



# LTE LATIN AMERICA

APRIL 2016

# 5G AMERICAS

## The Voice of 5G and LTE for the Americas

5G Americas is an industry trade organization composed of leading telecommunications service providers and manufacturers. The organization's mission is to advocate for and foster the advancement and full capabilities of LTE wireless technology and its evolution beyond to 5G, throughout the ecosystem's networks, services, applications and wirelessly connected devices in the Americas. 5G Americas is invested in developing a connected wireless community while leading 5G development for all the Americas. 5G Americas is headquartered in Bellevue, Washington and officially announced the change of the organization's name from 4G Americas on February 12, 2016.



# 5G AMERICAS - MEMBERS



# WHITE PAPERS

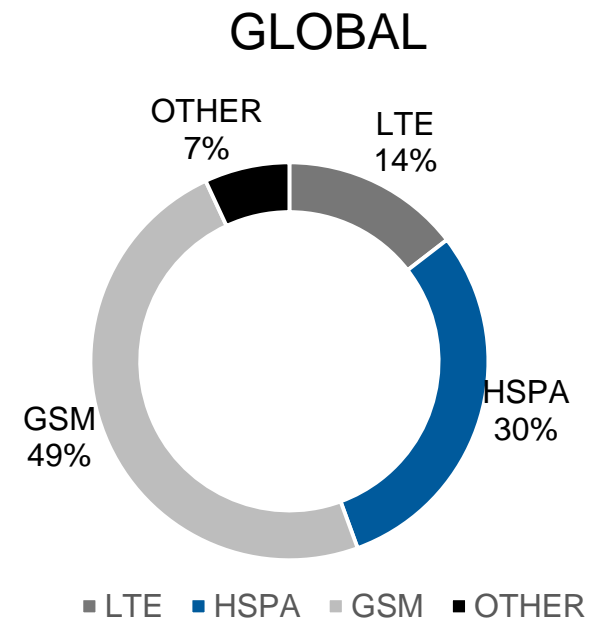
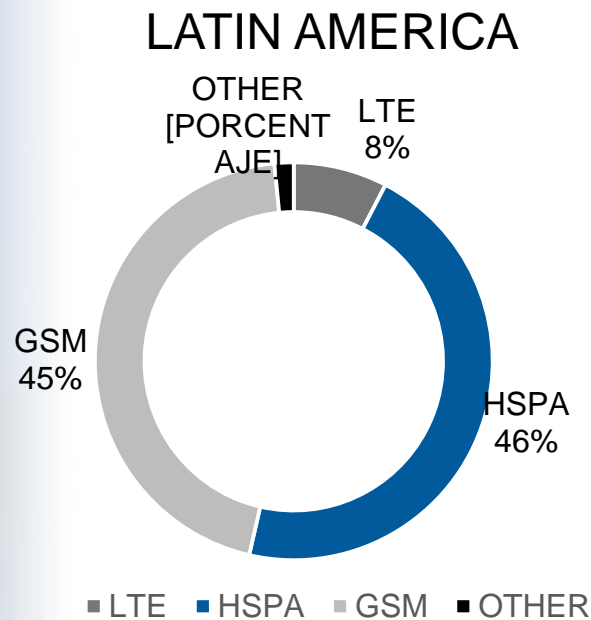
- ▶ Digital Adoption in Latin America:  
The Role of Infrastructure  
Deployment and Other Policies in the  
Region
- ▶ Cellular Technologies Enabling the  
Internet of Things
- ▶ LTE Aggregation and Unlicensed  
Spectrum
- ▶ 5G Technology Evolution  
Recommendations



