



Comunicaciones Móviles - Global facts

3Q 2016  
Septiembre



***La voz de la 5G y LTE  
de las Américas***

5G Americas' misión es promover y abogar por el avance y las capacidades plenas de la tecnología móvil LTE y su evolución más allá de las 5G a lo largo de las redes, servicios, aplicaciones y dispositivos conectados de manera inalámbrica en el ecosistema de las Américas.



## GLOBAL DATA

Mobile connections, including M2M  
Jan 2017

8,023,539,751

▲ 4.70%

Unique mobile subscribers  
Jan 2017

4,904,264,879

▲ 4.76%

Revenue/year  
FY 2015

\$1.06T

▲ 2.18%

ARPU/month  
FY 2015

\$10.25

▼ -2.78%

Source: GSMA Intelligence 2017, current year-end data except interpolated subscribers and connections

## Current World Population

7,476,258,614

[view all people on 1 page >](#)

TODAY

Births today  
**199,574**

Deaths today  
**82,499**

Population Growth today  
**117,075**

THIS YEAR

Births this year  
**3,284,400**

Deaths this year  
**1,357,694**

Population Growth this year  
**1,926,706**

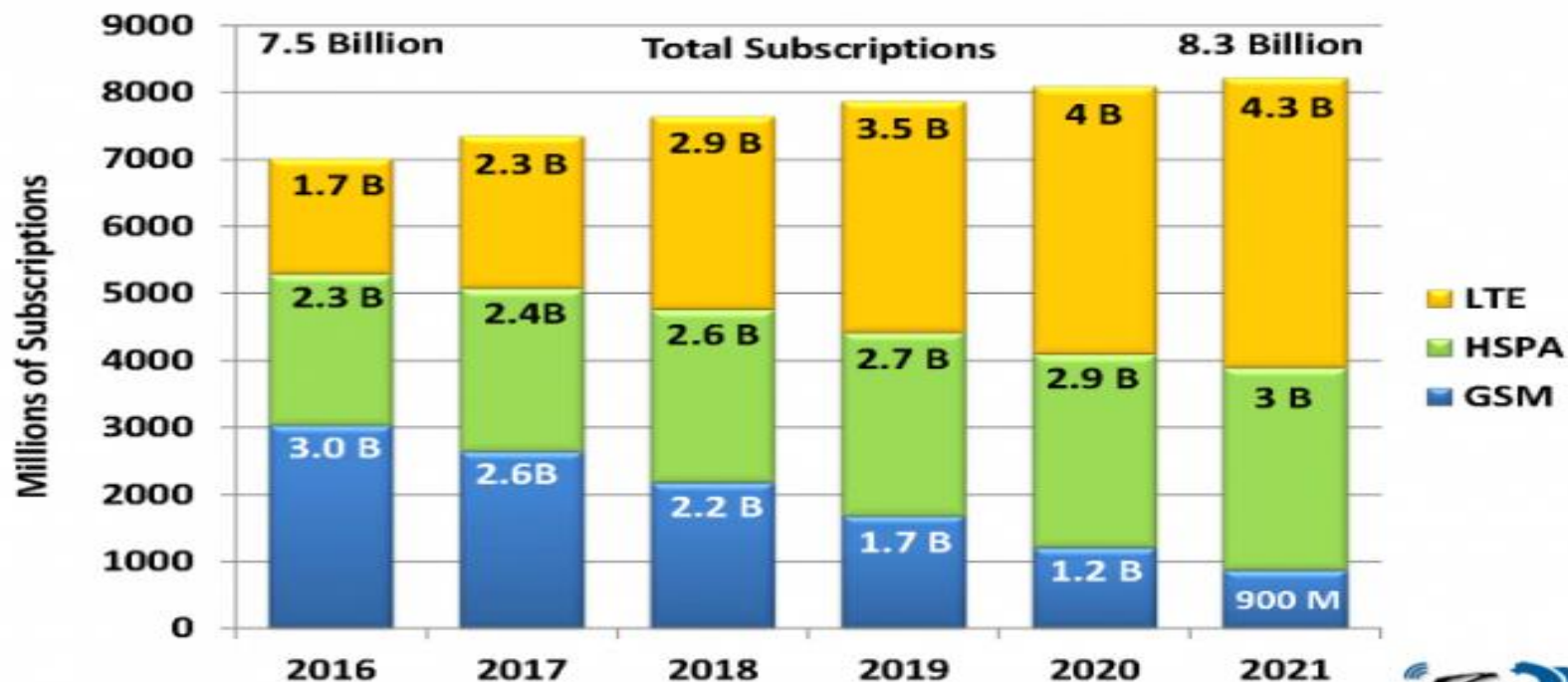
Source: <http://www.worldometers.info/world-population/>

