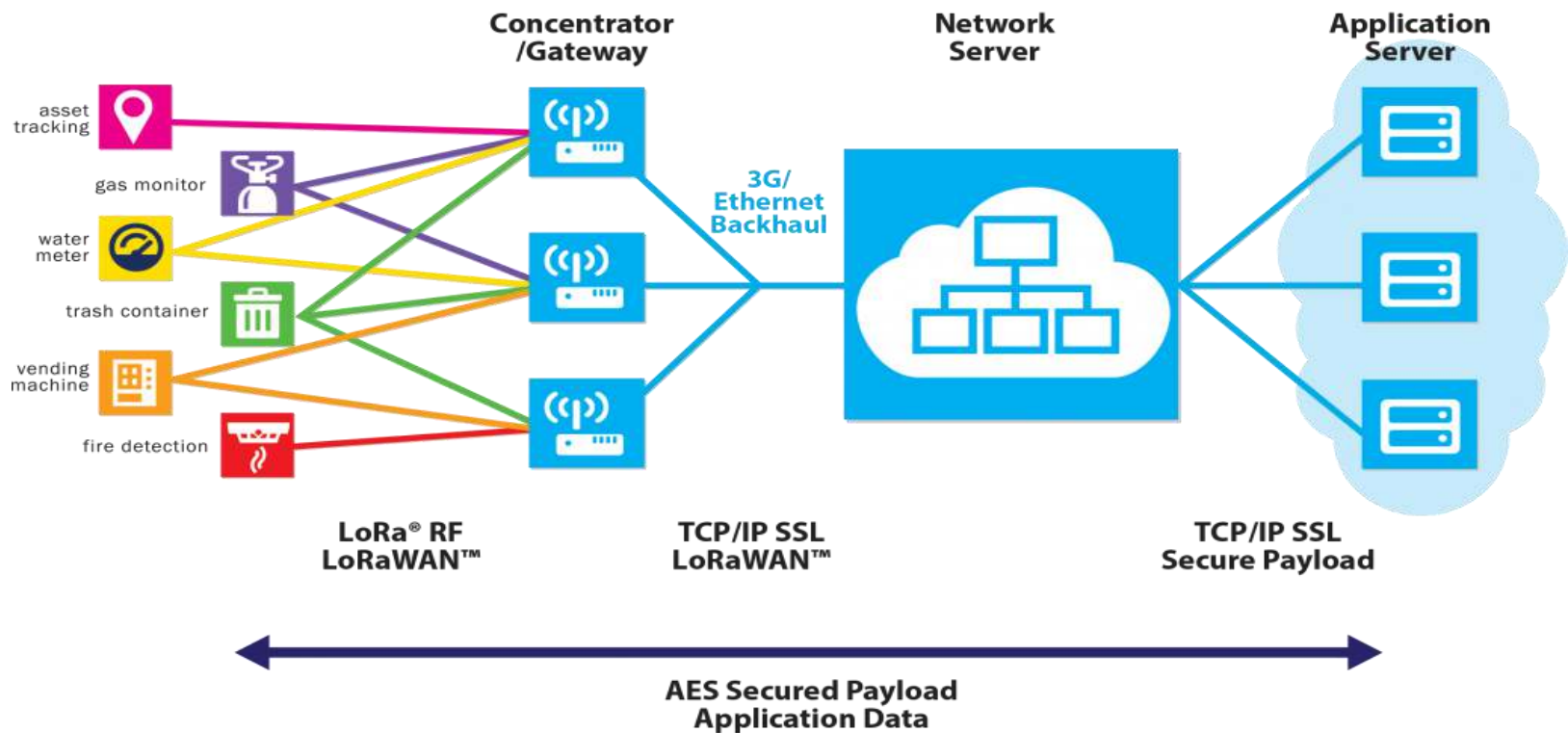




LoRaWAN™

LoRaWAN™

The LoRaWAN specification is a Low Power, Wide Area (LPWA) networking protocol designed to wirelessly connect battery operated 'things' to the internet in regional, national or global networks, and targets key Internet of Things (IoT) requirements such as bi-directional communication, end-to-end security, mobility and localization services



APPLICATIONS

- LOW Power IOT
- Smart Metering(water, gas, Energy)
- Smart Lighting
- Smart Parking
- Healthcare solutions
- Smart Garbage management
- Smart Municipality
- Smart Building Automation
- Smart City applications
- Smart Agriculture
- Smart Villages



