

Integration of Cloud Computing with

INTERNET OF THINGS

IOT

Tzu-Man Wu
Sivaporn Homvanish



Internet of things: Overview

Gather and send
information

Receiver and act
on information

Do both

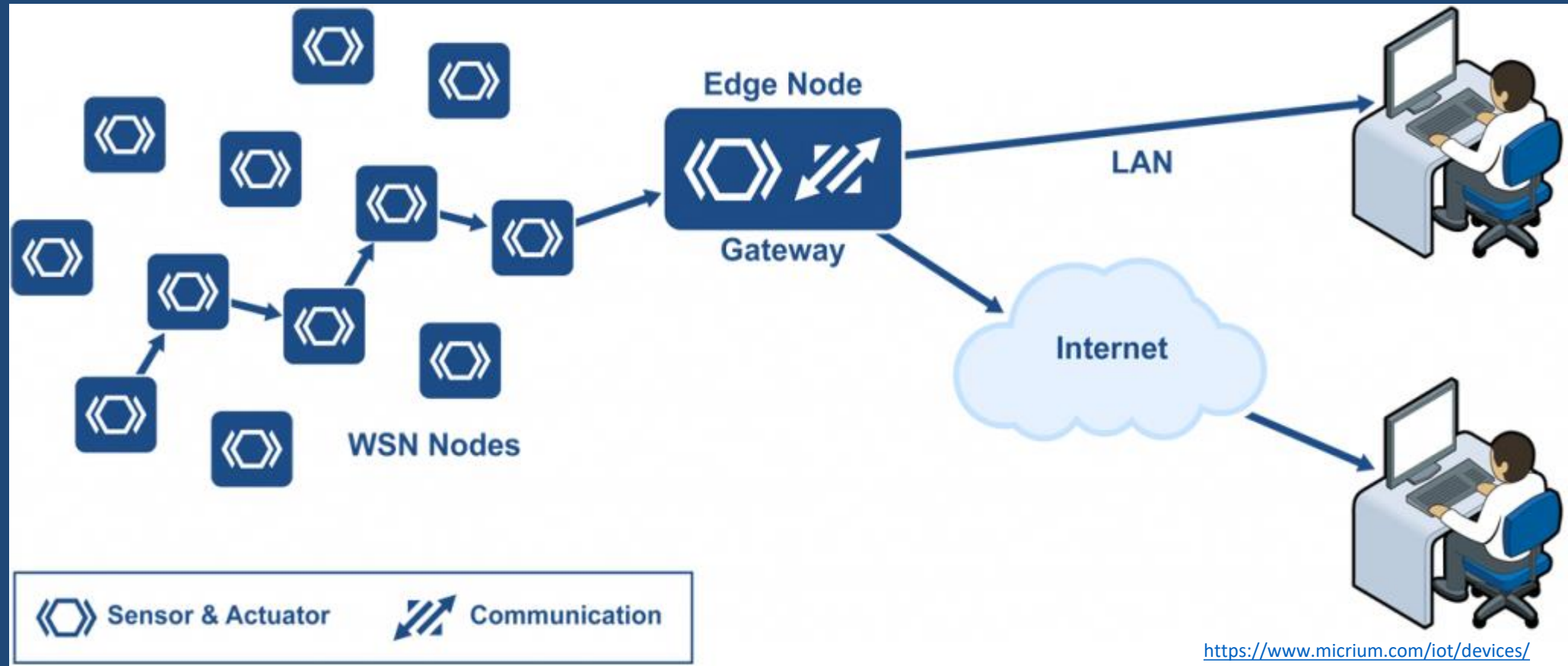
Internet of things: Architecture

Local IoT
architecture

Cloud IoT
architecture

Hybrid
architecture





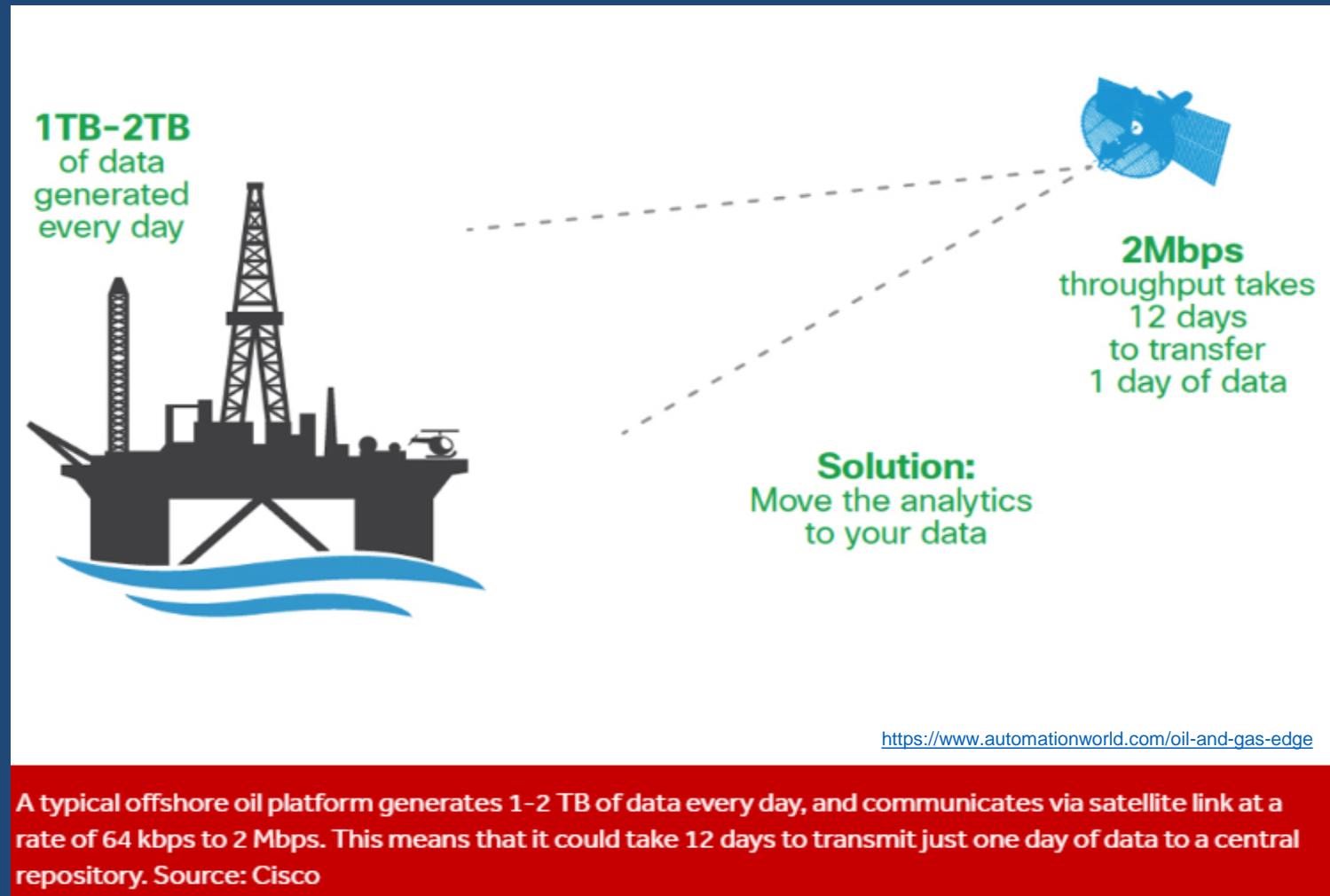
Wireless sensor network (WSN) installed in a factory, connected to the Internet via a gateway

