



**ON Semiconductor®**

# Wireless Connectivity Solutions

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Q2-2017



# Agenda

- **Wireless Connectivity BU Introduction**
- **RF Bricks & Platform Roadmap**
- **Product Line Updates**



# Corporate Key Growth Drivers



## Automotive

Expected 5 year market  
CAGR of 4-6%



## Power Conv. / Motor Control

Expected 5 year market  
CAGR of 4-6%



## I-IoT

Expected 5 year market  
CAGR of > **15 %**



Easy-to-Use  
Wireless



Most Power Efficient  
Solutions



Total RF Solutions



Buy it – Use it

# Wireless Connectivity Target Markets

## Building and Home Automation

EnOcean 868  
KNX wireless 868  
ZigBee/6LowPAN/Thread/HART 868/915/2g4  
Proprietary 868/915/2g4



## Automatic Meter Reading

Wireless M-Bus 868  
Sigfox  
ZigBee 868/915/2g4  
Proprietary 868/915/2g4



## Sensor & Asset & Infrastructure IoT

SIGFOX 868/915  
POCSAG, FLEX  
Traxnet 433/868/915  
Proprietary 868/915/2g4

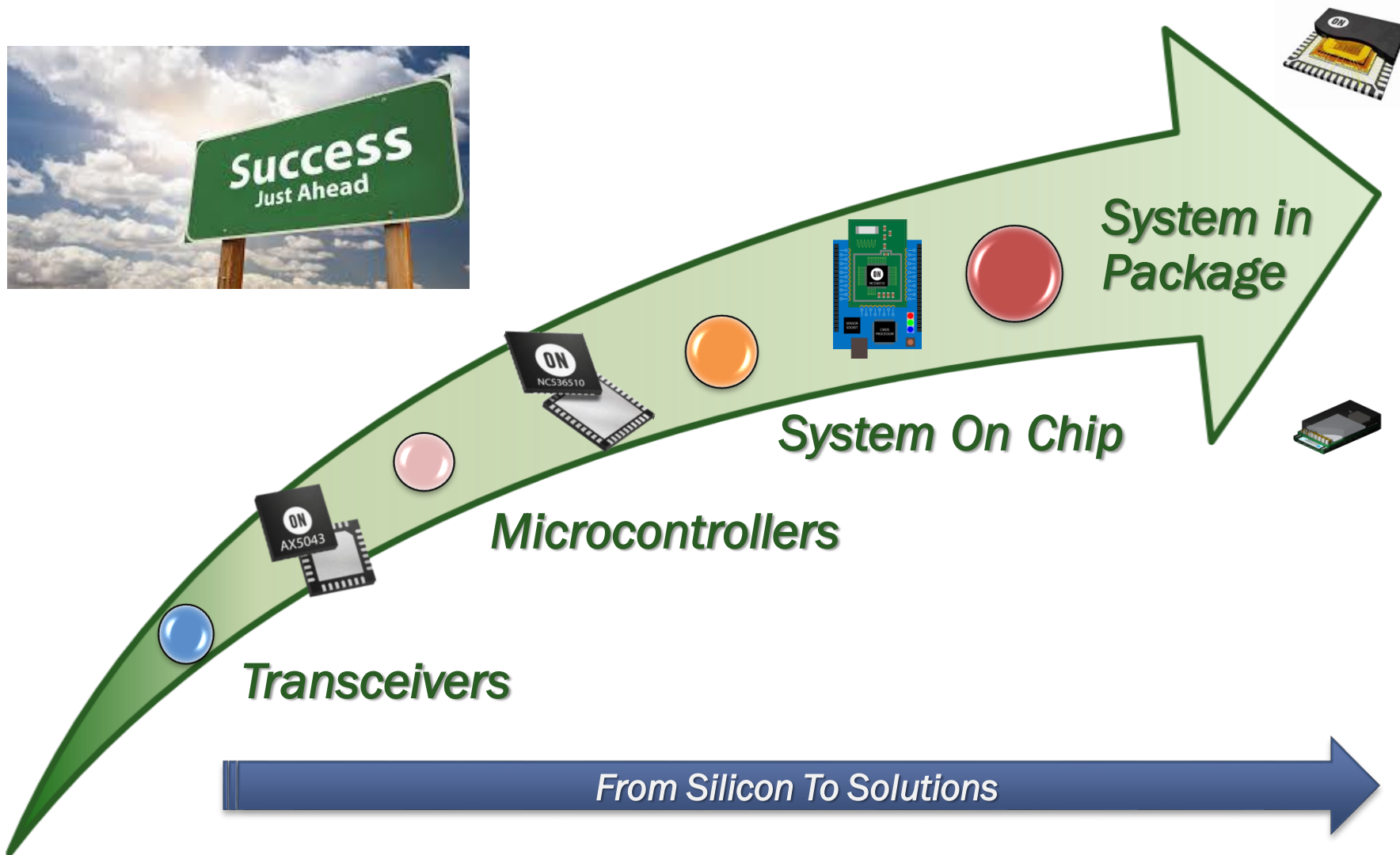


## Remote Controls & Lighting

EnOcean 868  
KNX wireless 868  
ZigBee / Thread 868/915/2g4  
Proprietary 868/915/2g4

