

# 2022 Trends to Watch

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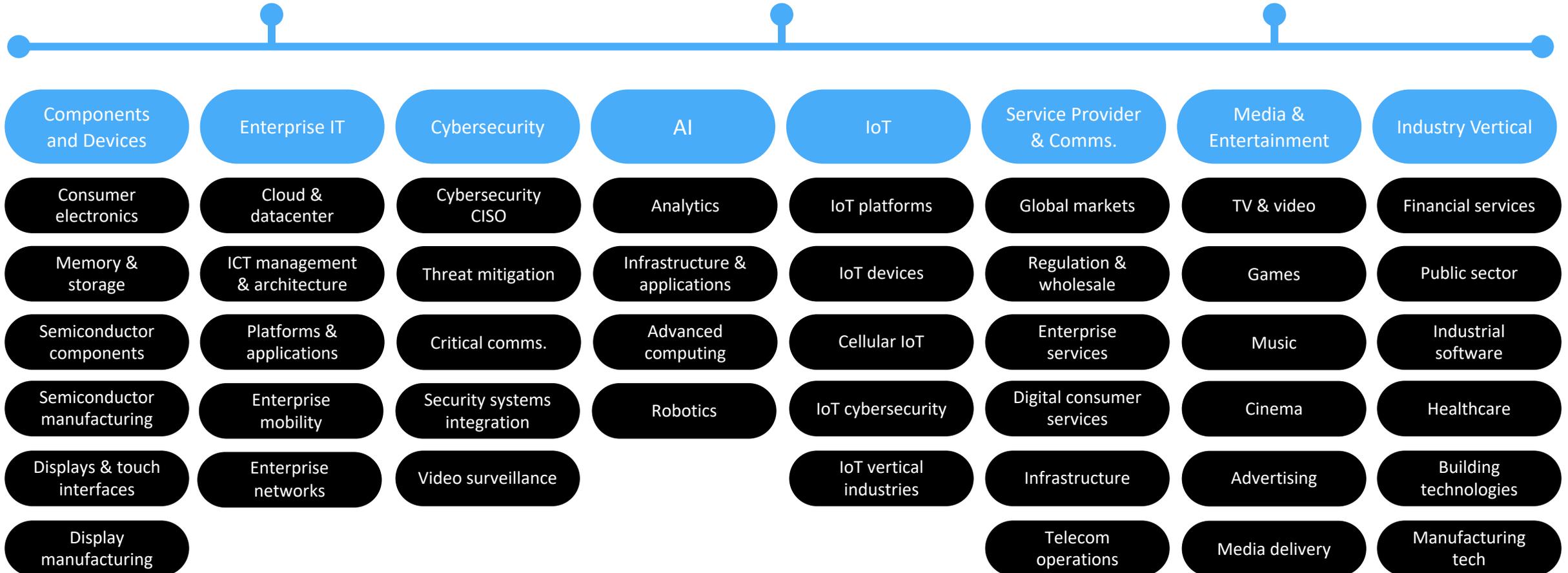


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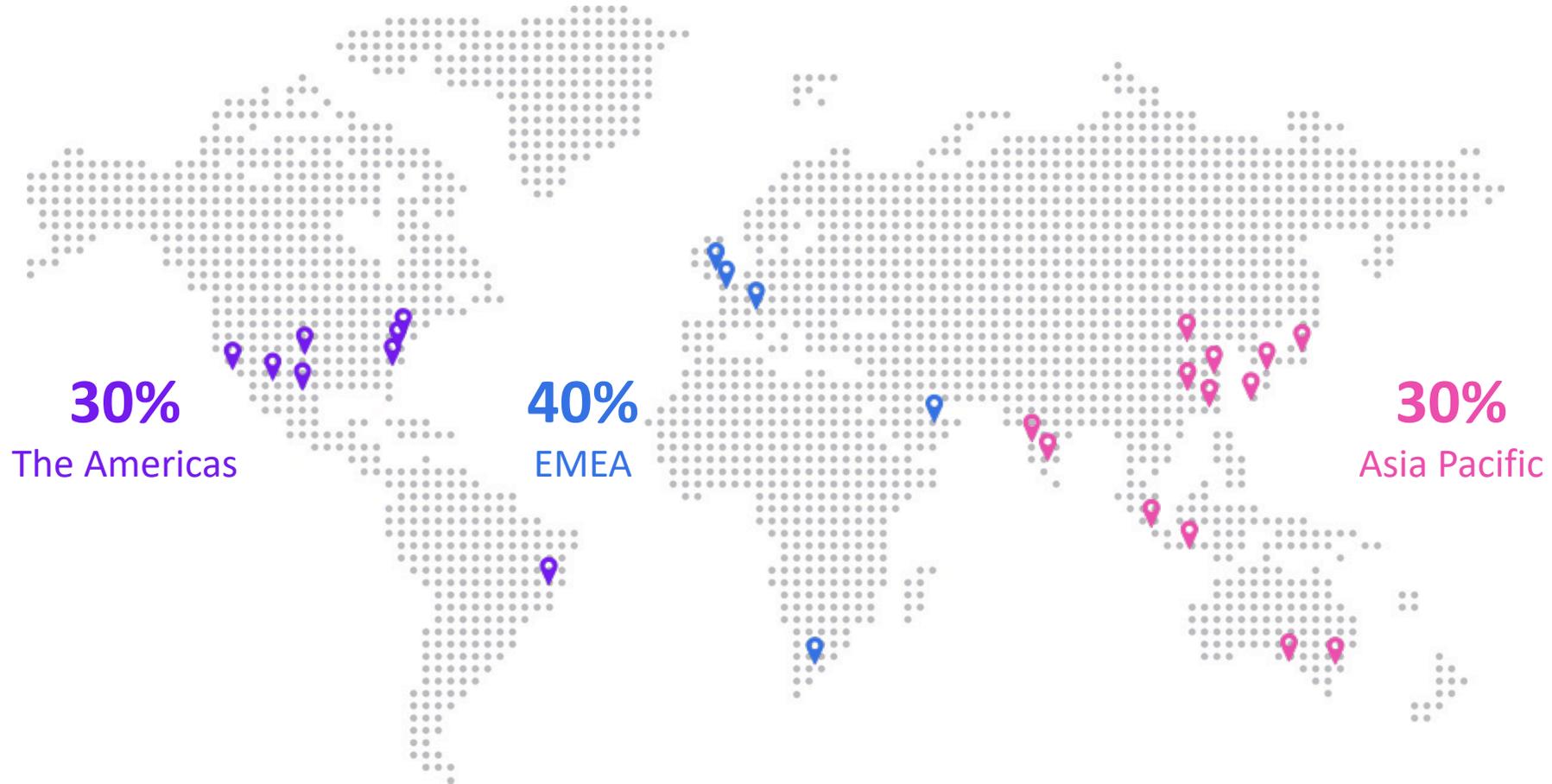
## Components and Devices