Internet of things: Architecture

Local IoT
architecture

Cloud IoT
architecture

Hybrid
architecture

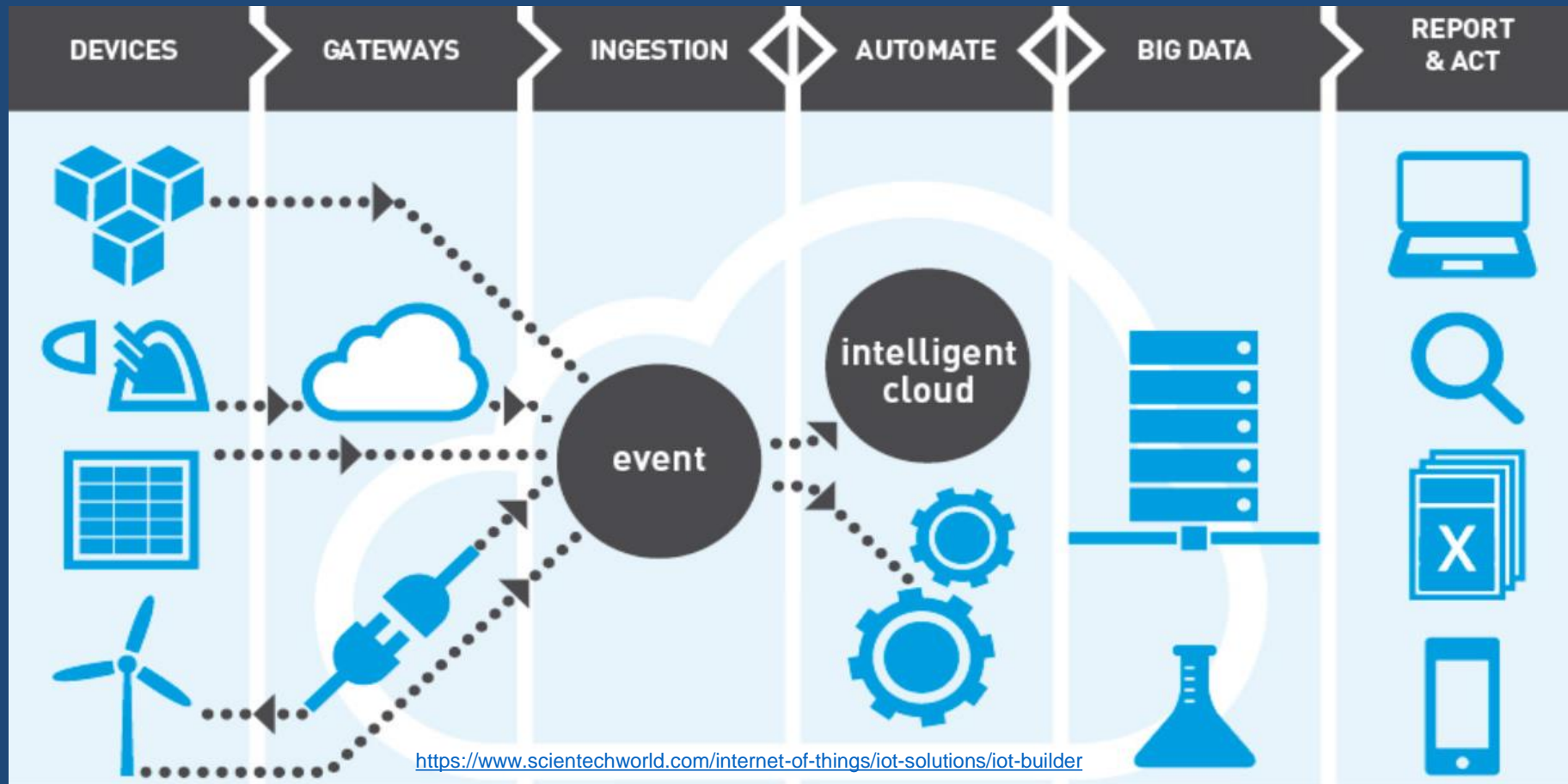


Internet of things: Architecture

Local IoT
architecture

Cloud IoT
architecture

Hybrid
