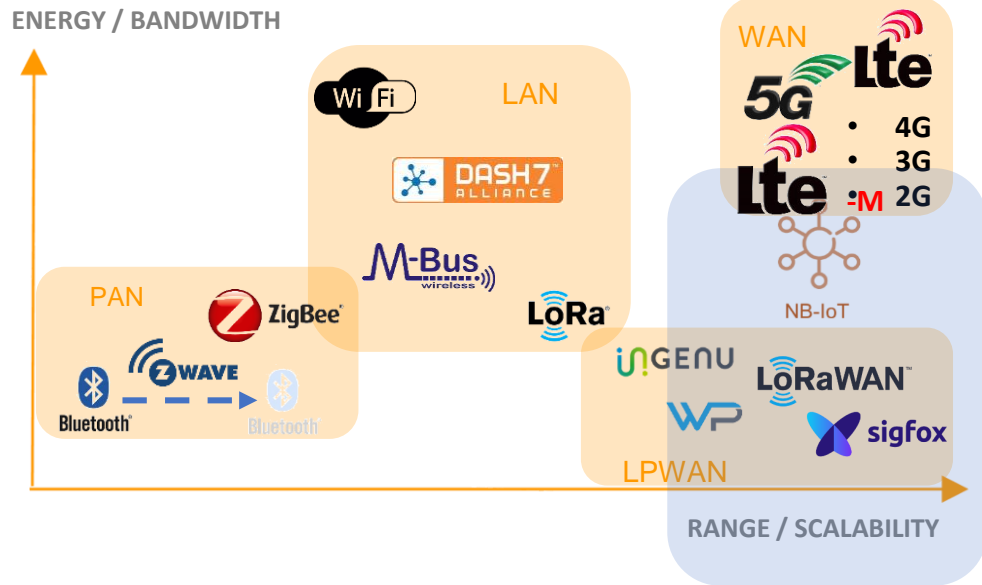




# International deployment of IoT solutions using LPWANs

# LPWAN TECHNOLOGIES

# LPWAN Technologies



**LPWAN Technologies  
with international rollouts**

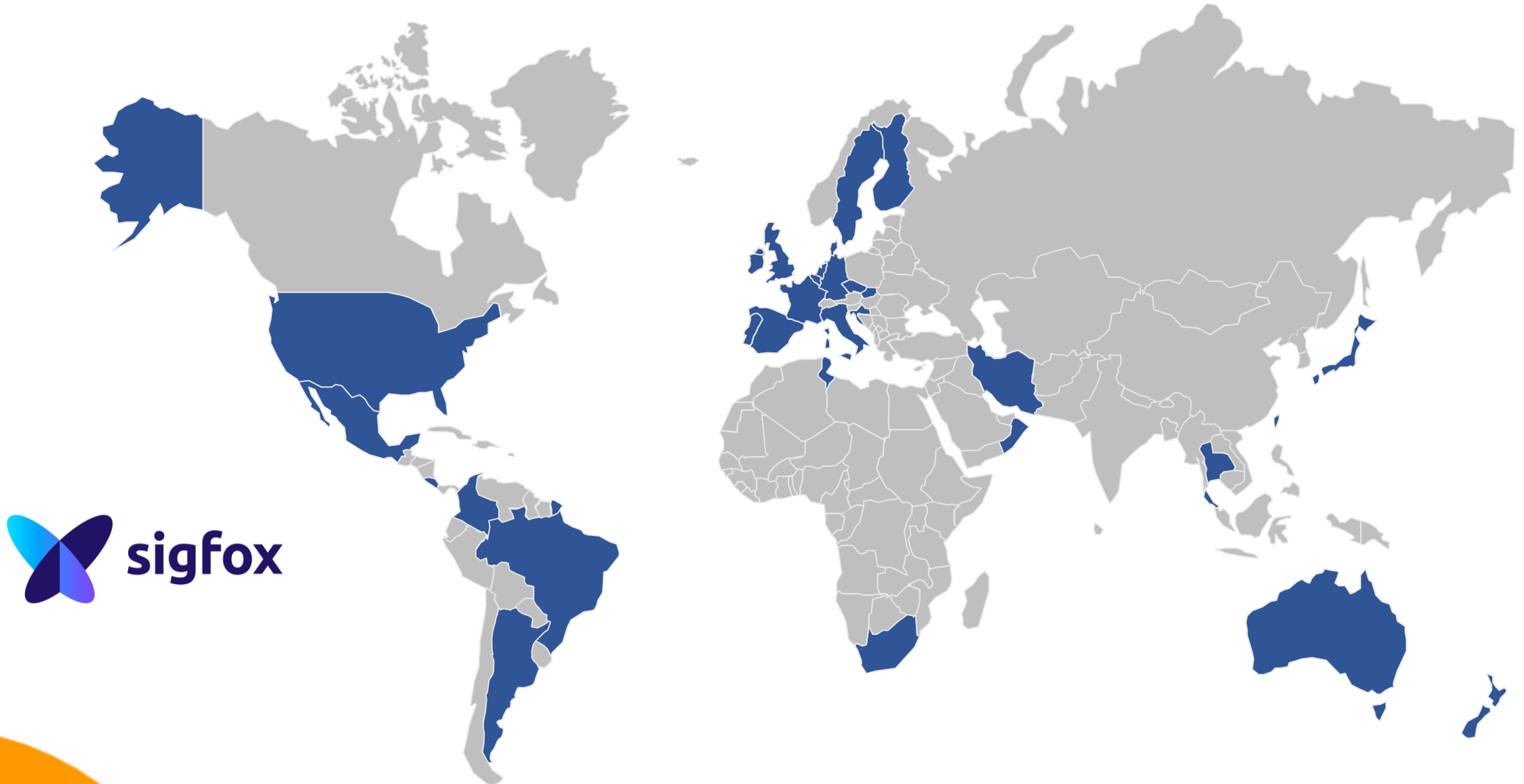


NB-IoT

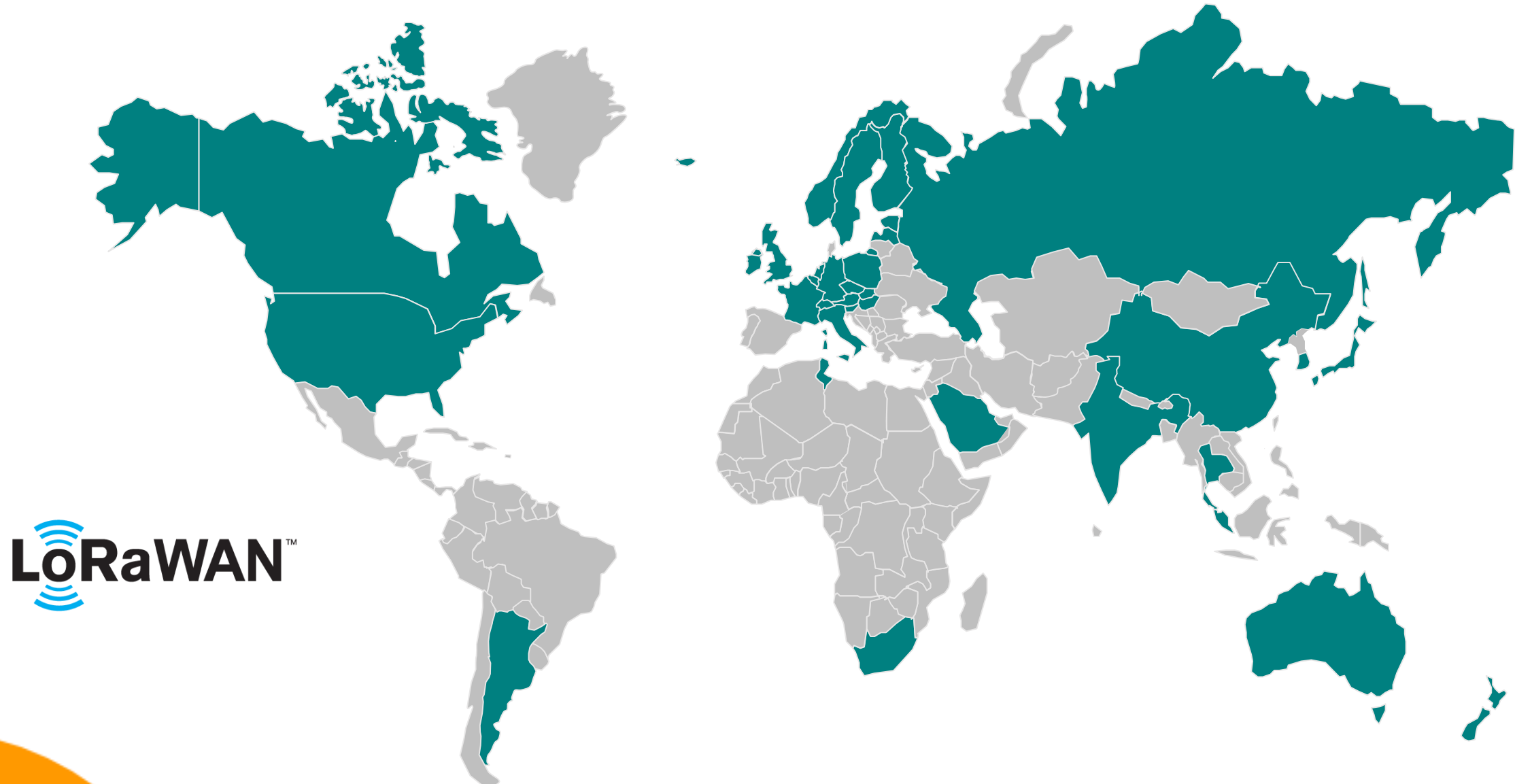


# NETWORK **COVERAGE**

## NETWORK COVERAGE 1/5

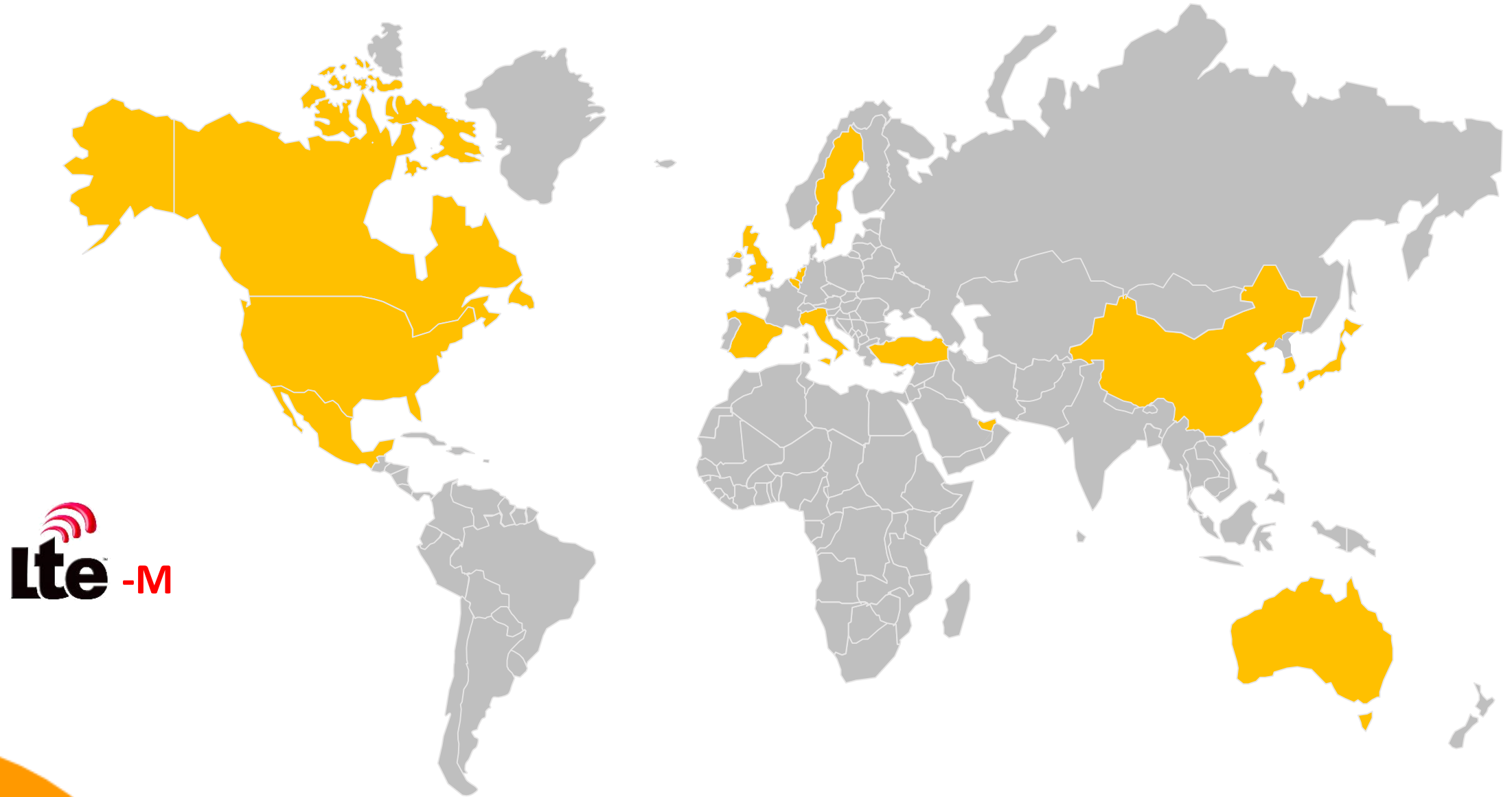


# NETWORK COVERAGE 2/5



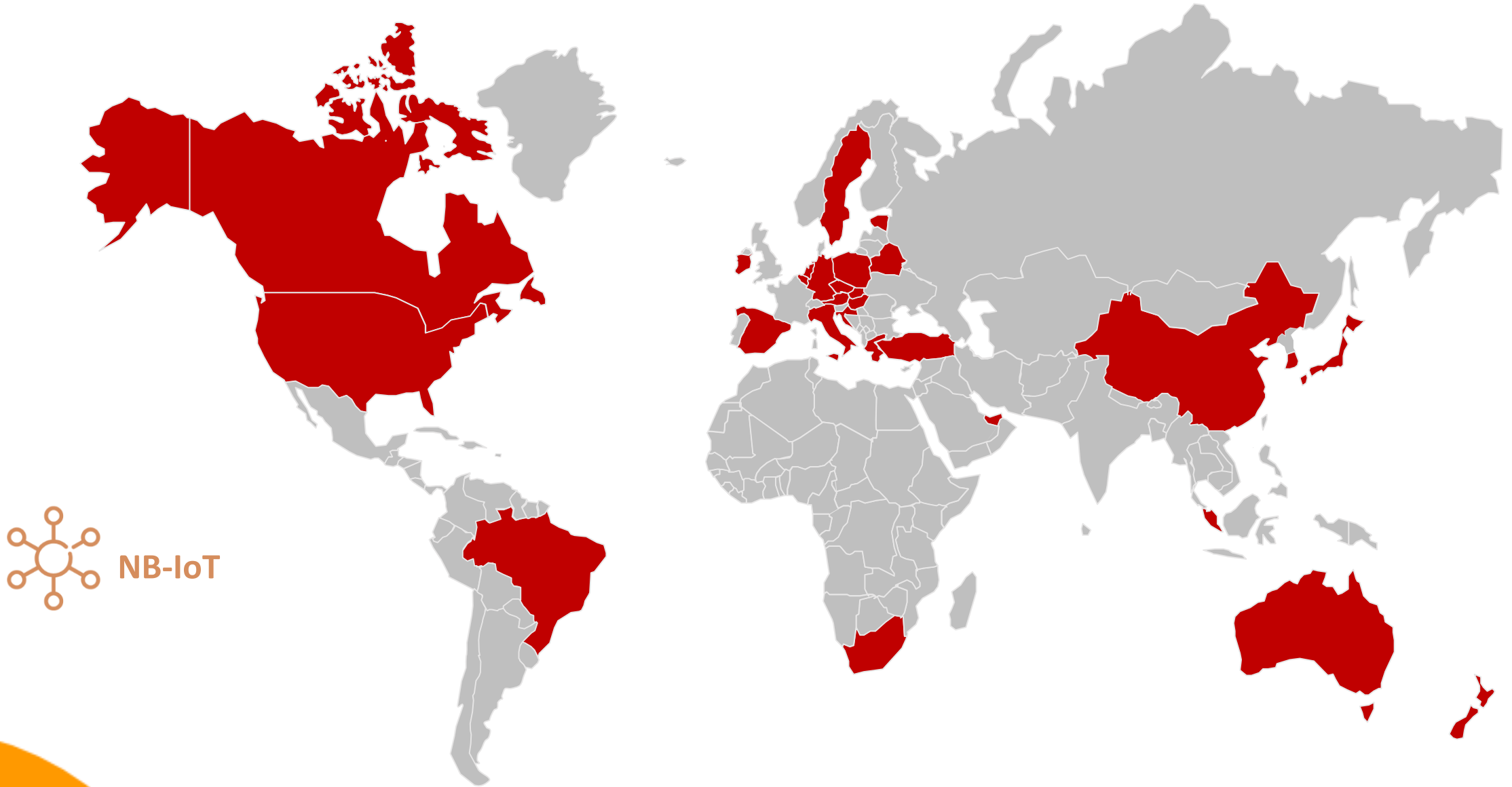
  
