



Latin America's evolving digital landscape



The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with nearly 400 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces the industry-leading MWC events held annually in Barcelona, Los Angeles and Shanghai, as well as the Mobile 360 Series of regional conferences.

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GSMA Intelligence

GSMA Intelligence is the definitive source of global mobile operator data, analysis and forecasts, and publisher of authoritative industry reports and research.

Our data covers every operator group, network and MVNO in every country worldwide – from Afghanistan to Zimbabwe. It is the most accurate and complete set of industry metrics available, comprising tens of millions of individual data points, updated daily. GSMA Intelligence is relied on by leading operators, vendors, regulators, financial institutions and third-party industry players, to support strategic decision-making and long-term investment planning. The data is used as an industry reference point and is frequently cited by the media and by the industry itself.

Our team of analysts and experts produce regular thought-leading research reports across a range of industry topics.

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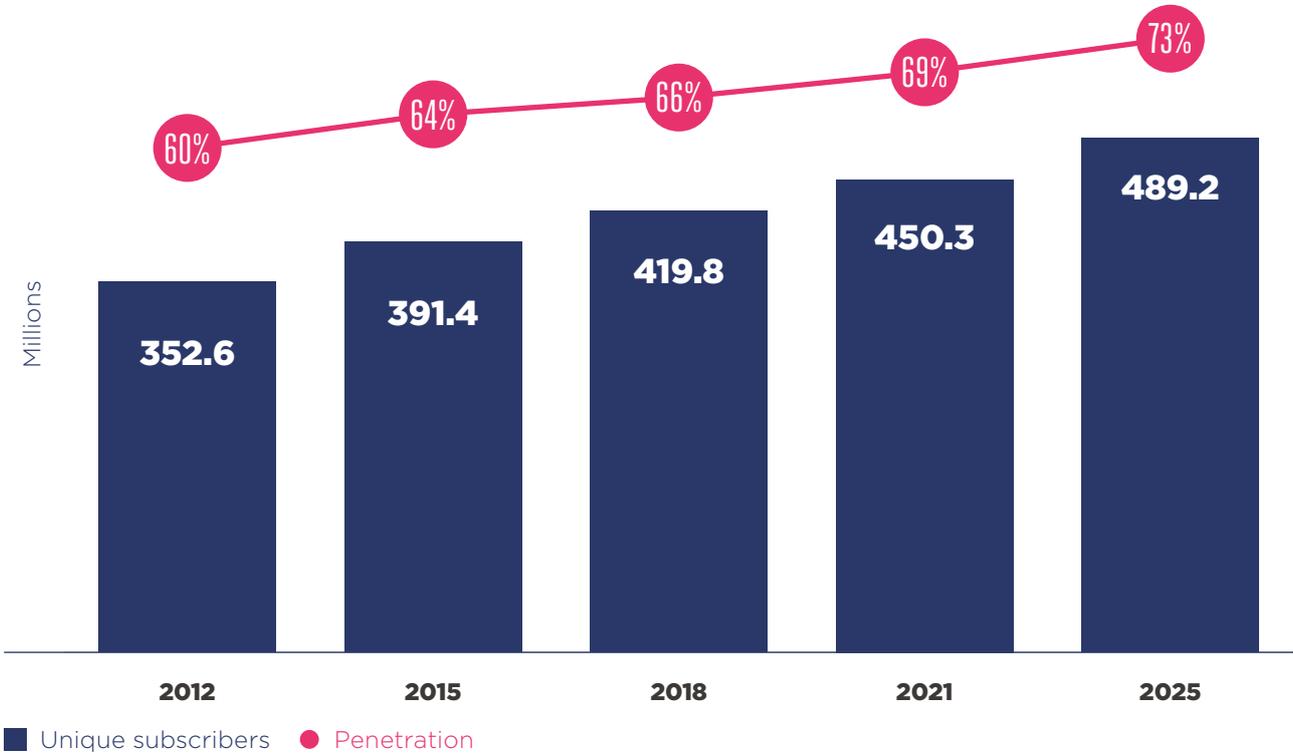
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Latin America
Countries included in our study

Mobile adoption ①

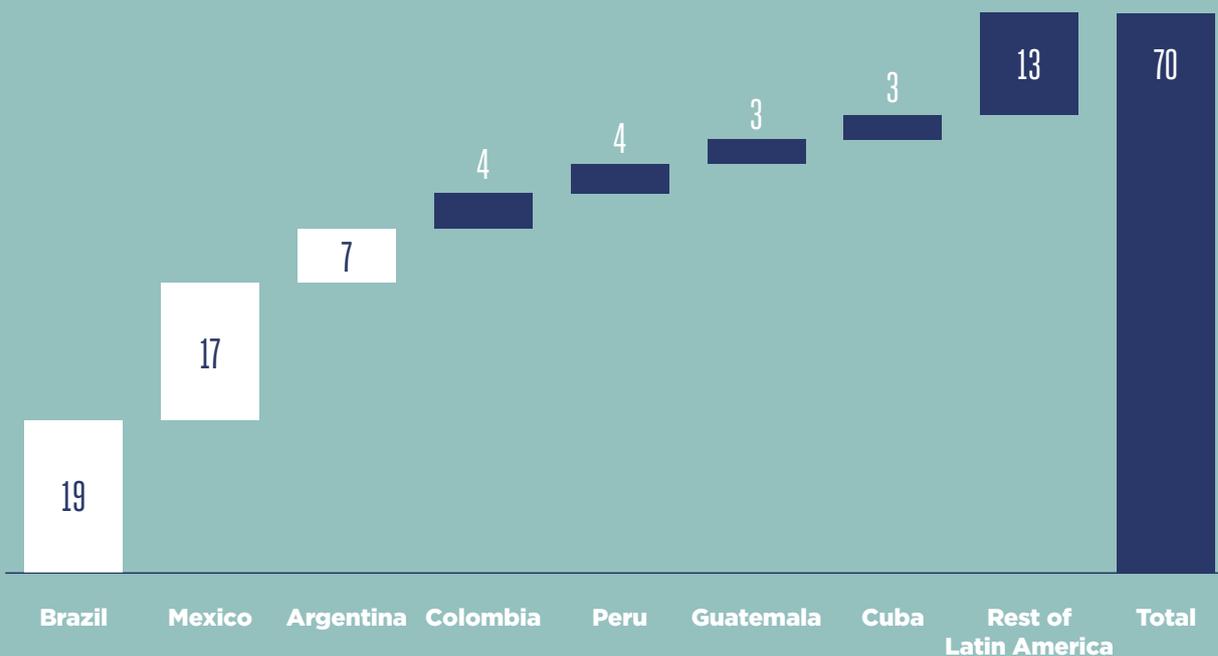
Unique mobile subscribers to reach around 490 million in Latin America by 2025



