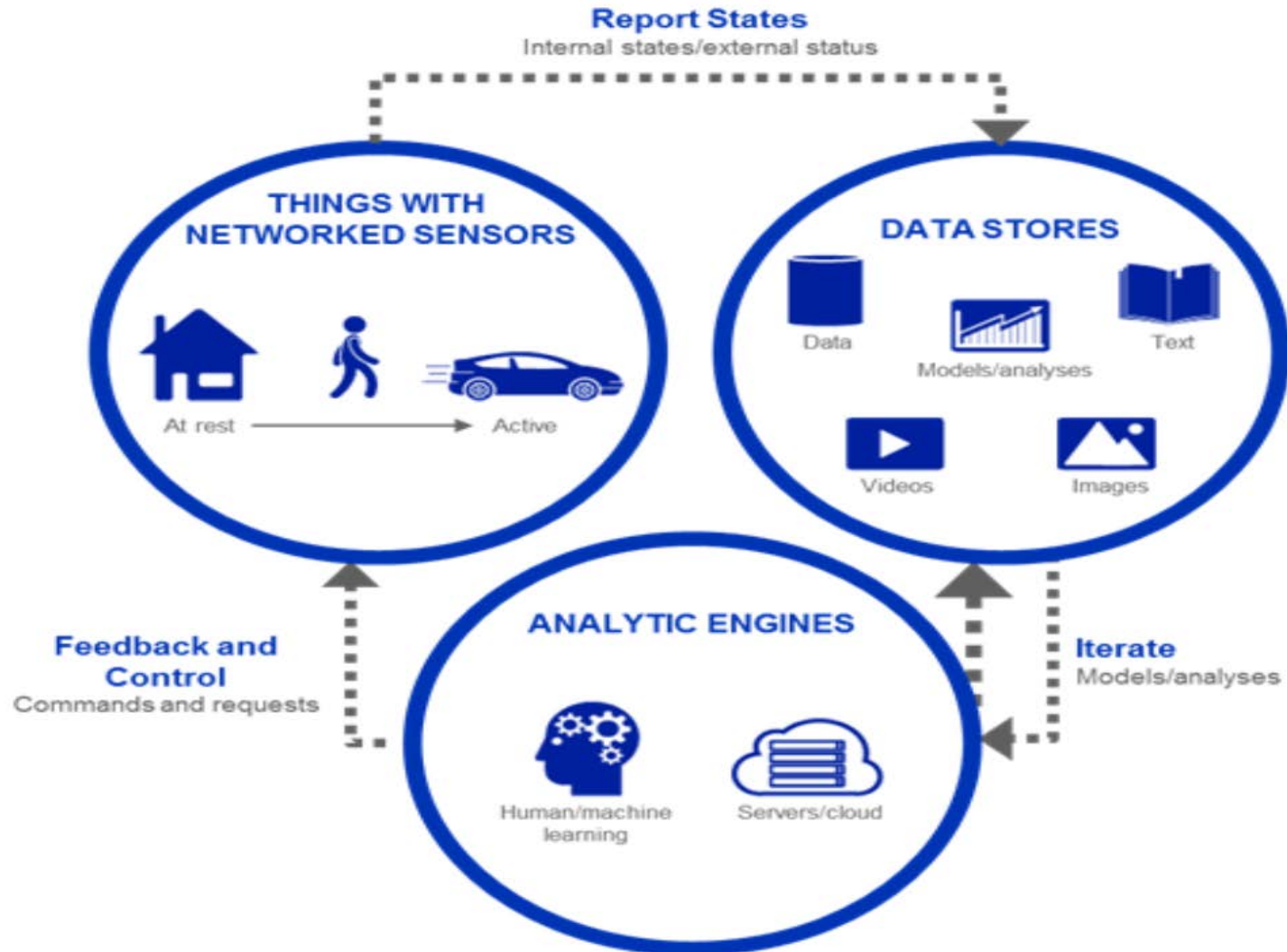


How IoT works ?

