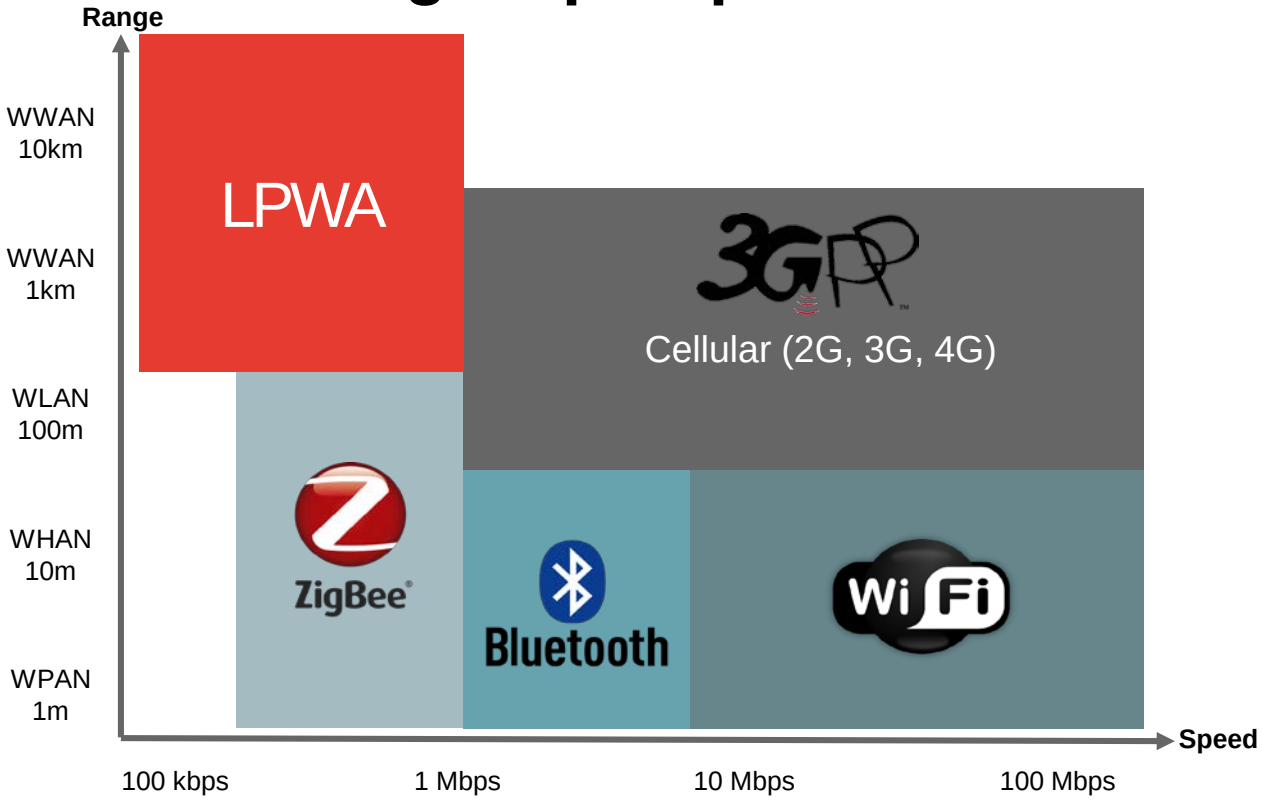
Innovation Summit 2016

SIERRA WIRELESS

Low Power Wide Area

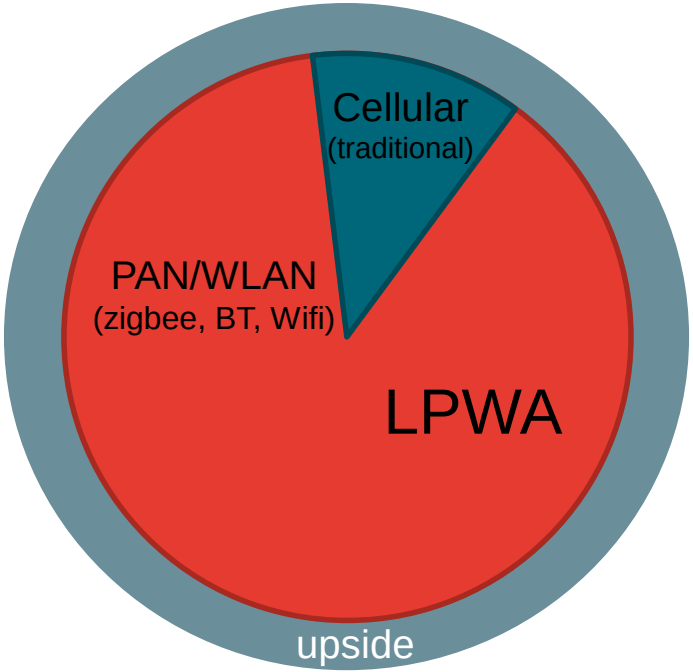
Philippe Guillemette, CTO

Wireless IoT technologies perspective



LPWA motivation

LPWA's deliver the "3 C's"



