



# Spotlight on Indonesia:

## Seizing the digital transition opportunity now

February 2020



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The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with over 350 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.

For more information, please visit the GSMA corporate website at **[www.gsma.com](http://www.gsma.com)**.

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High-speed connectivity is a foundational element of a thriving digital economy; the availability of the right spectrum is fundamental to ensuring this connectivity reaches all of Indonesia's population of 271 million. Releasing 700 MHz spectrum for mobile use in the country would deliver economic benefits of \$10.5 billion (IDR145.3 trillion<sup>1</sup>) over the 2020–2030 period, equivalent to an incremental 1% of GDP.

For the new People's Consultative Assembly, assigning the 700 MHz band to operators represents an opportunity to accelerate deployments of mobile broadband and fuel Indonesia's economic growth. Time is of the essence: even a short delay could cost the country's economy billions of dollars in lost benefits and prevent millions of people from accessing mobile broadband services.

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## An emerging digital economy giant

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The mobile sector in Indonesia has experienced massive growth, providing the impetus for the country's transition towards an advanced, knowledge-based society. 3G services are available across most urban centres, smartphone adoption is rising and 4G take-up is beginning to increase – albeit later than some regional peers. The archipelago is also home to an expanding middle class and an educated, tech-savvy youth population, both of which are driving a booming e-commerce market.

Mobile is supporting the digital transformation of traditional industries such as agriculture and manufacturing, and stimulating innovation among domestic start-ups. 4G networks and the emerging ultrafast 5G, combined, are fundamental in enabling digital inclusion and for delivering the connectivity requirements of citizens – as well as traditional and emerging industries. Indonesia has produced five 'unicorns' (privately held start-ups valued at over \$1 billion), notably Go-Jek, which is entering neighbouring markets. The government and telecoms industry have demonstrated an eagerness to nurture the country's start-up ecosystem by establishing entrepreneur networks, making venture-capital investments and founding incubators for fledgling tech firms.

Beyond providing connectivity, mobile is playing a crucial role in delivering vital services to previously underserved populations. Here, mobile is more than just a useful communications tool; it is the only way of accessing education and healthcare, propelling positive social outcomes. To that end, achieving the United Nations Sustainable Development Goals (SDGs) depends on mobile connectivity. The result of leveraging mobile is a virtuous cycle that boosts economic growth, creates employment opportunities and reduces inequality and poverty.

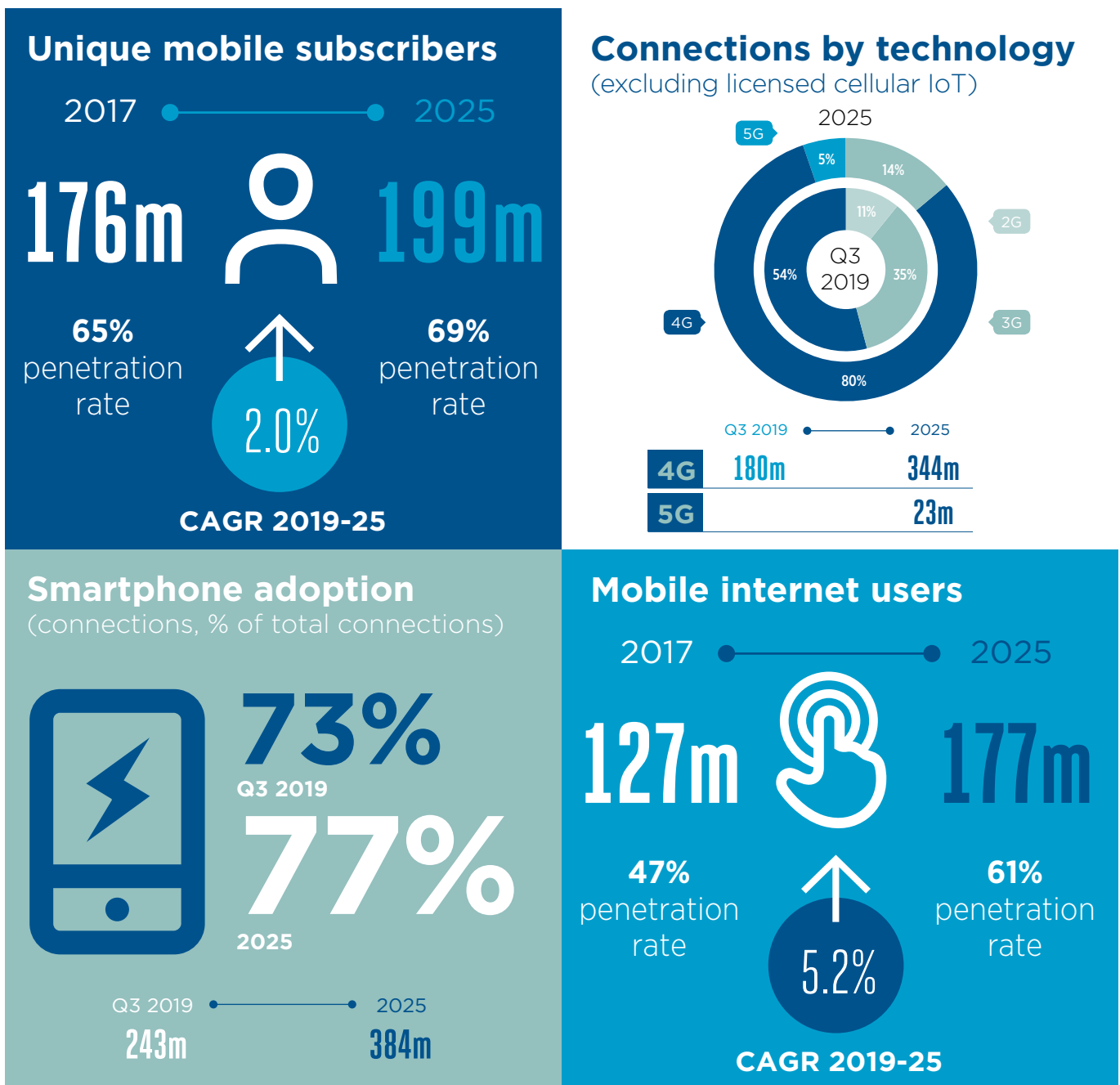
Indonesia is strongly positioned to become a digital economy powerhouse in Southeast Asia. Yet, internet access remains a key barrier for some citizens' full participation in Indonesia's digital society. While 3G (delivered with 900 MHz spectrum) has been successful in extending basic mobile broadband to many of the unconnected, certain locations remain scarcely covered, and the technology will not be able to handle the significant data traffic growth expected over this decade.

