

# **HOW ADDING MORE MOBILE SUBSCRIBERS WILL DRIVE INCLUSIVE GROWTH**

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## Introduction

A major opportunity for inclusive economic growth may be staring you in the face right now. If not, it probably is in your pocket. It is the smartphone. Our research with individuals and small businesses across emerging and developed markets suggests that smartphones, together with high-speed mobile networks, deliver enormous economic empowerment and value.

Those of us with smartphones and with advanced mobile access such as fourth-generation (4G) perceive the value. Indeed, in less than 15 years, 3G and 4G technologies have reached 3 billion subscriptions worldwide, making advanced mobile access the most rapidly adopted consumer technology in history.<sup>1</sup>

What is particularly striking from our research is that the poorer a person is, the higher the value he or she attributes to having a smartphone and mobile access. The poorer the user, the more powerful is the smartphone as a tool for economic inclusion. And for small businesses, our research shows that smartphones and mobile access are powerful tools for growth and competitiveness, especially in emerging markets.

Yet what is also striking is the extent to which billions of people will not have feasible access to smartphones and advanced mobile access for the foreseeable future. Too many governments worldwide simply have neither the high-level objective nor viable action plans in place to ensure widespread, low-cost access to advanced mobile access and smartphones. As a result, citizens and businesses are not able to truly benefit from the digital economy. This is despite the fact that the underlying technologies—such as the 4G high-speed mobile network standard, powerful Android smartphones, and applications—are already mature and becoming lower cost every day.

We estimate that in 2020, based on current trends, more than 5 billion people globally will still not have access to smartphones that are connected to high-speed 4G mobile, despite the fact that this form of advanced mobile access has been available since 2009 and is now ubiquitous in developed economies. The opportunity cost is enormous. Based on extensive primary research, we estimate that each new subscriber to an advanced mobile network realizes a consumer economic benefit equivalent to nearly \$1,000 per year. And this is likely a conservative estimate. An additional two billion mobile subscribers would add at least \$2 trillion of consumer surplus to the world economy. This larger subscriber base would also stimulate enormous economic activity—an estimated \$600 billion in annual GDP and \$60 billion in annual private-sector investment.

This failure to provide widespread advanced mobile access to 5 billion people is nothing short

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<sup>1</sup> By "advanced mobile access" we refer to mobile cellular networks using the currently mature 3G and 4G standards and the future 5G standard. All of these networks enable robust mobile data usage, although the 4G standard enables dramatically higher data speeds and lower cost per byte transmitted than 3G. Wi-fi serves as an important complement to these networks, but in our opinion does not offer an outright substitute. Our own research has focused on the economic impact of 3G and 4G adoption specifically

of a tragedy. It calls for urgent action. Staring us in the face is perhaps the single largest opportunity to accelerate inclusive growth in the world. But without a radical redirection in policies by many governments, this opportunity will never be achieved. Many governments are failing to set the right objectives. They are failing to make critical public goods such as radio spectrum available, and when they do it is often at too high a cost or managed in a haphazard way. Governments are also failing to clear numerous practical barriers towards deploying modern mobile communications infrastructure. In this paper, we outline the opportunity and suggest a path forward to making it a reality.

A note on our research: In the second half of 2014, we and a team of colleagues studied the economic impact of 3G and 4G network technologies on individuals and small and mid-sized enterprises (SMEs) in Brazil, China, Germany, India, South Korea, and the U.S. We also assessed the overall impact of GDP. We conducted primary research with 7,500 individuals and 3,500 small businesses in these six countries. Our resulting report was released at the World Economic Forum annual meeting in January 2015. The research was conducted independently by BCG and commissioned by Qualcomm. This paper draws upon that research and other experiences of the authors.

We have identified five key barriers to wider deployment of advanced mobile access (particularly 4G and beyond)

- A failure of governments to set universal advanced mobile access as a goal
- Poor allocation and management of the needed radio spectrum
- Insufficient capital investment in advanced mobile networks, especially in rural areas
- Failure to address the affordability of mobile devices and subscription plans for low-income consumers, including subsidies where needed
- A lack of locally relevant content and service

Each of these barriers can be overcome with better policy objectives, further investment, the right mix of policies, and coordinated action by governments, technology providers, and multilateral agencies. We call on the global community to mobilize to help accelerate the availability of affordable advanced mobile access in developing economies as a means of stimulating inclusive economic growth.