<http://www.5gamericas.org/es/resources/white-papers/>

# MOBILE TECHNOLOGIES

Share of mobile technologies in Latin America & Global, 2015



Source: Ovum, March 2016

# GLOBAL LTE

2015

**1 billion** connections

**107%** annual growth

**480** LTE networks in **157** countries

**117** LTE-A networks in **57** countries

2020e

**4 billion** connections

**45%** of mobile lines will be LTE





# MOBILE BROADBAND CALA

## LTE IN 2015

**54 million** connections

**304%** annual growth

**75** LTE networks in **30** countries

**1** LTE-A network in **Puerto Rico**

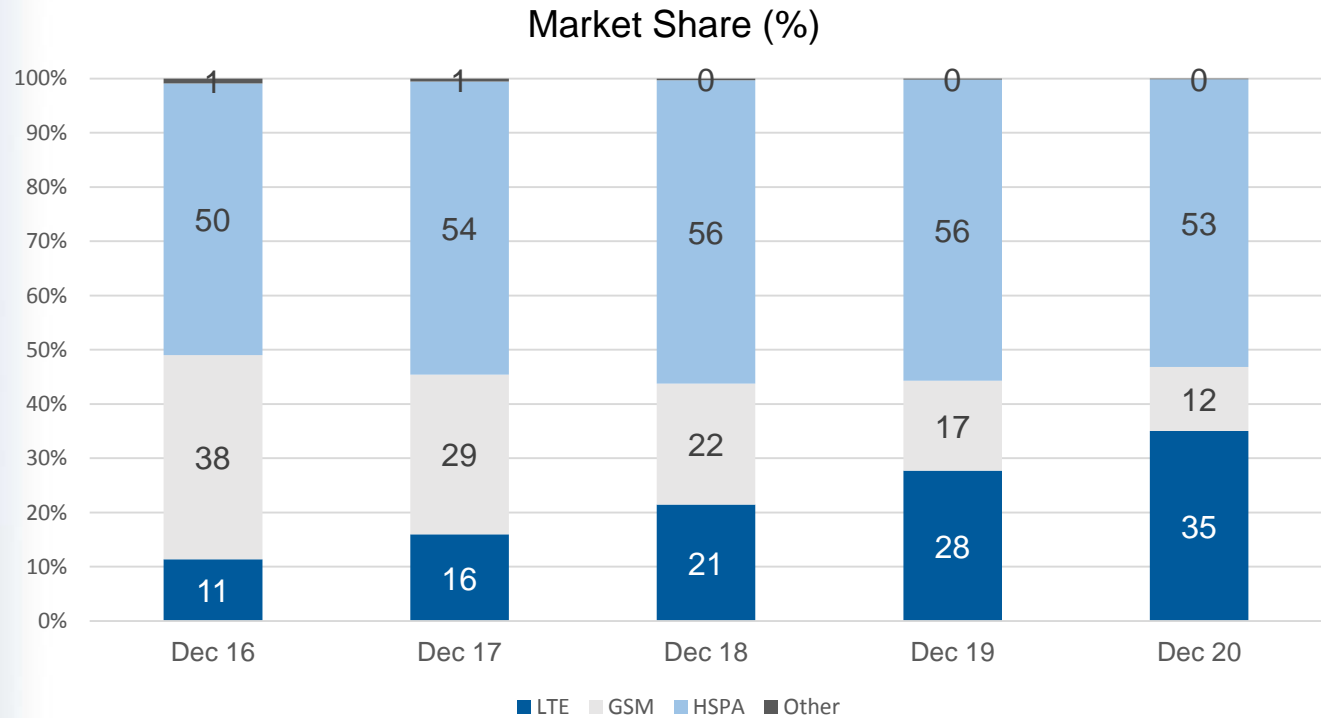
## HSPA IN 2015

**325 million** connections

**HSPA > GSM** in total connections



# LATIN AMERICA MOBILE LINES 2020e



## Total lines (in millions)

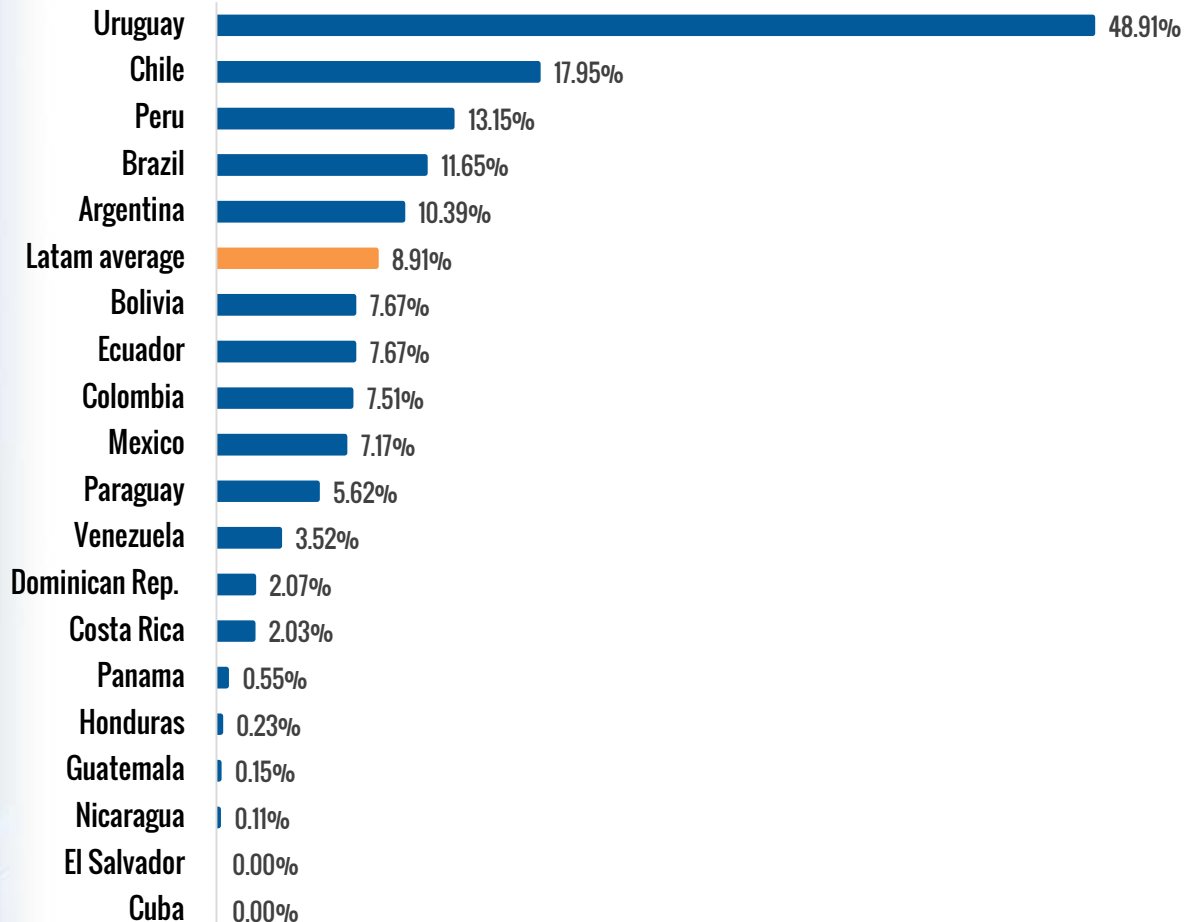


Source: Ovum, March 2016



# LTE IN LATIN AMERICA

LTE lines penetration over population, 2015



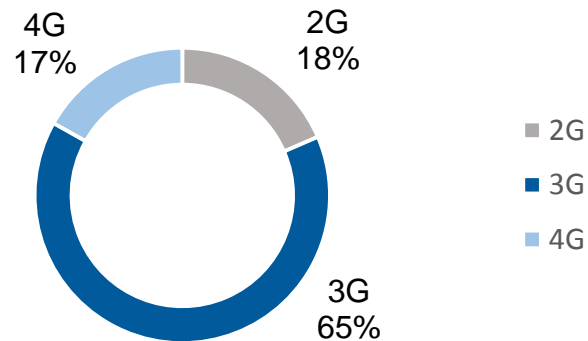
Source: regulators, Ovum, 451 Research, Carrier & Asociados, CEPAL

