

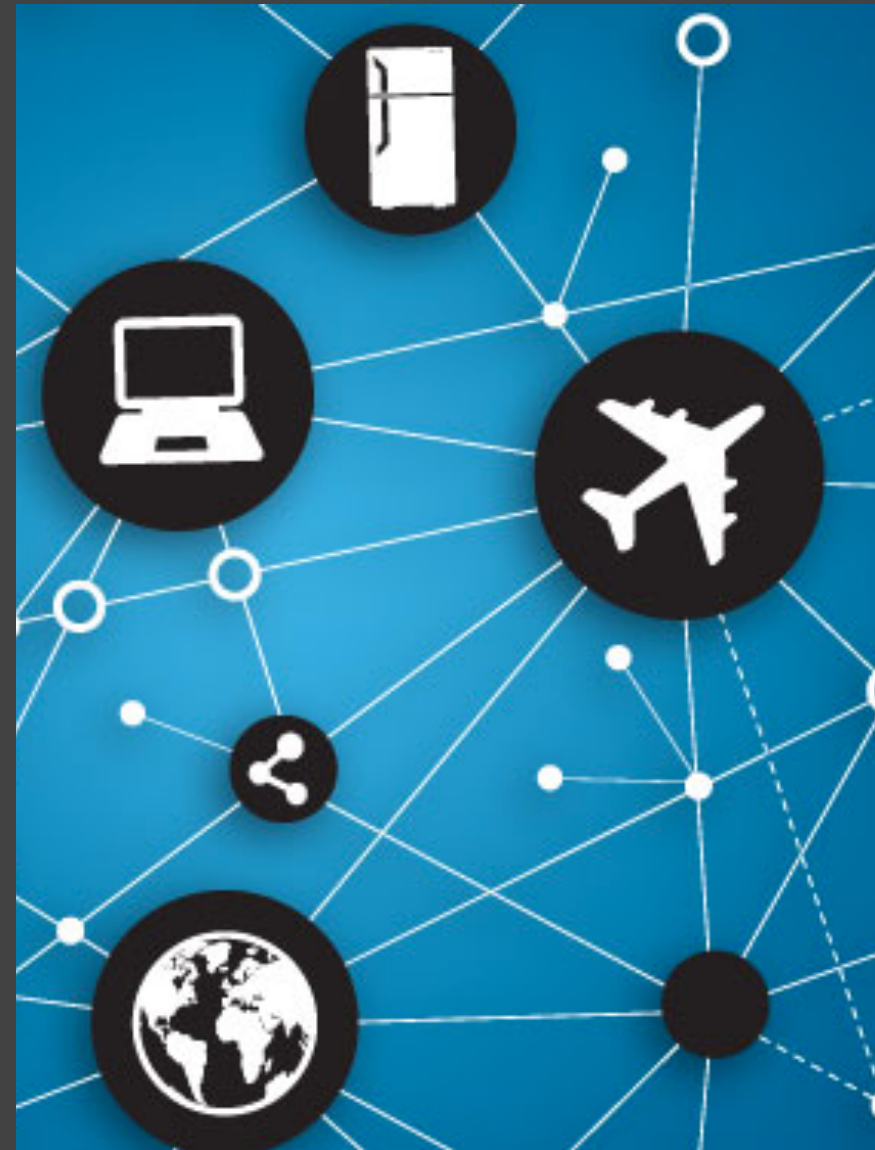
IoT - Big Data

2014.9 - Seonghak Hong (Data Scientist)

R user group in Korea

What is the IoT

- IoT = Internet of Things. Really?
- It means "all things can communicate via Internet"
- It means "all things have communication module (Wifi, Bluetooth)"



What is the Big Data

We already know

- Big Data = Big + Data + Distributed Computing + Analysis
- Input of Big Data = Various and Massive Data
- Output of Big Data = Insights (also called "Value")



Why IoT need Big Data (I)

- Things = Devices (Raspberry Pi, Arduino, ...) with various sensor
- Devices generate a lot of data from sensors
 - Temperature, Air Quality, Movements, GPS, Pressure, Images, ...
- Devices have to store the data somewhere else

Device → Big Data

Why IoT need Big Data (2)

- IoT data also have to be analyzed
- Massive data analysis are needed for getting insights
- Realtime analysis is also needed for instantaneous
- Big data do it