Source: GSMA Intelligence

Three markets will account for two-thirds of new subscribers by 2025

Subscriber growth 2018–2025 (millions)

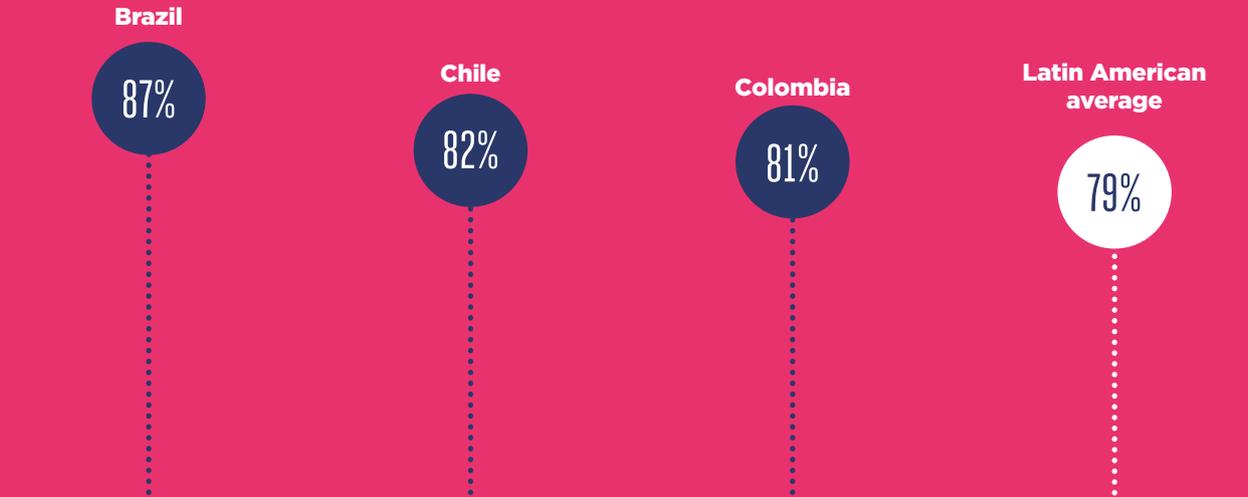


Source: GSMA Intelligence

Mobile adoption 2

Brazil, Chile and Colombia will have the highest smartphone adoption rates in the region by 2025

Percentage of connections



Drivers of smartphone adoption



Changing consumer behaviour, including growing use of OTT services and social media



Increased handset subsidies and financing offered by mobile operators

Source: GSMA Intelligence

By 2025, 64% of the population will be mobile internet users

2018



2025



Percentage of population

Mobile subscribers

- Mobile internet
- Voice & SMS
- Non-mobile

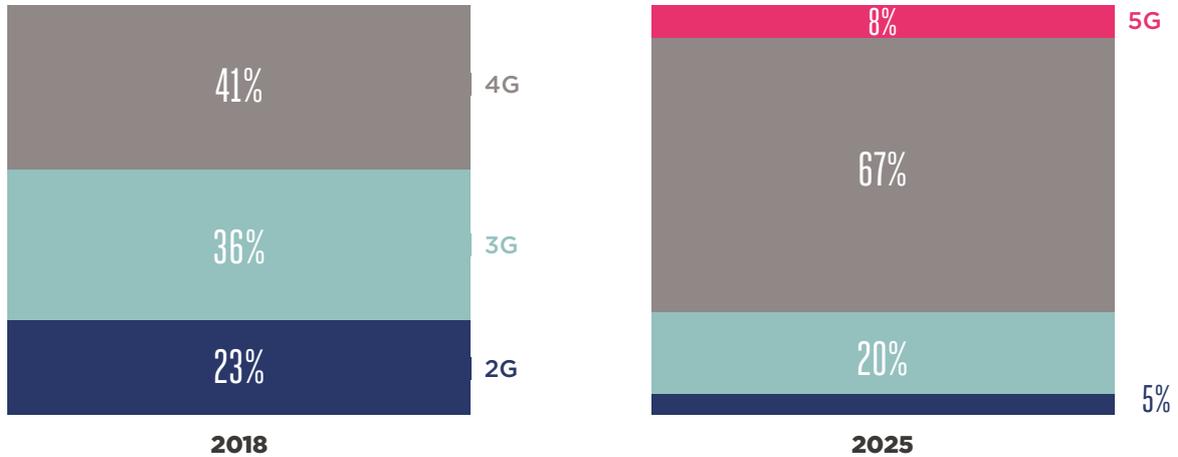
Services such as IP messaging and communications are driving the growth in percentage of mobile internet users.