We propose that such an initiative first focus on eleven developing economies where the greatest progress can be achieved toward closing this gap: Brazil, China, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Philippines, Russia, South Africa, and Thailand. The policy agenda we recommend focuses on four basic goals: promote a clear objective of universal advanced mobile access, incentivize investment and innovation; expand access to advanced

mobile services and devices, and promote adoption and usage of these services. In addition to mobilizing capital, this agenda should include an effective system for allocating and managing radio spectrum and creation of a regulatory environment that promotes investment and experimentation and makes inclusivity a top priority.

We believe that the costs of higher investment will be more than offset by gains in economic and social development and in more inclusive growth in developing economies. According to Boston Consulting Group research, accelerating advanced mobile access deployment to reach 4 billion more users would add more than \$1 trillion to global GDP and create more than \$4 trillion in consumer surplus for the new mobile users.

### **Mobile Technology as an Engine of Inclusive Growth**

Mobile technologies generate a stunning \$3.3 trillion in global revenue annually. Revenues across the mobile industry worldwide have grown 13 percent annually since 2009—more than twice the rate of the global economy over the same period. Mobile is directly responsible for 11 million jobs worldwide, and the indirect impact greatly exceeds this number. More than two-thirds of mobile-industry jobs are high-value, knowledge-economy jobs, such as innovation research, component and device design, and development of applications.

A significant share of the global population, moreover, has access to advanced mobile technologies. By the end of 2015, according to BCG estimates, there will be 1.2 billion 4G connections across the globe—one for every seven people. By 2020, we project that there will be nearly 3.8 billion 4G connections and that the penetration rate will reach 44 percent. It is likely that by 2020, progress towards a 5G mobile network standard will be significant.

The economic and social impact of advanced mobile access is greatest in developing economies. Every 10 percent increase in 4G penetration increases growth in per-capita GDP by 0.4 to 0.6 percent in developed countries and by 0.8 to 1.4 percent in developing economies, according to the World Bank. The World Bank estimates that every 1,000 new subscribers of broadband Internet result in the creation of 80 new jobs.

To better understand how much value individuals derive from advanced mobile access and how they use this access, we surveyed approximately 3,700 mobile subscribers in Brazil, China, and India. This research revealed that advanced mobile access, particularly in emerging markets, make economic and social development more inclusive in a number of ways.

#### ***Mobile phones boost income***

- Our research shows that mobile subscribers in emerging markets regard mobile as a

powerful tool for earning more money. In India, 71 percent of survey respondents agreed that mobile helped them earn more. In China, 50 percent of respondents also agreed with this statement. Seventy-five percent of Indians and 61 percent of Chinese surveyed said that their mobile phone makes them more productive. Eighty-one percent of Indians surveyed agreed that the smartphone was their most important modern tool.

- Mobile subscribers also use the service as a powerful tool to save money. More than half of mobile phone subscribers surveyed globally reported that their handset helped them save money over the previous week. This sentiment was especially strong in low-income economies. In India, the poorest nation in our survey, 71 percent of respondents said their phones save them money. In China, users estimated their weekly savings at \$32—the equivalent of around 12 times their weekly service cost. Brazilians put that value at \$33 a week, around 16 times their weekly service cost.
- Our research shows that mobile technologies create enormous overall economic value for users—what we call *consumer surplus*--in Brazil, China, and India that greatly exceeds the cost of owning a mobile device, . Subscribers in Brazil value mobile technologies at 20 percent of their income—well above what they pay for the service. Consumers in China and India value mobile services at 43 percent and 45 percent of their incomes, respectively. On an aggregate level, this consumer surplus is enormous. Mobile technologies create a consumer surplus of \$300 billion annually in India, \$500 billion in Brazil, and \$3.3 billion in China. Consumers in the U.S., Germany, and South Korea also highly value mobile services, but given their higher incomes, the value as a percent of income ranges from 11 to 13 percent.

### ***Mobile connects, protects, and empowers individuals***

For many households in emerging markets, mobile phones are their only “connected” device. Handsets provide the opportunity to live healthier lives, access educational resources, and feel more secure.

- Our research found that 78 percent of women in developing economies where we conducted our survey say they “feel more secure” when they have their mobile phones with them and that 81 percent feel more connected with their friends. More than 60 percent reported they “enjoy greater freedom” because of their mobile phones and feel more engaged with the world around them.
- Mobile enhances productivity. In China, more than half of mobile subscribers reported that mobile technologies make them more productive at work and allow them to pursue entrepreneurial activities.