### TOP 20 LARGEST COUNTRIES BY POPULATION (LIVE)

1	China	1,385,438,373	11	Japan	126,176,681
2	India	1,335,068,794	12	Ethiopia	103,160,518
3	U.S.A.	325,359,440	13	Philippines	103,063,383
4	Indonesia	262,122,584	14	Vietnam	94,955,034
5	Brazil	210,450,260	15	Egypt	94,345,579
6	Pakistan	194,884,018	16	D.R. Congo	81,042,604
7	Nigeria	189,530,427	17	Germany	80,657,955
8	Bangladesh	163,919,533	18	Iran	80,518,143
9	Russia	143,405,622	19	Turkey	80,040,818
10	Mexico	129,468,988	20	Thailand	68,226,213



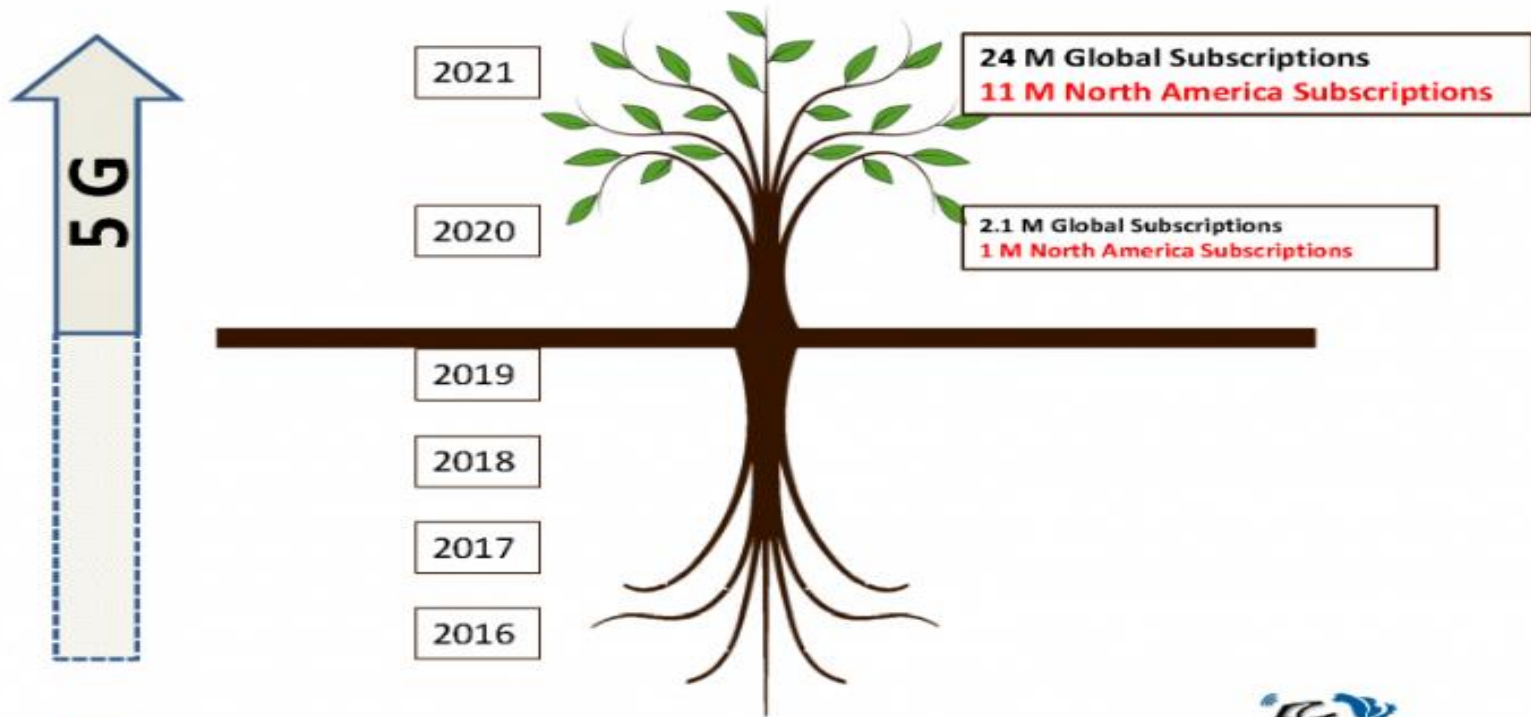
# Annual Global Technology Forecast Subscriptions 2016-2021



