GSMA™

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Shri Anand Kumar Singh,
Advisor (CA&IT)
Telecom Regulatory Authority of India   December 29, 2023
New Delhi

Dear Shri Singh,

Subject: GSMA Response to Consultation Paper "Digital Inclusion in the Era of Emerging Technologies".

The GSMA wishes to submit its response to the Consultation Paper: "Digital Inclusion in the Era of Emerging Technologies".

The GSMA welcomes the opportunity to offer recommendations to TRAI and commends its important initiative towards promoting digital inclusion in India.

Achieving digital inclusion for all is a complex endeavour as it goes beyond having the right infrastructure in place and while coverage is a prerequisite, it is not enough by itself to address the digital divide. This means that digital inclusion should be understood in terms that put stronger emphasis on people's circumstances, needs and the various barriers that prevent them from benefitting from the internet.

For the digital inclusion policy to be successful, a clear governance framework for implementation is required. None of the barriers to mobile internet adoption can be considered in isolation. Successful policy strategies recognise the cross-cutting nature of digital inclusion and the need to address all barriers in a holistic manner through a whole-of-government approach.

We remain available for any further exchanges in future on such issues of interest for the telecom industry.

Yours sincerely,

Jeanette Whyte .

GSMA

Jeanette Whyte

Head, Public Policy, APAC

GSMA

GSMA Response to TRAI Consultation on Digital Inclusion Policy

Q.1 What should be the definition of Digital Inclusion? What all parameters should it include to highlight disparities across different segments of society to have a realistic assessment from a policy perspective? Please provide your answer with suitable justification.

Achieving digital inclusion for all is a complex endeavour as it goes beyond having the right infrastructure in place. The roll-out of mobile broadband infrastructure has far outpaced its adoption (in India as well as most other countries) and while coverage is a prerequisite, it is not enough by itself to address the digital divide. This means that digital inclusion should be understood in terms that put stronger emphasis on people's circumstances, needs and the various barriers that prevent them from benefitting from the internet.

A framework that resembles such a people-centred understanding of digital inclusion is the UN's Universal and Meaningful Connectivity Framework, which was developed by a multi-stakeholder working group as part of the UN Secretary-General's Roadmap for Digital Cooperation[1]. Meaningful connectivity is clearly defined as "a type of connectivity that allows users to have a safe, satisfying, enriching, productive experience that is affordable". This understanding of meaningful connectivity puts individual needs at its centre and consists of a framework of five 'connectivity enablers' (see Figure 1).
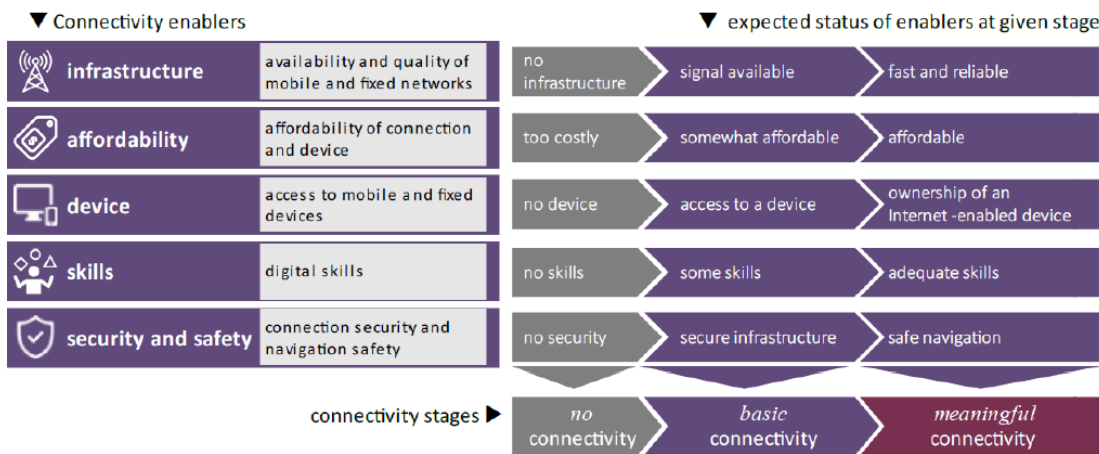

Figure 1: UN framework for universal and meaningful connectivity

As the aim is to achieve *universal* meaningful connectivity, the framework also reflects the ambition to connect everyone, which implies a complete gender balance. 'Everyone' in this case refers to individuals, households, communities (e.g. schools), and businesses. Universal connectivity expressed as 100% coverage and internet use was considered by the UN working group as the best proxy to drive ambitious action, even as it was recognised that this may not necessarily be desirable nor practically attainable by all countries within the considered timeframe.

