LoRa® Alliance

Wide Area Networks for IoT

The LoRa™ Alliance

"ENABLING THINGS TO HAVE A GLOBAL VOICE"

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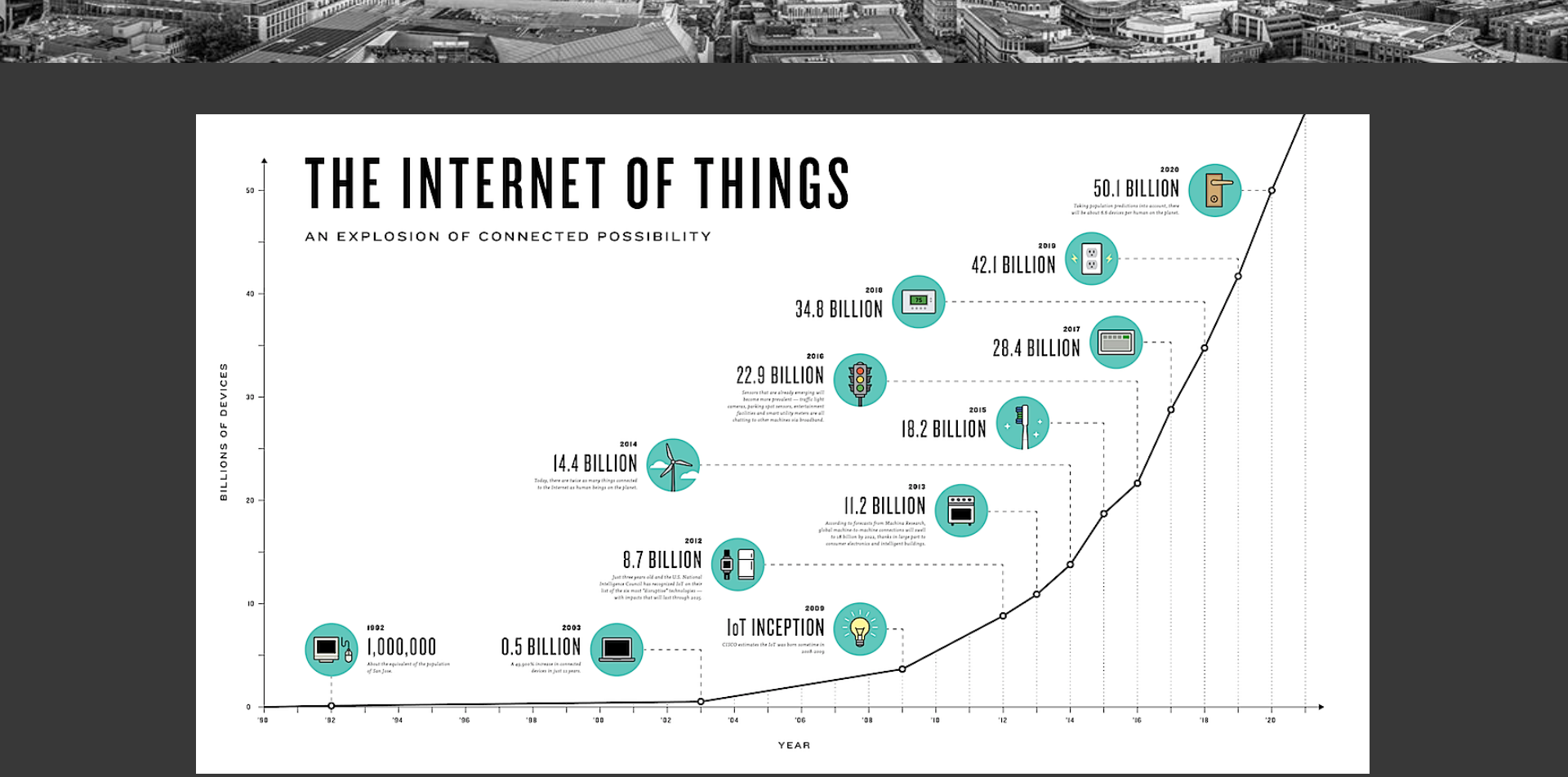
LoRa-Alliance.org