**LoRaWAN™**

# NETWORK COVERAGE 3/5



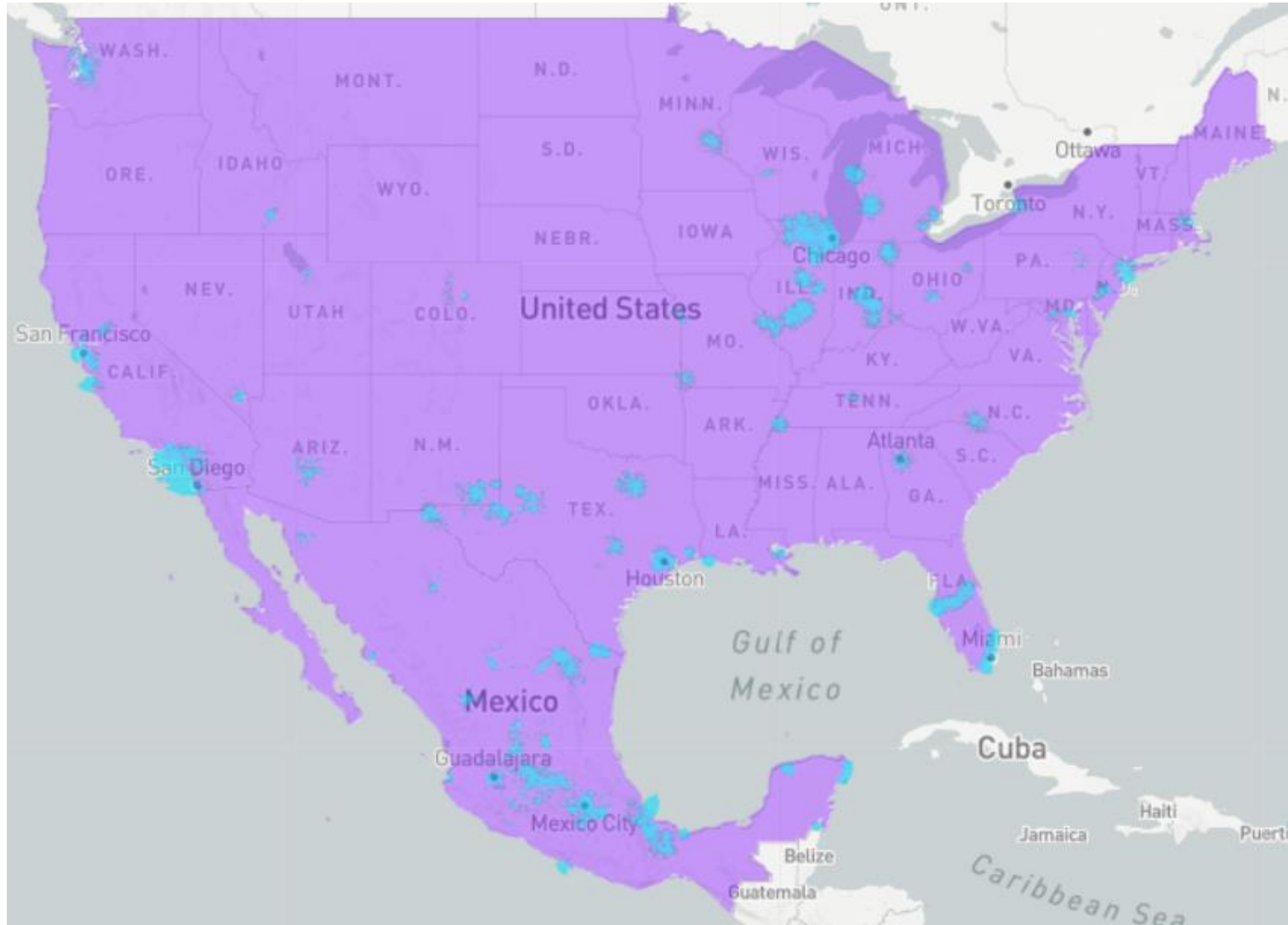


# NETWORK COVERAGE 4/5



 NB-IoT

# NETWORK COVERAGE 5/5



# CONNECTIVITY **PRICING**

# CONNECTIVITY PRICING



37 operators

South Africa	SqwidNET
Germany	Sigfox
Argentina	WND
Australia	Thinextra
Belgium	Engie M2M
Brazil	WND Brasil
Colombia	WND Colombia
Costa Rica	WND Costa Rica
Croatia	IoT Net
Czech Republic	SimpleCell
Denmark	IoT Denmark A/S
The Netherlands	AEREA
Slovakia	Simple Cell
Spain	Cellnex