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1. IDR1 (Indonesian Rupiah) = \$0.00007 (exchange rate as of 9 January 2020).

# Indonesia mobile market at a glance

Some 176 million Indonesians now subscribe to a mobile service, connecting them to each other and driving engagement in the expanding digital economy. The internet has been the most important enabler of the country's societal development and economic growth this century.



Source: GSMA Intelligence



## Spectrum remains a barrier to mobile broadband adoption

Though Indonesia's mobile industry has witnessed considerable growth, vital spectrum must be allocated if the country is to realise its significant potential. A lack of spectrum constrains operators' ability to execute the widespread rollout of high-performance mobile internet networks, hindering adoption. Appropriate spectrum licensing is central to safeguarding the long-term investments required to expand mobile access with faster speeds, better coverage and more innovative services.

Mobile operators are today predominantly using 1800 MHz spectrum for their 4G rollouts, covering densely populated areas where data traffic is concentrated and substantial capacity is needed to avoid network congestion. To keep up with capacity demand, frequencies such as 2.3 and 2.6 GHz need to be made available for mobile in the coming years, as well as the necessary spectrum to support ultrafast 5G services. However, the most practical and cost-effective way the Indonesian government can increase 4G coverage and adoption, particularly in semi-urban and rural communities, is to release 700 MHz spectrum for use by operators as soon as possible.

Malaysia, the Philippines and Singapore have completed their analogue television switch-off processes, allowing operators to effect 4G expansion programmes and (more recently) test 5G pilot networks. In contrast, Indonesia is yet to reallocate the spectrum in the 'digital dividend' band (700 MHz) from legacy analogue television to mobile broadband services. The technical characteristics of this spectrum mean it can support better coverage with less infrastructure compared to higher bands, enabling operators to reduce capital costs, which benefits consumers through a faster pace of deployment.

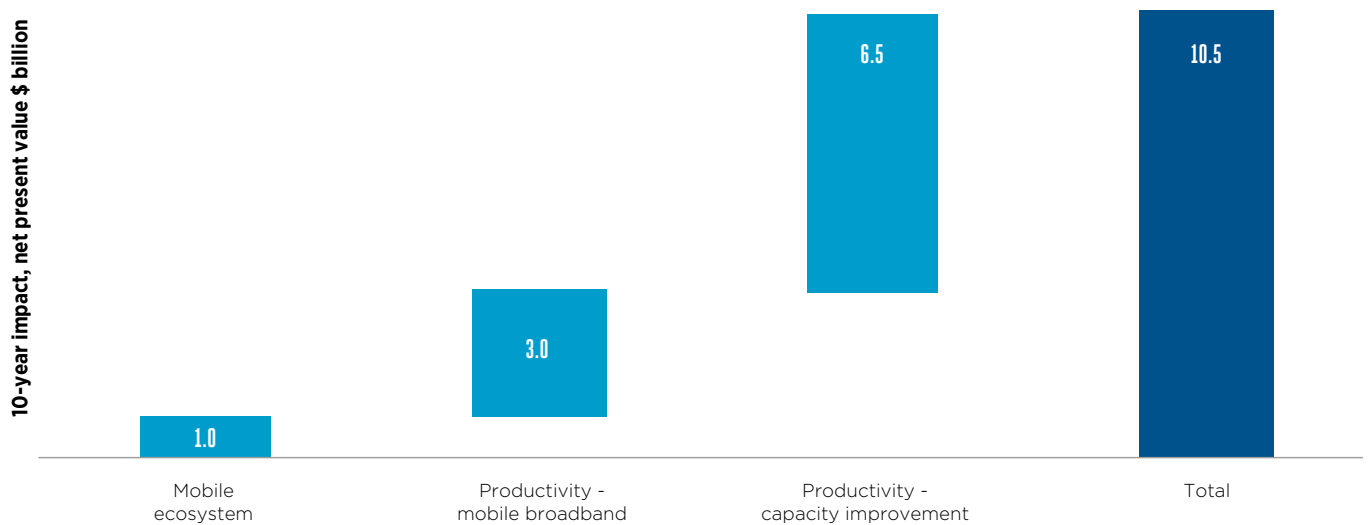
On 1 August 2018, the Ministry of Communication and Information Technology (MCIT) issued a consultation on digital TV broadcasting but made no announcements on timelines for when 700 MHz is to be released to mobile operators. As the timely and exclusive allocation of the 700 MHz band in sufficient quantity is key to them bringing affordable 4G – and in future 5G – services to all parts of Indonesia, planning for the release of 700 MHz spectrum should move forward without hesitation. The 45% of the population living in rural areas, who today suffer from the prevailing coverage gap, depend on swift action.