Source:  September 2016



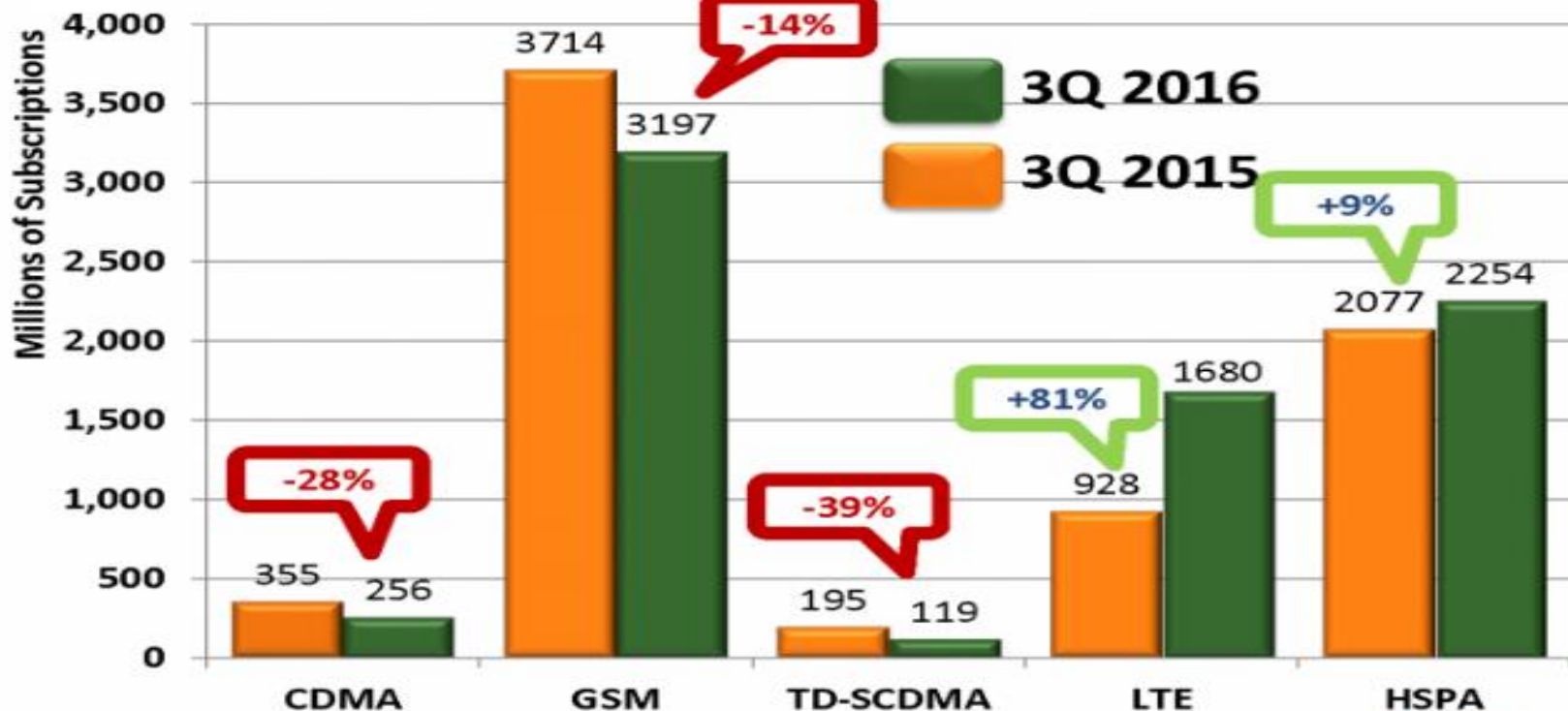
# Global 5G Subscription Forecast 2020 - 2021