Source: GSMA Intelligence

Technology evolution 1

4G connections¹ surpassed 3G by more than 27 million in 2018

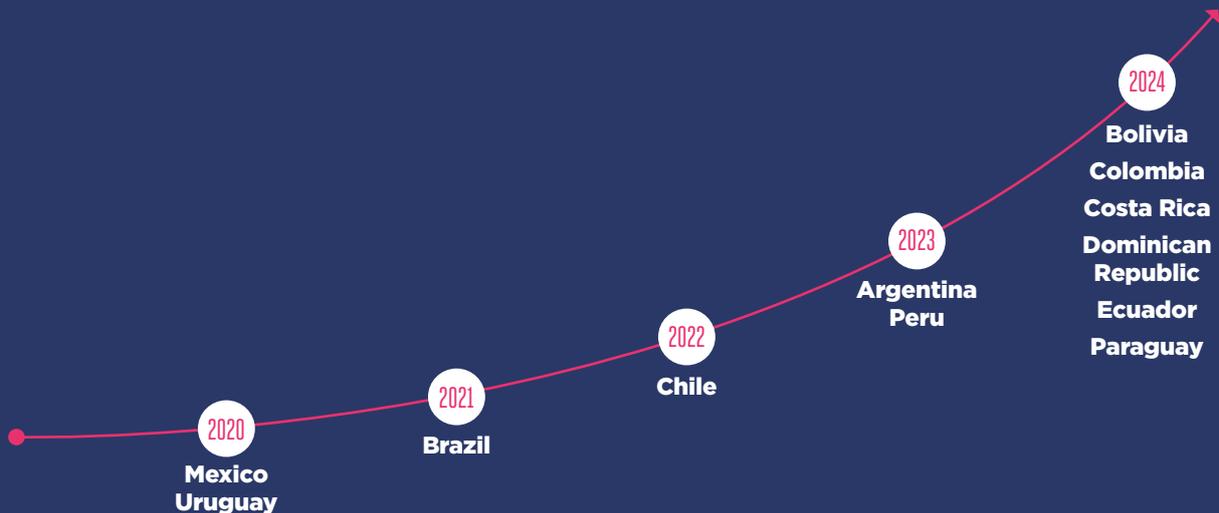
Percentage of total connections



- Now the leading mobile access technology, 4G accounted for 41% of total connections by the end of 2018. 4G is forecast to be the dominant technology in 2020, continuing to scale up even after 5G begins in 2020.
- This is evident with operator deployments of LTE-A; a total of 22 operators have launched speeds supporting 100 Mbps to 1 Gbps to date. A further 10 operators plan to do so in the short to medium term.

Source: GSMA Intelligence

5G launch forecasts



Trials are underway

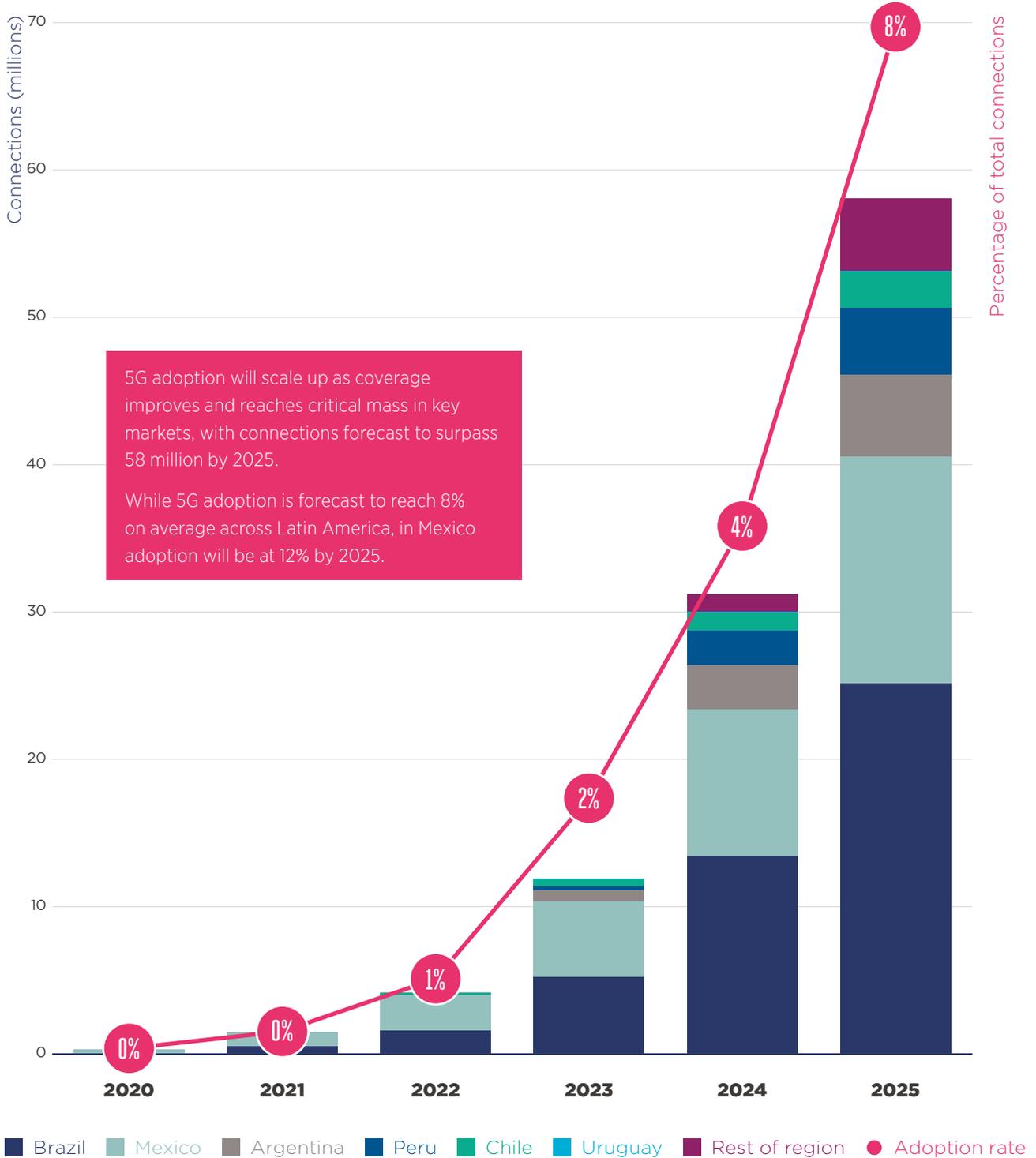
- Operators have predominantly conducted trials in the 28 GHz mmWave band.
- The first 5G trial was initiated in 2016 in Brazil by Claro, but a number of operators began trials in 2018.
- Antel Uruguay deployed a commercially ready 5G network in April 2019 in cooperation with Nokia.
- GSMA Intelligence forecasts the first 5G launch to take place in Mexico and Uruguay in 2020.