The "3 C's"

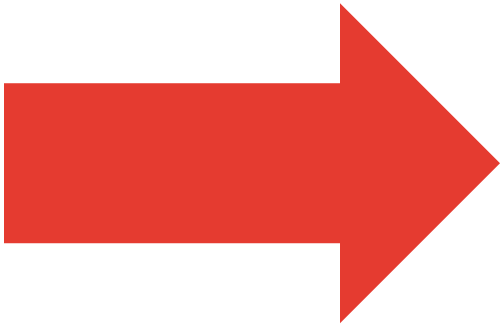
Cost
Current
Coverage

World Wide IoT Connections
+20B by 2022

Where is the LPWA magic?

The Magic

Low data rates
Low data usage
Leverage networks



The “3 C’s”

Cost
Consumption
Coverage

Cellular LPWA, “the” network for IoT

Ultra Low Power

10-20 years lifetime
On AA batteries
(2500 mAh)

Deep Coverage

+18dB sensitivity
(range x7)
Basement Coverage

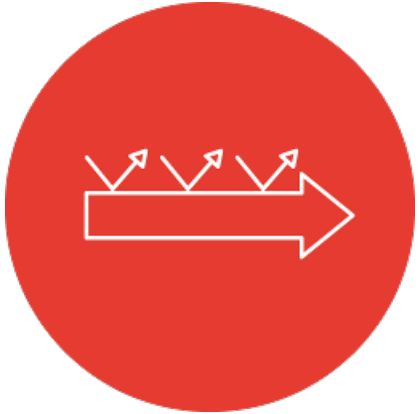
Low Complexity

75% Device
Complexity Reduction
Compared to LTE Cat-1

Cellular LPWA, “the” reliable solution

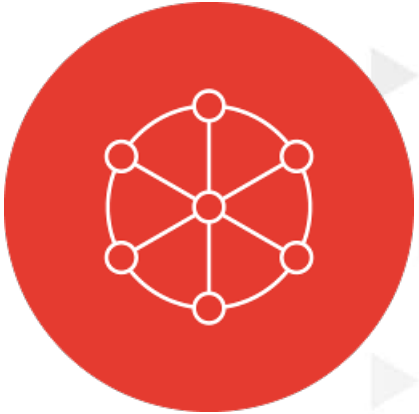
Immediate Service

Global Coverage
447 Networks
143 Countries



Durable Investment

Long-term availability
Scalability