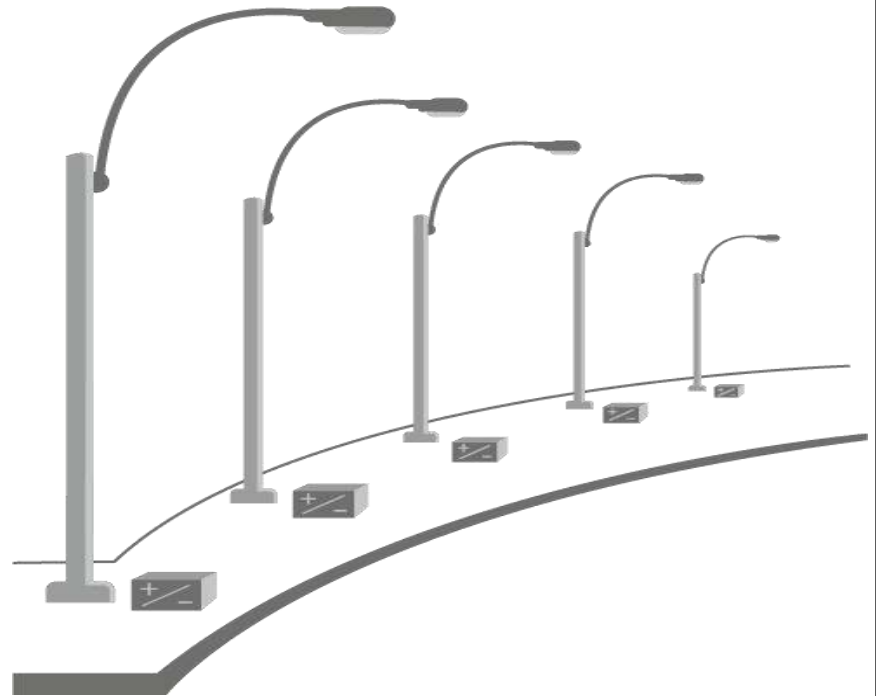
Smart Metering (water, Gas, Electric)

- Metering
- Usage report
- Alerts
- Hourly, Daily and monthly updates of usage.
- Battery powered
- More than 8Years lifetime.
- Long range >500meters <5km in urban



Smart Lighting

- Street lighting
- ON/Off through wireless
- Time Scheduling
- Day Scheduling
- Holiday Scheduling
- Power Metering
- Alerts
- Long range more than 1km to 5km



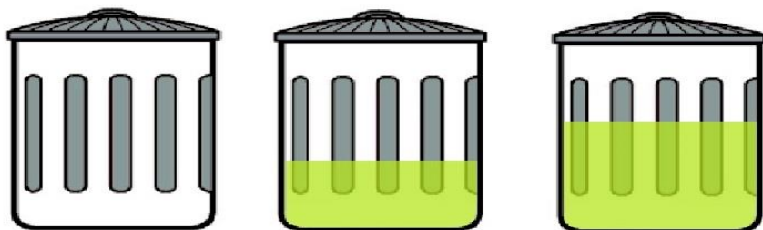
Smart Parking

- Vehicle Detection through wireless
- Commercial parking solutions
- City wide parking sensors under one network
- Battery powered sensors
- Smart sensor-5years lifetime
- Solar powered-40 years lifetime
- In building 500 meters and outdoor >2km



Smart waste Management

- Wireless waste management
- Level detection of waste bin
- Alert for garbage collection
- Smart municipality major application
- Eco-friendly inbuilt sensor
- Battery powered for long range
- >1km to <5km in dense Urban.



Smart Municipality

- Smart water metering
- Smart gas metering
- Smart Lighting
- Smart energy metering
- Smart Parking
- Smart garbage collection
- Temperature and humidity
- GPS Tracking without SIM or satellite
- Atmosphere Maintenance
- Single stage monitoring
- CCTV camera health monitoring

Smart Retail



Smart Mobility



Smart Agriculture

- Automated motors
- Agriculture drone mapping
- Auto detection of insects and updates
- Crop and plants monitoring
- Water health management for fish and prawn ponds
- Soil moisture updates
- Crop yield results



Conclusion

LoRaWAN is a long range low power wide area network communication protocol with bidirectional communication.

Wide area of applications for private and public network operators

Low bandwidth communication with a throughput of 0.3kbps to 50 Kbps.

Long-range wireless IOT protocol.

SmartCity





**THANK
YOU!**



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