# ARGENTINA

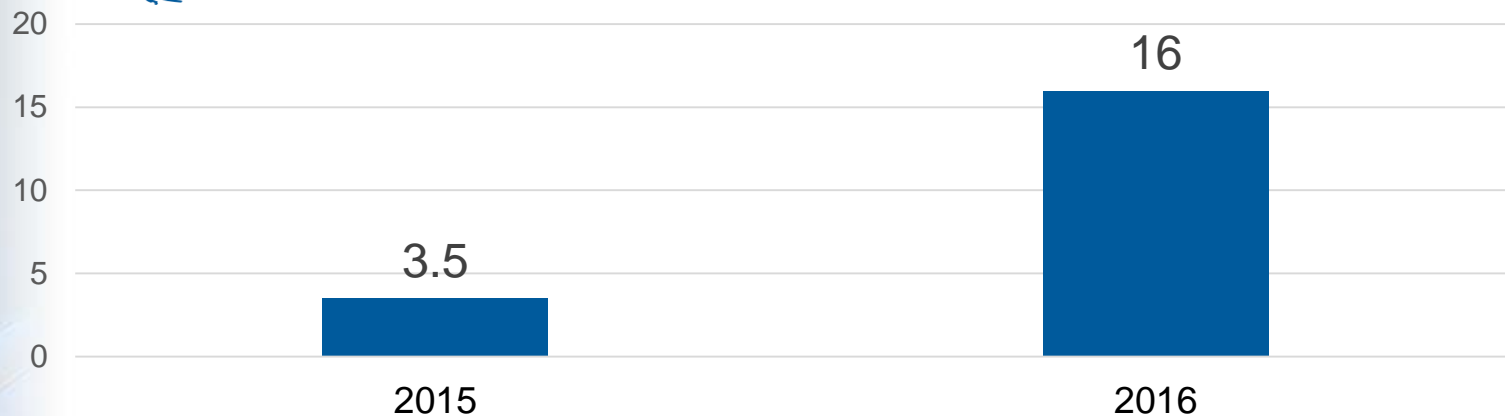


**36,2 million**  
Mobile lines in activity

Devices per technology, 2015



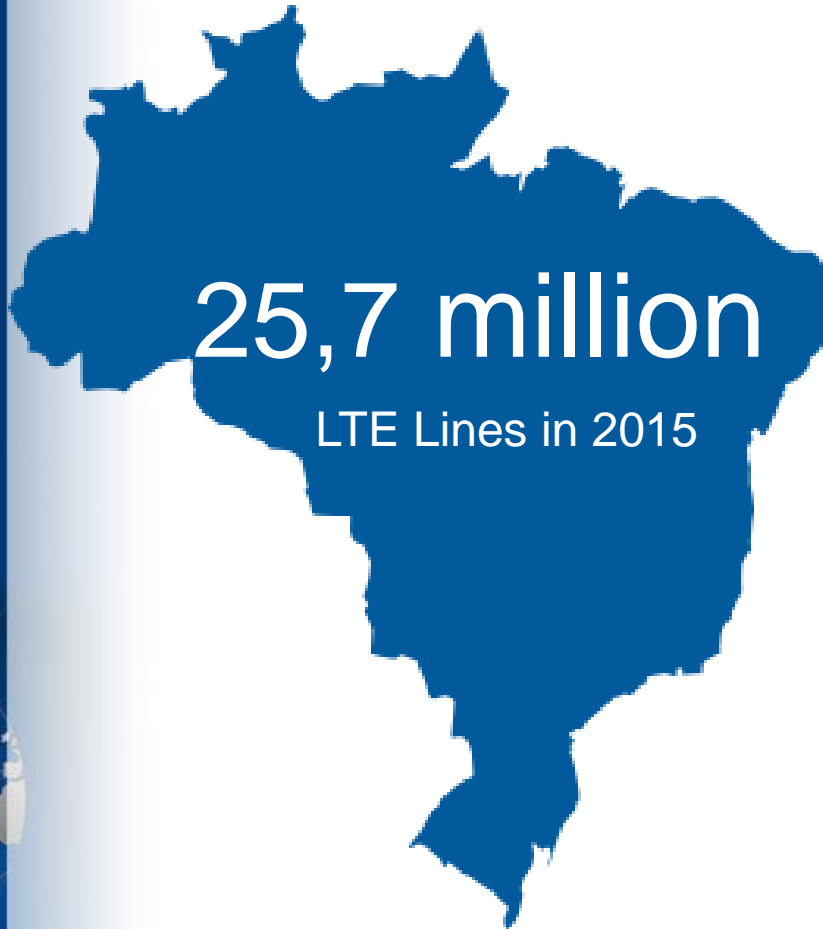
LTE Forecast (in millions)