Source: GSMA Intelligence

¹ Excluding cellular IoT

Technology evolution 2

5G connections will reach 58 million by 2025 Excluding FWA



Source: GSMA Intelligence

Media & Entertainment ①

Mobile operators have a strong presence in traditional pay TV

Pay TV subscribers (millions)

Telefónica 4.8

America Movil 13.7

AT&T (DirecTV/Sky) 21.4

- Success is driven by content: purchasing exclusive rights and commissioning own content.
- Pay TV market highlights:
 - Revenues at America Movil's Argentina, Paraguay and Uruguay business units doubled year-on-year to Q1 2019.
 - Telefónica's launch of IPTV in Argentina, together with a change in government policy towards convergence, will enhance the value of the operator's fibre network.
- However, Latin America pay TV subscriber growth remained flat year-on-year to 2018 (-0.3%), with a forecast CAGR between 2018 and 2024 close to zero.²

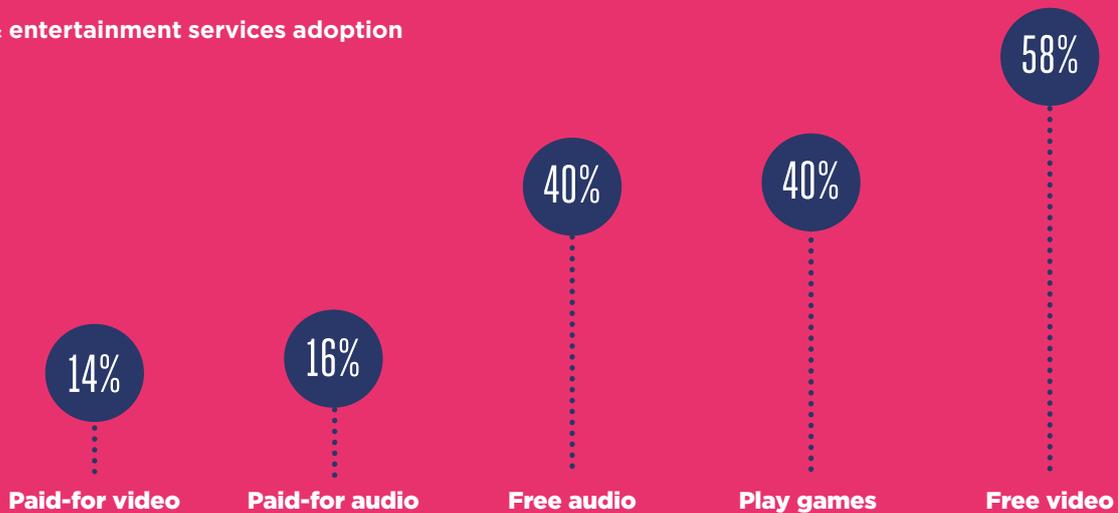
Source: Statista

Mobile-driven OTT media on the rise

Video and audio content consumption over mobile has grown across all Latin American markets surveyed, in both the free-to-access and paid-for segments.

- Demographically, millennials (18-34 year-olds) show increased media consumption in particular.
- By segment, the largest growth is in free-to-access online video.
- In Mexico, the only market where free-to-access has shown a 6ppt decline (in percentage of users accessing once per month), paid-for video on-demand services have grown in use by 10ppt, offsetting the decline.