United States	Sigfox
Estonia	Connected Baltics
Finland	Connected Finland
France	Sigfox
French Guiana	IDEO Caraïbes
French Polynesia	VITI
Guadeloupe	IDEO Caraïbes
Hong Kong	Thinextra
Reunion Island	IO Connect
Iran	Parsnet
Ireland	VT
Italy	NetTrotter
Japan	KYOCERA
Luxemburg	RMS
Malta	lot malta
Martinique	IDEO Caraïbes
Mexico	WND Mexico
New Zealand	Thinextra NZ
New Caledonia	iSMAC-NC
Oman	Omantel
Portugal	Narrownet
UK	WND UK
UK	Arqiva
Singapore	UnaBiz Singapore
Sweden	IoT Sweden
Taiwan	Unabiz Taiwan
Thailand	Platt Nera
Tunisia	IoT Tunisia



48 operators

Argentina	YEAP!
Australia	Definium Technologies
Australia	NNNCo
Austria	Microtronics
Belgium	Proximus
Brunei	TelBru
Canada	Eleven-X
Canada	X-Telia
Canada	IOTCan
China	CNIGC
Czech	
Republic	Radiokomunikace
Estonia	Levikom
Finland	Digita
France	Objenious
France	Orange
Germany	Netzikon
India	Tata
Ireland	Connect Centre
Italy	Unidata
Italy	A2ASmartCity
Japan	KDDI
Japan	Softbank
Latvia	Lattelecom
Luxembourg	Proximus
Malaysia	Atilze
Netherlands	KPN
New Zealand	KotahiNet
New Zealand	Spark
Norway	Telenor
Poland	Netemera
Russia	Everynet
Saudi Arabia	Machinestalk
Slovakia	Slovanet
South Africa	Fastnet
South Africa	Comsol
South Korea	SK Telecom
Sweden	Blink Services
Sweden	Tele2
Switzerland	Swisscom
Taiwan	Asia Pacific Telecom
Taiwan	Gemtek
Thailand	CAT Telecom
Tunisia	GETWireless
UK England	Digital Catapult
UK Scotland	Stream Technologies
USA	Comcast
USA	Senet