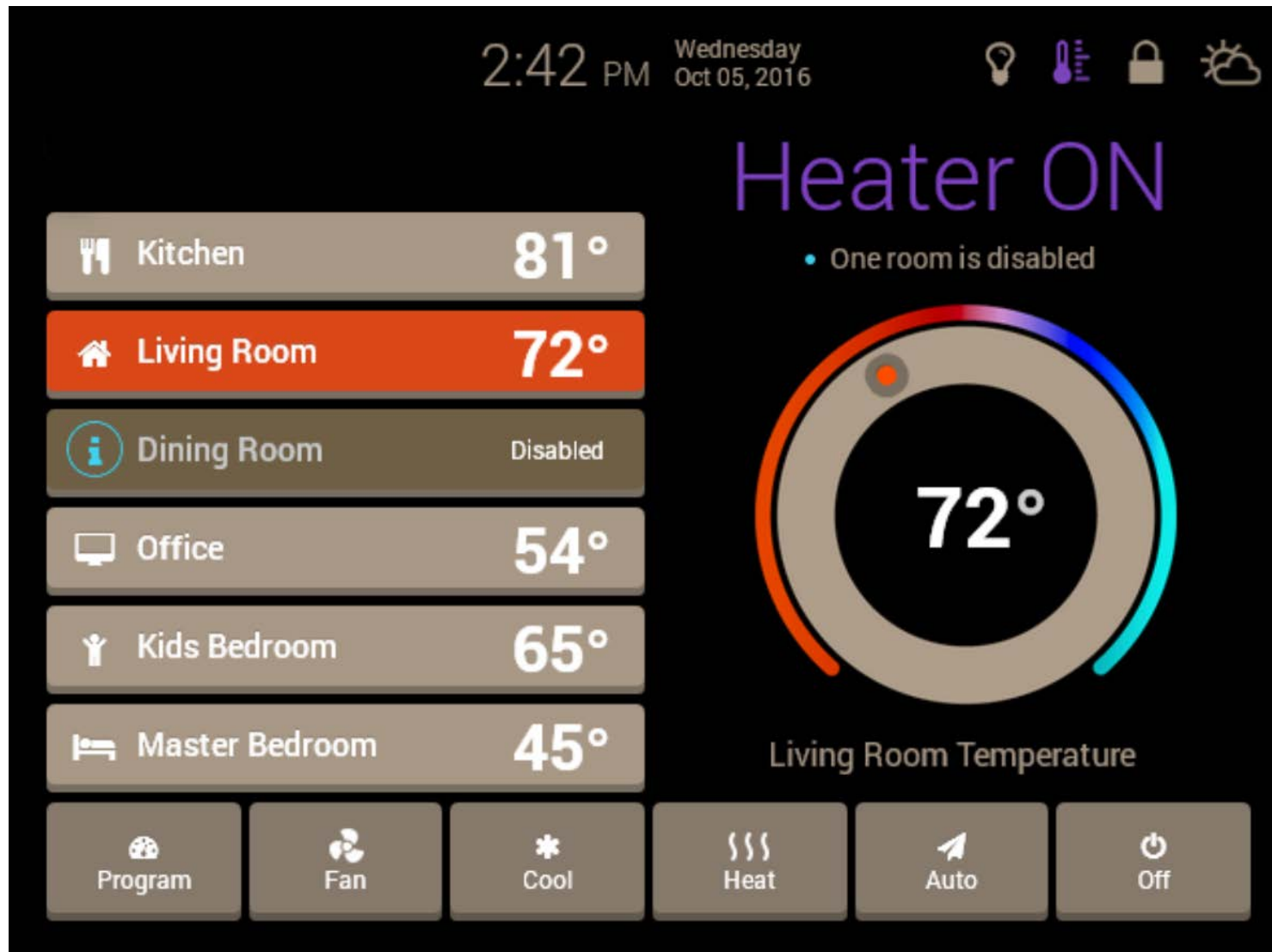


Data Processing

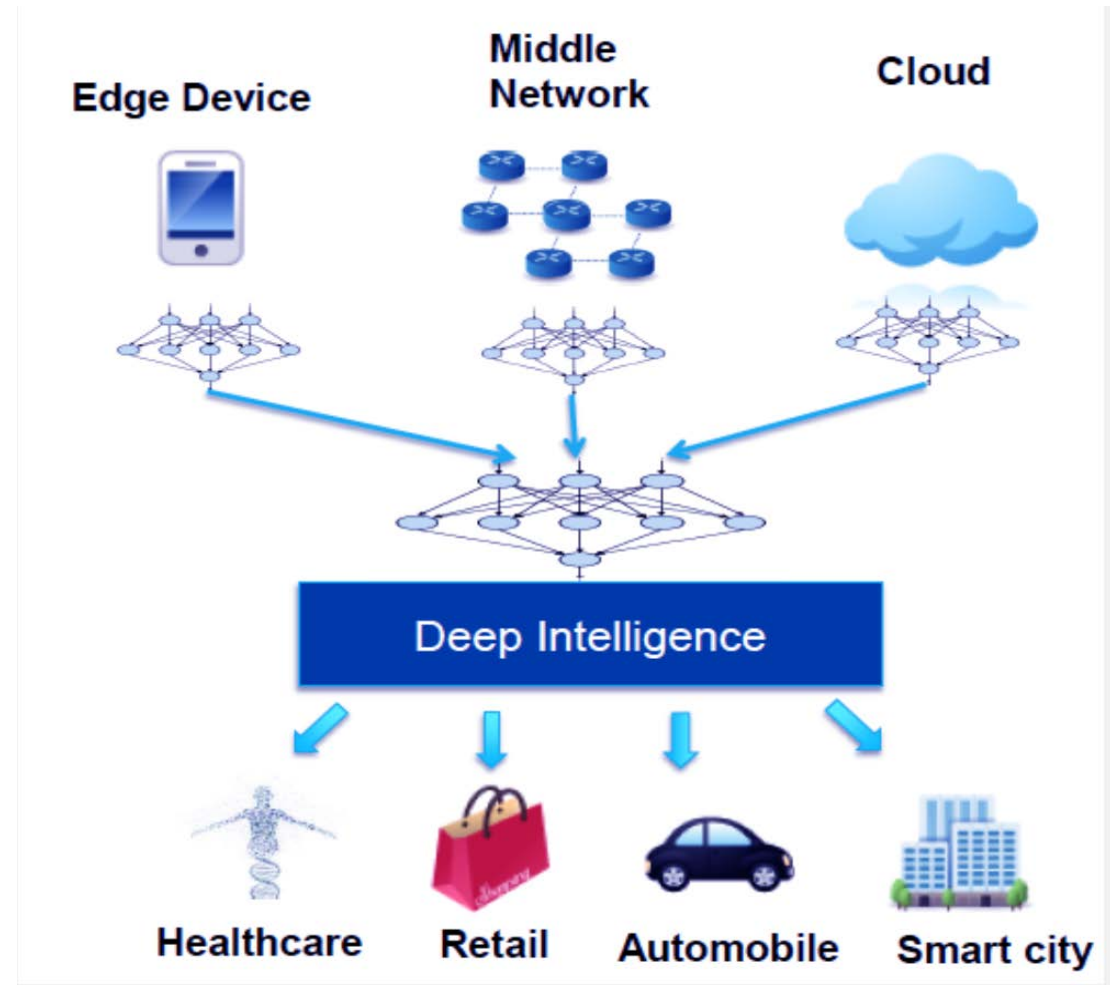
Interaction Between the Three Components of the Internet of Things