# Economic impact of releasing the digital dividend

If 700 MHz spectrum is allocated to mobile broadband, the Indonesian economy will realise economic benefits exceeding \$10.5 billion (IDR145.3 trillion) between 2020 and 2030, adding 1% to GDP by the end of the 10-year period. This figure is estimated

by calculating the different economic impacts: on the mobile ecosystem and wider economy, including both direct and indirect effects; on economic productivity following mobile use; and on productivity following capacity improvement.

## ECONOMIC IMPACT OF ALLOCATING 700 MHz TO MOBILE



Source: GSMA Intelligence

The availability of more sub-1 GHz spectrum makes it technically and commercially feasible for operators to roll out 4G in sparsely populated rural areas. Once finalised, the resulting growth in adoption will add \$800 million (IDR11 trillion) over the 10-year period from 2020. Further, the impact of the expanded mobile ecosystem will trigger a multiplier effect on the wider economy, equivalent to an incremental \$200 million (IDR2.7 trillion) in value. The total economic impact of the mobile ecosystem will therefore reach \$1 billion (IDR13.7 trillion).

- The wider reach of mobile internet connectivity using low frequency spectrum and effective use of 4G technology allows current mobile broadband users better access to the internet through faster download speeds. Academic studies show that this leads to economy-wide productivity benefits, as users are able to access a range of services not possible with lower download speeds. This will have an economic impact of \$6.5 billion (IDR90 trillion) over the 10-year period.

Productivity in Indonesia could be boosted by \$9.5 billion (IDR131 trillion) over the 10-year period, through two impacts:

- The Indonesian economy will benefit from productivity effects resulting from the additional 10 million individuals that will become mobile broadband users. Access to mobile broadband improves access to information and services, which in turn drives efficiency in business processes across industries, including finance and health. This impact of mobile internet is particularly significant in rural areas of Indonesia, where fixed line penetration is low. This will result in an impact of \$3 billion (IDR41.5 trillion) over the 10-year period.

# Taking collective responsibility for Indonesia's digital future

Mobile operators, broadcasters, other ecosystem players and policymakers all have a role to play in ensuring that Indonesia reaps the benefits of 700 MHz and closes the digital divide as soon as possible. This means establishing – as a priority – a policy environment conducive to operators making the considerable investments needed to take forward Indonesia's digitisation journey. An appropriate framework for digital dividend spectrum and advanced mobile broadband infrastructure must incorporate the following:

- 1. Avoid delays in the allocation of spectrum:** Based on our modelling, even a short delay by three years to 2023 could cost the Indonesian economy in excess of \$3 billion (IDR41.5 trillion) in lost benefits. This is because of restricted speeds and the inefficient, expensive build-out of base stations during the delayed years.
- 2. Ensure the full allocation of 700 MHz to mobile broadband:** The benefits of 4G are enhanced when large blocks of contiguous spectrum are allocated to mobile operators. Reducing the proposed allocation of 700 MHz would limit the potential capacity of mobile broadband and therefore the benefits described.

- 3. Support streamlined planning and administrative processes:** In a recent study, the GSMA highlighted how Indonesian operators are often required to ask two or three administrative bodies for permission before building out a cell site. A fast-track process can expedite mobile broadband rollout and enable consumers to enjoy higher speed broadband sooner.

- 4. Implement spectrum management framework that supports ever growing data demands beyond 2020:** A digital Indonesia will experience greater market demands as more users access the internet via mobile, industries become more digitised and the world embraces the 5G vision. As society continues its digital revolution, progressive frameworks for the regulation of mobile are essential. These must feature: flexible and pro-investment regulation that can accommodate data demands through the timely allocation of spectrum resources where needed; granting spectrum rights to the highest value uses; and avoiding the use of spectrum licensing as a tool to maximise fiscal revenues.





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