# REGULATORY CERTIFICATION

## REGULATORY CERTIFICATION 1/6

Country	Frequency	Max Output Power	Radio standard
ARGENTINA	902-928	36dBm	CNC Resolucion 302/98
AUSTRALIA	915-928	30dBm	AS/NZS 4268:2012
BRAZIL	902-907,5 & 915-928	36dBm	ANATEL Resolução nº 506
CANADA	902-928	36dBm	RSS-247
CE	868-868,6	16 dBm	EN 300 220-2 / -1 v3.1.1
COLOMBIA	902-928	36dBm	MTIC Resolucion_2544_2009
COSTA RICA	920.5 – 928	30 dBm	ALCA50_01_07_2015
HONG-KONG	920-925	36dBm	HKTA 1049; later HKTA 1078 issue 1
IRAN	868-868,6	16 dBm	EN 300 220-2 / -1 v3.1.1
JAPAN	920,5-923,5	16 dBm	ARIB STD-108
KENYA	868-868,6	16 dBm	EN 300 220-2 / -1 v3.1.1
LEBANON	868-868,6	16 dBm	EN 300 220-2 / -1 v3.1.1
MALAYSIA	919-923	27dBm	MCMC MTSFB TC T007
MAURITIUS	868-868,6	16 dBm	EN 300 220-2 / -1 v3.1.1
MEXICO	902-928	36dBm	MEX - NOM-121-SCT1-2009
NEW ZEALAND	920-928	36dBm	General User Radio Licence for Short Range Devices Notice 2016
OMAN	868-868,6	16 dBm	EN 300 220-2 / -1 v3.1.1
PANAMA	902 – 928	36 dBm	PNAF 11. BANDAS ESPECIALES DE REGISTRO
PERU	916-928	36dBm	Resolucion Ministerial 309-2012 MTC 03
SINGAPORE	920-925	29dBm	IMDA TS SRD Issue 1, 1 October 2016
SOUTH AFRICA	868-868,6	16 dBm	EN 300 220-2 / -1 v3.1.1
TAIWAN	920-925	33dBm	Low Power 0002 (LP0002) 28 June, 2011 revised
URUGUAY	915 – 928	36 dBm	RESOLUCION Nro.35/2000 DIRECCION NACIONAL DE COMUNICACIONES. Exp.9903040/1/1802
USA	902-928	36dBm	FCC Part 15-247