Source:  September 2016

  
www.5gamericas.org

# Annual Global Technology Growth 3Q 2015 – 3Q 2016

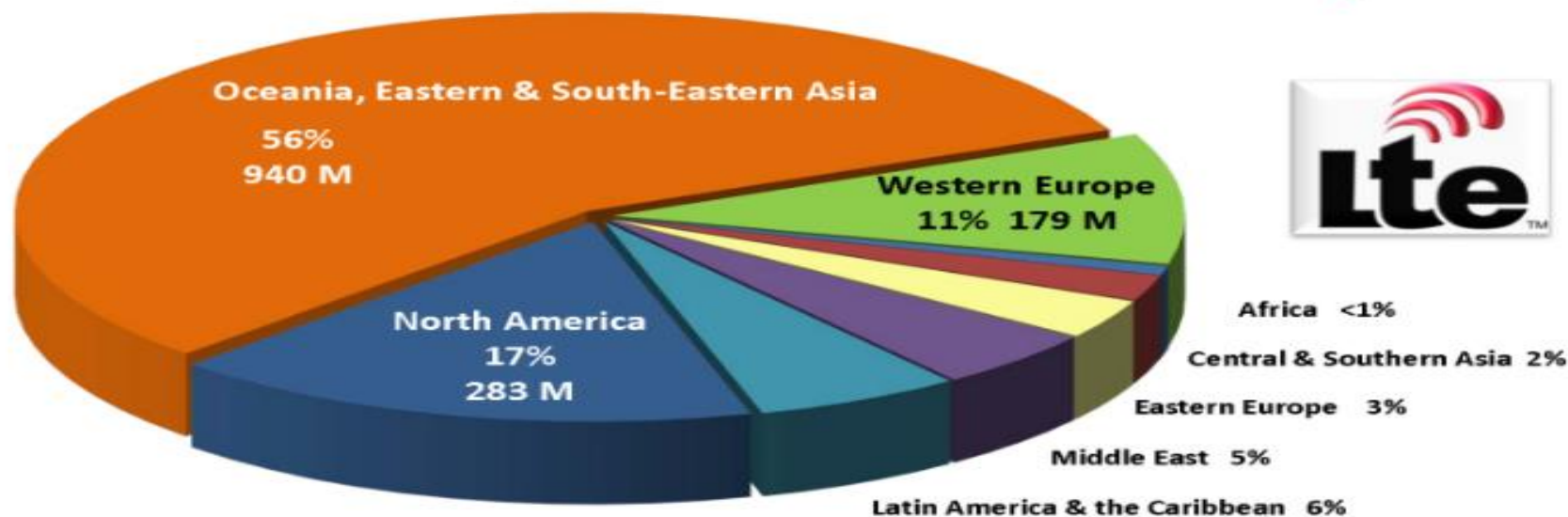


Source:  September 2016

  
www.5gamericas.org

# 3Q 2016 LTE Subscribers and Percentages by World Region

1.7 Billion Global LTE Subscriptions



Source:  September 2016

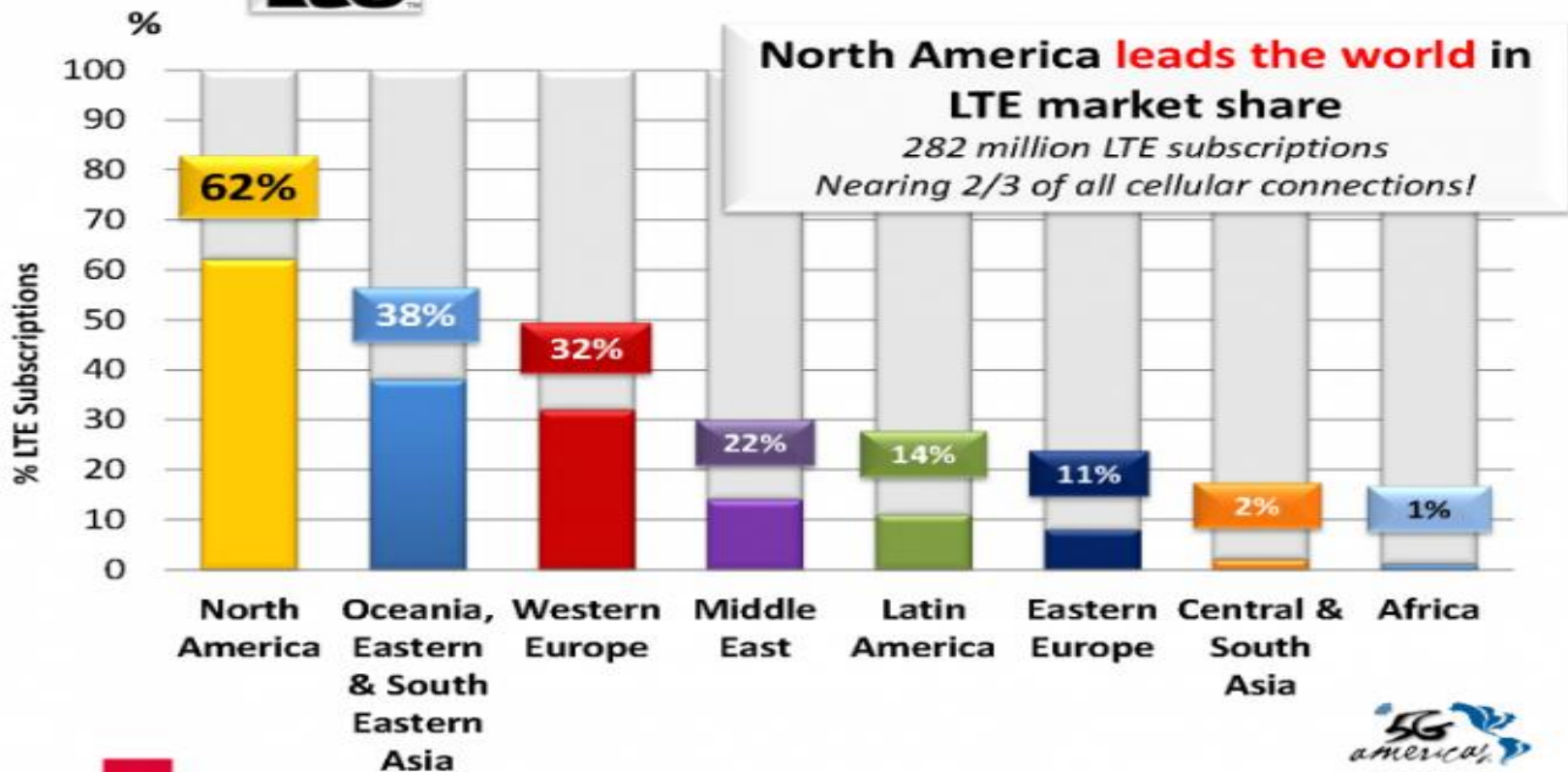
  
www.5gamerica.org

# Regional



# Technology - Share of Market

September 2016



Source:  September 2016







Tendencias globales - Global facts

WIDESPREAD ADOPTION OF MOBILE BROADBAND

# BY THE YEAR 2019

— THERE WILL BE —  
**9.3 BILLION**  
*Mobile Subscriptions*

**8 BILLION**  
— OF THOSE WILL BE —  
*Mobile Broadband*

**3x**  
*Increase*

SMARTPHONE  
SUBSCRIPTIONS

**10x**  
*Increase*

MOBILE DATA  
TRAFFIC

DRIVEN BY  
**VIDEO**

GLOBAL  
*Population*  
COVERAGE

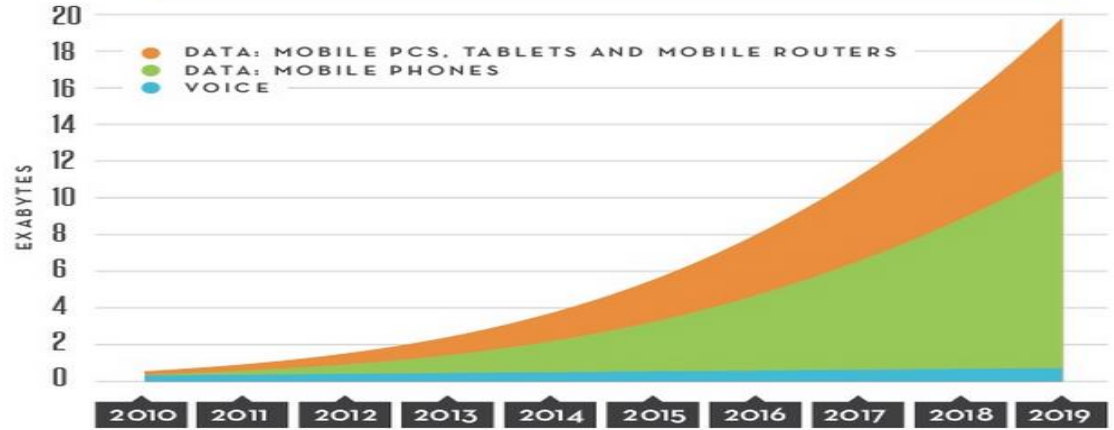
● LTE  
● HSPA



**1 MORE! MORE! MORE!**  
MORE USERS • MORE DATA • MORE DEVICES