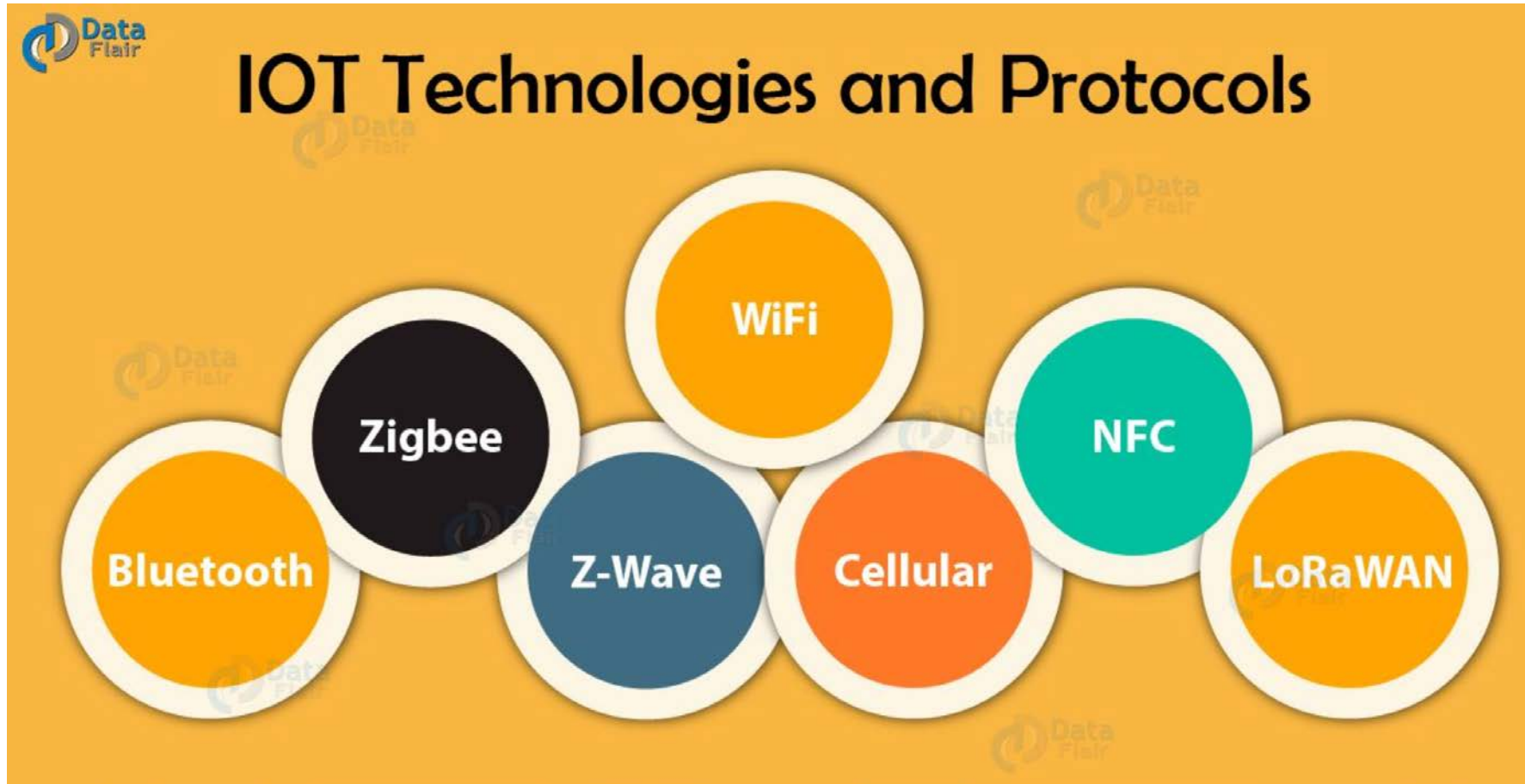
User Interfaces



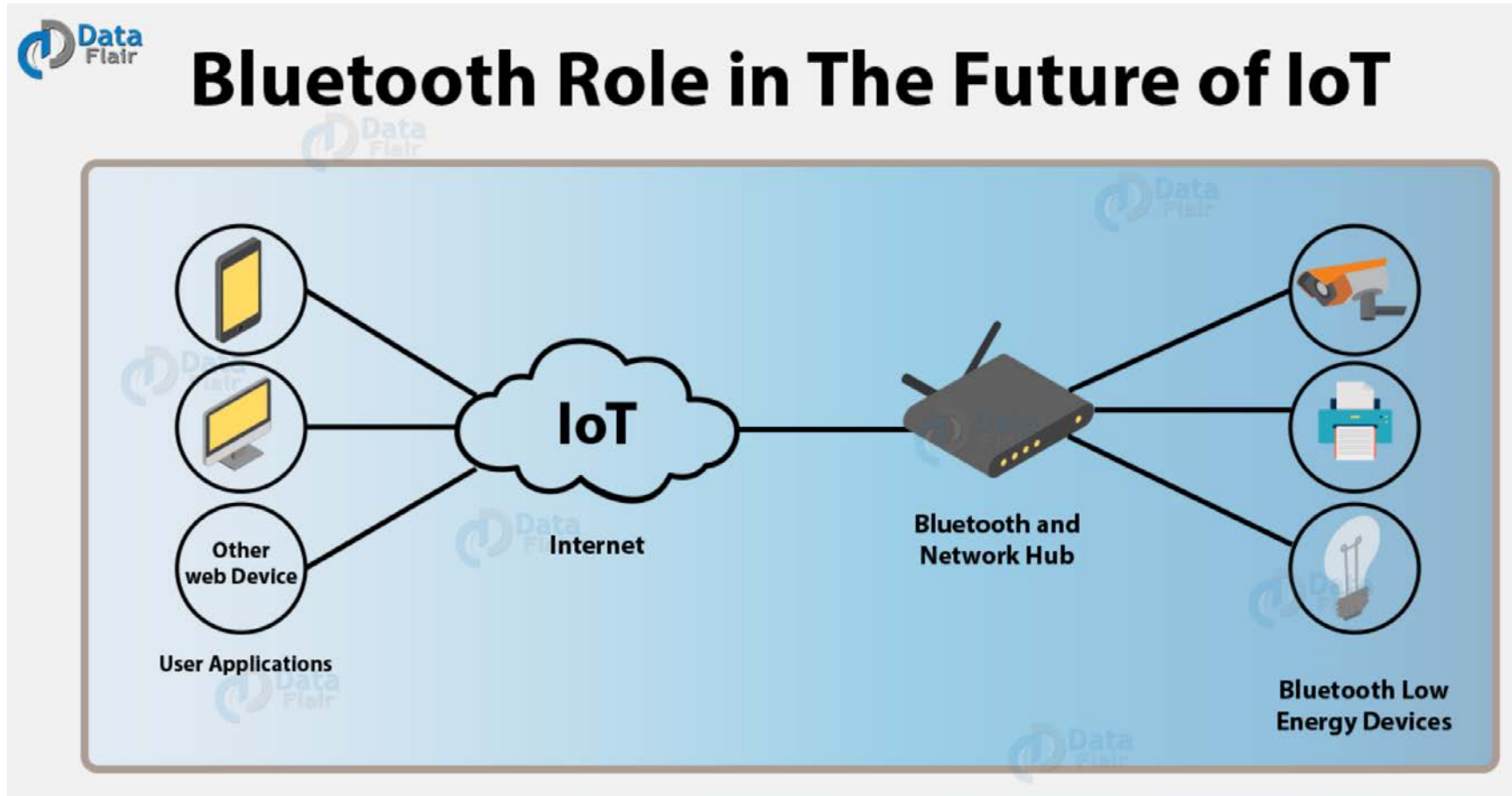
IoT with Big Data & AI



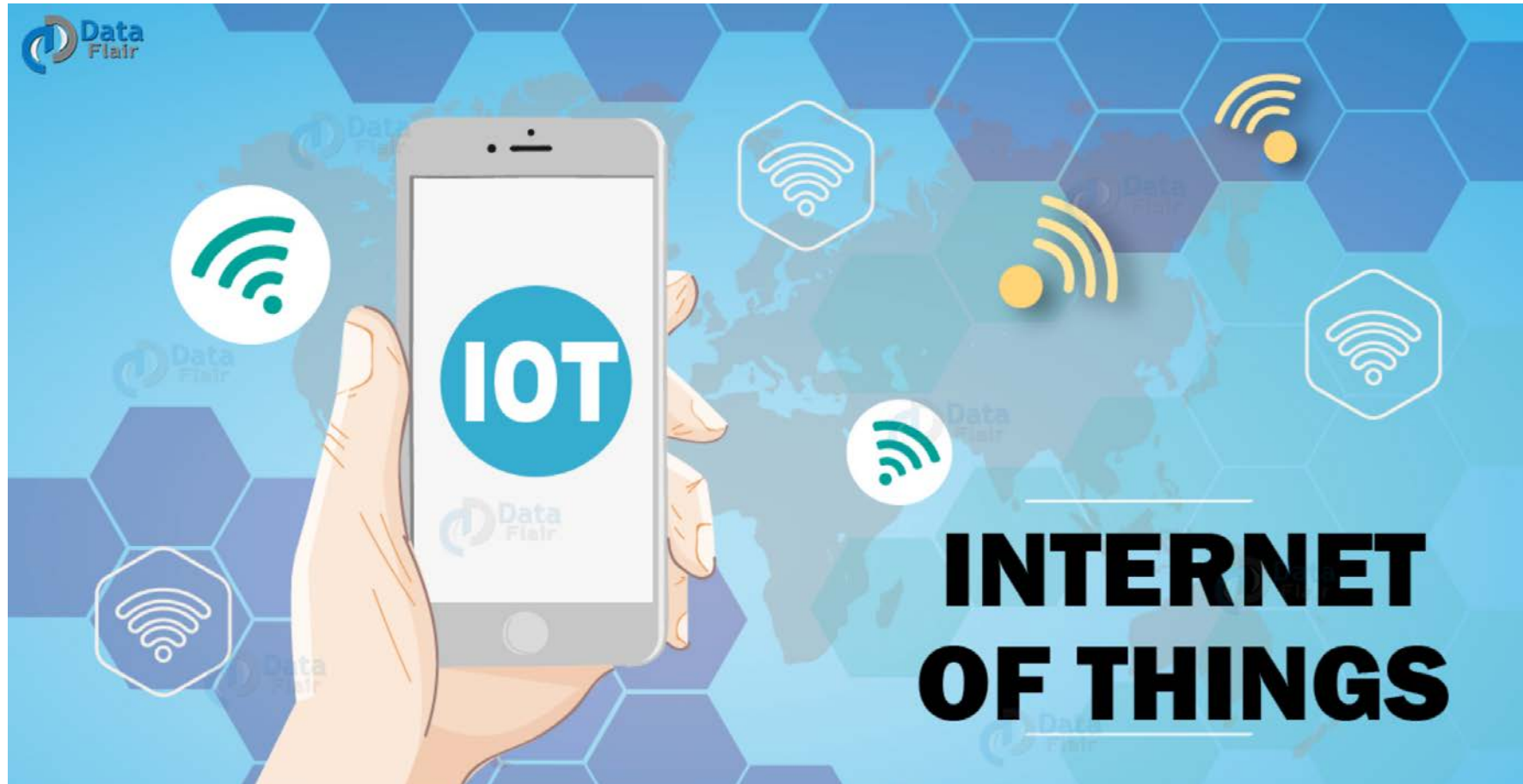
Access Technologies



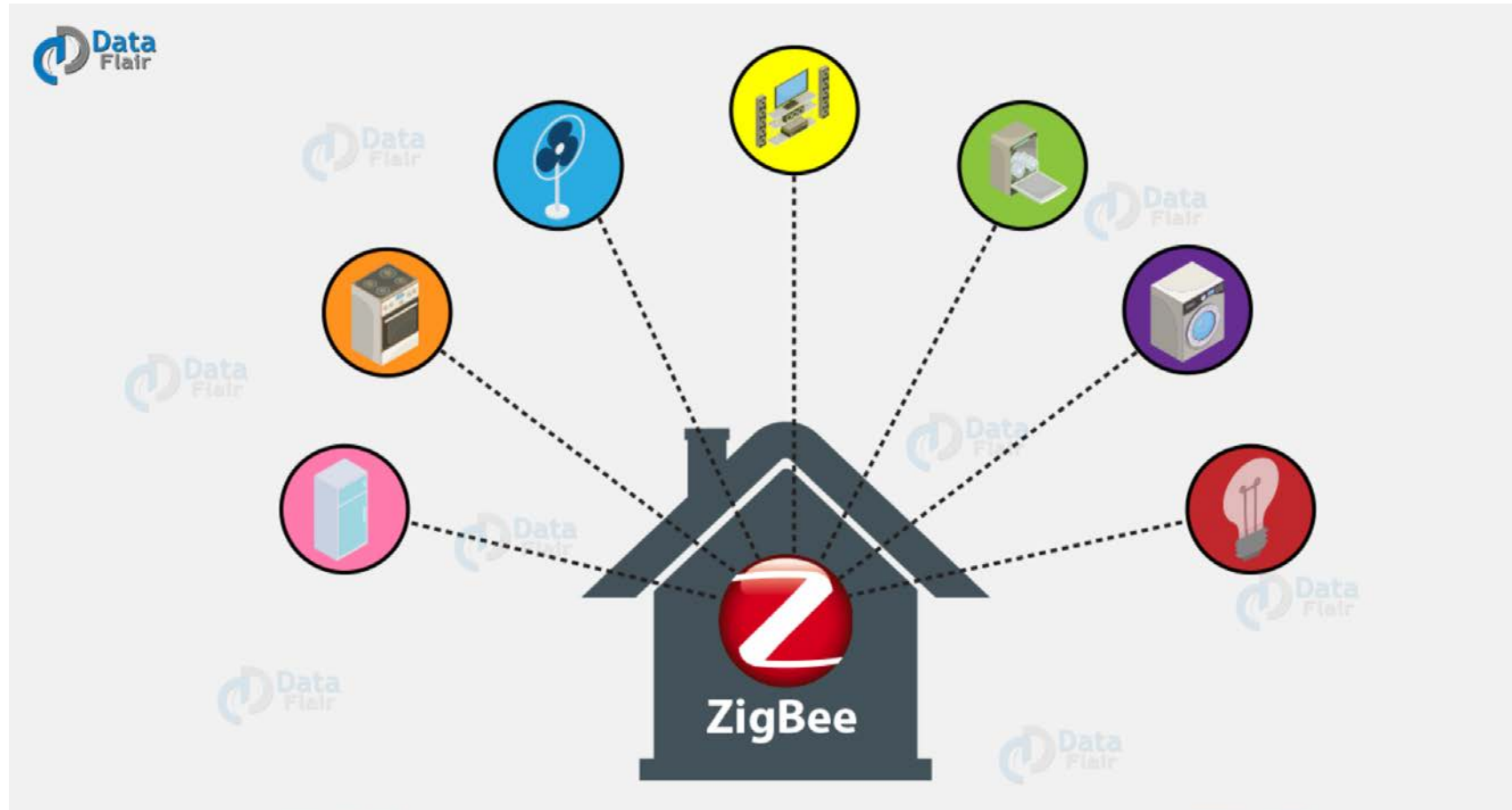
Bluetooth