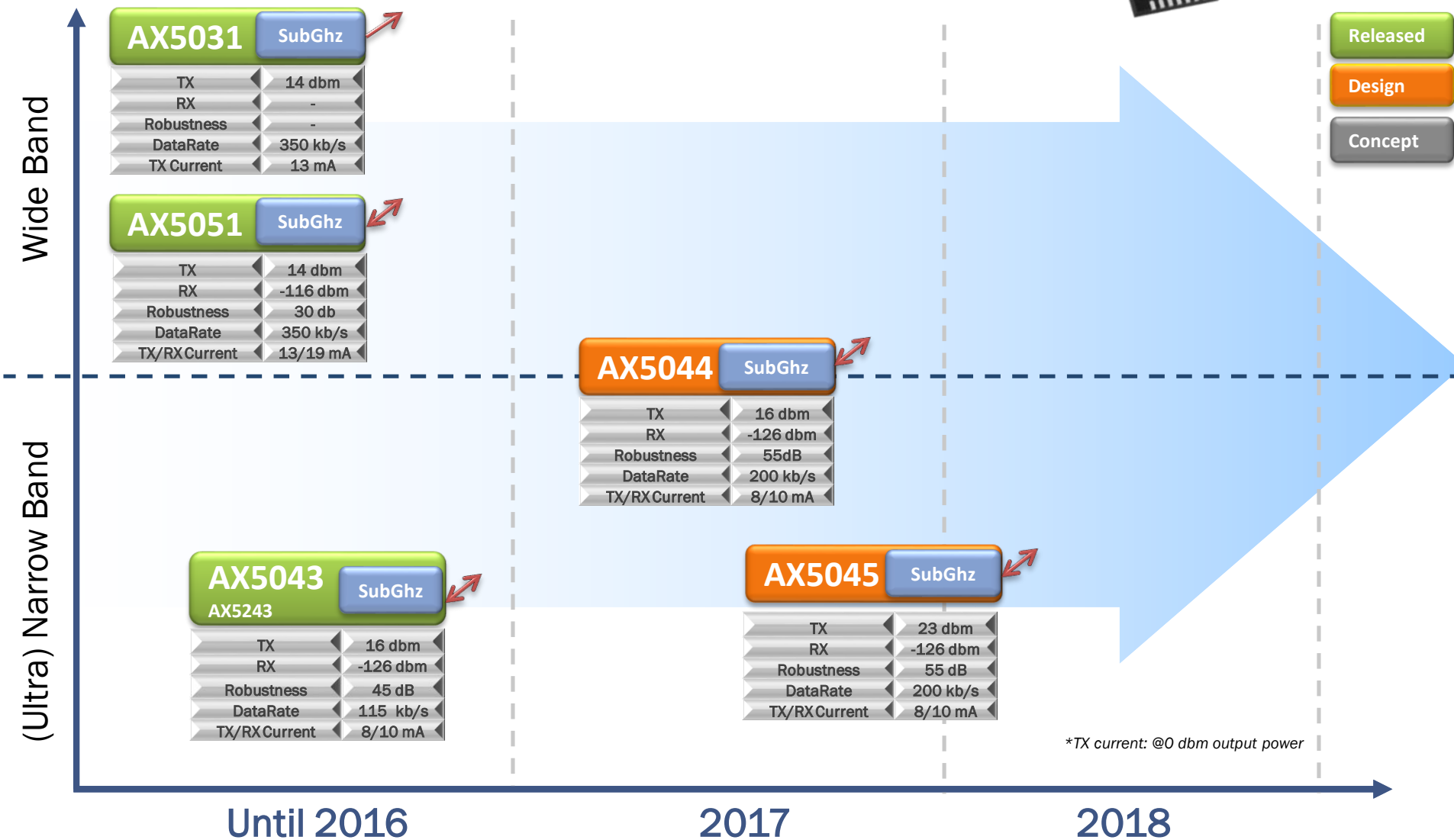


# RF Bricks Roadmap





# RF Transceivers Roadmap





# SoC ( MCU + RF) Roadmap



Released

Design

Concept

Wide Band

(Ultra) Narrow Band

AX8052F131

SubGhz

|            |             |
|------------|-------------|
| Core       | 8052 - 64kB |
| TX         | 14 dbm      |
| RX         | -           |
| DataRate   | 350 kb/s    |
| TX Current | 13 mA       |

AX8052F151

SubGhz

|               |             |
|---------------|-------------|
| Core          | 8052 - 64kB |
| TX            | 14 dbm      |
| RX            | -           |
| DataRate      | 350 kb/s    |
| TX/RX Current | 13/19 mA    |

NCS36510

2.4 Ghz

|               |             |
|---------------|-------------|
| Core          | CM3- 640 kB |
| TX            | 8 dbm       |
| RX            | -98 dbm     |
| DataRate      | 250 Kb/s    |
| TX/RX Current | 7/3 mA      |

AXM0+F143/4\*

SubGhz

|               |               |
|---------------|---------------|
| Core          | CM0 + - 64 kB |
| TX            | 16 dbm        |
| RX            | -126 dbm      |
| DataRate      | 200* kb/s     |