Device → Big Data Analysis → Insights

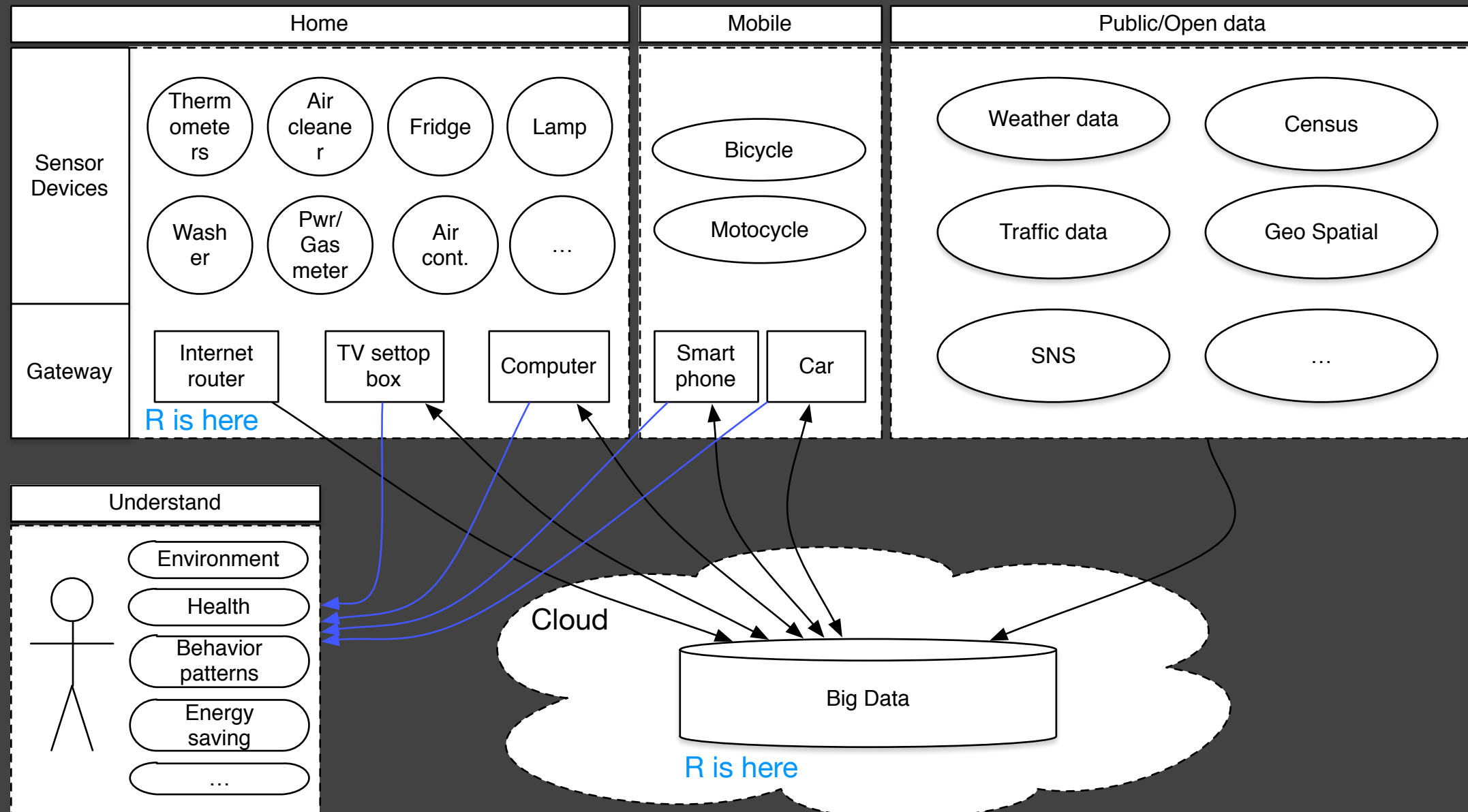
Problems of IoT device

- Electric power
 - Battery? Adaptor?
 - Low energy technology is solution
- Communication channel
 - How can communicate without wire?
 - Wifi and Bluetooth are solutions

Use cases of IoT

- Smart home care
- Smart building care
- Smart health care
- Smart retail shop care
- and so on

Smart home care



Forecast

- IoT need Big Data
- Big Data need analysis
- R is most powerful analysis tool
 - R will be used more widely