Media & entertainment services adoption



Percentage of mobile users in Latin America with an active SIM or mobile handset using media and entertainment services at least once per month
Source: GSMA Intelligence Consumer Survey 2018

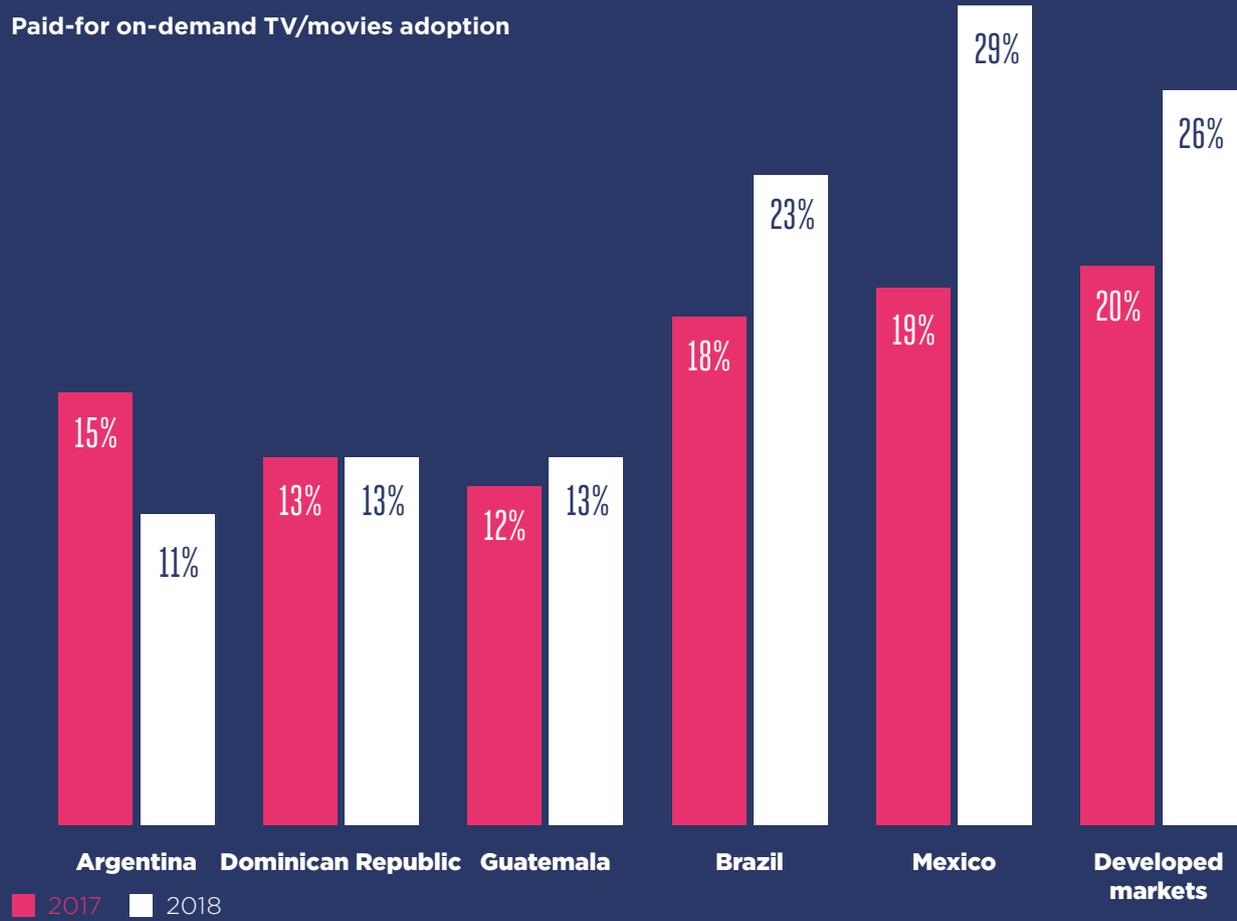
2 "LatAm will return to pay-TV subs growth in 2020", Broadband TV News, March 2019

Media & Entertainment ②

Local and international partnerships are key to operators remaining competitive

- Operators are retaining relevance through offering their own content (e.g. ClaroVideo in Mexico) and forming partnerships (e.g. Telefonica with Netflix in Brazil, and Spotify and Blim in Mexico).
- As a result, the paid-for video on-demand segment recorded year-on-year growth in 2018. In Mexico and Brazil, figures were close to or higher than the average for developed markets.