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Deploying the IoT

Reaching for 50 Billion Devices

Communication is key

Low power is critical

Distance is essential

Open standards are imperative

LPWA – Low Power Wide Area

Battery operations for years

10s of kilometers

< $10 BoM

The time is now right

LPWANs

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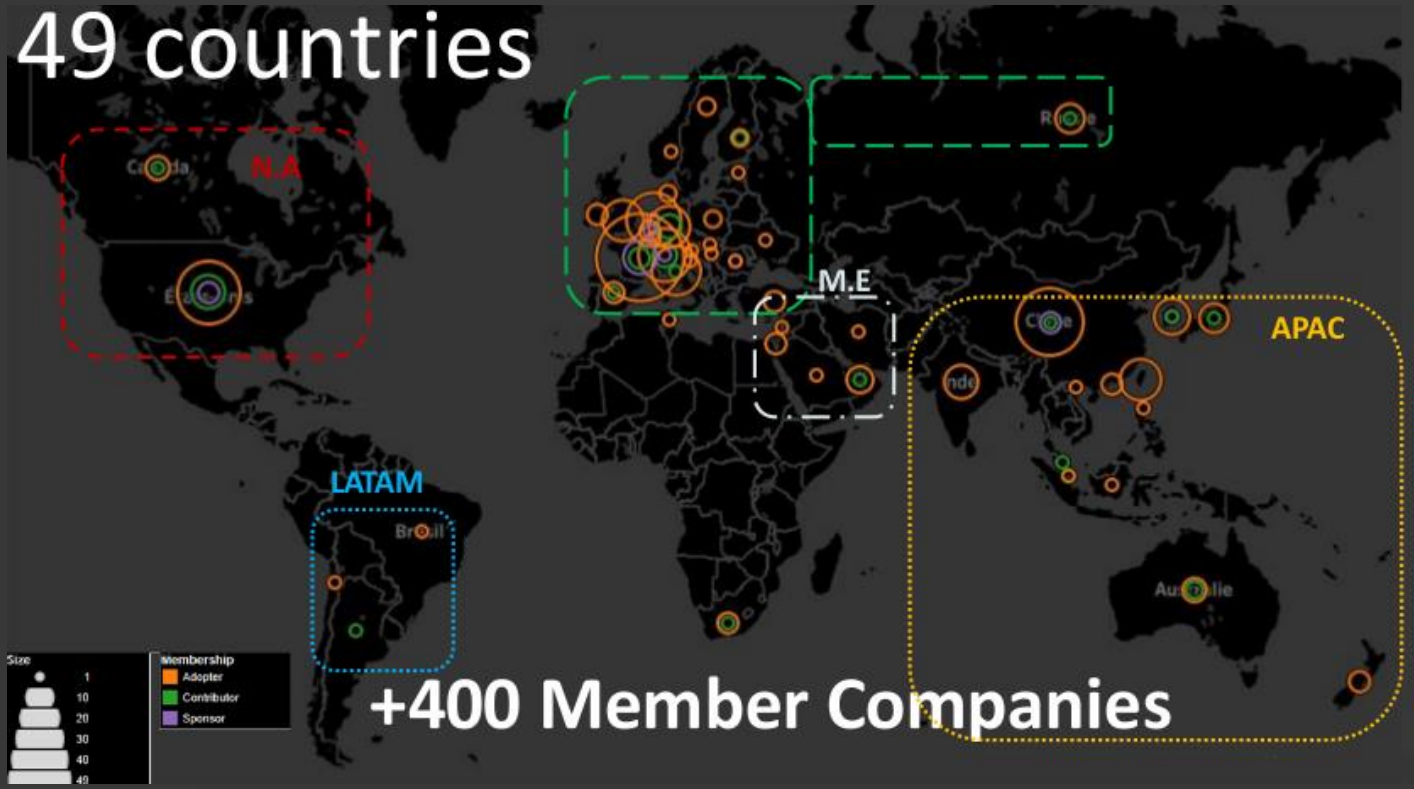
The Alliance