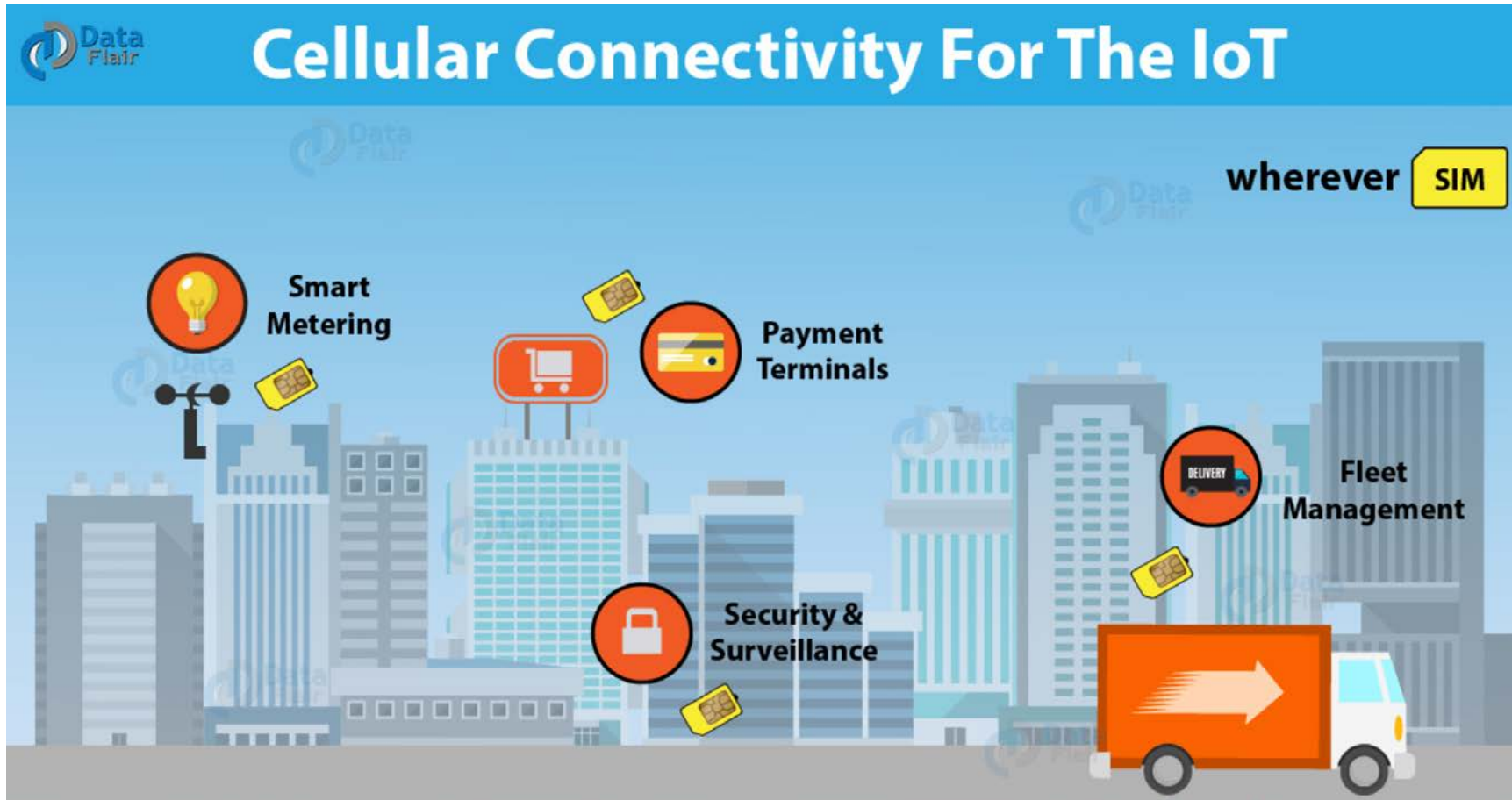
Wi-Fi



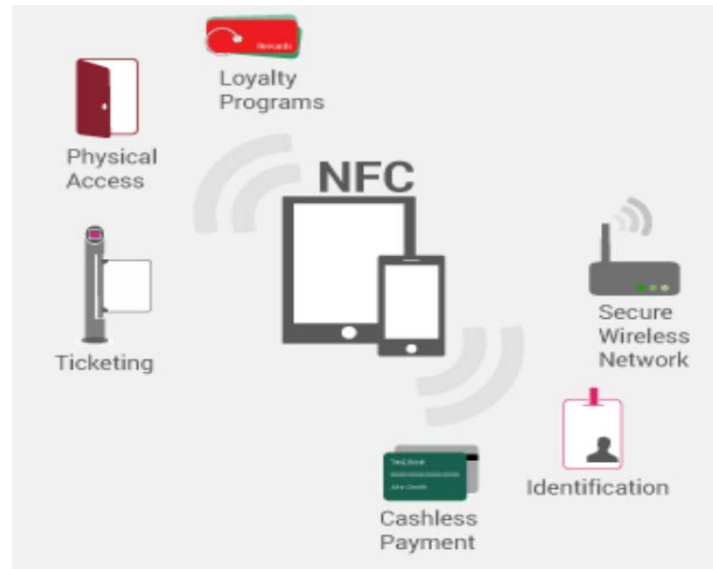
ZigBee



Cellular



Z-Wave/NFC/LoRaWAN



Messaging Protocols



IOT Protocols

**Constrained Application Protocol
(CoAP)**

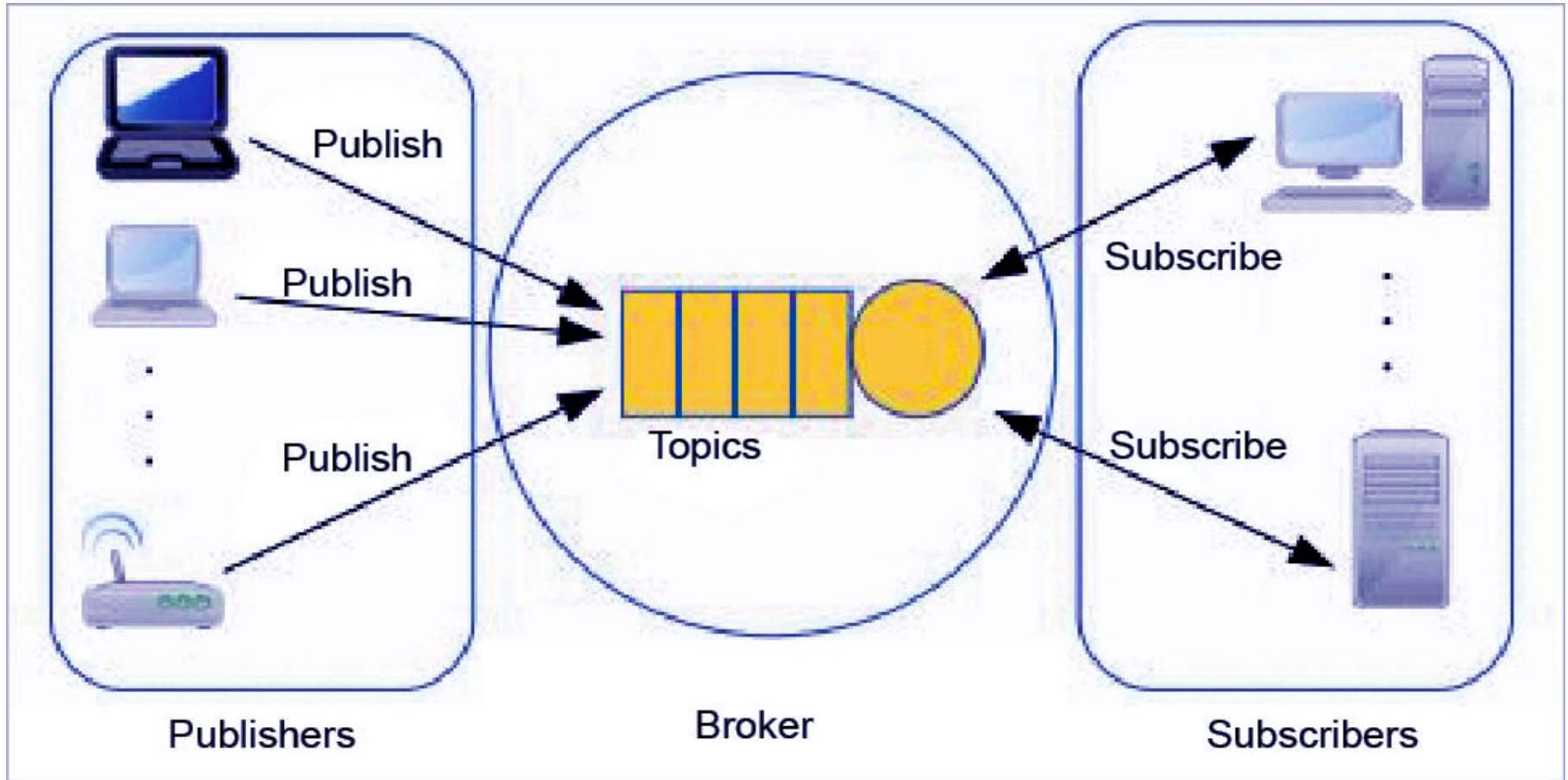