## Technologies and Applications

## Services and Markets



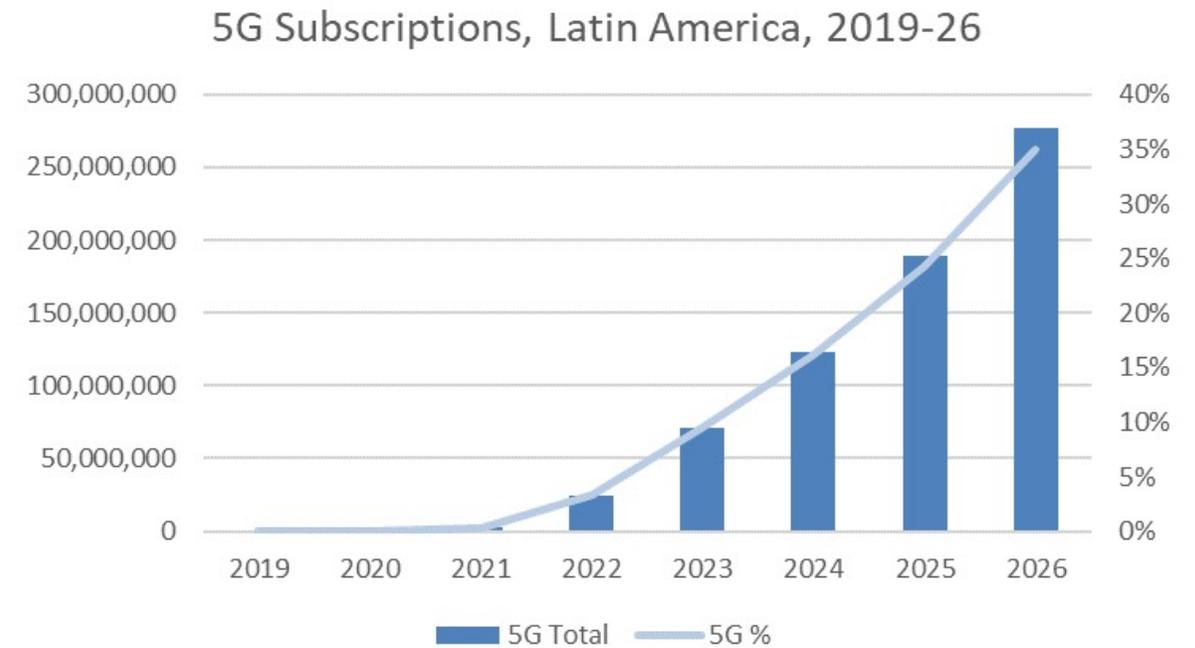
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# 5G in Latin America starts in earnest in 2022

# 5G in Latin America: slow start and fast take-up

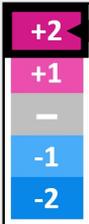
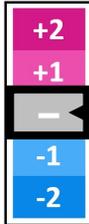
- 5G has had a quiet start in Latin America. It has been more than two years since the technology saw its debut in South Korea and the US, but just a handful of countries offer it in Latin America; among them, Uruguay and Trinidad and Tobago. Omdia expects to see things changing in 2022.
- New spectrum allocations started with Chile and Brazil last year and operators in these countries are busy building new 5G networks. In Mexico IFT gave the green light for Telcel to use its 100MHz in 3.5GHz to mobile service and already announced a new spectrum auction for 5G.
- Consequently, 2022 will be a year where many operators will be building their 5G networks and subscriber growth will gain traction from 2023 onwards, helped by better availability of 5G-enabled devices. We estimate that a steeper adoption curve toward the end of the forecast period will bring 5G to around 35% of total connections by 2026, representing 276 million connections in the region.
- On the other hand, 5G development may be hindered in some countries due to non-market-friendly measures taken by regulators. The most noticeable example is Mexico, where a recent spectrum auction concluded with several empty blocks and where Telefónica took the rare step of voluntarily returning spectrum, alleging high costs to maintain it.



Source: Omdia

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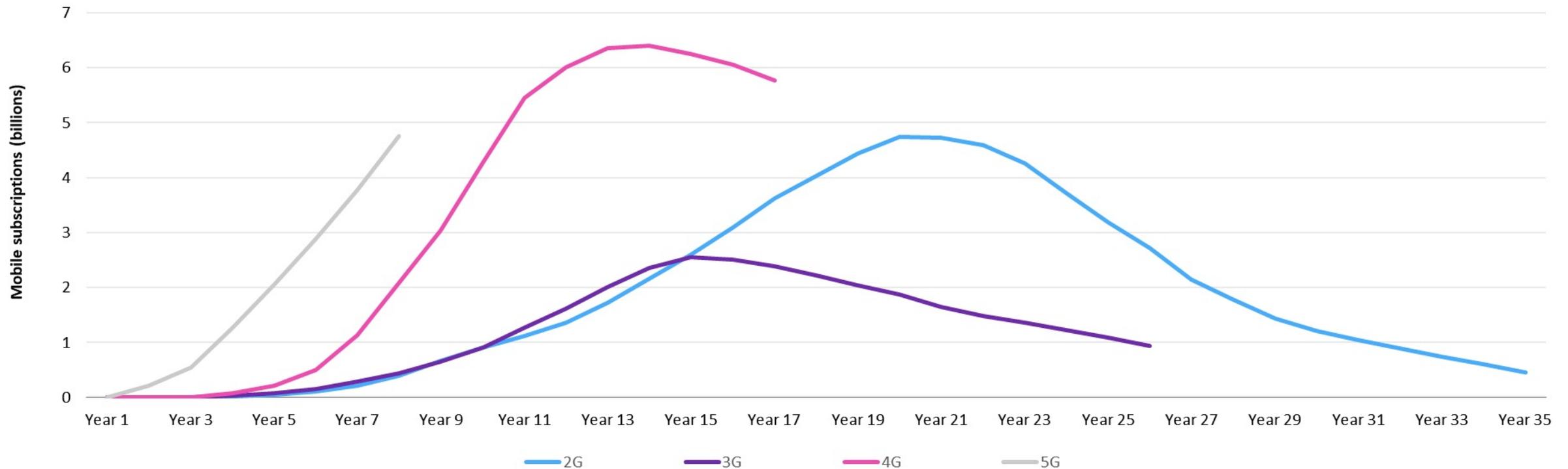
# 5G in Latin America: a mix of new operating and business models