Flexibility



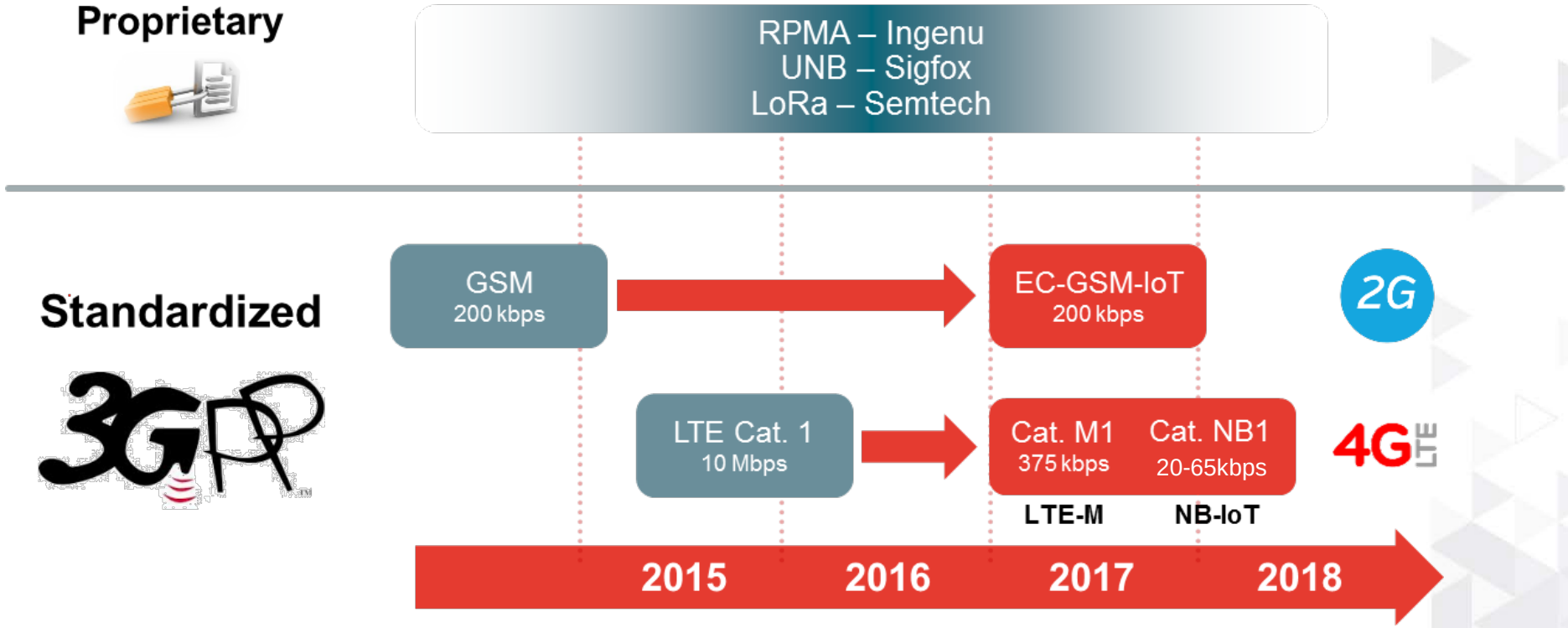
Trusted Ecosystem

Built-in Security
Solid supply chain
Healthy competition

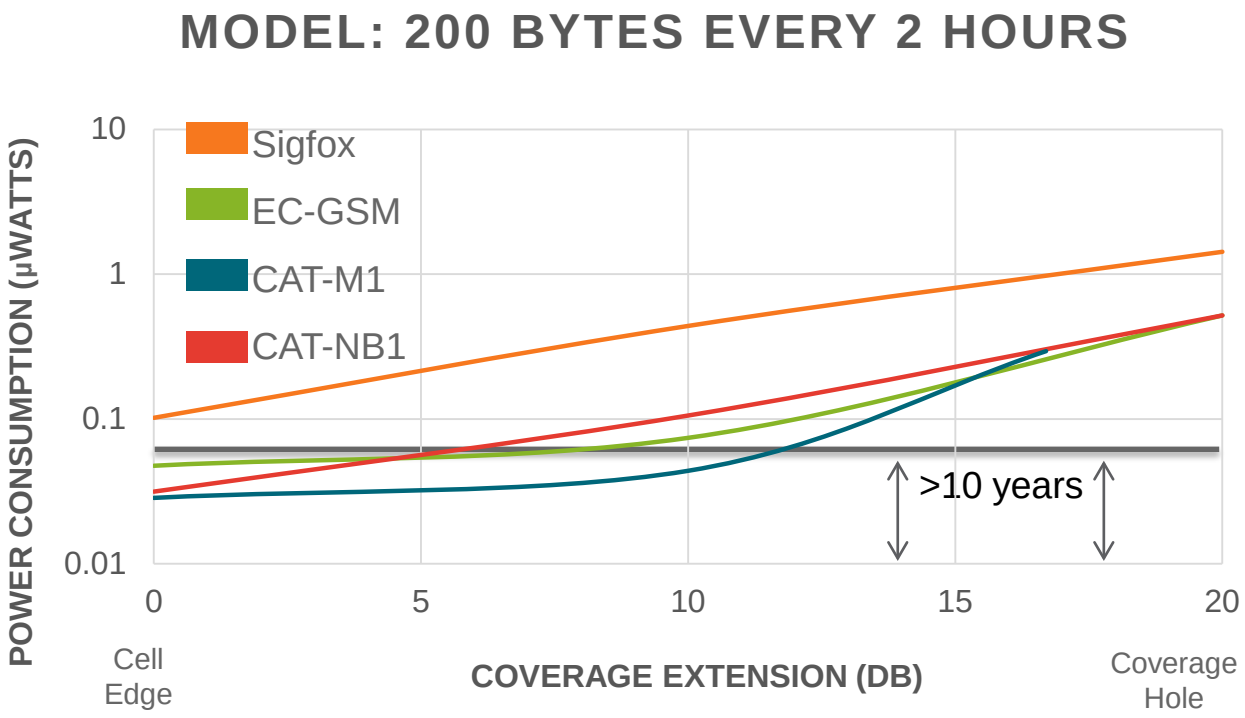
3GPP Cellular LPWA summary

Attribute	CAT-M1	CAT-NB1	EC-GSM
Spectrum	LTE bands	LTE and Refarmed 2G Bands	2G Bands
Typical MNO	Good LTE Coverage	Mix LTE and 2G	Long 2G Life
Data Rate	375kbps	20-65kbps	70 kbps
Channel BW	1.08MHz	200KHz	200KHz
Mobility	Yes	No	Yes
Specification Available	Now 3GPP	Q2'16	Now 3GPP
IP vs messaging	Both	Simple message or very low data	Both
Voice Capable	Yes	No	Yes
Network Roll Out	S/W Upgrade	S/W Upgrade	Mostly S/W Upgrade
Public Network Availability	Q1-Q2'2017 NA, Aus., Japan, EU	Q1-Q2'2017 EU,China,NA	Q4'2016 EU