architecture



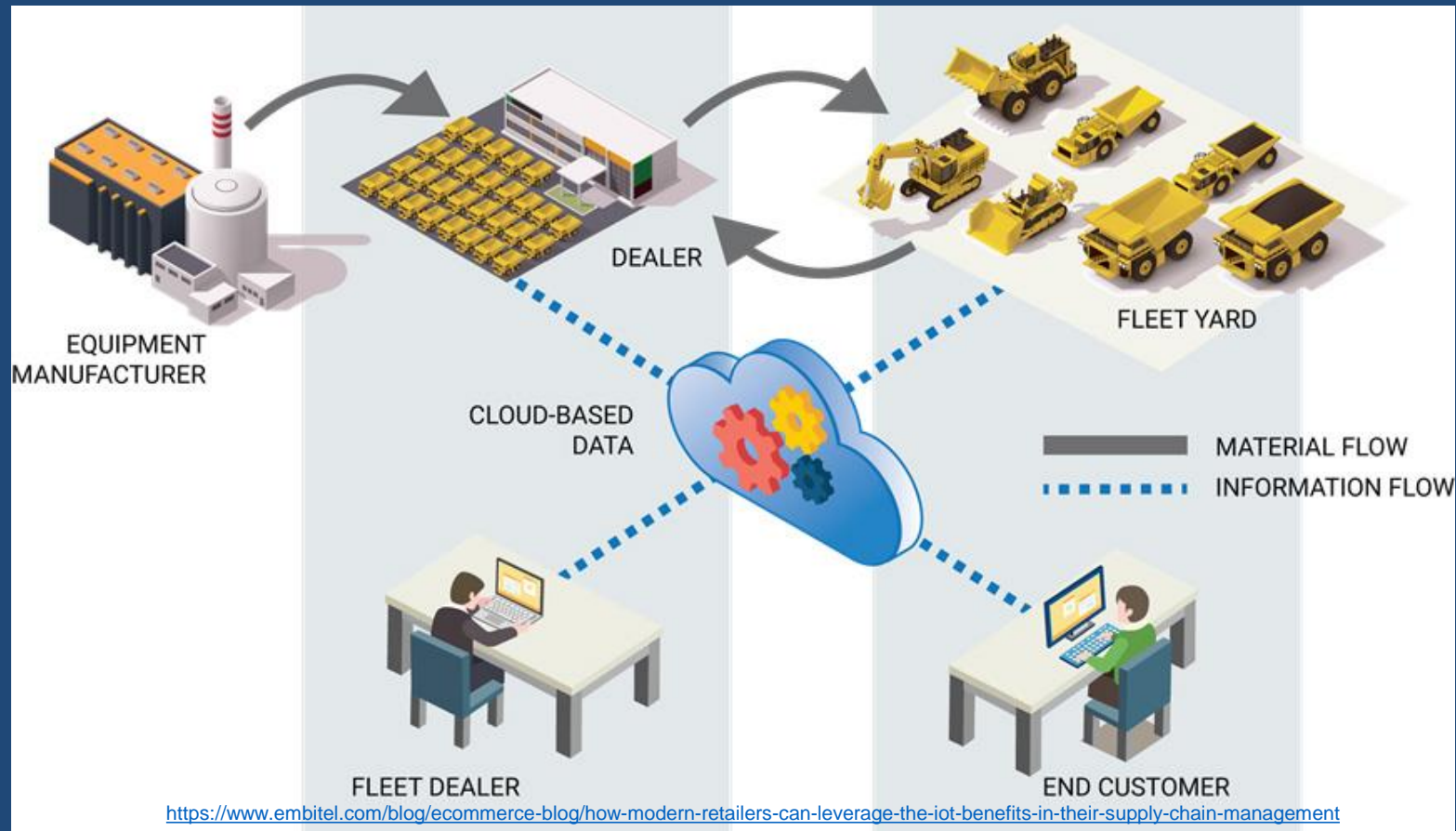
Cloud IoT

Internet of things: Architecture

Local IoT
architecture

Cloud IoT
architecture

Hybrid
architecture



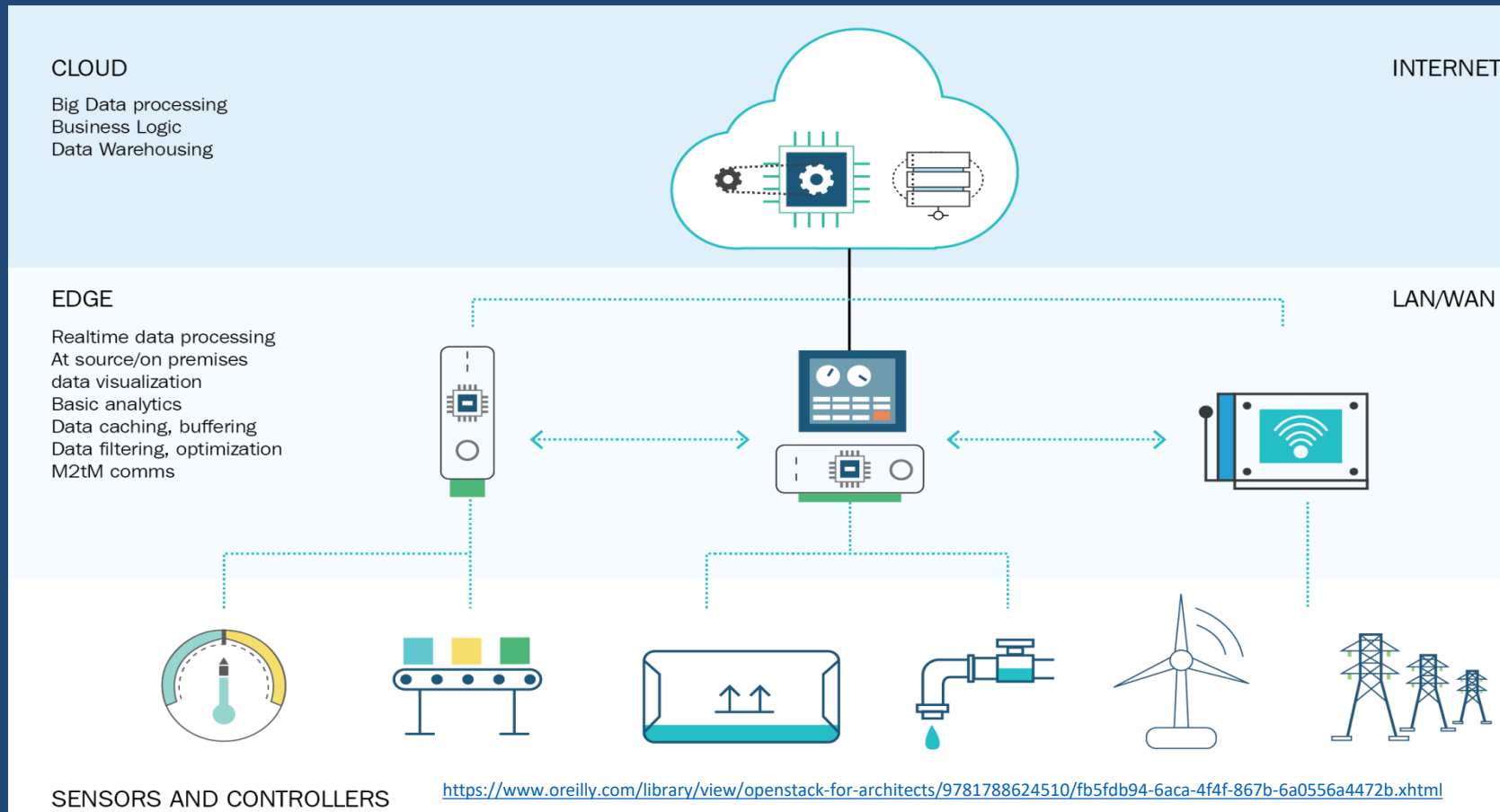
supply chain applications - use case of cloud IoT architecture