Player type	What will the impact be?	Impact rating	How should players respond?
Service providers	A new investment cycle starts; service providers will be designing auction strategies, network deployment plans, and new services.		5G will demand a new operating model, including the use of cloud to host elements of the network. This is necessary to take full advantage of the cost savings and agility promised by the new technology.
Service providers	5G brings with it a window of opportunity for new players and, consequently, the increase in competition for wireless and fixed broadband markets.		However, the evidence is not clear that this is going to happen in all markets. Chile saw no new player in its 5G auction, whereas Brazil has seen 5 new entrants. In 2022 there will be more visibility on how the competitive landscape for established operators will change due to 5G.
Vendors	The resumption of investment plans in 5G after the hiatus caused by COVID-19 is good news for vendors. Plans for the new networks and new services, powered by 5G, are likely to increase budgets for many service providers.		Very little is left from some governments' threats to interfere with vendor choices for 5G; as a result, Omdia doesn't see there being any long-lasting consequence to the market. The pool of traditional telecom vendors will remain unchanged in the region but will need to calibrate portfolios to deal with the increased interest for Open RAN.

# 5G in the world

# Market evolution: 4G subscriptions start to fall; 2G and 3G continue steady decline but still have 1.3 billion subscriptions in 2026

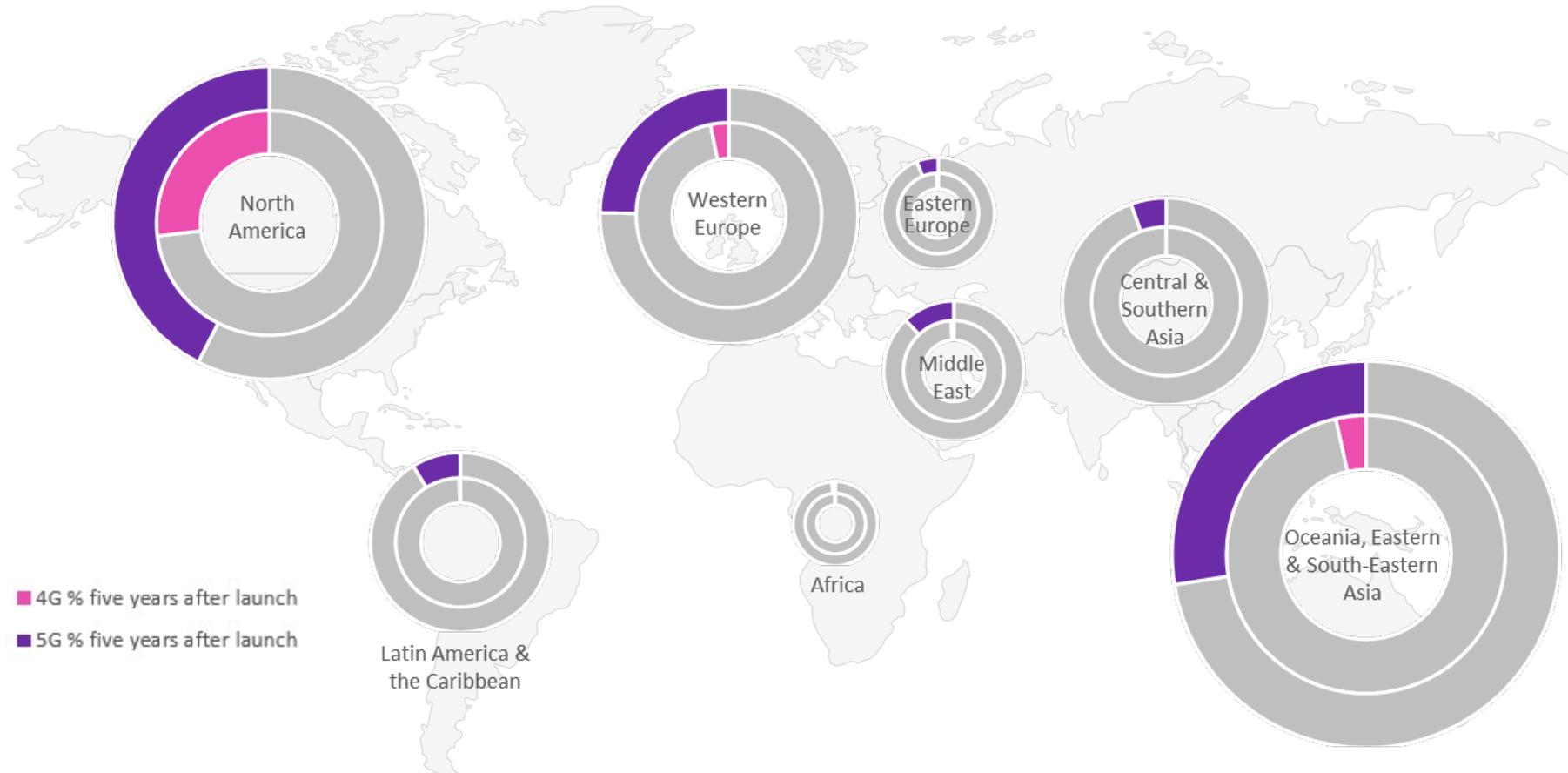
Global mobile subscriptions by technology generation



Notes: Year 1 for 2G=1992, 3G=2001, 4G=2009, 5G=2019  
Source: Omdia

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# Adoption of 5G five years after release is set to be far greater than adoption of 4G and will be more spread out across regions