### ***Mobile is regarded as an essential utility***

- Fifty-five percent of Chinese and 45 percent of Indians said they would be willing to give up electricity in their homes for 12 hours a day in order to keep their phones. Forty-five percent of Indians and 51 percent of Chinese in our survey said they would rather give up 20 percent of their salary than go without their mobile phone for a year.

### **Mobile technologies accelerate growth and job creation by SMEs**

SMEs are the principal growth drivers of many economies around the world. In many economies, SMEs are responsible for up to 65 percent of all jobs, according to the Organisation for Economic Cooperation and Development.

Mobile technologies are fast becoming a growth engine for SMEs. Mobile provides rural entrepreneurs with better, faster access to market knowledge and enables them to share information more efficiently. It has also enabled myriad innovative business models that have helped SMEs compete with much bigger companies.

As part of our research, we surveyed around 1,900 SME decision makers in Brazil, China, and India and took an inventory of their companies' mobile adoption levels. We focused on mobile technologies used for marketing and sales (such as mobile apps) and those used for operations (such as mobile data collection or fleet management). Among our findings:

- Approximately 75 percent of emerging-market SMEs surveyed reported that mobile has helped them grow revenue, become more efficient, and be more innovative. By contrast, only 50 percent of SMEs in developed markets reported that mobile had these effects.
- SMEs in developing markets are more aggressive users of mobile technologies than those in developed markets. In Brazil, China, and India, 25 to 30 percent of SMEs surveyed were categorized as "mobile leaders"—meaning that they are early adopters of advanced mobile services. This compares with only 14 percent of SMEs in Germany that we classify as mobile leaders.
- The "mobile leader" SMEs in these three developing economies have increased their revenues 1.5 times faster than SMEs that are laggards, registering compound annual growth of 9 percent from 2012 through 2014. They also were also growing their employee base by 6.3 percent annually over that period—more than *three times* the pace of mobile technology laggards.
- Narrowing the mobile divide among SMEs could boost job creation even further. We have calculated that if today's laggards adopted mobile to the same degree as leaders, within three years they would create an additional 500,000 jobs in Brazil, 1.8 million

jobs in India, and 2.5 million jobs in China. What's more, the mobile industry could create an additional 300,000 jobs in Brazil, 500,000 in India, and 3.5 million in China.

One reason for the high number of "mobile leader" SMEs in developing economies is that, for many, mobile is their only portal to the Internet. Mobile is also truly transformational—allowing emerging market SMEs to leapfrog an entire generation of technology and directly develop business models or operational tools for mobile platforms.

The following vignettes illustrate the impact that mobile technologies can make for small entrepreneurs:

- **Mobile payment in the streets of Brazil.** A Brazilian taxi driver we interviewed found that mobile payments have not just saved him money, but have also increased his sense of security. He uses Cielo, a mobile payment solution, to handle transactions with customers. He used to conduct business with cash only. When he lacked correct change for customers, he sometimes lost revenue. Worse, when he had large sums of cash in his cab, he often felt vulnerable to thieves. He now carries a minimal amount of cash to conduct business, which facilitates easy transactions with customers and enhances his sense of well-being on the job.
- **mFarming in India.** Mobile technologies are enabling farmers to manage their businesses better. In India, for example, farmers are often located too far from an urban area for fixed line connectivity, limiting access to information about pests or diseases, soil conditions, or current market prices. mKrishi, a mobile app, enables farmers to receive proactive, personalized crop advice as well as periodic, weather-specific alerts on how to protect against pests or when to harvest. Farmers using the tool have increased their productivity by 15 percent, according to mKrishi. One farmer we interviewed reported that use of mKrishi doubled his tomato yield to about 1,600 crates per acre. Another said that mKrishi has reduced his costs by about 50 percent.
- **Empowering female entrepreneurs in Tanzania.** In our research, we encountered a female entrepreneur in Tanzania who operates a small flour mill. Before she had a mobile phone, this entrepreneur had to spend days every week traveling through the countryside, carrying lots of cash, in order to buy wheat from farmers. Now, with the mobile phone, she no longer has to travel. She contacts farmers by phone instead. And with mobile payment systems, she can easily transfer money to farmers without handling cash. As a result, her business has expanded dramatically: she is selling hundreds of bags of flour a month, has developed a brand, and expanded to new locations.