# GLOBAL DATA TRAFFIC GROWTH TO 2019

## MORE MOBILE TRAFFIC (MONTHLY EXABYTES)



ABOVE ALL  
SMARTPHONES  
— DRIVE —  
Traffic Growth



## SMARTPHONES

2013

2019

1.9 BILLION  
SUBSCRIPTIONS

5.6 BILLION  
SUBSCRIPTIONS

MOBILE TRAFFIC PER ACTIVE SUBSCRIPTION

600 MB ■ 2.2 GB

TOTAL SMARTPHONE TRAFFIC

1 EXABYTE ■ 10 EXABYTES

**1** MORE! MORE! MORE!  
MORE USERS • MORE DATA • MORE DEVICES



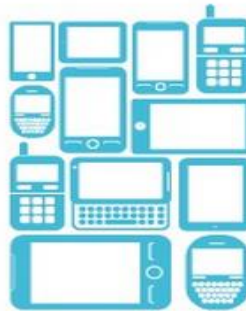
## TECHNOLOGY EVOLUTION

SPEEDS COMPARED

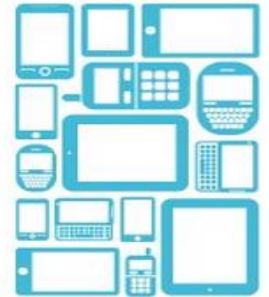


## INCREASED NETWORK EFFICIENCY

SMALL CELLS AND HETNETS



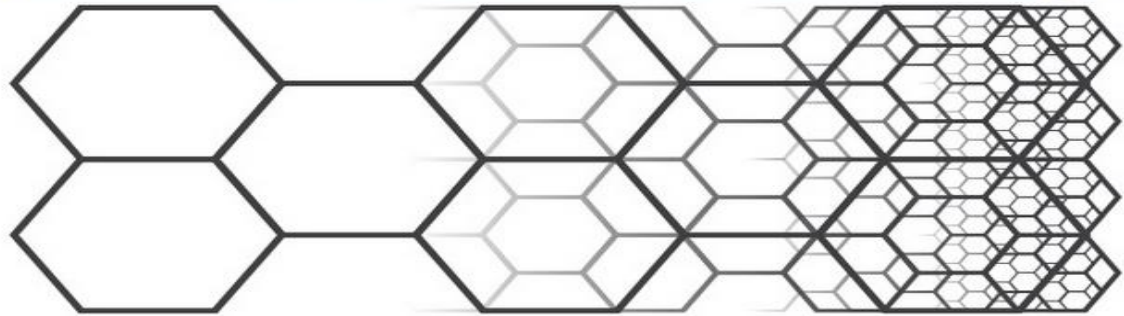
TO REACH THE GOAL OF  
*1000x capacity*  
— WE NEED AN —  
**EXTREME DENSIFICATION**  
— OF THE NETWORK USING —  
*many small cells everywhere*



2

HERE IS

**WHAT WE NEED!**



New HetNet architecture for the network that brings it closer to the user and delivers more capacity.