Internet of things: Architecture

Local IoT
architecture

Cloud IoT
architecture

Hybrid
architecture



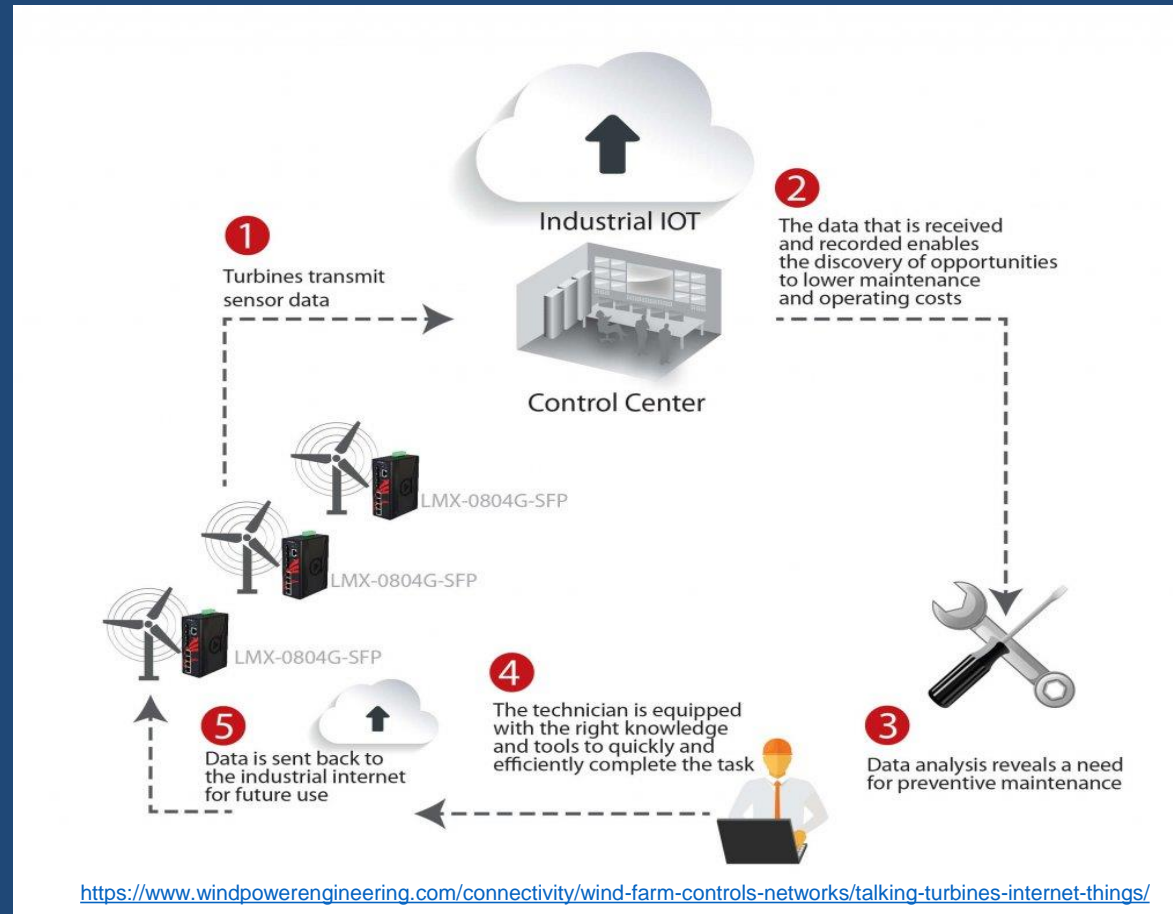
Cloud and Edge computing-Complementary Technologies powering IoT