LoRaWAN™ IoT ECOSYSTEM – Multi-source value chain

CHIPSET

SEMTECH

MICROCHIP

life.augmented

MODULES

muRata
Innovator in Electronics

MICROCHIP

FOXCONN

MULTITECH

DEVICES

BOSCH

Mueller SYSTEMS

Schneider Electric

HOMERIDER SYSTEMS

BASE STATION

everynet

CISCO

SAGEMCOM

kerlink

MULTITECH

NETWORK SERVER

IBM

hp

OrbiWise

actility

everynet

SAGEMCOM

APPLICATION SERVER

senet

intel

libelium

digi mondo

WIPRO
Applying Thought

iSECUR

LoRaWAN – Unique & Sustainable Differentiators

Security

- Device unique
- Network
- Application

Coverage

- Scalable
- Bi-directional
- Broadcast

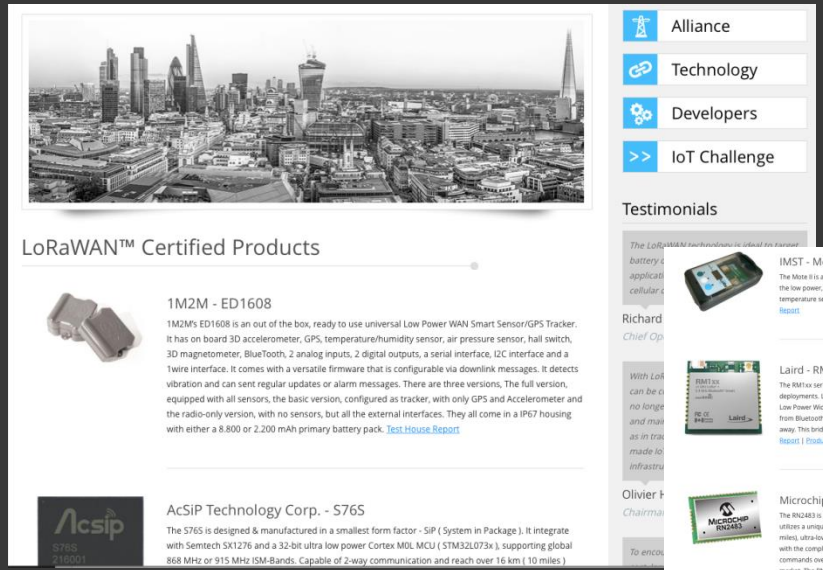
Energy Efficiency

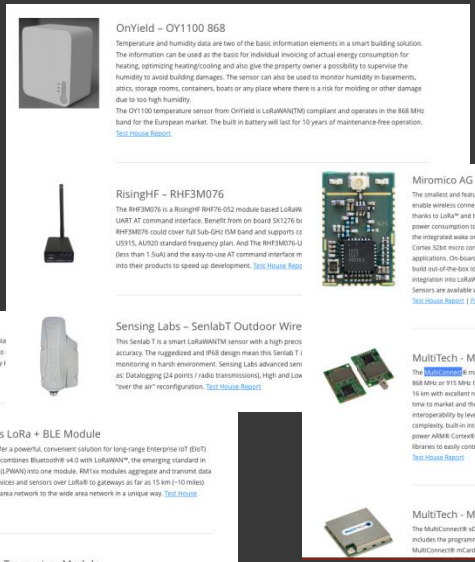
- Coin-cell batteries
- Energy harvesting
- Device classes

Location

- Increase value
- Network driven
- Indoor/Outdoor

LoRaWAN Certified..





LoRa Alliance Certified™

[LoRa Alliance Certified Products Page]

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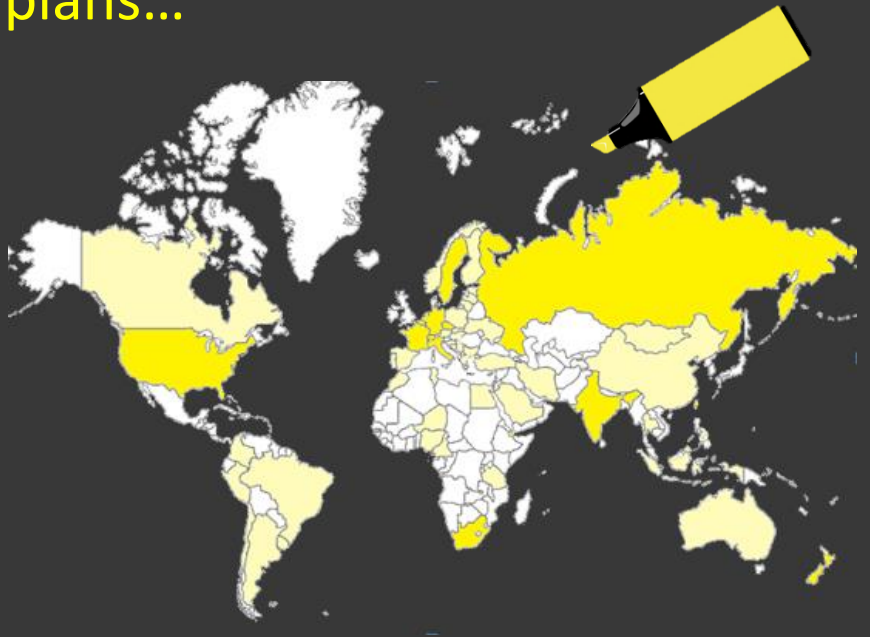
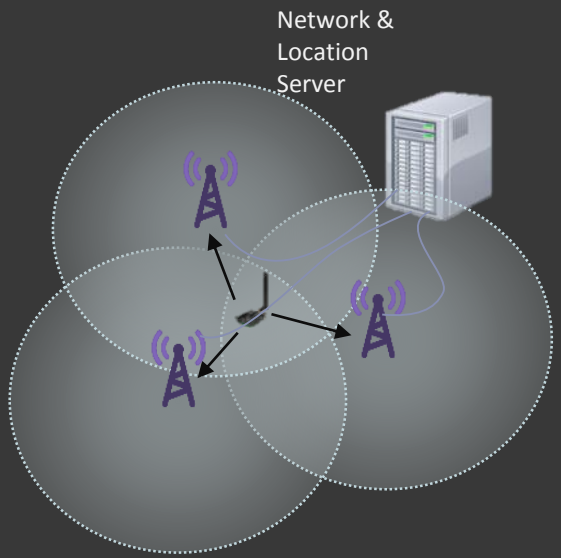
LoRaWAN – National deployment plans…



27 Announced national deployments
> 150 regional or city deployments

Localization with LoRa



- All base stations share a common timebase
- A LoRaWAN sensor transmits a packet
  - Packet received by at least three base stations
  - Each base station reports the time of arrival & other meta data such as signal strength, signal to noise ratio
- Algorithms compare the time of arrival and other signal parameters
  - Computes the most likely position of the sensor
  - Differential Time Of Arrival
- Accuracy
  - Rural – 20 to 50 meters
  - Urban – 120 to 200 meters

OPEN for Business

Openly available Specification

Based on Open Standards

Functional Certification

Open Business Model

THANK YOU

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