## LOCATION

Indoors, outdoors, on lampposts and businesses



## TECHNOLOGY

Supporting 3G, 4G, Wi-Fi



## VARIETY

Deployed by operators as well as users



## DEPLOYMENT

In all types and sizes - femto, micro, pico, metro, relays, remote radio heads and distributed antenna systems

2

HERE IS

WHAT WE NEED!



## REGULATORY INNOVATION

### MORE SPECTRUM

#### PRESIDENTIAL MANDATE

In the U.S., President Obama issued a Memorandum that directs Federal agencies to relinquish or share spectrum allocated to them, setting a precedent for regulatory innovation. *June 14, 2013*



### GLOBAL HARMONY

Regulatory innovations are needed to secure internationally harmonized spectrum, through auction and pairing, to meet the data challenges and potential capacity crunch.

2

HERE IS

WHAT WE NEED!

TO MEET THE  
— *1000x data challenge* —  
THERE IS A NEED TO

- 1 CONTINUE TO EVOLVE MOBILE NETWORK TECHNOLOGY
- 2 ALLOCATE MORE CLEARED SPECTRUM  
- particularly licensed internationally harmonized spectrum for LTE roaming
- 3 INNOVATE WITH SPECTRUM REGULATORY  
POLICY FOR LICENSED SHARED ACCESS