## REGULATORY CERTIFICATION 2/6

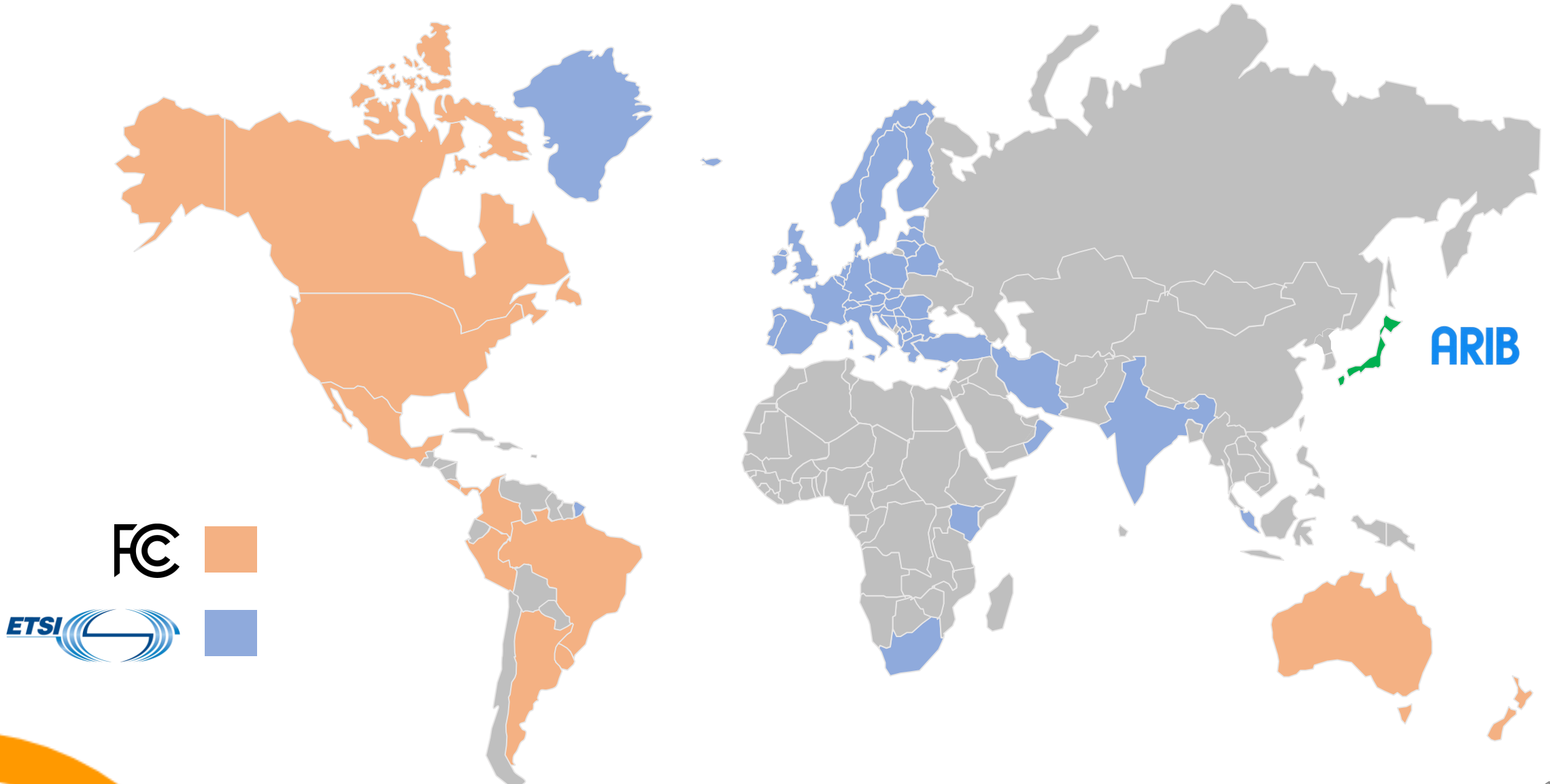


Regulation: FCC title 47 part 15  
Frequency: 902-928MHz  
Output power: 150mW up to 4W  
Duty cycle: N/A



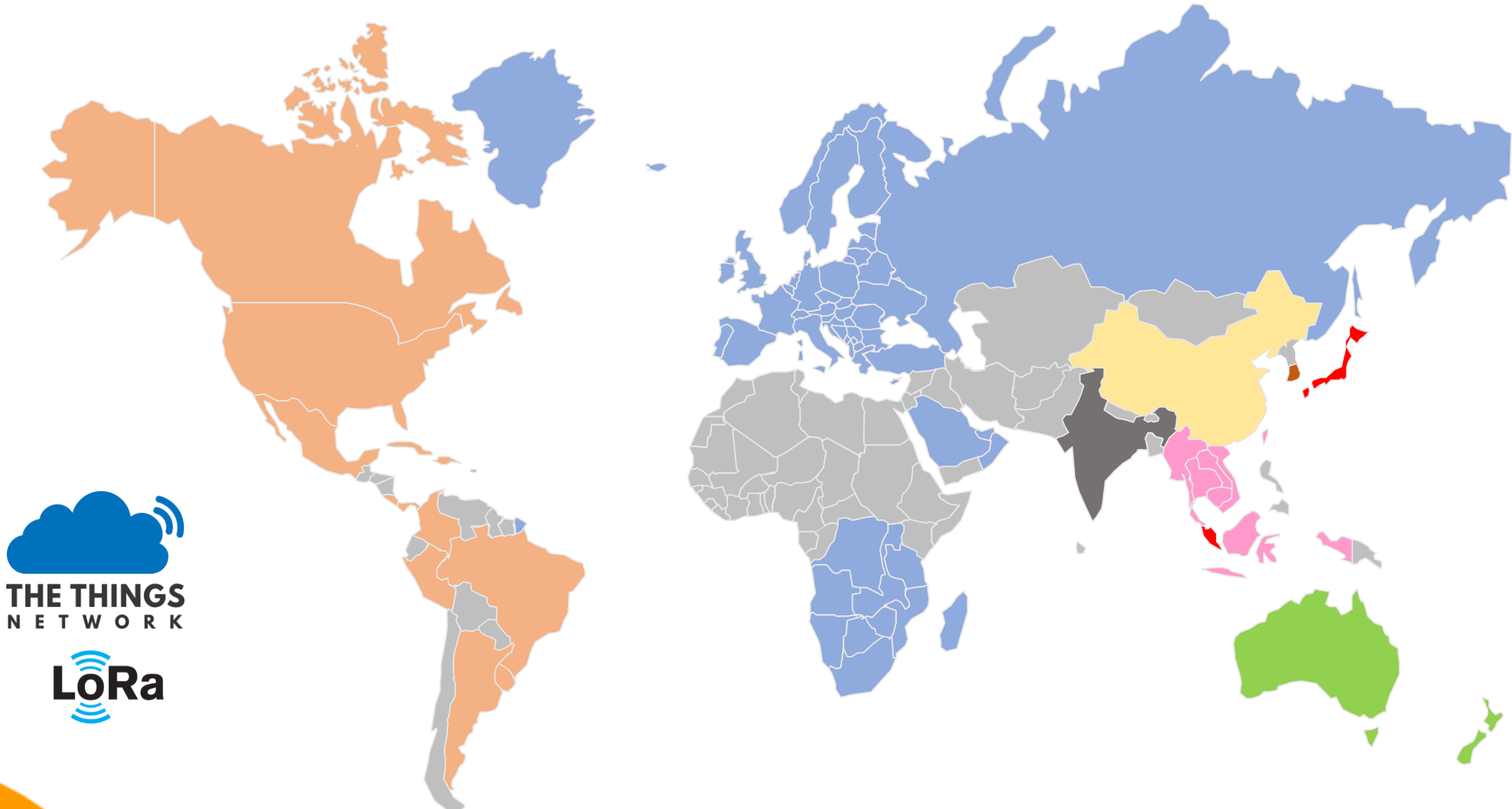
Regulation: ETSI EN 300-220  
Frequency: 863-870MHz  
Output power: 25mW max  
Duty cycle: 1% (36 seconds/hour)