Source: Carrier y Asociados, March 2015



# LTE IN BRAZIL

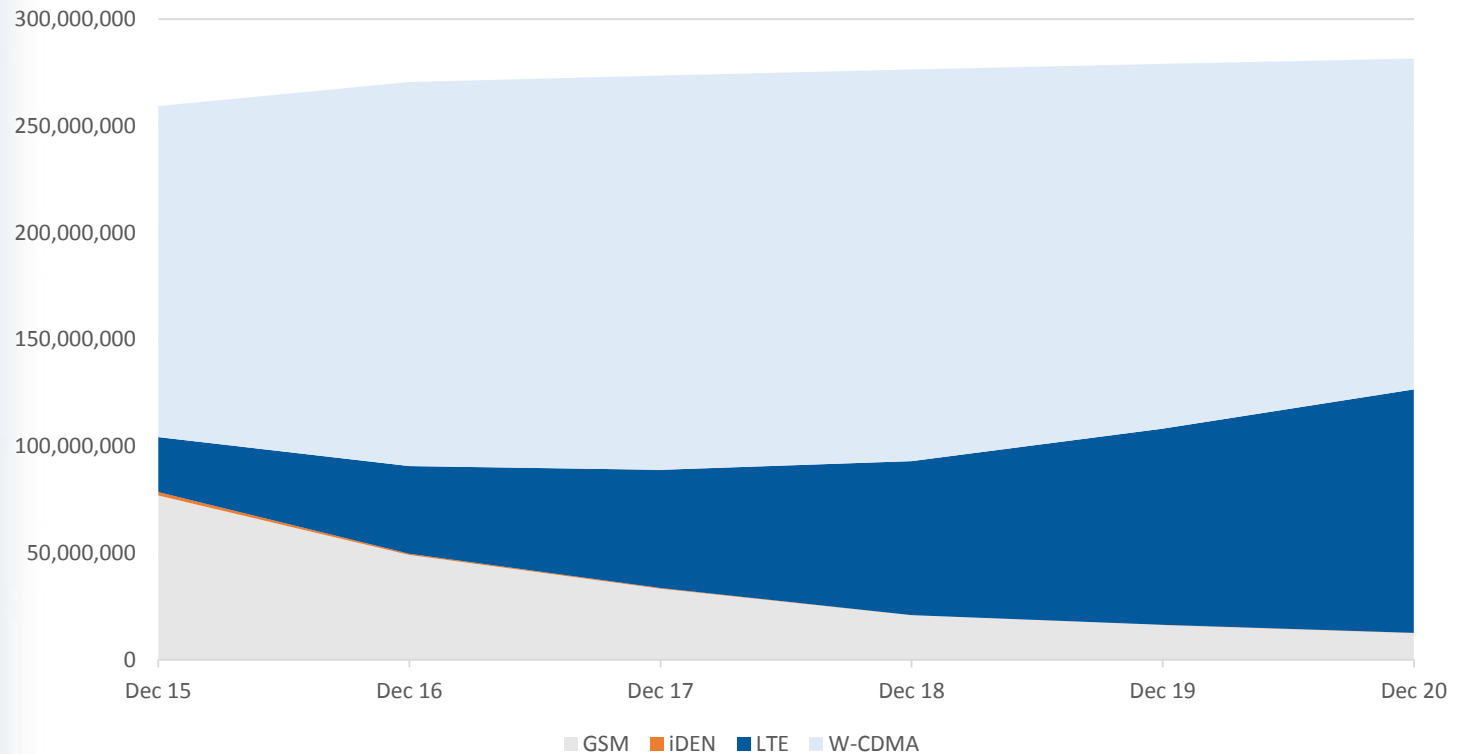


- Brazil is the **largest LTE market** in Latin America
- Represents nearly **half** of Latin American LTE subscriptions
- It is expected to reach **114 million** of LTE subscriptions by 2020 end
- By 2020, **40%** of mobile lines will be LTE