## *Mobile helps change lives in emerging markets*

Widespread deployment of mobile technologies can lead to major improvements in the well-being of those living on the margins in developing nations. Mobile provides a platform upon which applications that foster economic and social inclusivity can be built, leading to impressive gains in health care, education, and security. The following vignettes illustrate the types of applications being developed by local innovators.

- **Fighting Back Against Violence.** In India, an app called FightBack allows women to send a security alert to friends, relatives, and emergency services when they feel threatened or endangered. With the push of a panic button on the smartphone app, an SOS alert is triggered and sent out to a predefined list of six emergency contacts. This instant alert continuously pinpoints the user's exact location through GPS tracking. FightBack also provides an interactive map of all locations in which alerts have been issued. This information has helped police officers to identify "hot spots" where women feel threatened on the streets, and that information has been used to improve safety in these areas. In India, 84 percent of people surveyed reported that the mobile phone helped them to feel more secure.
- **Treating Disease and Saving Lives.** In emerging economies, mobile health (mHealth)—the use of mobile applications and devices to deliver medical information, access data, or provide clinical services—offers basic health-care services to patients that might otherwise go untreated. According to TechChange, access to mobile technologies is growing much more quickly than access to traditional health-care services.

Swasthya Samvedana Sena, an initiative in India, uses mobile technologies to improve maternal health. Frontline health-care workers in several regions across India use mobile tablets to educate pregnant women and new mothers on a wide range of topics, including women's health, pregnancy, labor, contraception, government services, postnatal care, and HIV. According to one beneficiary, "Visits by the doctors have now decreased, thanks to the education provided by this service."

We believe that findings of our consumer and SME research in Brazil, China, and India are indicative of what we would find in other emerging markets. It underscores the immense potential for inclusive growth if deployment of advanced mobile services could accelerate even further.

## **The Barriers to Wider Advanced Mobile Access**



Despite tremendous global progress in expanding mobile connectivity, there is an enormous gap between developed and developing economies when it comes to availability of such advanced mobile access as 4G services.

This gap will persist for the foreseeable future. Even with the current expansion plans for advanced networks, BCG estimates that in 2020 around 5 billion people will not have access to 4G services, the most advanced mobile access developed to date. Of these, 4 billion will live in developing economies. Although 4G penetration rates are projected to reach around 90 percent of consumers in developed economies by that time, only around 35 percent will have access in developing economies. In Nigeria, 4G coverage is projected to reach 23 percent by 2020, and in Pakistan only 12 percent.

Demographics explain part of the gap: in nations with low penetration rates, large portions of the population have low incomes, many live in rural areas, and many are illiterate. But there are also major barriers to much wider deployment of advanced mobile access in developing economies, particularly in rural areas. Addressing these challenges through a well-coordinated action plan by policymakers, industry, and assistance agencies could make economic growth dramatically more inclusive.

We have identified five key barriers to wider adoption: a failure to prioritize universal mobile access as a policy goal, poor management of radio spectrum, insufficient capital investment, the affordability of mobile devices and subscription plans, and a lack of localized content and services.

### ***Barrier 1: Failure to prioritize universal advanced mobile access as a policy goal***

Despite the evidence of mobile's dramatic impact on economic inclusion and growth, it is striking that many countries do not make universal access a top policy priority. Our review of national communications policies suggests that numerous governments focus on other goals that run counter to universal mobile access. These other goals include state monopolization of the mobile sector, channeling of industry profits to preferred groups, restrictions on information flows within societies, restrictions on foreign investment in the mobile sector, and tariff revenues on imported equipment. We also observe situations in which local governments fail to address issues that impede mobile network deployment—such as policies that make it difficult to obtain sites for mobile base station towers and the associated rights of way.

In addition, many governments are not setting adequate coverage goals for advanced mobile networks. For example, they mandate only limited coverage in rural areas. As explained below, many governments are also not making available the radio spectrum that is required to provide rural mobile coverage cost-effectively.

We believe that it is imperative for all governments to commit to universal access to the most

advanced and cost effective mobile network services, embodied today by 4G, and by its successor technologies in the future. Without this commitment, mobile's unparalleled ability to deliver inclusive economic growth will not be realized.

### ***Barrier 2: Poor management of the radio spectrum***

Spectrum-related policies are critical to enabling investment in advanced mobile infrastructure. These policies include making spectrum available in accordance with International Telecommunications Union (ITU) recommendations, managing allocation for standards such as 4G, ensuring that spectrum earmarked for these services is fully released in globally harmonized spectrum bands, and pricing.