**Message Queue Telemetry
Transport Protocol (MQTT)**

**Advanced Message Queuing
Protocol (AMQP)**

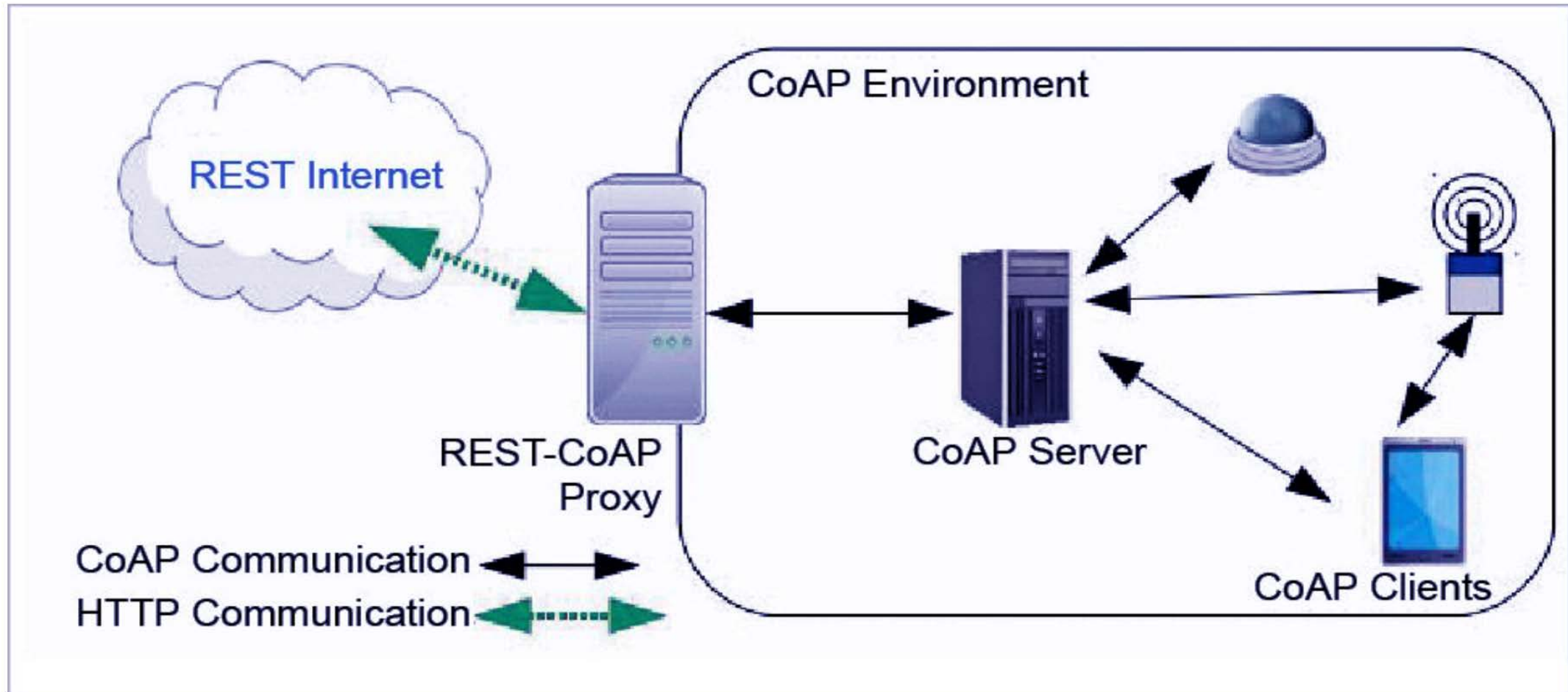
**Data Distribution Service
(DDS)**



Message Queue Telemetry Transport (MQTT)