Internet of things: Architecture

Local IoT
architecture

Cloud IoT
architecture

Hybrid
architecture



Cloud and Edge computing-Complementary Technologies powering IoT

Internet of things: Architecture

Local IoT
architecture

Cloud IoT
architecture

Hybrid
architecture

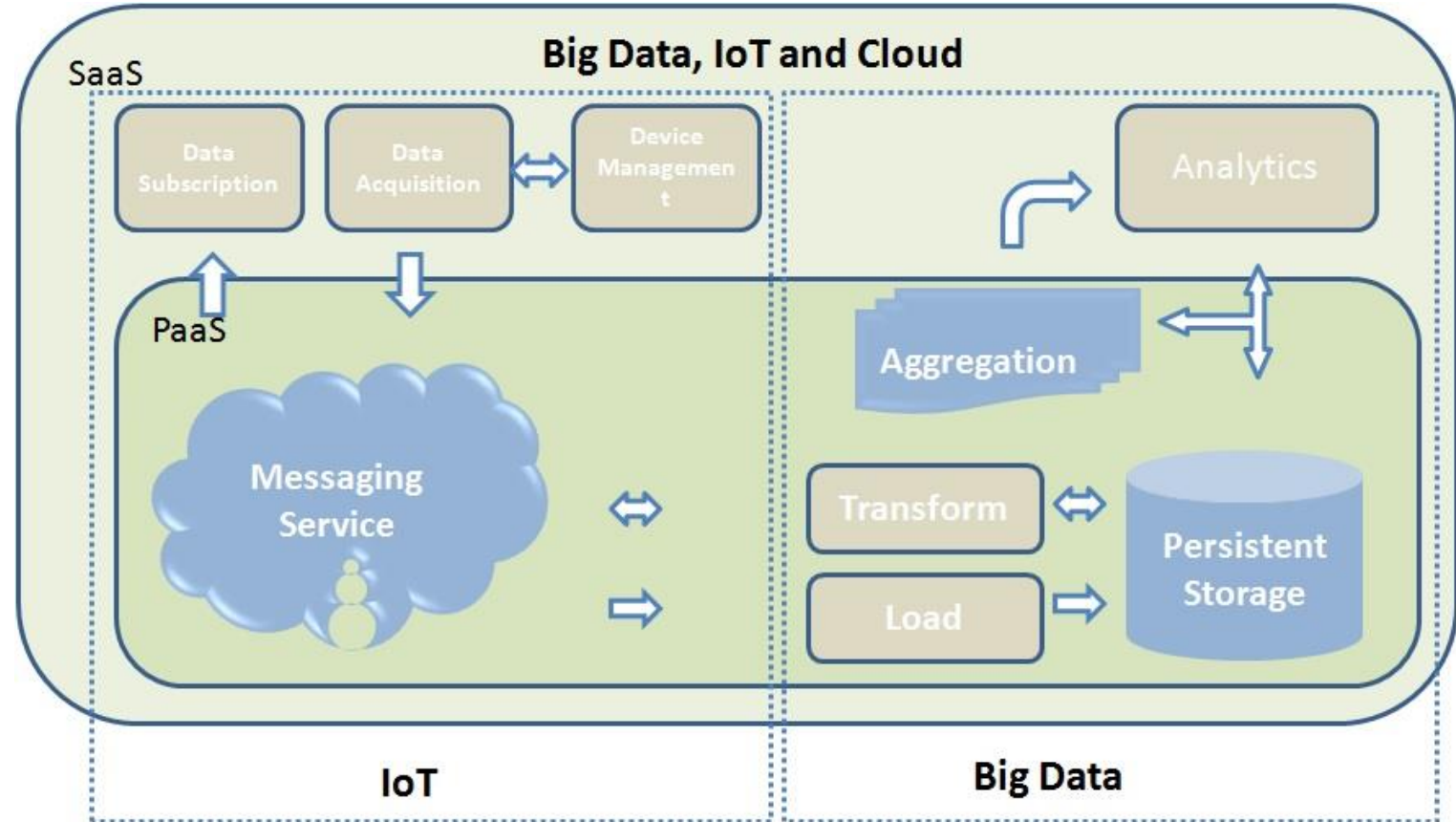
Internet of things with Cloud Computing

IoT

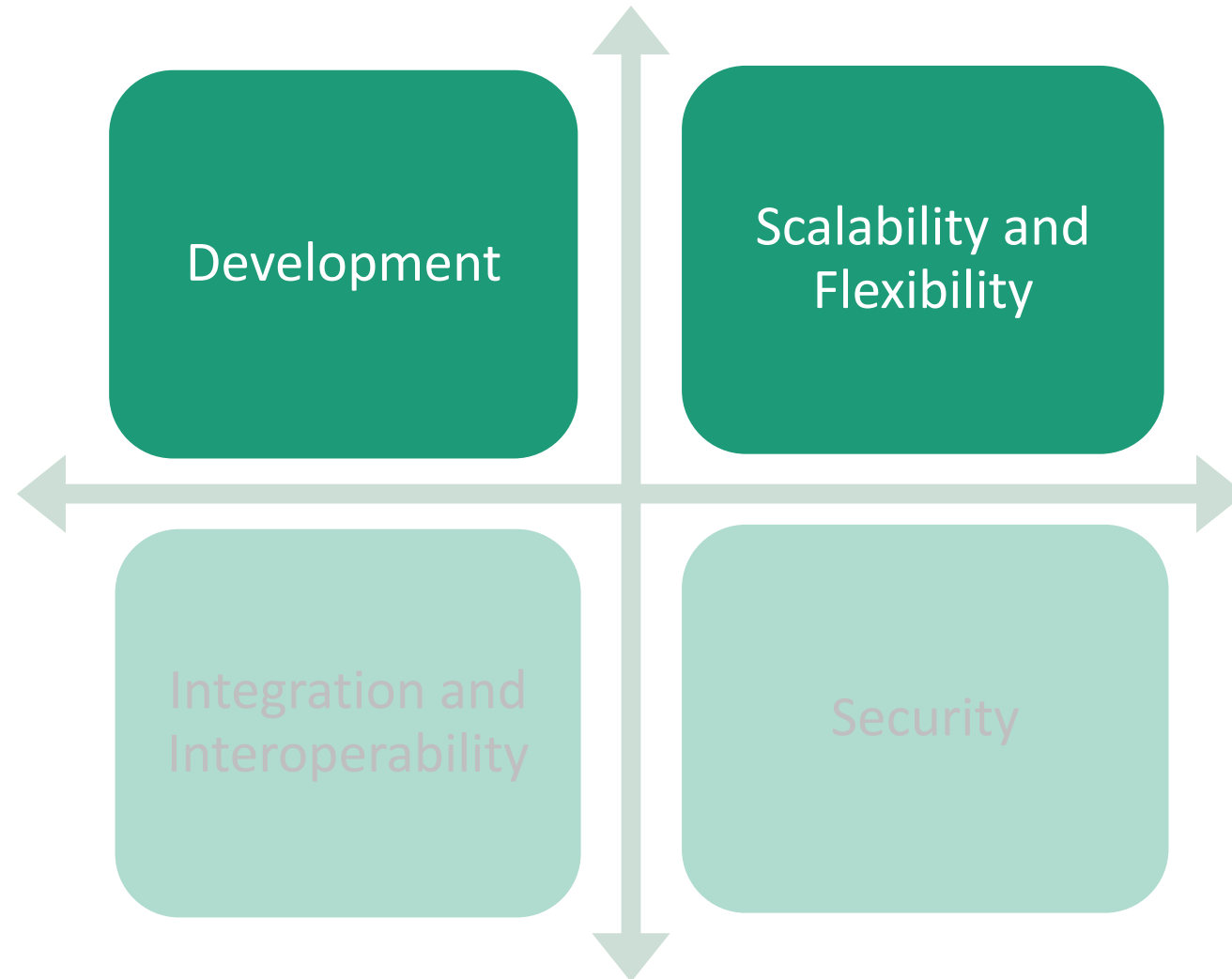
Cloud
Computing

Big Data

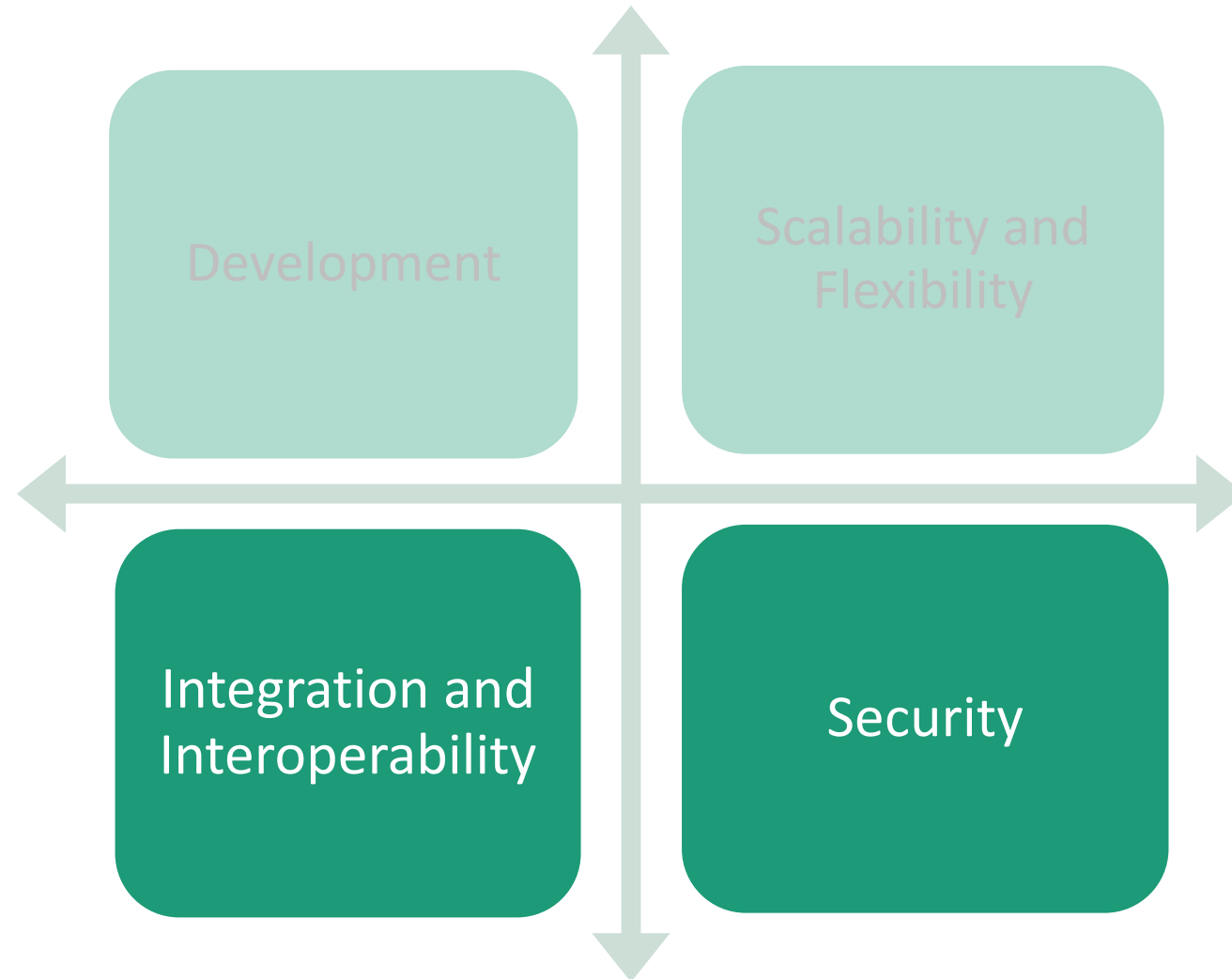
The relation among **IoT**, **Cloud Computing** and **Big Data**



Advantages of Cloud IoT