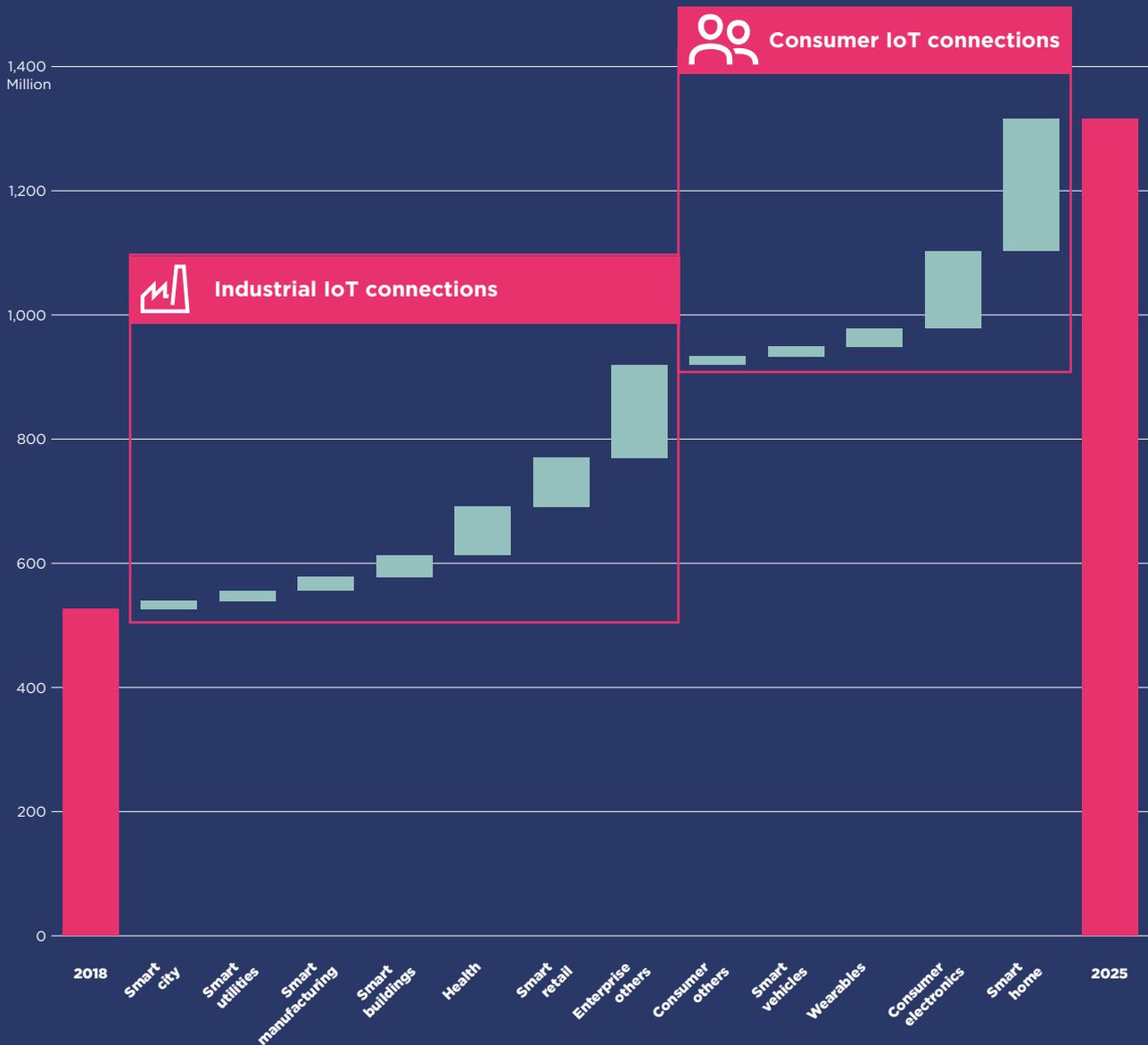
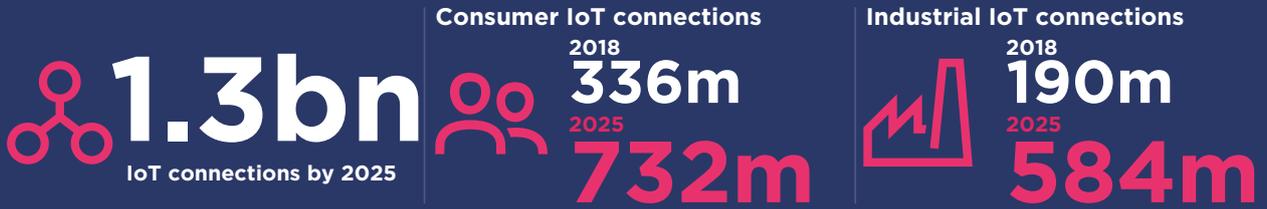
Paid-for on-demand TV/movies adoption



Percentage of mobile users that pay for on-demand TV/movies at least once per month
 Source: GSMA Intelligence Consumer Surveys, 2017 and 2018

Internet of Things ①

By 2025, consumer IoT will account for 56% of connections, while industrial IoT will triple between 2018 and 2025



- Although consumer IoT accounts for the largest share of IoT connections, industrial IoT in the region will increase more rapidly at a CAGR of 17% over the forecast period, driven by growth in smart buildings and utilities.

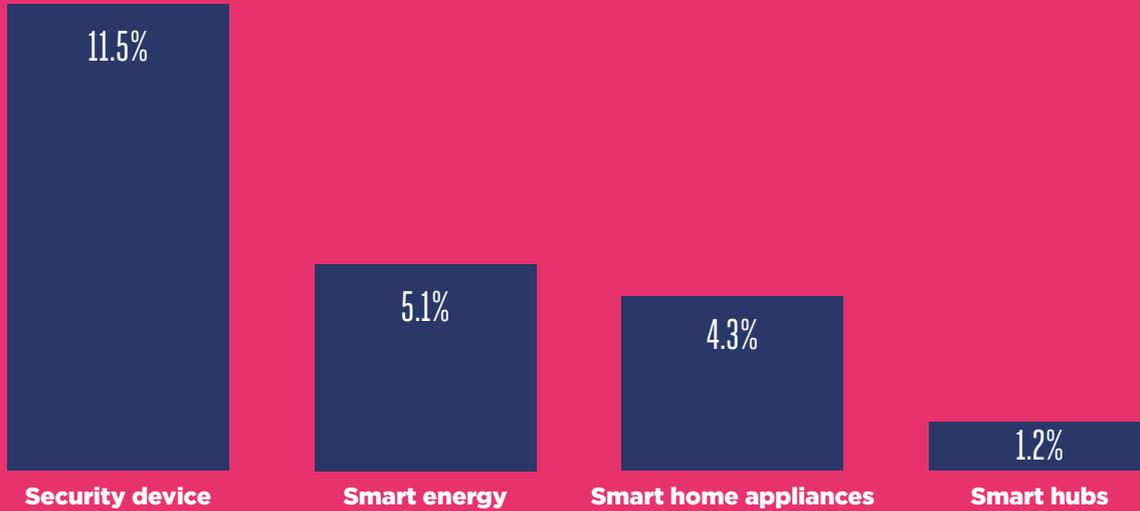
- Growth in consumer IoT will be driven by the smart home and electronics segments. Smart home connections will grow from 42% of total IoT consumer connections to 48% by 2025.