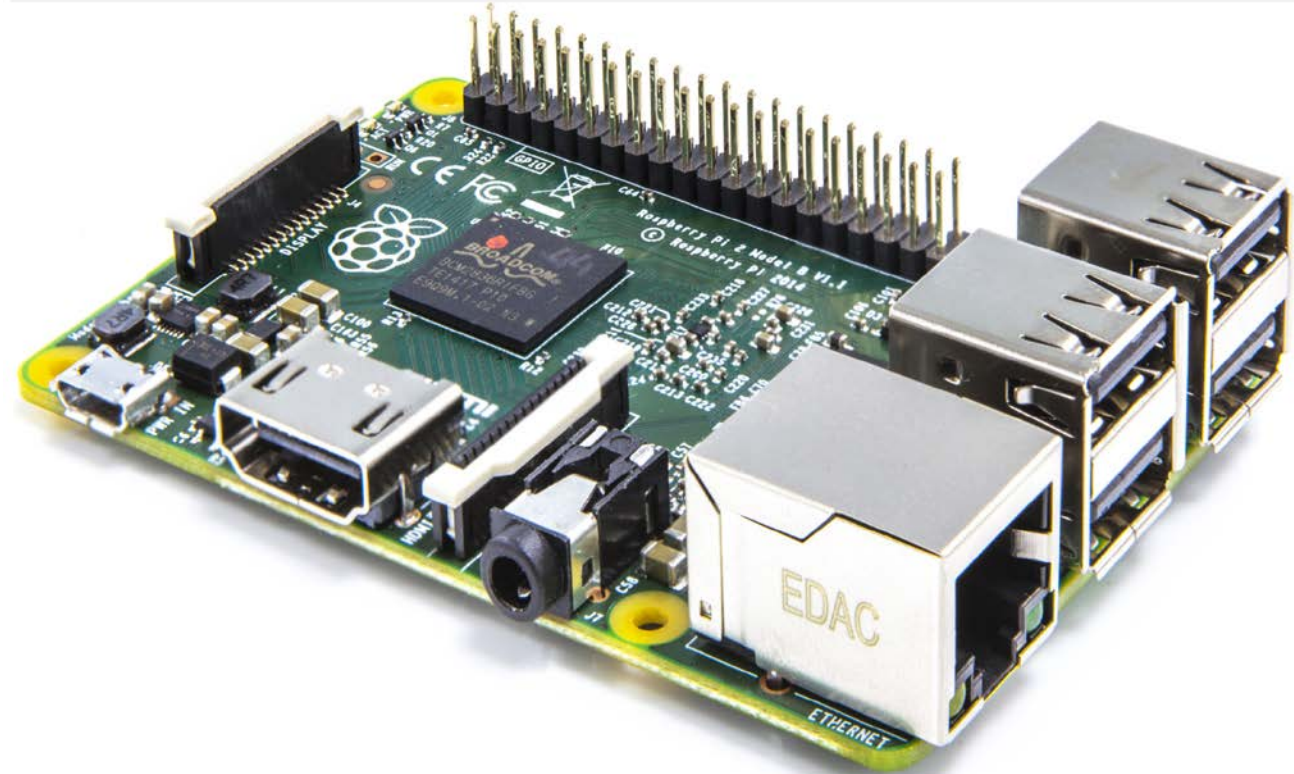
Constrained Application Protocol (CoAP)