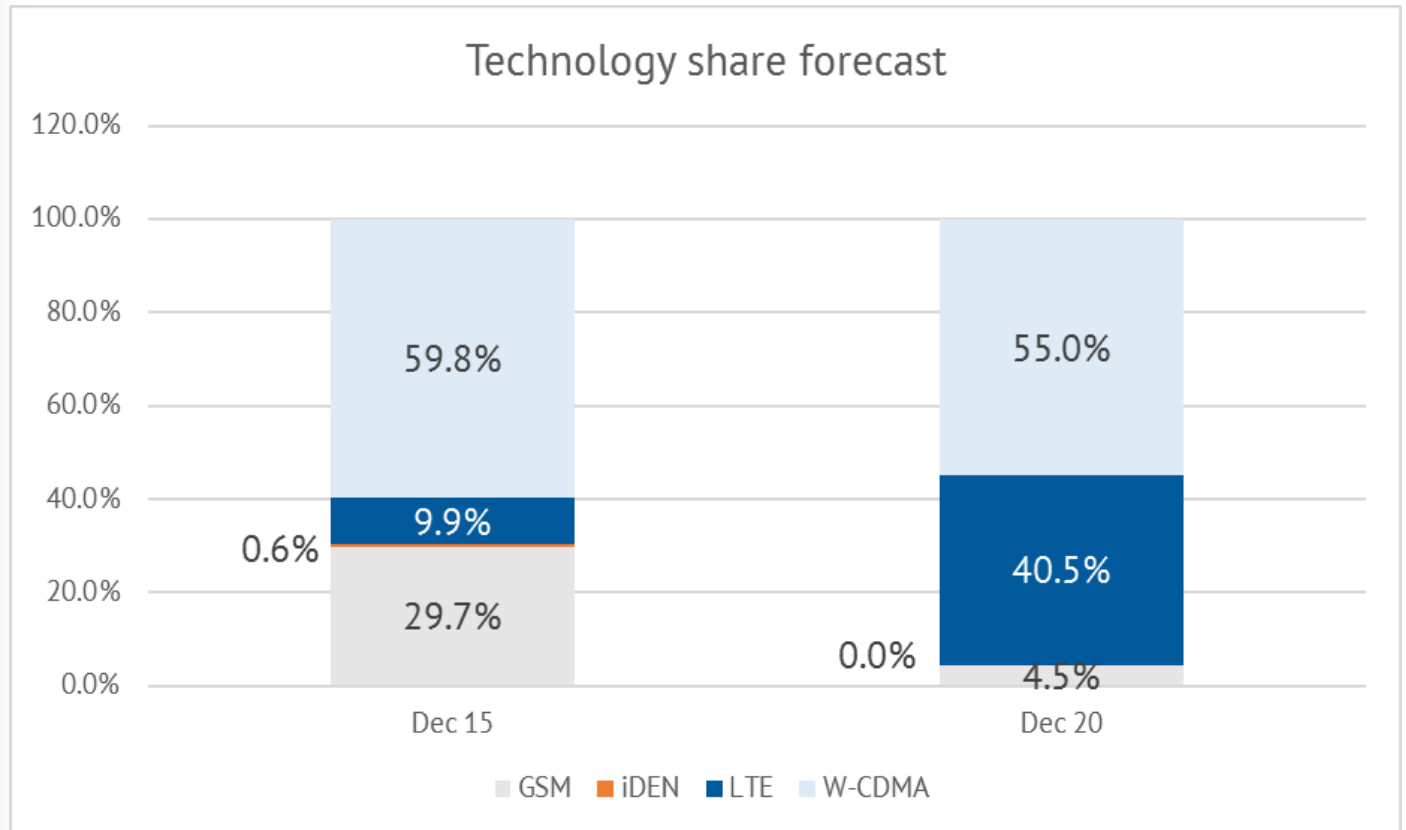
# LTE IN BRAZIL

Technology evolution Forecast (subscriptions)



