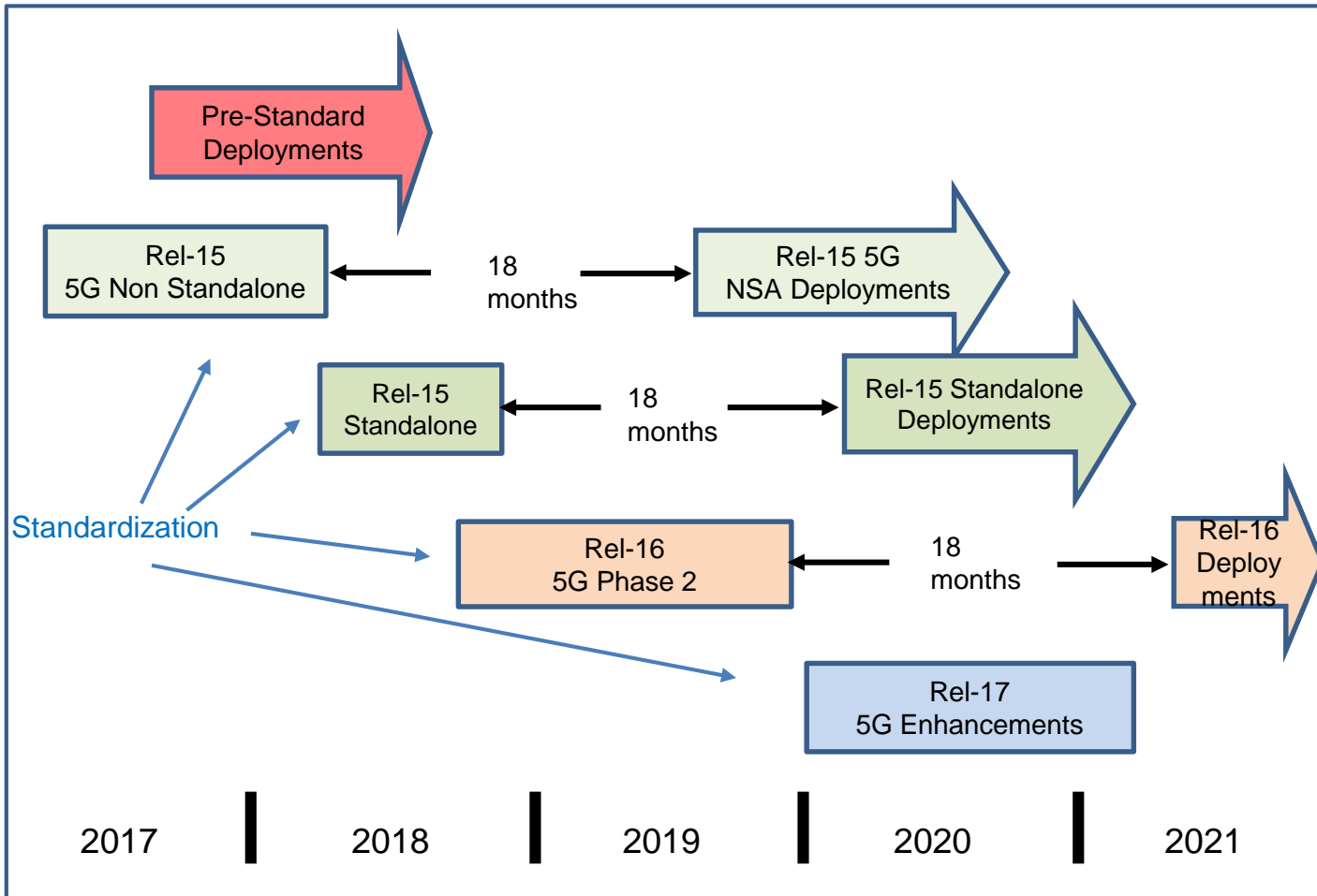




# The Voice of 5G and LTE for the Americas

5G Americas fosters LTE and its further advancement to LTE-Advanced Pro that will provide the wireless technology foundation for 5G