Region	Year five 4G %	Year five 5G %
North America	26.9%	42.5%
Oceania, Eastern & South-Eastern Asia	3.5%	27.5%
Western Europe	3.2%	24.7%
Latin America & the Caribbean	0.3%	8.8%
Middle East	0.8%	12.1%
Central & Southern Asia	0.0%	5.5%
Eastern Europe	0.5%	5.3%
Africa	0.1%	1.4%

Source: Omdia

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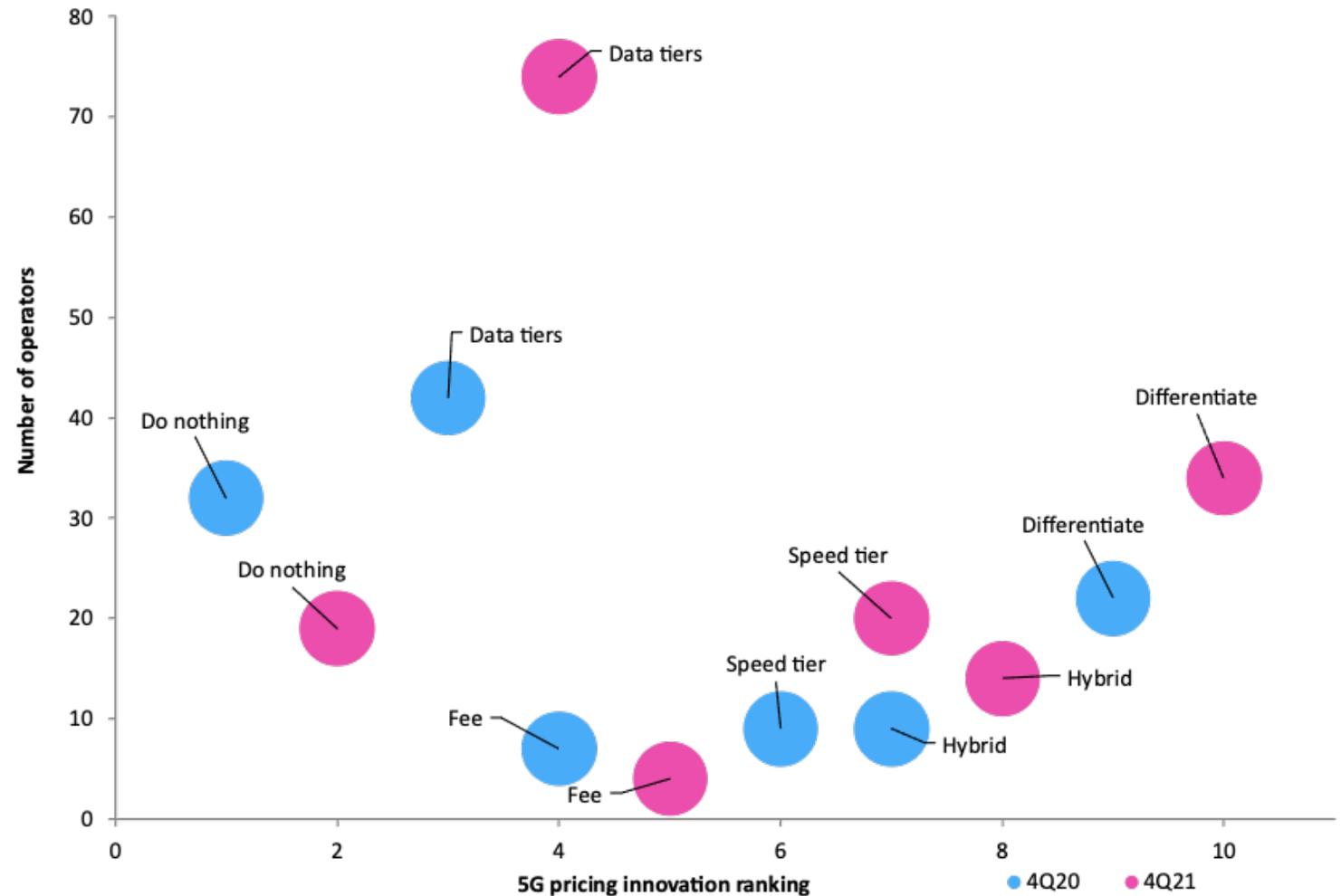
Notes: Year 1 for 4G=2009, Year 1 for 5G=2019. Charts are sized relative to number of subscription in each region. Percentage of total region's subscriptions. In some cases, penetration rates are too small to show on charts. Please refer to table for exact figures. Source: Omdia

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# Telcos moving on from “do nothing”

- Telcos have moved out of the “do nothing” 5G pricing model, with just 12% of operators left in the bubble. But that still equates to 19 operators that have merely opened up 4G plans to 5G.
- Most “do nothings” have migrated to “data tiers,” simply by adding extra data allowances to cater for a new or wider audience.
- But “speed tiers” have also gained momentum, increasing from nine operators in 4Q20 to 20 in 4Q21.
- Meanwhile, 12 new operators have added 5G-rich services to 5G during the period.

Omdia’s six 5G pricing models – 4Q20 vs. 4Q21 (n=165)



Sources: Omdia, Tarifica

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# Key plan changes: Global

- Markets including the US and Japan are each hosting several MVNOs and sub-brands (see chart). In 4Q21, we added six MVNOs and sub-brands to our pricing database, including those with affiliations to Japanese behemoths, such as OTT messaging player Line and cable firm JCOM, and telco incumbents Softbank Mobile and KDDI (Y! Mobile and UQ Mobile).
- These non-incumbent Japanese players offer 20–25GB maximum data plans, competing mainly with fourth-entrant Rakuten Mobile, which also advertises 20GB plans for around the same price.
- Meanwhile, Australia is the latest market where operators have rolled over 5G plans to prepaid and in Malta new entrant Epic forced rival Melita to lower its 5G unlimited data plan price.
- In the US, AT&T-owned Cricket Wireless is now competing, offering true unlimited data for \$55 per single line, more than rival Comcast’s same \$45 price point (both are for prepaid users).