IoT Hardware

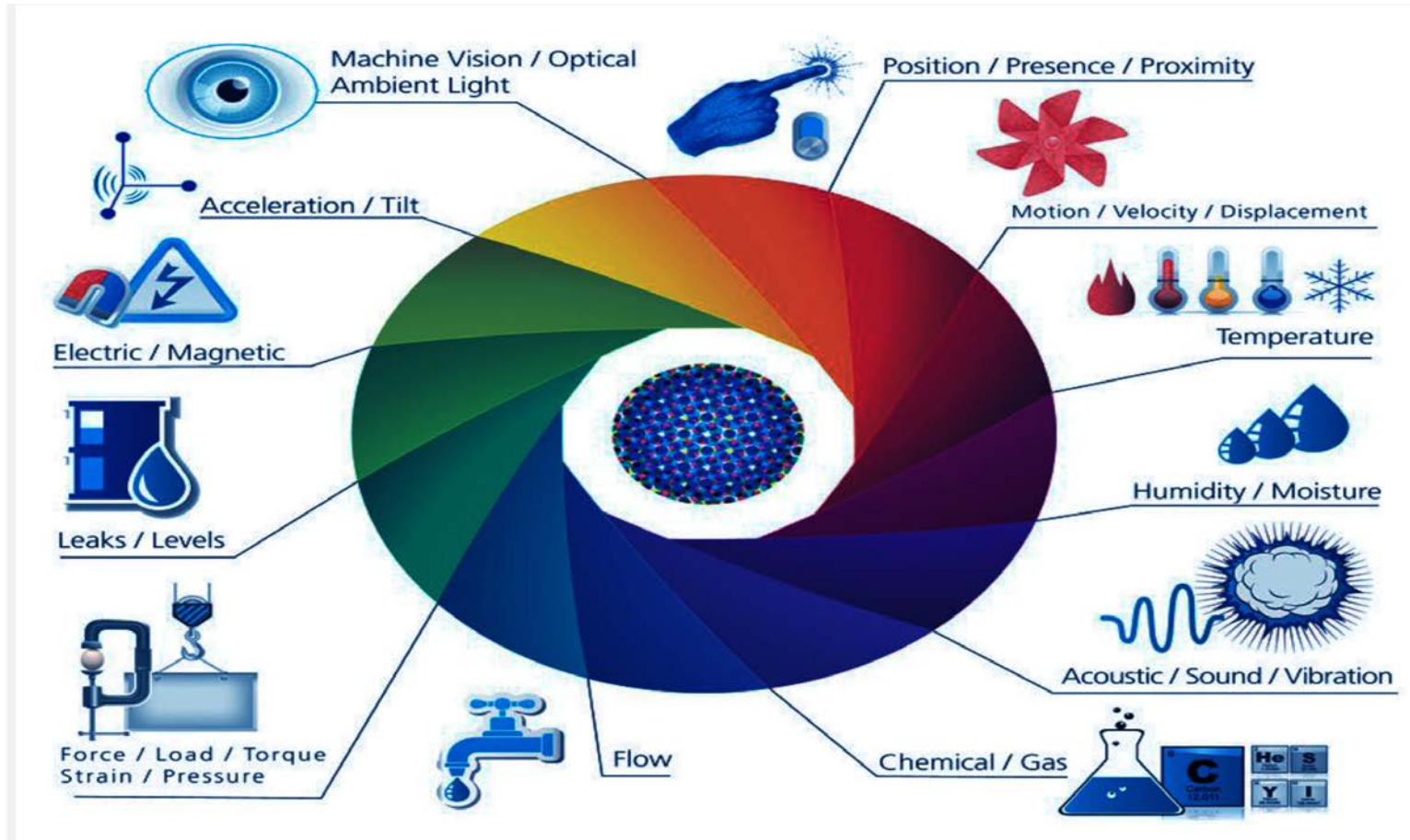


IoT Hardware – Arduino Uno



IoT Hardware – Raspberry Pi 2

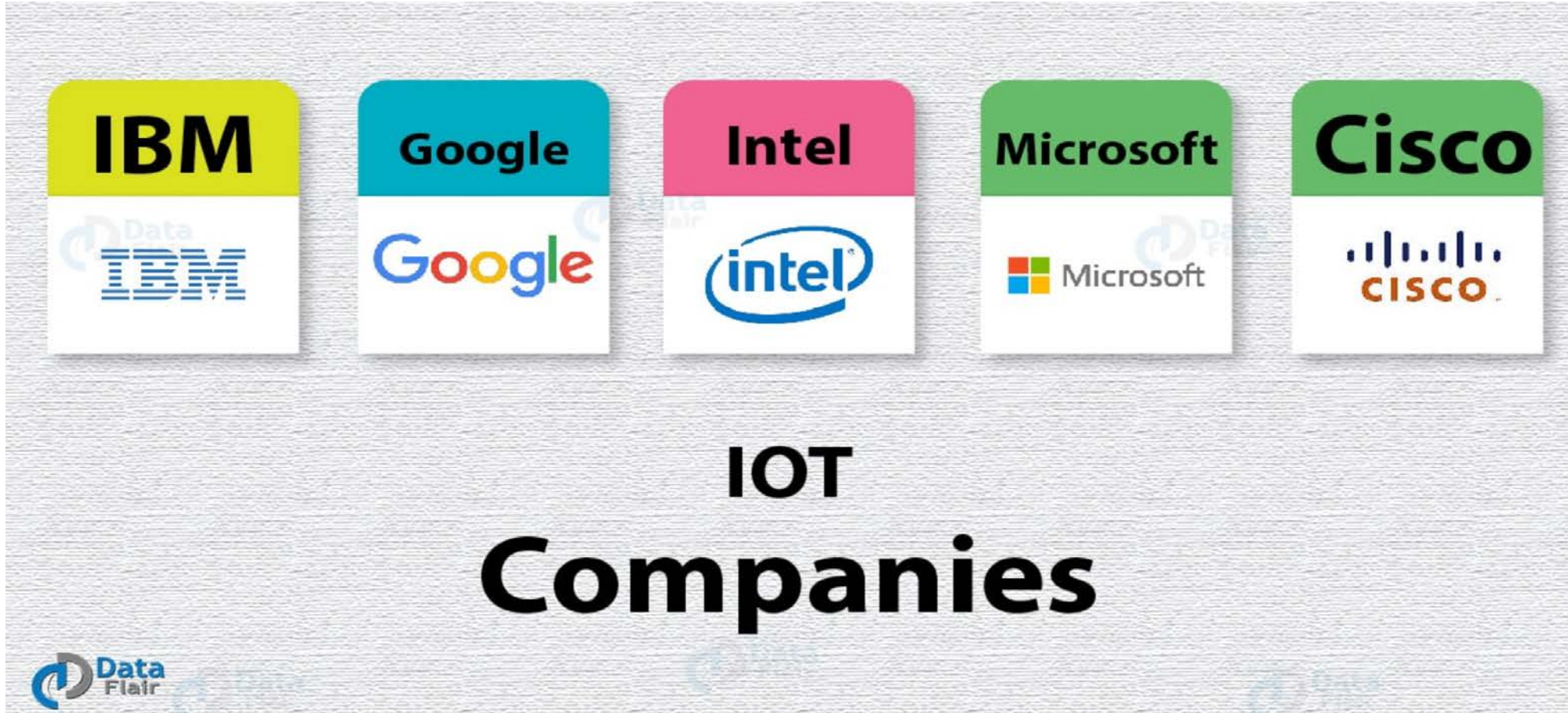
IoT Sensors



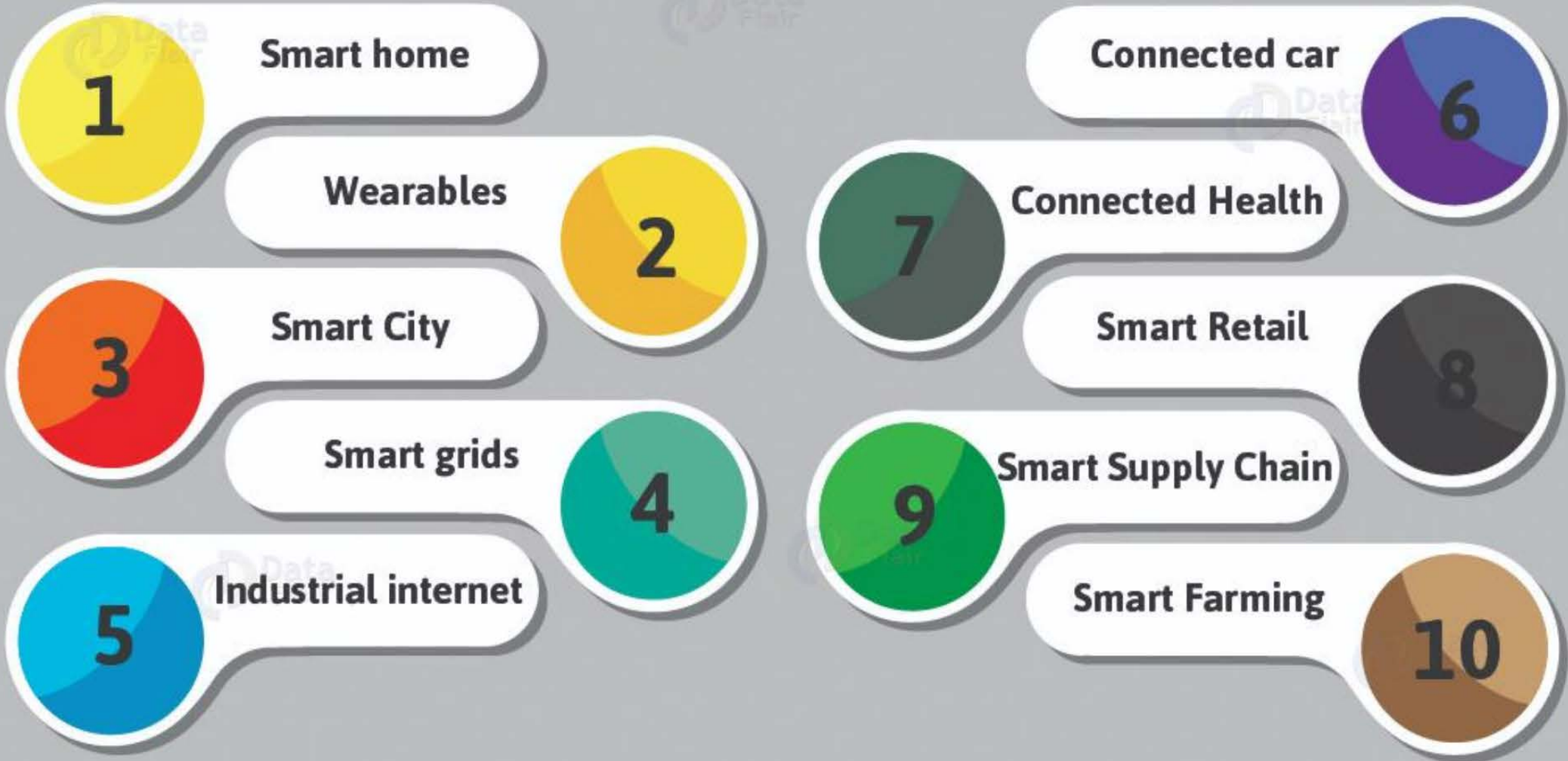
IoT Wearable Devices



IoT Companies