## 3GPP Release 15-17 | Road to 5G



**LTE continues to grow!**

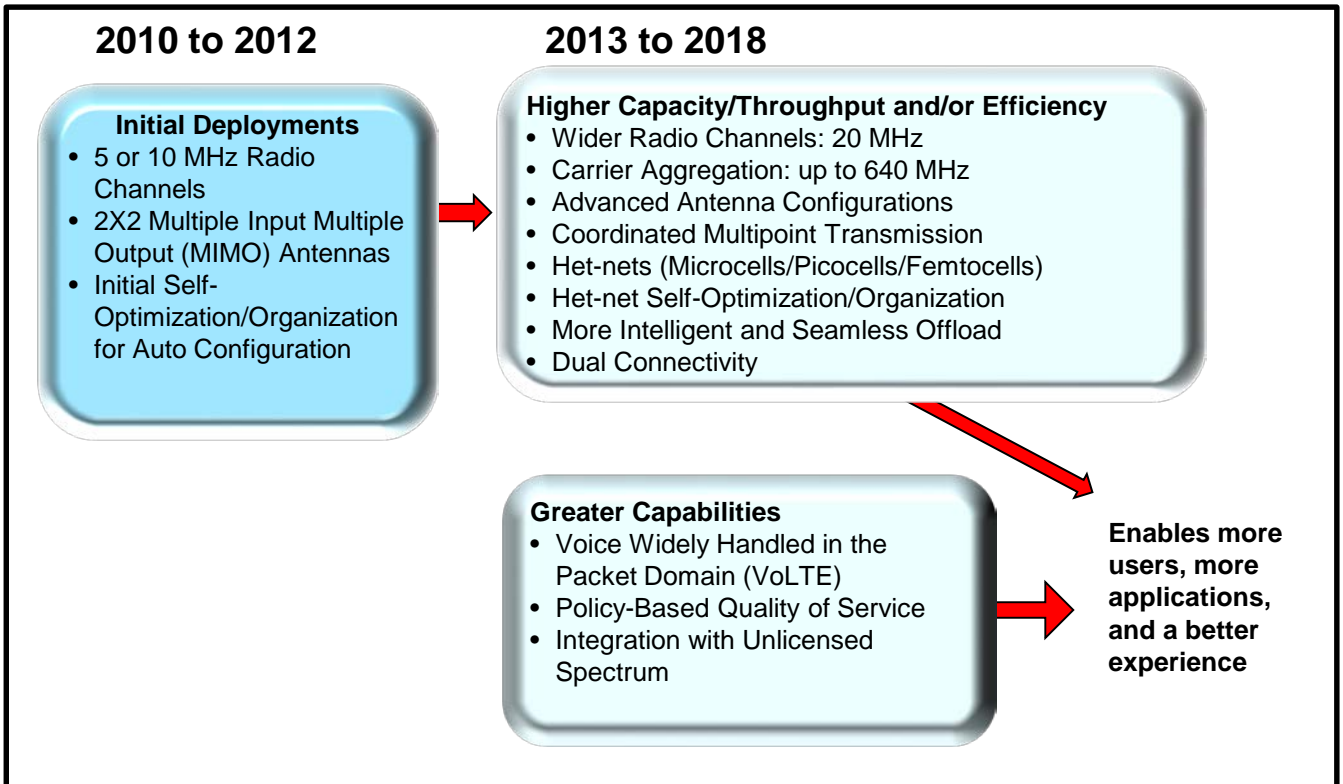




# The Voice of 5G and LTE for the Americas

LTE and its advancement to LTE-Advanced Pro will continue to lead us through the next decade and provide the mobile foundation for 5G

## LTE to LTE-Advanced Pro Migration



5G Americas / Rysavy Research

**Innovations continue to be standardized at 3GPP that will provide creative solutions for the future of the wireless connected ecosystem**

**560 LTE networks including 211 LTE-A networks worldwide; LTE-Advanced Pro Release-13 innovations are being deployed including 20 commercial networks with Cellular IoT LTE Cat-M1 or Narrowband-IoT (TeleGeography, GlobalComm Database, September 2017)**