## Key 5G plan updates – 4Q21

Operator/s	Country	Update	What does this mean?
Optus, Telstra, Vodafone	Australia	Added 5G to prepaid plans	Telstra limited 5G to most expensive prepaid plan to avoid ARPU impact
China Unicom	China	Added new entry-level 5G plan, \$15.50, 20GB at 500Mbps	Expect rivals will follow suit to remain competitive
UQ Mobile, JCOM, LineMo, Mineo, Y! Mobile, IJ Mio	Japan	Evidence of six 5G MVNOs/sub-brands	Largest plans offer 20GB
T-Mobile	Germany	Ceased Magenta Gaming in February 2022	Reason undisclosed for discontinuation. Still has Magenta Gaming, which includes Hatch
Epic	Malta	“Speed tier” strategy	Forced Melita to lower price of unlimited data
Cricket Wireless	US	“Data tier” strategy	Makes nine 5G telcos in the US

Sources: Omdia, Tarifica

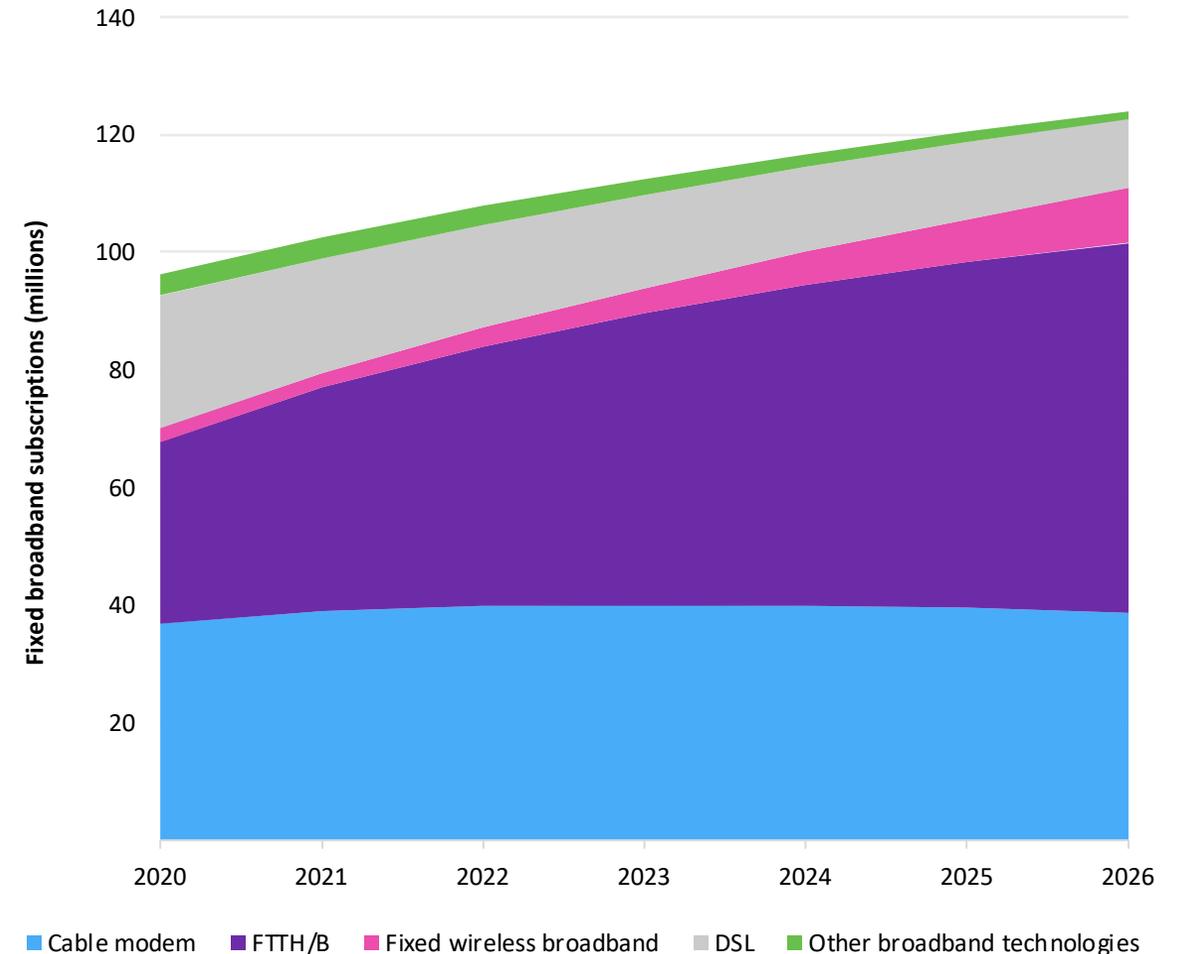
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# New partnership/ownership models

# Latin America is embracing new infrastructure investment models

- Gone are the days of the fully integrated telecom operator. Infrastructure as a service is becoming popular.
- Omdia forecasts that over 50% of fixed broadband connections are going to be on fiber by 2026. Considering the large investment needed for fiber and 5G, involving large sunk costs and long payback periods, innovative investment and co-investment models are more relevant than ever.
- New ways of collaborating and making infrastructure deployments more effective have been manifesting around the world in the last few years, and the trend is coming to Latin America.
- The wholesale-only model is gaining relevance in Latin America, but with a different approach to the initial government-led projects that were not so successful until now, since the private players adopted those services only marginally: for example, the Altán 700MHz network in Mexico, which filed bankruptcy protection in 2021, or Azteca in Peru, whose contract was ended.
- Latin American CSPs have been divesting not only their towers, but also the fiber infrastructure; moving away from the integrated, infrastructure end-services company model toward a purer, telco services model.