Source: Ovum, April 2016

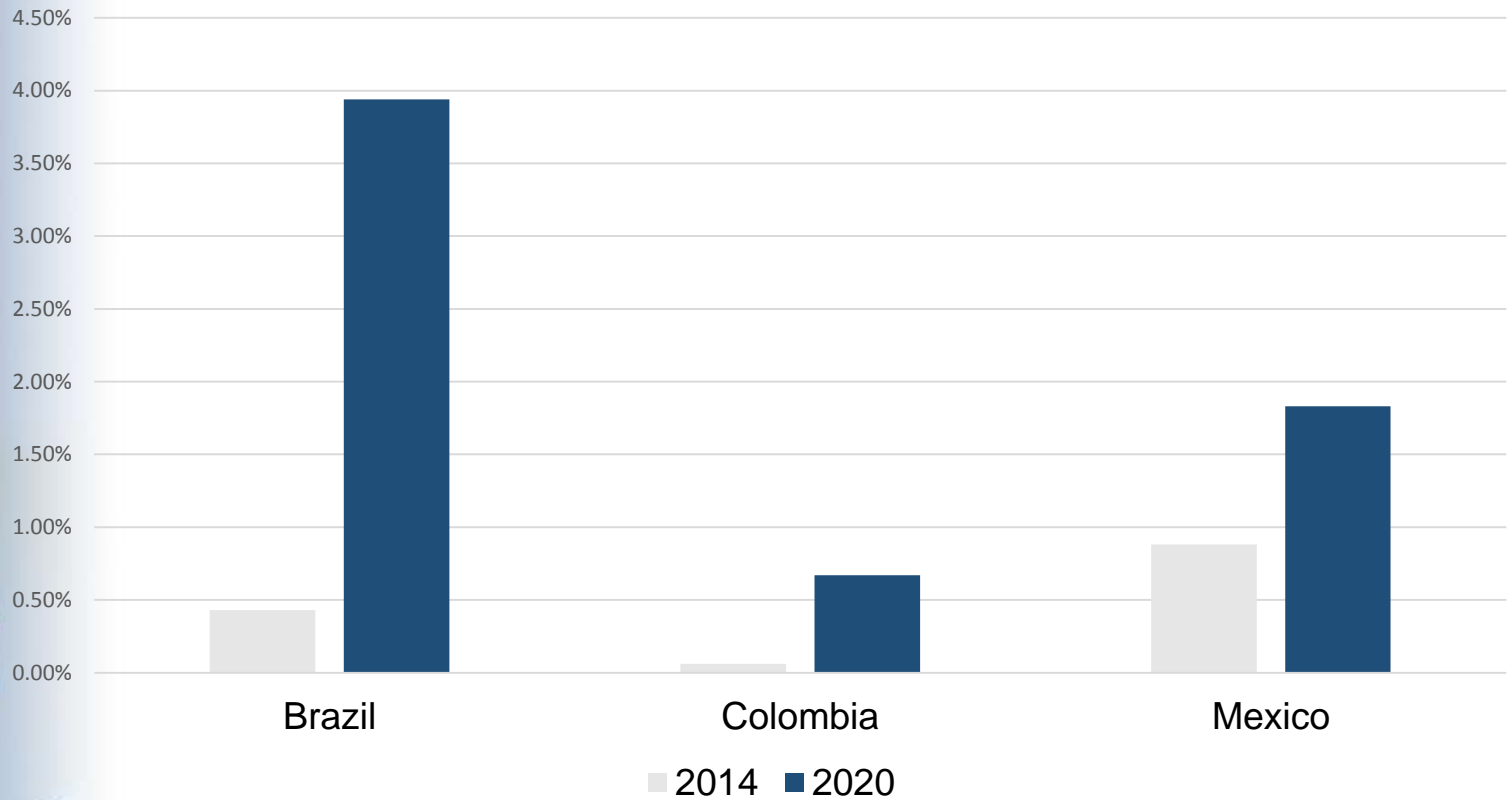
# LTE IN BRAZIL



Source: Ovum, April 2016

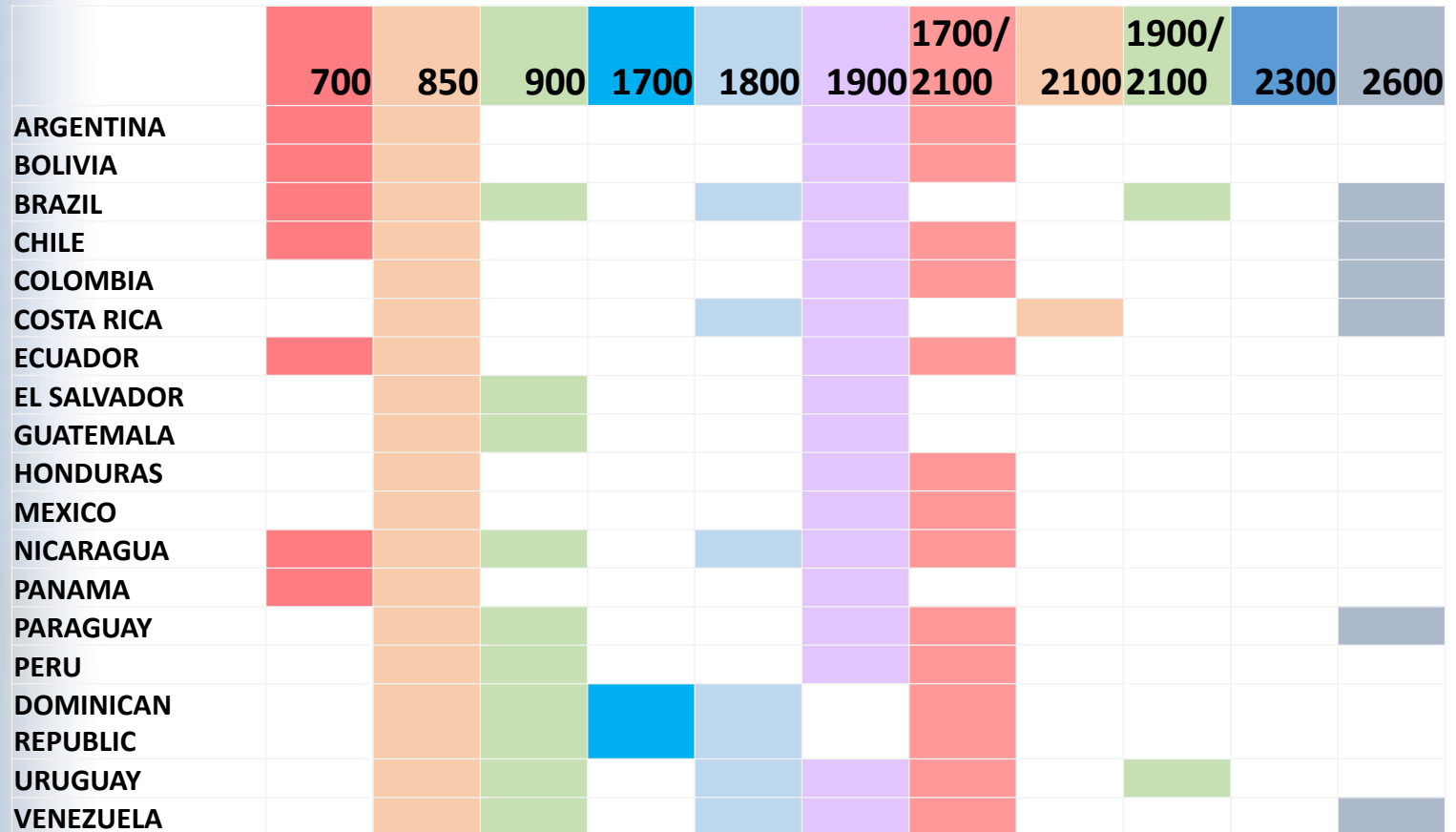
# FTTH IN LATIN AMERICA

## FTTH - Evolution of market penetration





# SPECTRUM ALLOCATION IN LATIN AMERICA



Source: 5G Americas based on regulators' information

# SPECTRUM ALLOCATION IN LATIN AMERICA

Market	Total Spectrum	ITU 2015 Suggestion	Percentage Achieved 2015	ITU 2020 Suggestion	Percentage Achieved 2020
Argentina	403.6	1300	31.0%	1720	23.47%
Bolivia	274	1300	21.1%	1720	15.93%
Brazil	542	1300	41.7%	1720	31.51%
Chile	465	1300	35.8%	1720	27.03%
Colombia	362.5	1300	27.9%	1720	21.08%
Costa Rica	260.6	1300	20.0%	1720	15.15%
Dominican Republic	312.4	1300	24.0%	1720	18.16%
Ecuador	290	1300	22.3%	1720	16.86%
El Salvador	208.4	1300	16.0%	1720	12.12%
Guatemala	210.6	1300	16.2%	1720	12.24%
Honduras	290	1300	22.3%	1720	16.86%
Mexico	313	1300	24.2%	1720	18.27%
Nicaragua	420	1300	32.3%	1720	24.42%
Panama	418	1300	32.2%	1720	24.30%
Paraguay	280	1300	21.5%	1720	16.28%
Peru	304.4	1300	23.4%	1720	17.70%
Uruguay	270	1300	20.8%	1720	15.70%
Venezuela	324	1300	24.9%	1720	18.84%