# REGULATORY CERTIFICATION 3/6





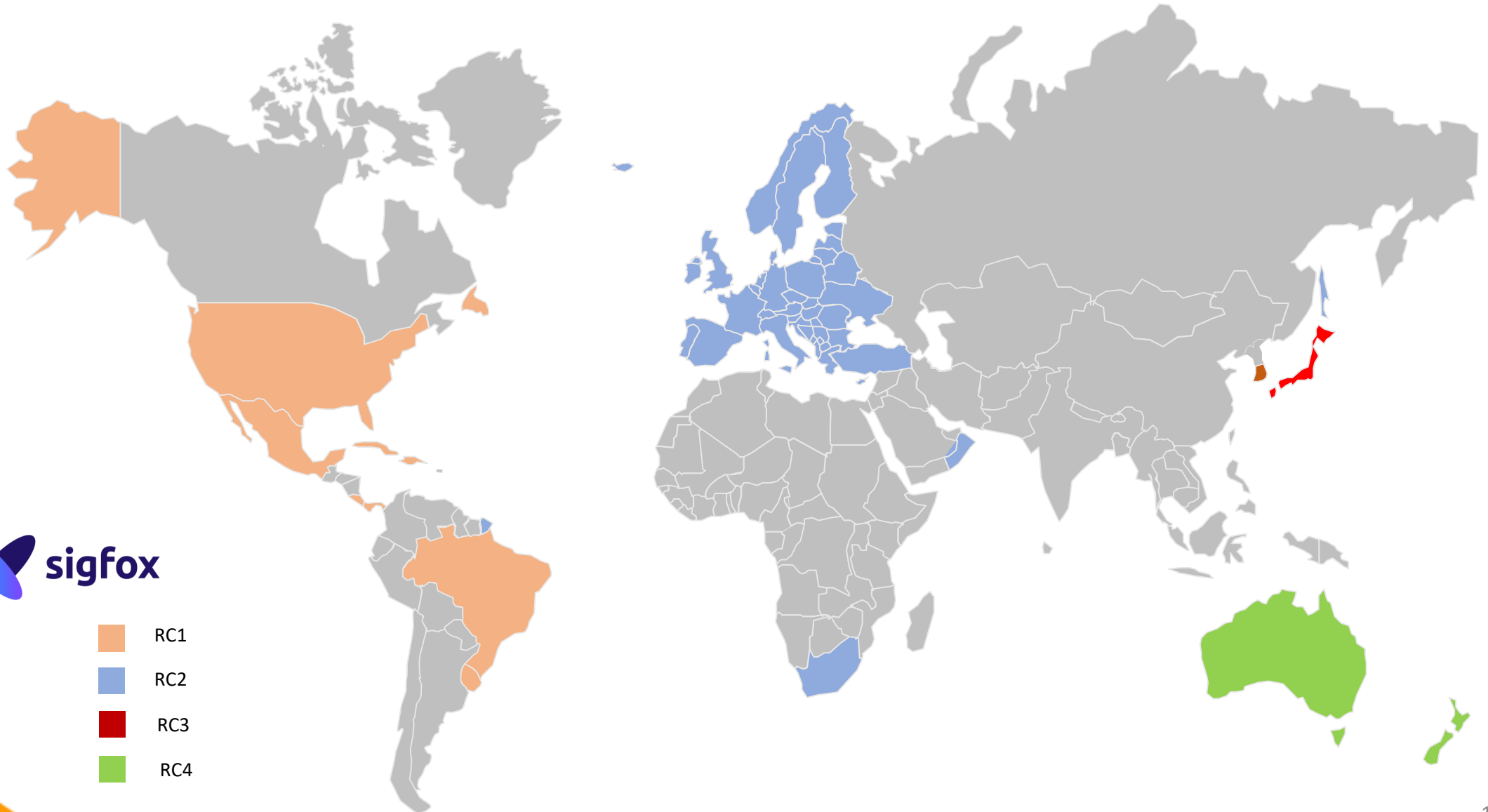
# REGULATORY CERTIFICATION 4/6



# REGULATORY CERTIFICATION 4/6



-  RC1
-  RC2
-  RC3
-  RC4



# REGULATORY CERTIFICATION 5/6



## REGULATORY CERTIFICATION 6/6





Merci

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