Advantages of Cloud IoT



Disadvantages of Cloud IoT

Data
Ownership

Potential
crashes

Latency

Disadvantages of Cloud IoT

Data
Ownership

Potential
crashes

Latency

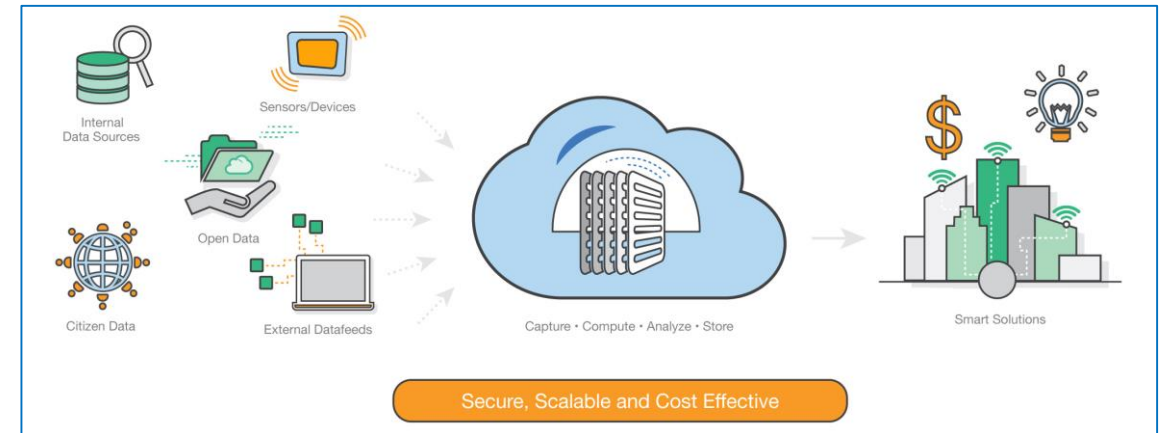
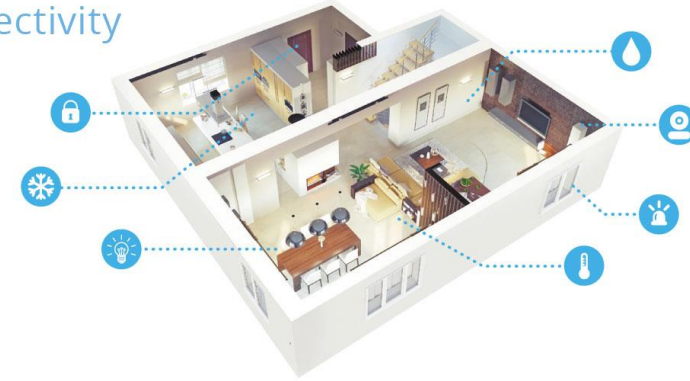
Case Studies