Latin America fixed broadband subs forecast, 2020–26

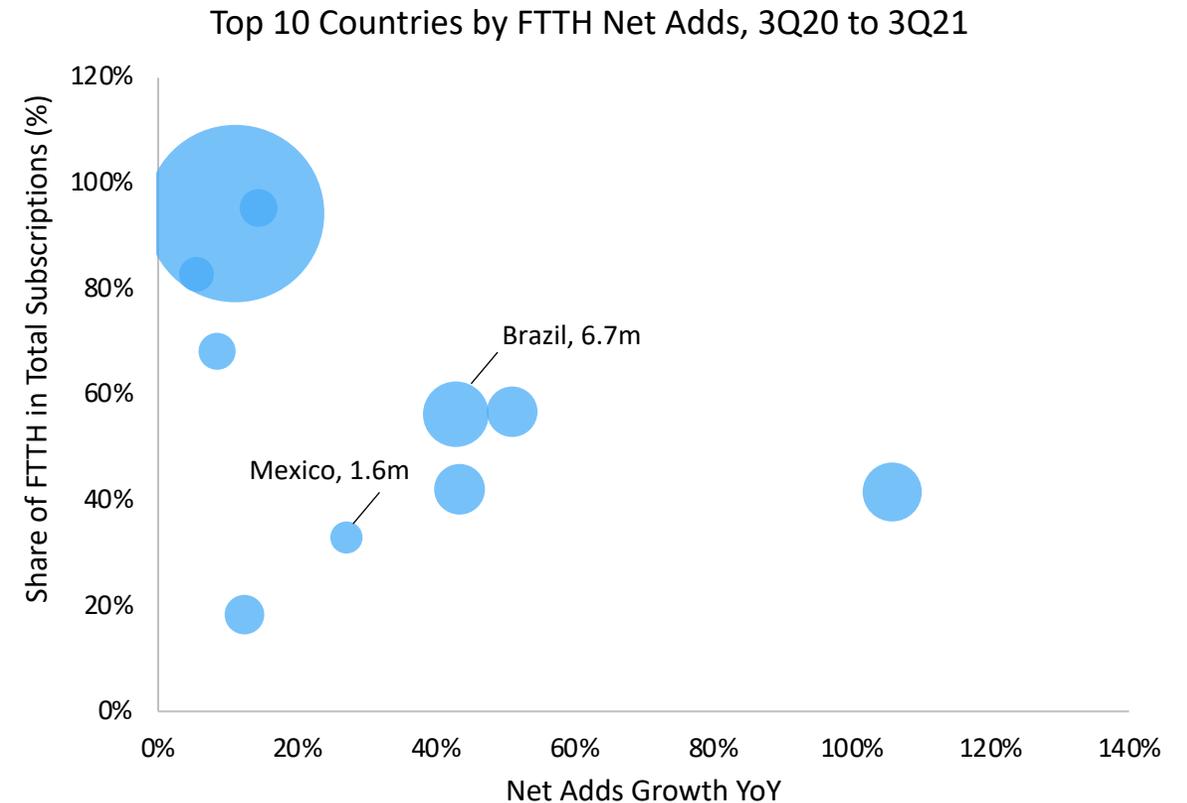


Source: Omdia

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# The momentum behind FTTH also drives the transformation in the sector

- Despite the differences in the market dynamics, Brazil and Mexico have been posting strong performances in the fixed broadband market, especially in the expansion of FTTH.
- Both countries are among the top 10 countries in the world when measured by FTTH net additions from 3Q2020 to 3Q2021. The country to add more FTTH connections in the period was China, with incredible 49.4m new subscriptions, but the country is getting closer to saturation since FTTH represents 94% of total connections. Right after is Brazil, that added 6.7m in the period, but far from saturation point, since FTTH answer for 56% of total connections. Mexico is in 10<sup>th</sup> place in this global ranking, having added 1.6m FTTH, the country has even more untapped potential than Brazil, since FTTH has only 33% participation in the market.
- Despite the good performance, it is clear that Mexico could accelerate its investment in fiber, the country FTTH net adds are 4x smaller than that of Brazil.



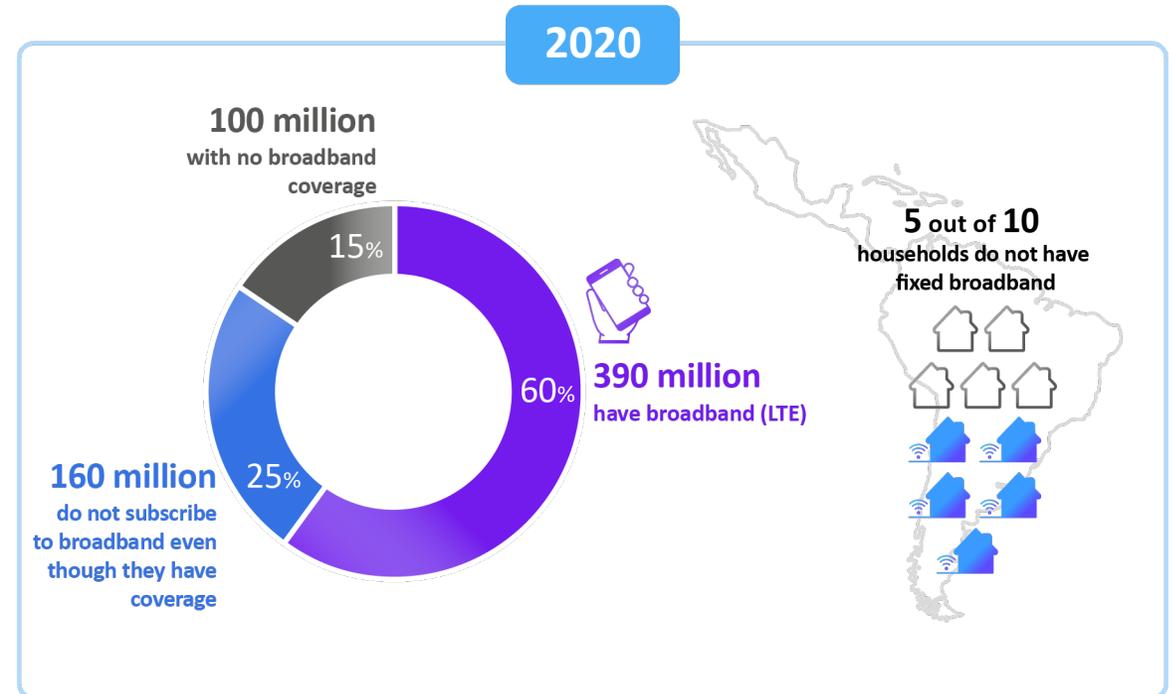
Source: Omdia

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# Latin America still has important gaps in its infrastructure

- Across Latin America and the Caribbean, 3 in 10 people—260 million—have no internet connection, and only half of households have fixed broadband connection. Over the past few years, closing the digital divide has been a focus for governments around the world. Operators and vendors see the importance of this initiative for long-term economic growth, which in turn supports their own growth strategies.
- Latin America is the region hardest hit by the COVID-19 pandemic, with a regional GDP decline of 6.5% in 2020. This led to a major increase in unemployment, informality, and poverty. Following the sharp contraction in 2020, the economy of Latin America is now projected to expand by 5.5% in 2021; with a slower recovery growth pace of around 3% in 2022, since the pandemic is far from over for most countries.
- Internet connectivity has become even more necessary as it is one of the main catalyzers for economic growth. The use of digital applications and solutions to maintain business, education, and consumption emerged as a natural response to cope with lockdown measures; now, most of them have been adopted permanently, so having internet connectivity has become an essential service. Bridging the digital divide has never been more important.