- **Spectrum allocation.** One critical issue here is that advanced mobile networks in rural areas require lower frequencies in the 700 megahertz (MHz) in order to be built and operated cost-effectively. 4G networks currently operate in frequencies ranging from 700 megahertz (MHz) to 2.6 gigahertz (GHz). Higher frequencies are best suited for densely populated cities. Lower frequencies are best suited for rural areas, where density is low. Nations with high 4G penetration rates have allocated a balanced range of frequency bands in order to cover as much of their populations as possible. The U.S., for example, has championed the transition to 4G by outlining an aggressive plan to allocate 500MHz of spectrum by 2020 across all regions to enable more than 98 percent of Americans to have access to 4G services. Similarly, Germany and South Korea are allocating spectrum for rural areas as part of a goal to enable 100 percent penetration.

Many governments in developing economies, however, tend to focus on allocating high frequency bands of 1 GHz and above. Nigeria, one of Africa's largest economies, also has one of the continent's lowest penetration rates of less than 1 percent. Yet it is still focusing on allocating 2.6 GHz 4G spectrum. Many governments have not addressed the conflict in spectrum usage--such as between analog TV broadcasting, military use, and modern mobile communications. To free up needed spectrum, it is often necessary to mandate the retirement of spectrum used for some analog TV channels, which governments are reluctant to do. For widespread deployment of advanced mobile access, developed economies need a more balanced approach to allocating spectrum.

- **Spectrum pricing.** While revenues from auctioning spectrum at high prices are an attractive source of government income over the short term, governments should also consider factors that will ultimately stimulate economic growth and higher tax revenue over the long term. Other objectives should include creating value for

consumers, stimulating private investment, and creating jobs. Germany set low prices for spectrum reserves in 2010, for example, and achieved considerable success in achieving broad coverage. High spectrum costs also lead to higher debt loads for operators and reduce their ability to build or upgrade network infrastructure. When India auctioned 3G spectrum in 2010, for example, its prices were regarded as too high, which prompted operators to buy only small amounts and to limit their investment in infrastructure and service. It is critical, therefore, that policymakers and governments manage the radio spectrum with a clear focus on the ultimate goal—universal mobile access and its powerful inclusive growth impact.

### ***Barrier 3: Insufficient capital investment***

Because mobile phones are now used to access a wide range of data services, such as video, audio, web browsing, and file sharing, the need for greater advanced mobile services network capacity is growing explosively. Monthly data consumption of smartphones will increase nine-fold between 2014 and 2020, according to BCG research, with the greatest increase in Asia Pacific.

In 2014 alone, operators invested around \$216 billion globally in their networks, an annual increase of more than 9 percent. Through 2020, investment in advanced mobile networks is projected to grow at a compound annual rate of 2.5 percent.

But even these levels are not sufficient to bridge the mobile access gap between developed and developing nations. We estimate that global investment should grow by 3.2 percent annually, which would mobilize \$1.5 trillion to \$2 trillion, in order to achieve this target. We believe that the economic benefits of this added investment will greatly exceed the costs.

Building and operating advanced mobile networks in rural areas present serious cost challenges in most developing economies. Recouping a good return on investment is particularly difficult given the low population density of rural areas and relatively low rates of adoption. The result for operators is lower revenue per cell radius than in urban areas.

One potential solution is for operators to share mobile communications infrastructure in rural areas. Mobile operators in many developing nations have also started to tackle the problem of poor access to electrical grids by using such alternative energy sources as fuel cells and solar. Governments and multilateral agencies could provide incentives and public funds—or co-invest—in infrastructure that would bring advanced mobile technologies to rural areas in the interest of promoting inclusive growth.

Fortunately, the 4G network investment required for operating in the 700 MHz band for rural areas can be up to 70 percent lower than for 2.1 GHz bands deployed in cities. Other trends also promise to lower investment costs. By obtaining spectrum in smaller chunks across different bands, for example, operators in some countries are creating a large virtual pipeline that allows faster speeds, greater capacity, and better spectrum utilization. Long-term evolution (LTE) broadcast technology, which allows users to optimally utilize the spectrum by sending one video stream to multiple users, is another lower-cost option.

#### ***Barrier 4: Affordability of mobile devices and subscription plans for low-income consumers***

The costs of handsets and service plans for advanced mobile services currently are beyond the pocketbooks of the vast majority of rural households in developing economies.