Smart Home

Smart City

Smart Event

Hubble IoT connectivity ecosystem



This year's race in numbers

198
riders

22
teams

3,540
km

21
stages

4
countries

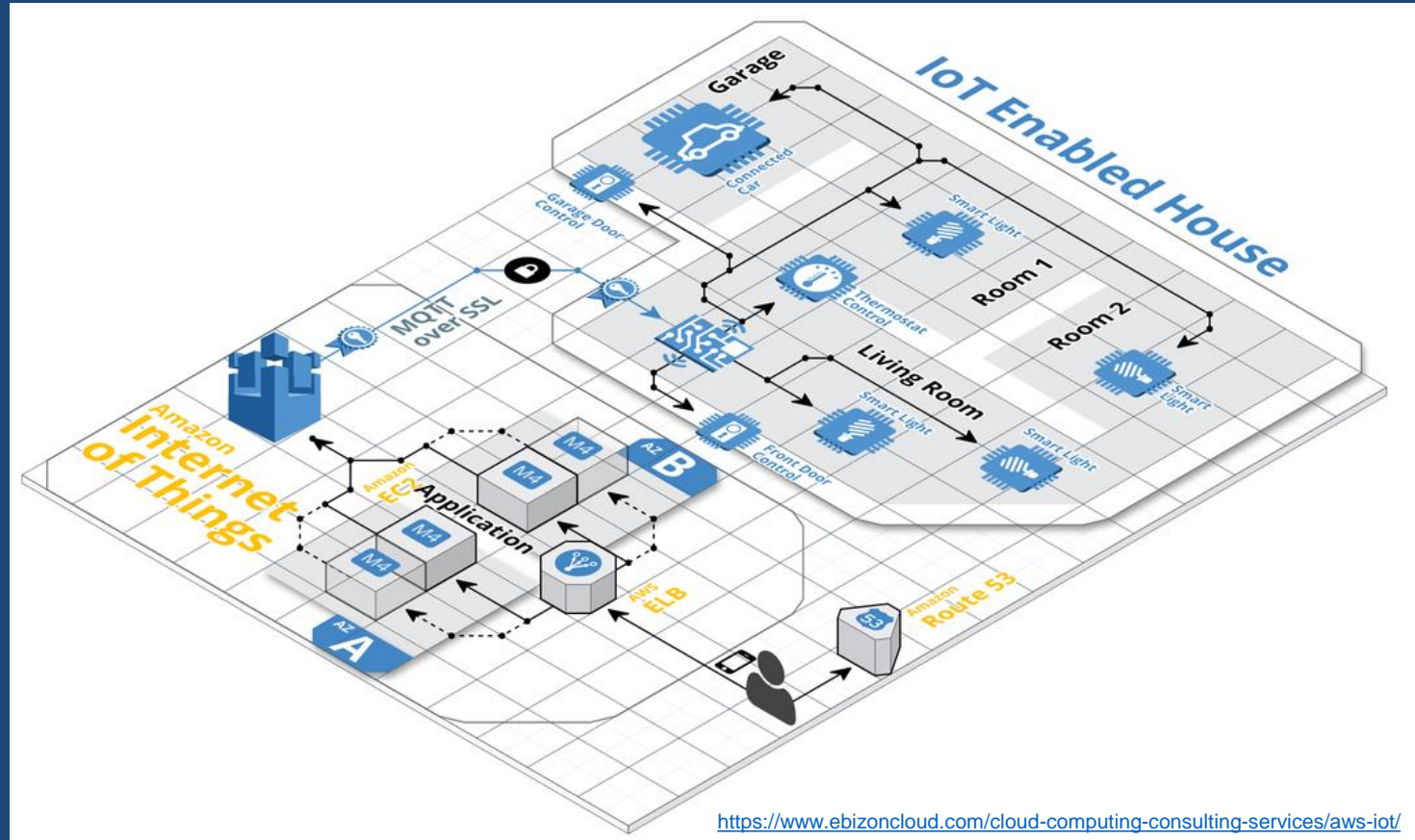
Germany, France, Belgium,
Luxembourg



Hubble IoT connectivity ecosystem



<https://hubbleconnected.com/eu/about/>



<https://www.ebizoncloud.com/cloud-computing-consulting-services/aws-iot/>

Case Studies

Hubble IoT connectivity ecosystem

Smart
Home

Smart City

Smart
Event

PINACL



Case Studies

City of Newport Case Study

Smart
Home

Smart City

Smart
Event

We're telling better stories through data!

How does the solution work?

1 Each rider is fitted with GPS tracker.



2 The trackers communicate with each other as well as with sensors in the race and team vehicles to create a mesh network.



3 The data is streamed from the race vehicles to the aircraft.



5 Upload of data from the Dimension Data truck to the Dimension Data cloud.



4 The data is relayed to the Dimension Data big data truck.



Inside the data truck the data is captured and analysed using an advanced digital analytics platform, powered by our cloud.



<http://sagarnangare.com/case-study-of-use-of-cloud-computing-iot-big-data-machine-learning-devops-in-tour-de-france/>

Case Studies

DimensionData and Tour De France

Smart
Home

Smart City

Smart
Event

Conclusion