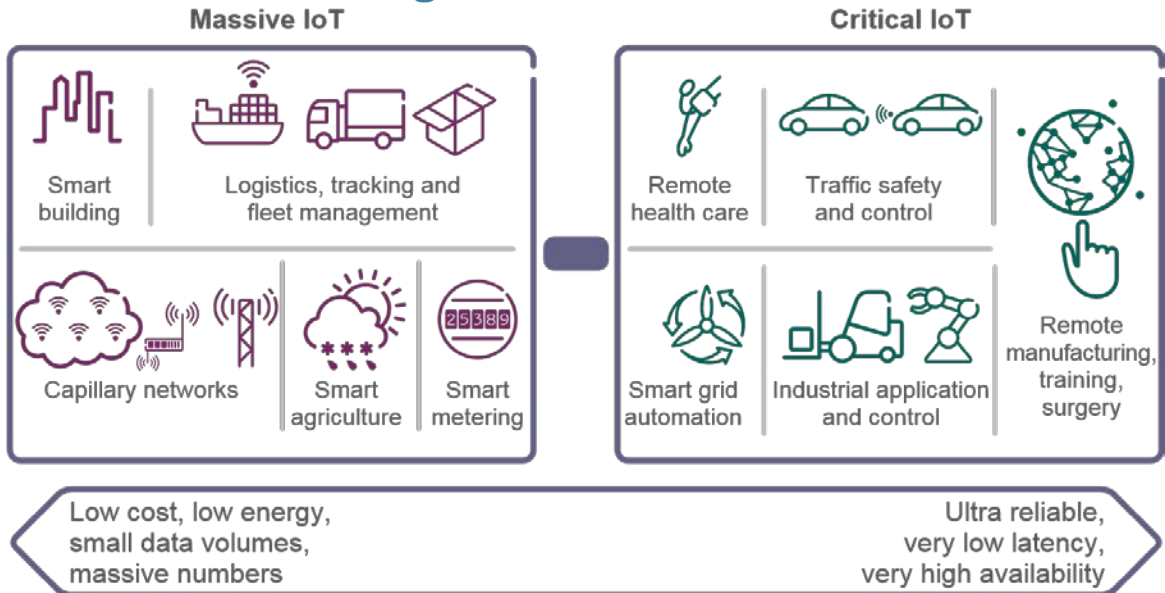
 TeleGeography  
September 2017



# The Voice of 5G and LTE for the Americas

5G and LTE-enabled IoT will spur new business models, converging technologies and a wide ecosystem of applications and services

## Cellular Internet of Things



- Internet of Things will surpass mobile phones as largest category of connected devices by 2018
- By 2022, 18 B of 29 B connections will be Internet of Things
- 1.5 B IoT devices with cellular connections

Ericsson Mobility Report, June 2017

- Wide-area IoT CAGR 30% 2016 – 2022
- Short-range IoT CAGR 20% 2016 - 2022

Ericsson Mobility Report, June 2017



# The Voice of 5G and LTE for the Americas

Licensed, shared and unlicensed spectrum will be essential to the mobile broadband industry

## Spectrum and the Evolution to 5G

<b>Existing bands &lt;6GHz</b> <hr/> <b>cmWaves 6-30GHz</b> <hr/> <b>mmWaves &gt;30GHz</b>	<b>Licensed</b> Exclusive rights granted to an operator by regulator	<b>Licensed</b> Provides reliable, secured spectrum for predictable quality/capacity	<b>Licensed</b> Provides reliable, secured spectrum for predictable quality/capacity
	<b>Shared</b> Shared with incumbents	<b>Shared</b> Coordinated access when/where not used by incumbents	<b>Shared</b> Facilitates timely access to spectrum in shared bands
	<b>Unlicensed</b> No registration or individual permission	<b>Unlicensed</b> Rules established to avoid interference	<b>Unlicensed</b> Compliment for LTE & 5G e.g. in small cell deployment
<b>Additional harmonized spectrum needed in existing and new bands</b>	<b>High frequencies for ultra-dense 5G small cell deployments</b>	<b>Both licensed, unlicensed exclusive and shared spectrum</b>	