*Right Now!*





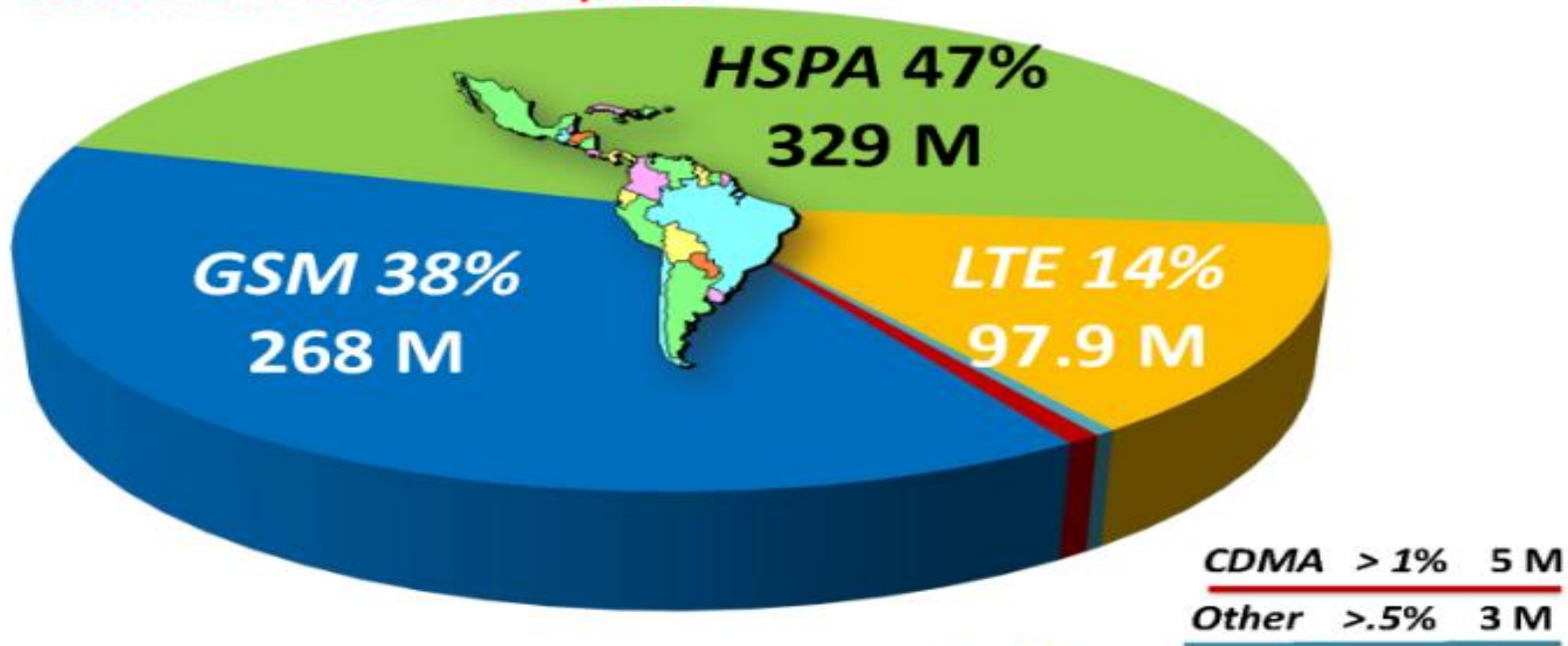
Latín América - Global facts



# Latin America & Caribbean - Mobile Subscribers and Market Share by Technology

September 2016

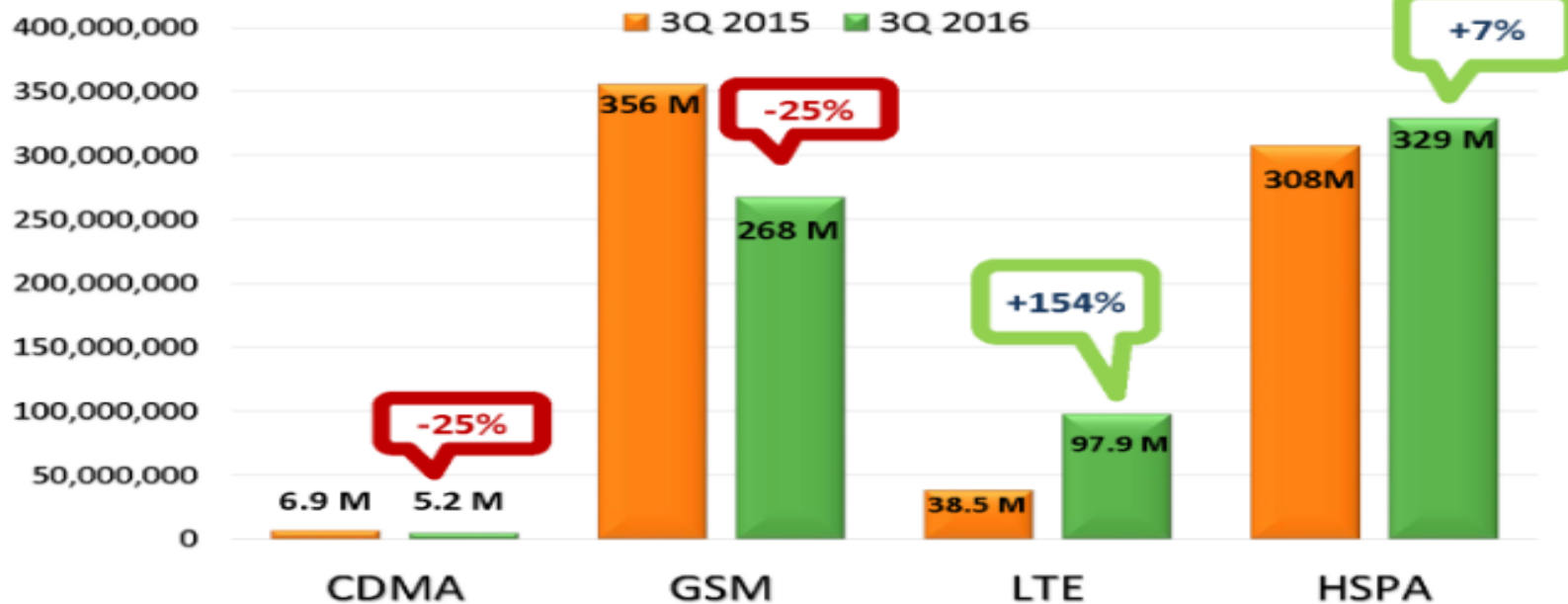
703 million total subscriptions



Source:  September 2016

  
www.5gamericas.org

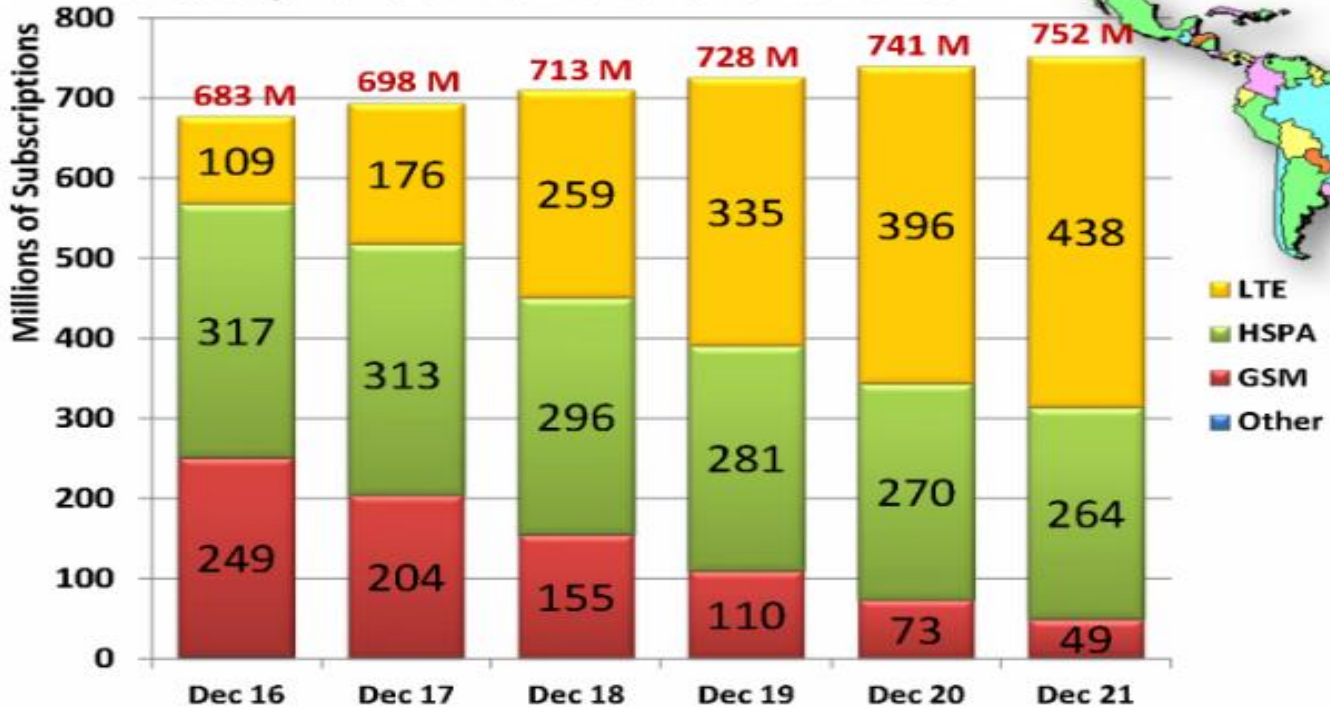
# Latin America & Caribbean – Annual Technology Growth 3Q 2015 - 3Q 2016