Operators and handset manufacturers are already dramatically bringing down handset prices. India's Reliance, for example, has indicated that it will sell 4G phones priced at \$30 to \$45 that are bundled with services for customers that trade in their current handsets. In China, 4G smartphones sold by China Mobile start at around \$65 for subscribers of a one-year contract costing around \$14 a month. By the end of 2015, Gartner projects that more than half of 4G handsets sold worldwide will cost less than \$100.

Policymakers can also help bring down the prices for handsets. Governments should be encouraged to eliminate tariffs on imported handsets that exist in some markets. They could also encourage innovative programs to help finance or subsidize handset purchases.

To help lower the costs of monthly service plans, we call for the development and promotion of a "lifeline data service" that provides a meaningful level of wireless data access to all people at an affordable price. Such a service would require government subsidies, which we can be justified by their economic and social benefits. Some private-sector companies, such as Jana, are pioneering new business models whereby advertisers and merchants can also contribute to subsidizing the costs of mobile data plans in emerging markets. Such innovation in this area is needed and should be encouraged.

#### ***Barrier 5: Lack of localized content and services***

Relevant and accessible digital content and services are crucial in order for users to gain the benefits of mobile access. According to the World Bank, roughly 80% of all digital content online is in one of 10 languages. These are English, Chinese, Spanish, Japanese, Portuguese, German, Arabic, French, Russian, and Korean. Clearly, many other languages are under-represented.

Bridging this content gap presents a considerable challenge, especially in multi-lingual Asian nations. India, for example, has 22 official languages in 11 scripts and hundreds of unofficial languages. What's more, different types of content have different localization needs. Consumers

expect videos, news, social networks, and health-service information to be highly local, for example, but are less concerned about gaming or financial services.

We propose that government, universities, NGOs, the private sector, and multilateral organizations invest in training and financial support for local developers of digital content and services.

### **An Action Plan for Accelerating Advanced Mobile Access**

We call on the global community to mobilize to help accelerate the deployment of advanced mobile access in developing economies as a means of stimulating inclusive economic growth. We believe that such an initiative could make the biggest impact by focusing on eleven major developing economies where 4G deployment is already growing at a brisk pace, but far bigger gains in inclusive growth could be achieved if expansion of networks accelerated. Those countries are Brazil, China, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Philippines, Russia, South Africa, and Thailand.

The policy agenda we recommend focuses on five key goals: set the right policy priorities, incentivize investment and innovation; expand access to advanced mobile services and devices; and promote adoption and usage of mobile technologies. There are five key elements:

- Ensure the prioritization of universal mobile access as a top policy goal
- Smart allocation of radio spectrum.
- Accelerate capital investment in advanced networks, especially in rural areas.
- Ensure that everyone has access to affordable advanced handsets and affordable "lifeline" mobile data plans
- Support the development of localized content and services.

We recommend several specific actions in order to further these goals:

- **Extend the consumer research that we have conducted in China, India, and Brazil to encompass additional emerging markets.** Such research will provide further powerful evidence and quantification of mobile's inclusive growth impact. The World Economic Forum can use its auspices to help ensure that this happens.
- **Issue a challenge to all national governments to make universal mobile access a priority. Develop and publish an annual "mobile access policy scorecard" to enable**

transparency, and call out governments that are failing to set this as a priority. It would also be useful to establish a set of "best practice" or "reference" policies, which can serve as models for other governments. The World Economic Forum, the UN, the ITU, the GSMA, can all play a role in these developments.

- **Place particular focus on progress in eleven key countries in order to have an impact on the largest population groups most quickly.** Progress varies widely among these eleven countries. But progress here will deliver the largest impact to inclusive economic growth. These countries are Brazil, China, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Philippines, Russia, South Africa, and Thailand.
- **Develop customized "pathways to universal mobile access plans" for each of these eleven countries, specifying policy actions that are needed in each country.** Every country has a different starting point, as well as a unique mix of challenges around issues such as spectrum allocation, operator regulation, tariffs, and barriers to network deployment. But for each country, a specific pathway will clarify what needs to be done.
- **Engage multilateral lending institutions, including the new BRICS Bank, China's Infrastructure Bank, and existing institutions such as the World Bank and Asia Development Bank.** By getting these institutions to also commit to the goals of universal mobile access and access to lifeline mobile data plans, we can fast-track the funding for key infrastructure investments that will have the largest impact. The World Economic Forum can be a catalyst to bring these institutions on board.

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