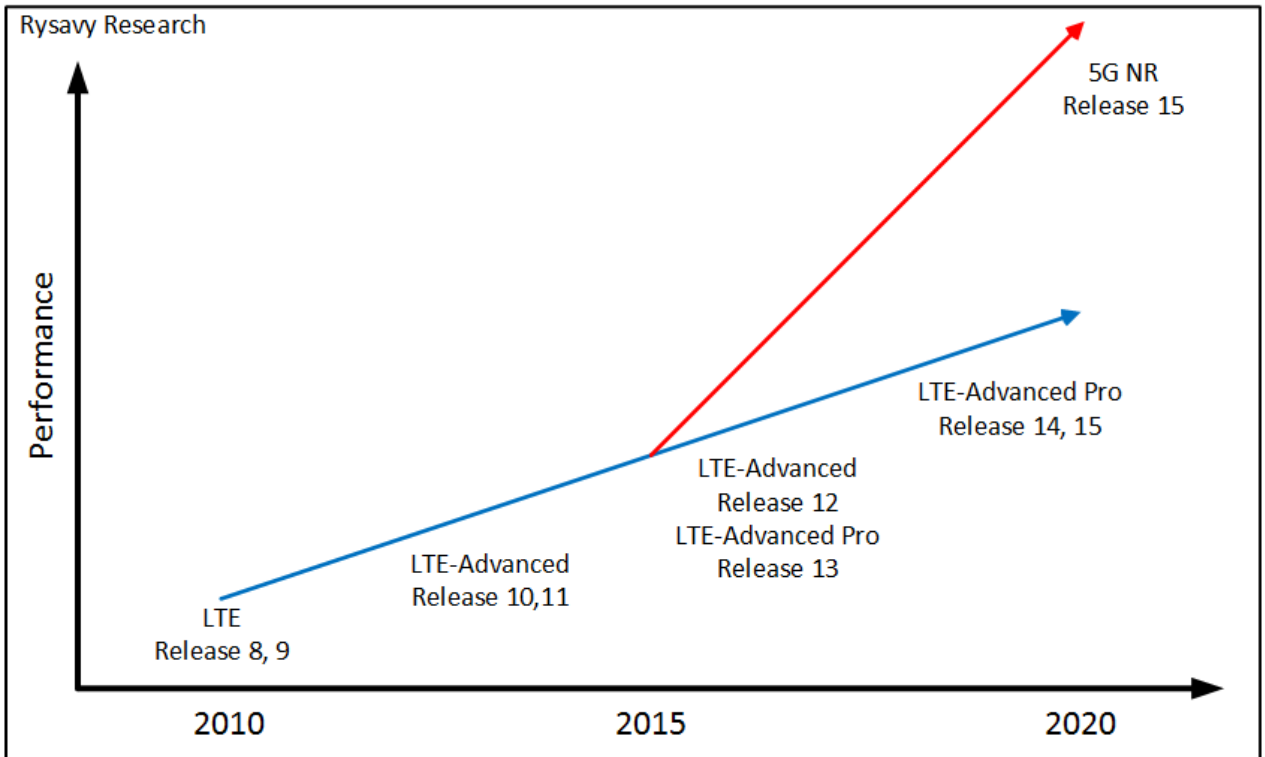
WRC-15 approved the study of 11 high band spectrum allocations for WRC-19



# The Voice of 5G and LTE for the Americas

Network Transformation – moving from today’s LTE-Advanced networks to future LTE-Advanced Pro and eventually 5G networks

## Evolution to 5G with LTE Improvements and New 5G Radio Methods



**5G AMERICAS** publishes dozens of white papers for technical facilitation, guidance and recommendations.



Download free papers at [www.5gamericas.org](http://www.5gamericas.org)

[www.5gamericas.org](http://www.5gamericas.org)





# The Voice of 5G and LTE for the Americas

Advocating for the development and deployment of 5G use cases, services and applications

**The Fourth 5G Global Event - Seoul, S. Korea  
November 22-23, 2017 hosted by 5G Mobile Forum**



**5G Americas will host  
The Fifth 5G Global  
Event**



**“5G New Horizons”  
May 16-17, 2017 in  
Austin, TX**







***5G Americas is the regional representative with the EU, Japan, Korea, China and Brazil for the Global 5G Events***

## 5G Contribution to Financial Growth

- U.S. GDP could be boosted by \$500 billion Accenture Strategy, January 2017
- Smart grid adoption enabled by wireless connectivity could create 1.8 trillion in added revenue in the U.S. Electric Power Research Institute, January 2017
- Connected devices could create \$305 billion in annual health system savings Journal of Health Economics, January 2017
- By 2035, 5G will enable \$12.3 trillion in global economic output IHS Economics/IHS Technology, January 2017

### FOLLOW 5G AMERICAS ON SOCIAL MEDIA

 <https://www.linkedin.com/in/4gamericas/>
 [@5GAmericas](#)  
[@5GA\\_Cala](#)  
 [www.facebook.com/5gamericas](http://www.facebook.com/5gamericas)
 [@5GA\\_Brasil](#)

[www.5gamericas.org](http://www.5gamericas.org)