## Digital divide in Latin America



Source: Omdia

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# Operators' technology requirements shows divergence

- PON requirements have expanded as operators implement new applications and services onto their growing fiber networks.
- Operator upgrade paths and business strategies vary. Consequently, there is divergence regarding the underlying technologies chosen to support strategic growth.
- Network operators are focused on one, several, or all of the following applications and strategies:
  - Mass-market high-speed fiber-to-the-home (FTTH) services
  - Wholesaling and increasing infrastructure assets to support numerous retailers
  - PON for mobile transport
  - Small and medium-sized enterprises (SME)
  - Smart City networks
  - Campus scenarios



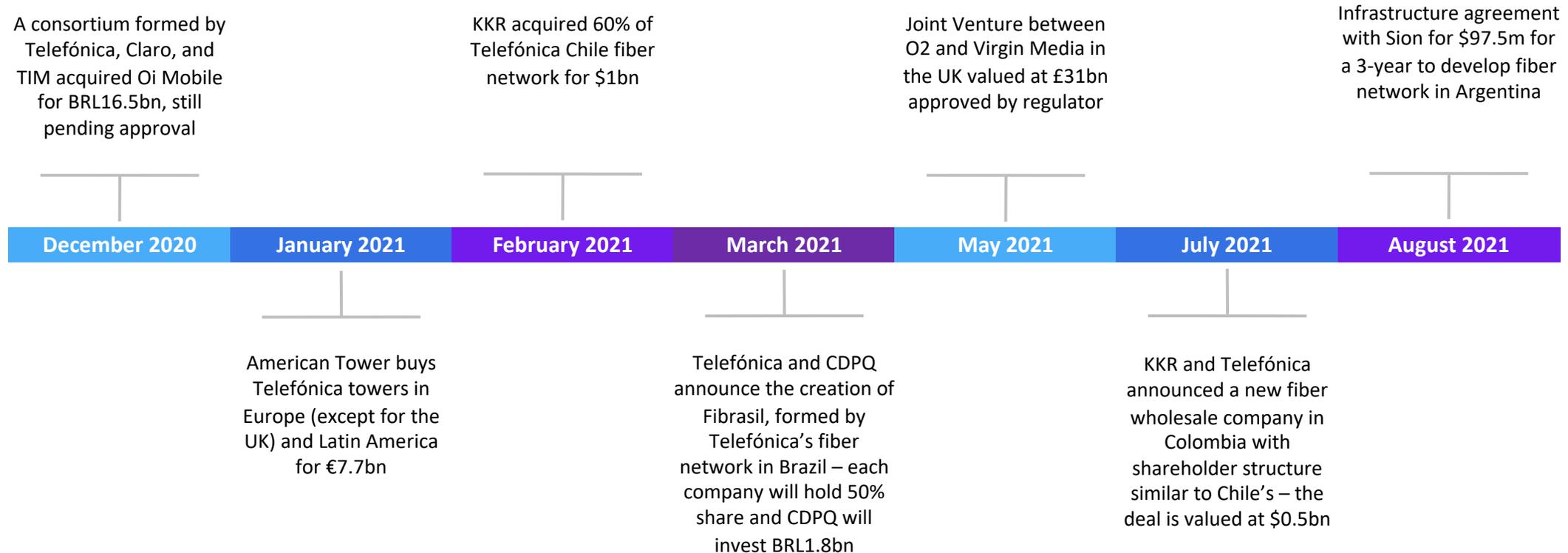
Source: Omdia

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# Business alliances, M&As, and joint ventures - Latin America is embracing new infrastructure investment models

- CSPs are selling their tower infrastructure to tower companies or creating their own towercos. America Móvil has approved the spin-off to Sitios Latinoamérica in September 2021, Telefónica sold its portfolio to American Tower Corporation in Brazil, Peru, Chile, and Argentina for \$1.1bn (completed in June 2021). Entel and TIM have also sold towers. These companies reduced debt and improved its ROCE (return on capital employment). The wholesale-only model has been supported by several financial institutions and has had great success in the stock market in recent years (EBITDA margins of 40% to 70%). One of the key success factors is having an initial anchor client. We foresee these types of movements in the smaller markets.
- Fiber is also starting to show new dynamics with the creation of fiber infrastructure companies, as ETB joins with Ufinet (Enel subsidiary) in Bogotá; Telefónica with KKR in Colombia and Chile, and with American Tower in Brazil. American Tower is also expanding fiber networks in Buenos Aires, Mexico City, and main Brazilian cities with an anchor telco client.
- The joint venture between America Móvil and VTR in Chile, the agreement of AT&T and Movistar in Mexico, and Entel Peru and Movistar RAN-sharing agreements, are examples of this growing trend.
- Oi restructuring and having sold several assets to mobile operators and infrastructure companies is changing the market dynamics, creating a competitive wholesale market.
- Internet Para Todos in Peru, the company formed by Telefónica, Facebook, CAF, and IDB, is another example of the collaborative approach required to find innovative models that bridge the digital divide.
- All these recent moves show that CSP companies are moving towards a lighter infrastructure model and concentrating on their services. Thinking outside the box for new partnership and co-investment models is a key component of the successful new CSP model.

# Business alliances, M&As, and joint ventures – The case of Telefonica



- Telefónica found a formula to both unlock value from its assets and accelerate investments in fiber networks. The company is spinning off its fiber networks in several countries and selling stakes to infrastructure investors while also remaining a customer of the new entity.
- Telefónica's decision to cede control of its fiber assets allows the company to share the investment requirements with new investors and to raise funds to reduce debt.