| TX/RX Current | 8/10 mA       |

AX8052F143

SubGhz

|               |             |
|---------------|-------------|
| Core          | 8052 - 64kB |
| TX            | 16 dbm      |
| RX            | -126 dbm    |
| DataRate      | 115 kb/s    |
| TX/RX Current | 8/10 mA     |

AXM0+F145

SubGhz

|               |               |
|---------------|---------------|
| Core          | CM0 + - 64 kB |
| TX            | 23 dbm        |
| RX            | -126 dbm      |
| DataRate      | 200 kb/s      |
| TX/RX Current | 8/10 mA       |

\*TX current: @0 dbm output power

Until 2016

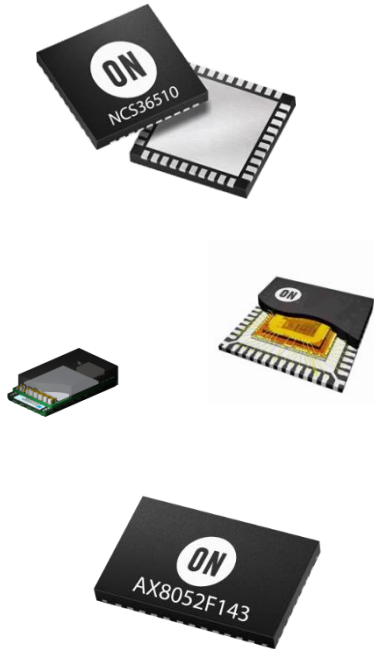
2017

2018

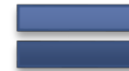


# From Platform to Product Lines

SoCs & SiPs



Certified Stacks & Reference Designs



Turnkey Solutions

Differentiated  
Roadmap

*per*

Product Line

# Agenda

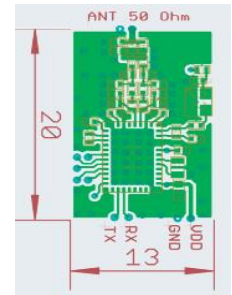
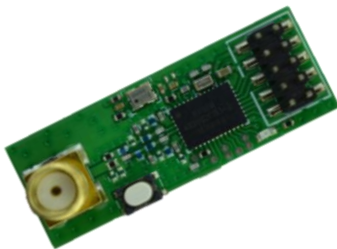
- Wireless Connectivity BU Introduction
- RF Bricks & Platform Roadmap
- Product Line Updates
  - **Sigfox**
  - Thread / Zigbee
  - KNX, EnOcean & Wireless M-Bus
  - Proprietary