LPWA technology timeline



Coverage + consumption myth debunked

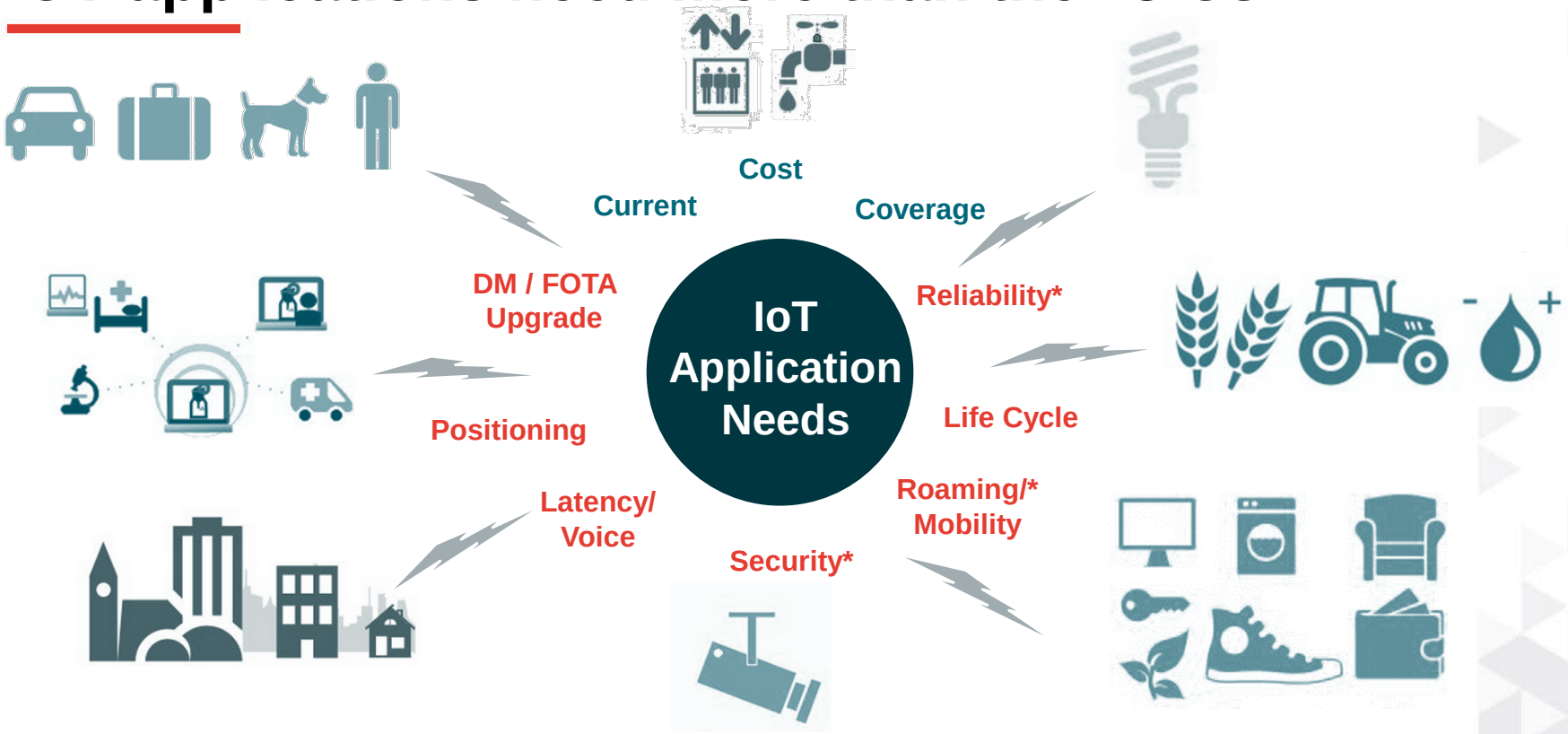


KEY MESSAGES

- **Coverage matters**
- **~Same for all**
- **Base station density is KEY**

Source: 3GPP TR 45.820 and GPC-150313

IOT applications need more than the “3’Cs”



Sierra Wireless

Innovation Summit 2016

Discover, discuss and test tomorrow's IoT technologies and network with one of the most active IoT business and developer communities.

summit.sierrawireless.com