Source:  September 2016

  
www.Sgamericas.org

## Latin America & Caribbean Technology Forecast Subscriptions & Market Share 2016-2021

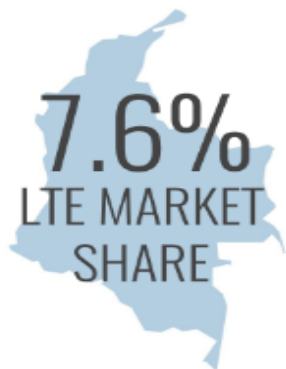


Source:  September 2016

  
www.5gamericas.org

# COLOMBIA | LTE 2015 - 2020

## MOBILE MARKET

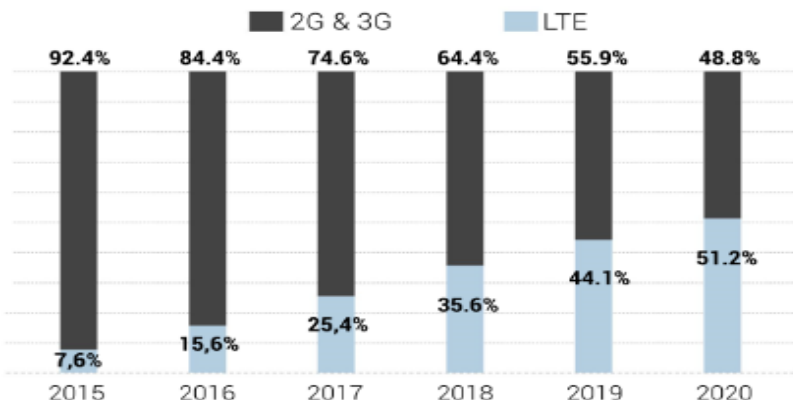


The Colombian wireless market had approximately 56.4 million registered lines in 2015 of which **4.3 million correspond to LTE subscribers, reaching a market share of 7.6%.**

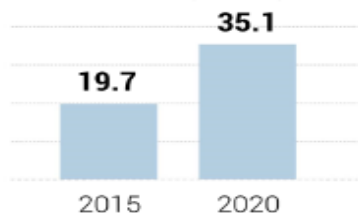
Mobile subscribers in Colombia are expected to reach 62.5 million in total with **32 million of LTE lines, accounting for 51.2% of the market share.** In terms of growth, 2020 is expected to have 642.4% more LTE lines than 2015.

Smartphone use is also expected to grow. Colombia is expected to have in 2020 around 77.6% more devices in use than 2015, increasing from 19.7 to 35.1 million smartphones in use.

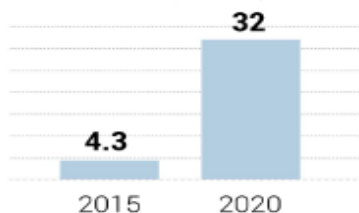
## LTE MARKET SHARE (% OF REGISTERED LINES)



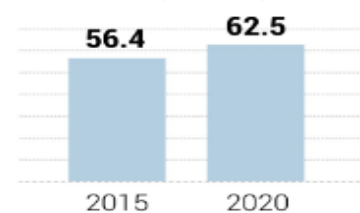
## SMARTPHONES IN USE TOTAL (MILLION)



## LTE LINES TOTAL (MILLION)



## WIRELESS LINES TOTAL (MILLIONS)



# ***Curso Comunicaciones Móviles - 2017***