# Sigfox Technology: Application

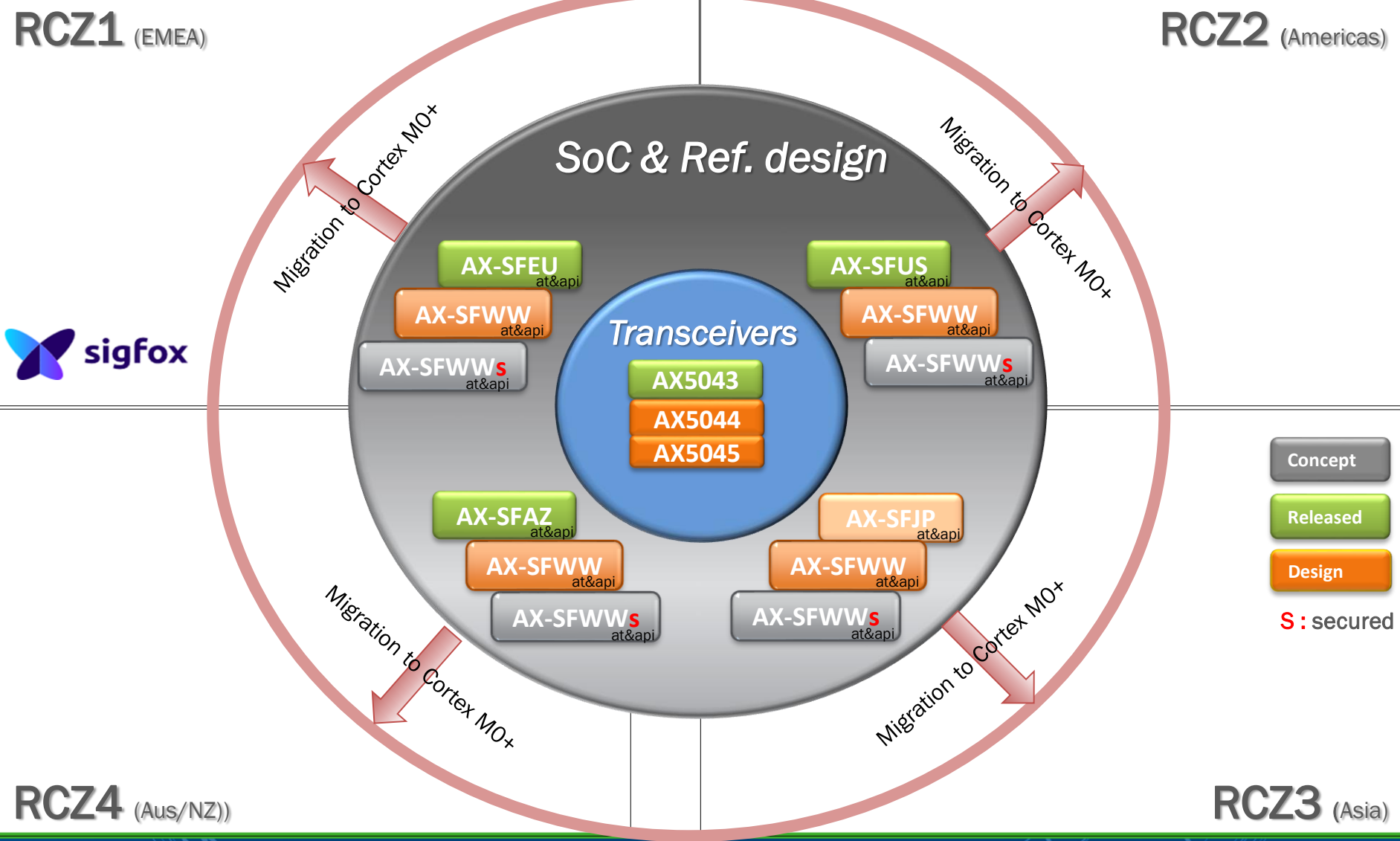


# ON Semiconductor Sigfox Solution

- Sigfox Certified SoC and Reference designs to operate WW on Sigfox network
  - RCZ1 : EMEA
  - RCZ2 : US/Latin America
  - RCZ3: Japan/Korea
  - RCZ4: Australia New Zealand
- Our reference designs comply with most stringent local RF regulation (ETSI/FCC....)
- AT Soc version for 'modem' type of function
- API SoC version available to enable customers to port their application on embedded microcontroller (40 kB Flash available). *Requires SLA to be signed .*
- API SoC Family migrating to Cortex M0+ Core in Q3-17



# 'Sigfox Certified' Roadmap per Region



# Thank You!

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