# Spectrum Auctions

# 5G spectrum awards in Latin America (March 2022)

Country	Spectrum	Date	Model	Coverage obligations	Concession	Bands
Chile	Spectrum contest 5G & 4G remnants	Dec.20 – Feb.21	Classification and first price sealed bid auction	90% pop. coverage within 3 years. 88% of the communal coverage by the first 18 months (all bands)	30 years \$453.5m	3.5GHz (150 MHz) 26GHz (1,200MHz) (Remnants: AWS (30MHz) 700MHz (20MHz))
Brazil	Spectrum auction	4/2021	Sealed bid auction	State capitals and Federal District by July/22; cities above 500,000 inhabitants by Jan/23; cities below 200,000 inhabitants by Jun/23; cities above 100,000 inhabitants by Jun/24	20 years (10 years for selected bands in 26GHz)	700 MHz, 2.3GHz, 3.5GHz, 26GHz.
Dominican Republic	Spectrum auction	10/2021	Sealed bid auction	Coverage obligations (% population) and 60 Mbps minimum speed – StandAlone (SA)	20 years \$73m (4 years)	3.5GHz (140MHz)
Uruguay	Regulatory authorization (fixed to mobile allocation)	4/2019	ANTEL authorized	Limited footprint		26 & 28GHz
Mexico		2/2022	Telcel launch 2/22 – AT&T 12/21	Telcel will pay more than 900 million pesos (\$44m per year in fees for the authorization)	20 years (till 2039)	3.5GHz (150MHz) (AT&T 50 & Telcel 100MHz)
Peru		4/2021	Claro and Entel launch			3.5GHz (and AWS with DSS)

Source: Omdia, regulator websites

# 5G spectrum auction winners per band - Brazil

Band / Region		Winity II	Claro	Vivo	TIM	Algar	Brisanet	Sercomtel	Cons. 5G Sul	Cloud2U	Neko
700MHz		20MHz									
2.3G Hz	N		50MHz	40MHz							
	NE						50MHz				
	MW		50MHz	40MHz							
	S		50MHz		40MHz						
	*			50MHz	40MHz						
	SP		50MHz	40MHz							
	**		50MHz				40MHz				
3.5G Hz	Brazil		100MHz	100MHz	100MHz						
	SP+N							80MHz			
	NE						80MHz				
	MW						80MHz				
	S								80MHz		
	*									80MHz	
	**						80MHz				
26GH z	Brazil		400MHz	600MHz	200MHz						
	SP				400MHz						200MHz
	S				400MHz						
	*				400MHz						
	**						1.0GHz				
										* RJ, ES and MG	
										** Sectors 3, 22, 25, 33	

## 5G spectrum auction winners and value of the winning bid (BRL) = R\$7.4bn

Band	Region	Winity II	Claro	Vivo	TIM	Algar	Brisanet	Sercomtel	Consórcio 5G Sul	Cloud2U	Neko
700MHz		1,427,872,492									
2.3GHz	N		822,000,000	29,000,000							
	NE						111,385,964				
	CO		150,000,000	30,000,000							
	S		210,000,000		94,500,000						
	*			176,400,000	450,000,000						
	SP			231,000,000							
	**		32,000,000				57,000,000				
3.5GHz	Brazil		418,338,000	500,337,720	431,337,720						
	SP+N							82,000,000			
	NE						1,250,000,000				
	CO						105,000,000				
	S								73,600,000		
	*									405,100,000	
	**						2,350,000				
26GHz	Brazil		105,648,015	158,472,023	27,000,000						
	SP				26,492,917						8,492,917
	S				12,000,000						
	*				17,000,000						
	**						5,343,157				
<b>Total Paid (BRL)</b>		<b>1,427,872,492</b>	<b>1,737,986,015</b>	<b>1,125,209,743</b>	<b>1,058,330,638</b>	<b>64,693,157</b>	<b>1,466,385,964</b>	<b>82,000,000</b>	<b>73,600,000</b>	<b>405,100,000</b>	<b>8,492,917</b>

\* RJ, ES and MG

\*\* Sectors 3, 22, 25, 33

# Brazil spectrum auction obligations

	Federal roads without 4G	Municipalities without 4G	Fiber backbone to uncovered cities	TVRO migration from C-Band	Cleaning extended C-Band	PAIS – Connecting Amazon	Federal government private network	Connecting selected public schools
700MHz	x	x						
2.3GHz		x						
3.5GHz			x	x	x	x	x	
26GHz								x

## In numbers

- **All** municipalities main district with 5G
- **1,700** localities(not main district) with 5G
- **391** municipalities main district with, at least, 4G
- **7,430** localities with, at least, 4G
- **2,349** stretches of roads, summing **35,784 Km**
- **530** municipalities main district with optical fiber backbone
- **R\$ 3.1 billions** to connect schools

# Key messages

①

## **5G in Latin America starts in earnest in 2022.**

As the pandemic recedes, governments and operators find the space to plan the launch of 5G in several countries in the region. 5G is still in very early stages in Latin America. It will require at least two years to deploy and start the subscriber uptake.

②

## **Bridging the digital divide in Latin America has never been more important.**

Across Latin America, 3 in 10 people have no internet connection and only half of households have fixed broadband connection. Having internet connectivity has not only become an essential service, but a main catalyzer for economic growth; making public policies a key driver of investment and demand.

③

## **Collaboration and new partnership models are becoming more popular.**

Monetization of infrastructure assets, and adoption of shared network models and co-investment models, are bringing new opportunities to Latin America to drive investments with less risk, reduce debt and manage costs more effectively.

# Appendix

## Methodology

Data and information in this Trends to Watch report is based on Omdia's research and data tools, which are available through the Omdia Knowledge Center and World Information Series (WIS). Further sources include a combination of reports and data published by CSPs.

## Further reading

*Mobile Subscription and Revenue Forecast: 2021–26* (October 2021)

*Total Fixed Broadband Subscription and Revenue Forecast: 2021–26* (October 2020)

*Brazil: Mobile, Broadband, TV, and OTT Video Report* (June 2020)

*Mexico: Mobile, Broadband, TV, and OTT Video Report* (October 2020)

*Telecoms as an Investment in Latin America: COVID-19 Impact and Opportunities* (October 2020)

*Service Provider Regional Outlook: Latin America – 2021* (July 2021)

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# Appendix

## **Omdia Consulting**

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help you. For more information about Omdia's consulting capabilities, please contact us directly at [consulting@omdia.com](mailto:consulting@omdia.com).

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