Source: GSMA Intelligence

Internet of Things 2

Smart home devices overall remain nascent, with smart hubs particularly struggling from lack of local language support

Smart home device adoption



Percentage of households with access to or use of smart home devices

- Uptake of smart hubs is largely in the bigger economies, with 4.2% and 0.6% of households in Brazil and Argentina, respectively. Uptake of smart home appliances remains low across developed markets too, as the majority are white goods with long lifecycles.
- Energy monitoring and smart grids represent an opportunity for utility providers to protect against revenue theft. However, development in the region is slow as organisations are still in pilot phases, with projects often financed by R&D departments under national programmes. Those involved are also debating responsibility for the high upfront costs.

Source: GSMA Intelligence Consumer Survey 2018

Example operator initiatives in the IoT sector



Mexico

In 2018, Telcel and Samsung partnered to offer smart home/office solutions on Samsung's SmartThings platform. Telcel offers connectivity, as well as a marketplace, systems integration, big data and analytics.



Argentina

In 2018, Claro developed a partnership alliance with 15 IoT and cloud companies across several verticals. The operator connects specialised knowledge from the different businesses with its own connectivity, distribution, private APNs and marketing solutions.



Brazil

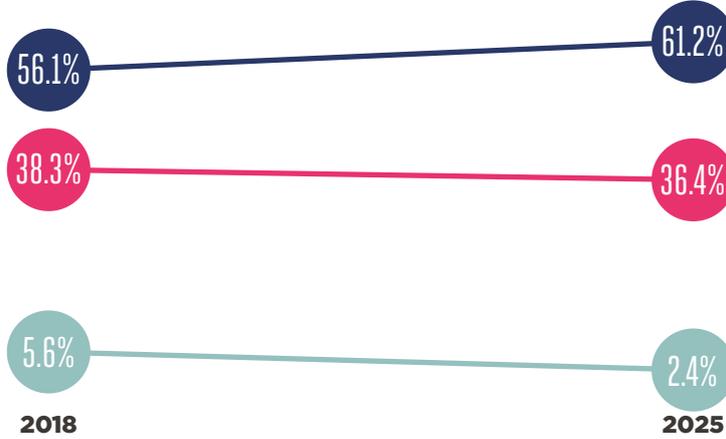
In 2019, TIM Brazil teamed up with satellite provider Gilat Satellite Networks for backhaul in underserved areas to complement the operator's 4G network for M2M connectivity. The focus is on agricultural crop management solutions and improvements in productivity.

Source: IoT Business News, Samsung, Telcel, Convergencia Latina

Internet of Things 3

IoT revenue will grow fourfold by 2025, driven by applications, platforms and services

Revenue share by segment



● Applications, platforms and services ● Professional services ● Connectivity

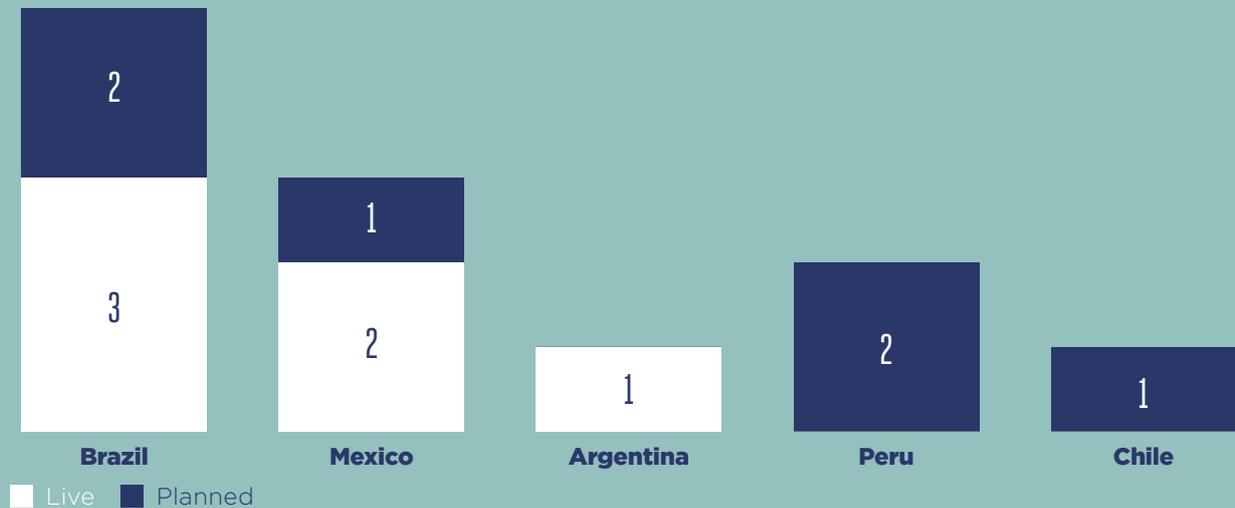
- IoT revenue will grow at a CAGR of 21% to 2025 to reach more than \$47 billion, almost four times its value in 2018.
- Although IoT connectivity revenue will also grow, it will account for just 2.4% of total IoT revenues in 2025 – down from 5.6%. Applications, platforms and services will account for more than 60%.

Source: GSMA Intelligence

Brazil leading the way on IoT network deployments

- Brazil is becoming an IoT hub for the region: it has two live NB-IoT networks and one live LTE-M network, a national IoT strategy, and \$4 million investment offered by the National Confederation of Industry to companies interested in installing IoT technology.
- Brazil is also the eighth-largest country globally in terms of cellular IoT connections at 19.7 million for year-end 2018.

NB-IoT and LTE-M deployments by country



Source: GSMA Intelligence

Internet of Things 4

Growth in use of licensed LPWA among enterprises in Latin America

Network usage %



Latin America

27%

LTE-M



Global average

32%

NB-IoT

24%

22%

The region is transitioning to new cellular networks in preparation for potential 2G switch-off.