<b>Average</b>	<b>330.5</b>	<b>1300</b>	<b>25.43%</b>	<b>1720</b>	<b>19.22%</b>



Source: 5G Americas based on regulators' information

# FUTURE SPECTRUM ALLOCATION PROCESSES

COUNTRY	ALLOCATION/AUCTION TYPE	DATE
Mexico	700 MHz	2016
Mexico	2600 MHz	2016
Mexico	600 MHz	2020
Peru	700 MHz	2016
El Salvador	806-894 MHz and AWS	Undefined
Paraguay	700 MHz and 2600 MHz	2016 End
Puerto Rico	600 MHz	2016
British Virgin Islands	450 MHz, 700 MHz PCS, AWS and 2600 MHz	Undefined
Costa Rica	1800 MHz and 1900/2100 MHz	2017
Costa Rica	900 MHz	End 2017
Colombia	700 MHz, 900 MHz, and remains of 1900 MHz and 2600 MHz	2015-2017
Colombia	AWS-3, 2300 MHz and 3500 MHz	2017-2019



Source: 5G Americas based on regulators' information

# SUMMARY

- LTE is the fastest growing mobile technology to arrive in Latin America
- More spectrum is necessary for the healthy growth of mobile broadband
- Advanced mobile broadband technologies will be key to drive the deployment of fiber optics networks
- Regulation that simplify infrastructure deployment is necessary to accelerate deployment of new fixed and wireless technologies.





**THANK YOU!**