IOT Applications and Usecases



Smart Home



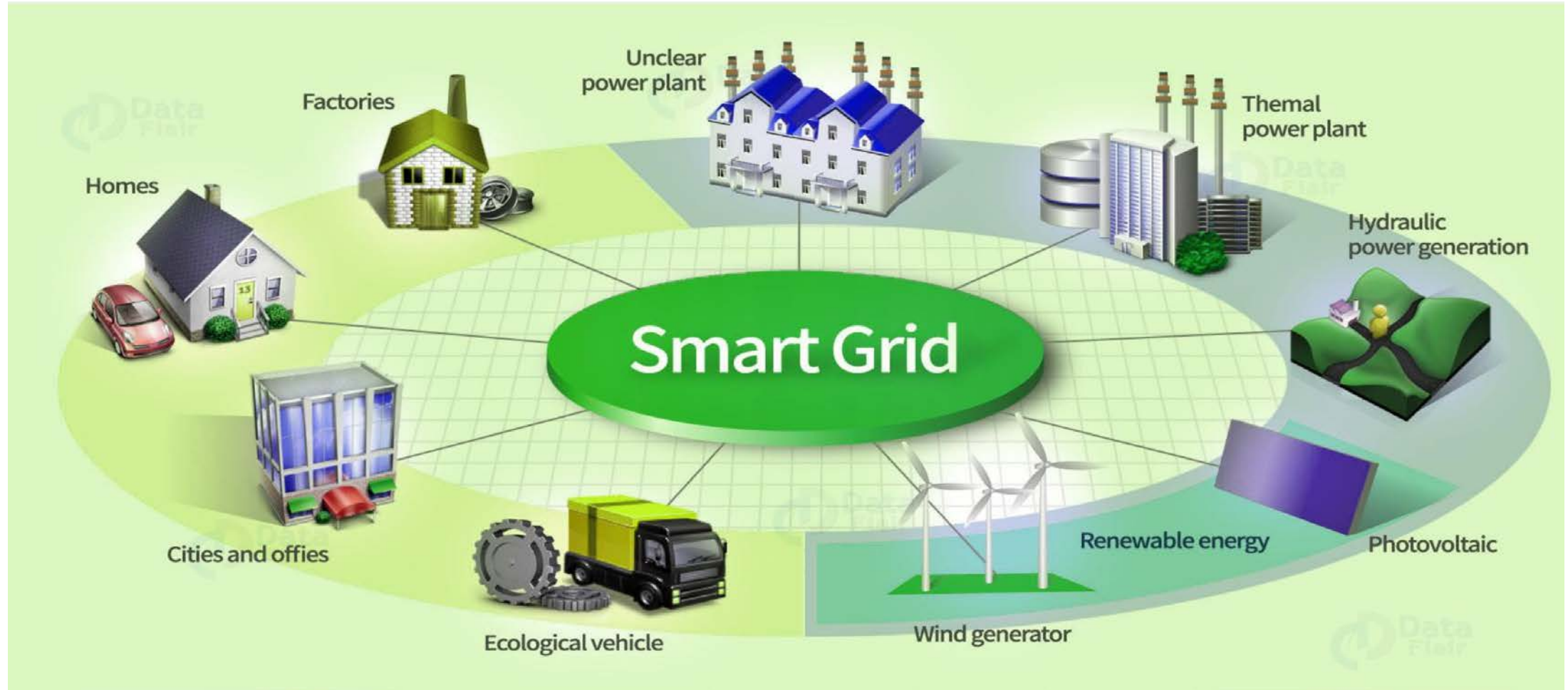
Smart Home (SKT)



Smart City



Smart Grid



Connected Car

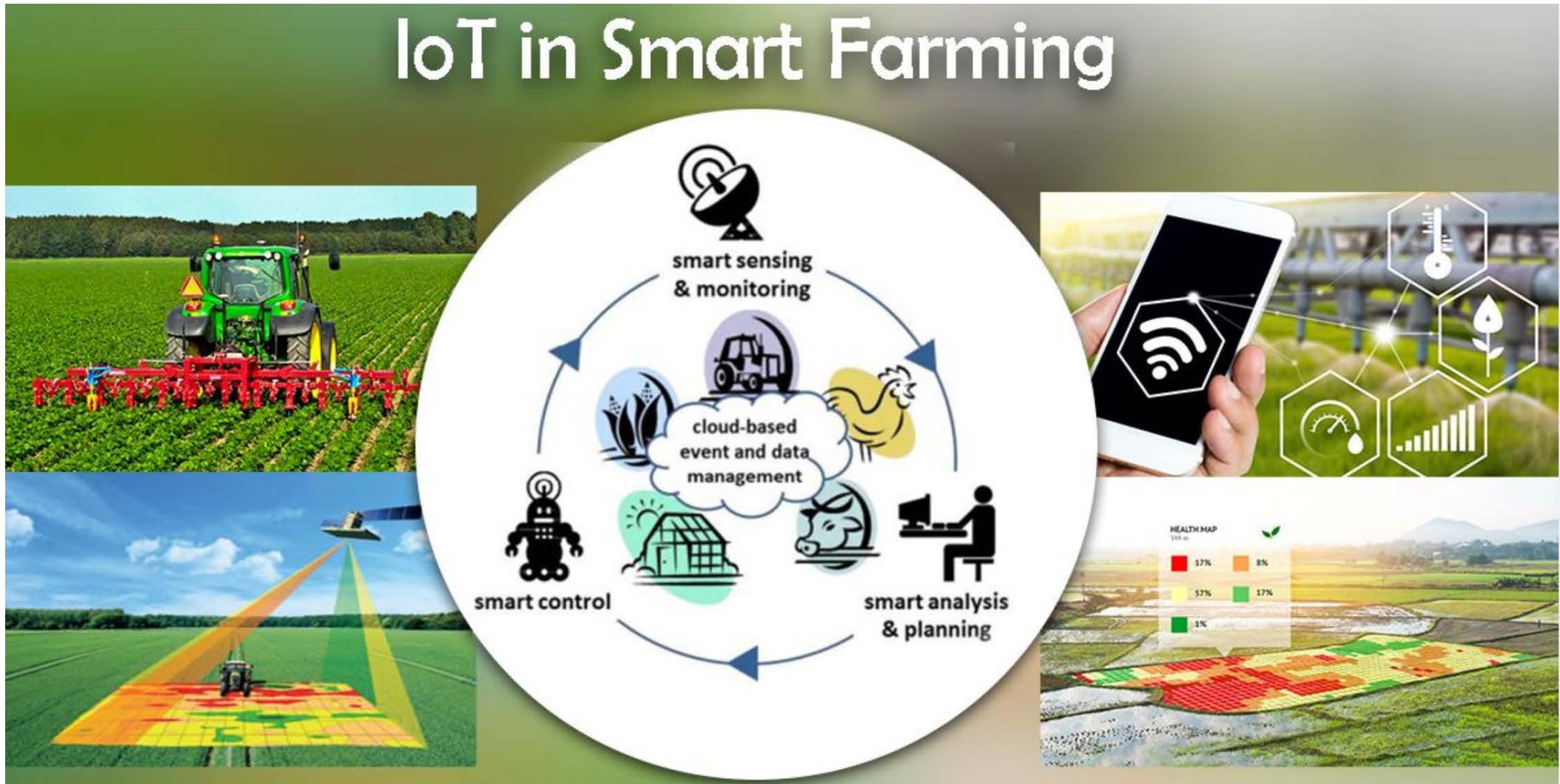


Healthcare



Smart Farm

IoT in Smart Farming



Thanks for
your attention!

Q & A