Source: GSMA Intelligence, Enterprise IoT Survey 2018

Enterprises grapple with IoT device costs

With more than 40% of deployments comprising fewer than 50 devices, the majority remain small-scale. The top three factors for enterprises when considering IoT solutions are:



device cost
35%



network coverage
16%



security & privacy
14%

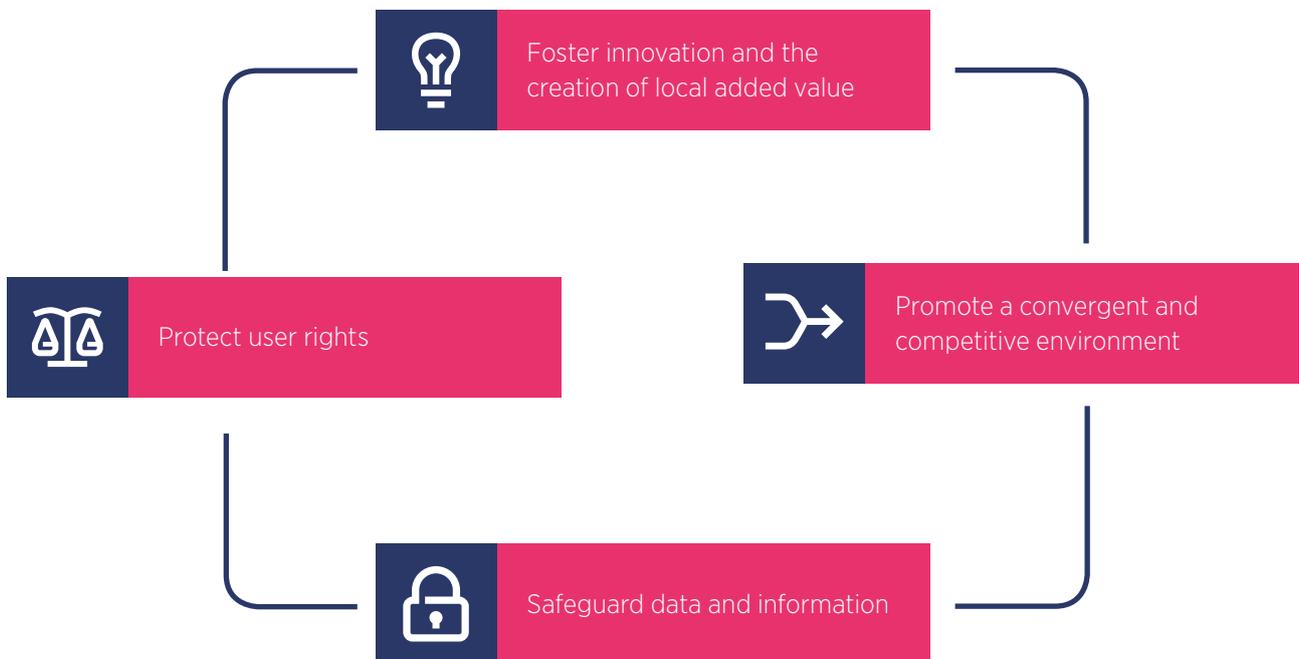
Source: GSMA Intelligence Enterprise IoT Survey 2018 Percentage of respondents to survey

Policy enablers to sustain investment, innovation and adoption of digital services ①

Fostering growth in the digital ecosystem

Growing levels of digitisation have radically changed the way we communicate. Users demand better and faster connectivity, everywhere. The emergence of new products and services provides the opportunity to help communities transition to the fourth industrial revolution (Industry 4.0).

Governments in Latin America have the opportunity to decide how they will integrate their countries into the new digital knowledge economy and capture the benefits available. Public policy must focus on encouraging the development of the digital infrastructure required. A flexible and clear long-term policy is needed to foster innovation, promote investment and enable the benefits of the digital economy for the region.



Policy enablers to sustain investment, innovation and adoption of digital services ②

Specifically, governments in the region should:



Reassess existing regulations to determine if they are still justified and remove those no longer needed.



Ensure sufficient spectrum for high-quality connectivity and a clear **roadmap** ahead. Changes in consumer behaviour towards more intensive use of data require more spectrum at reasonable prices and clear licence renewal conditions and terms, in order to provide innovative and quality services.



Strengthen **digital infrastructure by simplifying the regulatory framework for municipal deployment**. This means more antennas and sufficient spectrum – at reasonable prices and conditions – to maintain high-quality connectivity.



Build a fiscal policy that aligns mobile taxation with that applied to other sectors and with the best practices recommended by international organisations such as the World Bank and IMF. **Fewer taxes on connectivity can enable access** and digital inclusion for the unconnected.



Simplifying regulation in Colombia

The national regulator in Colombia, the Communications Regulation Commission (CRC), has developed a roadmap to modernise the country's regulatory framework with the aim of facilitating new business models and technological innovation for the digital economy. One of the latest decisions taken by the CRC was to eliminate 25% of legacy regulation.

For more information, see the [CRC website](#).



Outlining a spectrum roadmap in Mexico

The national regulator in Mexico, the Federal Institute of Telecommunications (IFT), has prepared its 5G roadmap with a specific set of milestones ahead for the industry.

For more information see the [IFT website](#).



Modernising the regulatory framework in Brazil

The national congress in Brazil is voting on a Bill of Law (PLC 79/2016) to amend the Telecommunications Law. The aim is to allow the migration from concessions to authorisations, create more flexible spectrum management and promote better broadband investments in digital infrastructure. Anatel is stressing the urgency, but final approval is still uncertain.



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