However, even universal adoption does not provide a complete picture of digital inclusion. To ensure people can use the internet to meet their needs and reap its full benefits, it is important to look beyond adoption. This is important because there is generally still a digital divide when considering the extent to which the internet is used. Therefore, in its annual Consumer Survey, the GSMA measures regular and diverse use of mobile internet (see Figure 2). Regular mobile internet use is defined as performing
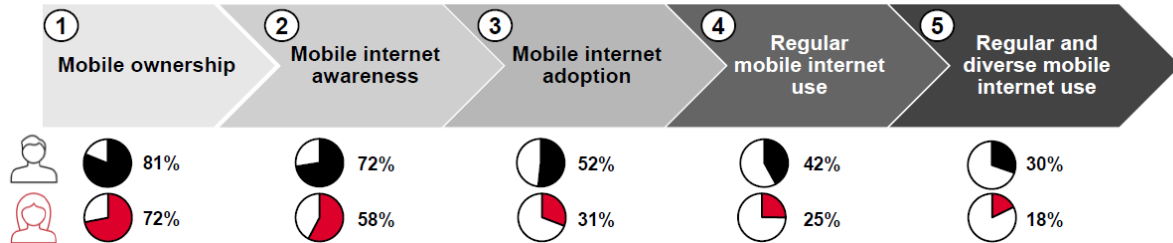
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[1] UN Roadmap for Digital Cooperation. (2022). Achieving universal and meaningful digital connectivity.
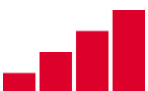
at least one mobile internet use case daily. Regular and diverse mobile internet use is defined as performing at least three mobile internet use cases daily. Although it may not be necessary to set specific targets for regular and diverse internet use, it is important to consider and track to better understand progress towards achieving digital inclusion for all.

Figure 2: The mobile internet user journey in India

Q.2 Do you agree that the indices mentioned above and developed by various international organisations for assessment adequately represent the status of Digital Inclusion in the country? What other indices and factors need to be considered to identify the gaps in Digital Inclusion in the country?

We agree with the inclusion of the GSMA's Mobile Connectivity Index (MCI) as a tool for measuring connectivity and digital inclusion in India. The MCI allows for a data-driven approach to policymaking, Successfully increasing levels of mobile internet adoption, usage and coverage means leveraging this type of data-centric analysis and evidence-based decisions.

Under Section 2.35, the enabler scores listed are not in line with the latest MCI data. The MCI data is updated annually and the most up to date enabler scores for India are:
- Infrastructure: 61.8
- Affordability: 62.4
- Consumer Readiness: 54.3
- Content and Services: 67.2

Another useful index is the Inclusive Digital Economy Scorecard (IDES) developed by the United Nations Capital Development Fund (UNCDF) has developed[2]. IDES is a strategic performance and policy tool that has been developed to support countries in better understanding and monitoring the status of their digital transformation, with a view to helping them make it more inclusive. A benefit of the tool is that it aims to measure the extent to which the policy environment is enabling for digital inclusion. While India is not yet featured by IDES, this could be an opportunity going forward.

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[2] UNCDF (2023). Inclusive Digital Economy Scorecard.
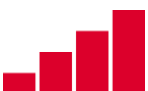
Q.3 Are Digital Connectivity, Digital Affordability and Digital Literacy the main factors responsible for Digital Inclusion in the country? Do you agree that by addressing these, Digital Inclusion can be achieved in the country? If not, please suggest other factors responsible for Digital Divide that need to be addressed to ensure Digital Inclusion?

According to the latest GSMA Consumer Survey, adults in India reported data and handset costs as the top barriers to mobile internet adoption, followed by digital skills, relevance, safety and security concerns and other factors impacting access (see Figure 8)[3]. None of the barriers to mobile internet adoption can be considered in isolation. The barriers are interdependent and policies addressing digital inclusion should be implemented in a holistic manner, covering each of the barriers.

		AFFORDABILITY				LITERACY AND DIGITAL SKILLS										RELEVANCE				SAFETY AND SECURITY						ACCESS													
		HANDSET COST		DATA COST		READING/ WRITING DIFFCULTIES		DO NOT KNOW HOW TO ACCESS INTERNET ON A MOBILE		DO NOT KNOW HOW TO USE A MOBILE		DO NOT HAVE TIME TO LEARN HOW TO ACCESS INTERNET ON A MOBILE		NOT SUFFICIENT SUPPORT IN LEARNING TO USE INTERNET		INTERNET IS NOT RELEVANT FOR ME		INSUFFICIENT CONTENT IN LOCAL LANGUAGE		HARMFUL CONTENT (SELF/FAMILY)		STRANGERS CONTACTING ME		INFORMATION SECURITY		INTERNET DRAINS MY BATTERY		NETWORK COVERAGE		FAMILY DOES NOT APPROVE		ACCESS TO AGENT SUPPORT		SLOW CONNECTION/ CANNOT DO WHAT I WANT		NO ACCESS TO INTERNET ENABLED PHONE		HARD TO FIND WHERE TO BUY INTERNET ENABLED PHONE	
		M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
ASIA	Bangladesh	27%	32%	24%	29%	29%	36%	22%	31%	23%	20%	22%	18%	11%	17%	31%	38%	16%	20%	20%	26%	24%	30%	16%	26%	10%	10%	12%	9%	13%	20%	5%	6%	14%	17%	16%	12%	6%	10%
	India	38%	34%	41%	35%	29%	29%	28%	24%	30%	23%	25%	19%	20%	22%	26%	21%	17%	17%	19%	21%	20%	18%	25%	25%	25%	15%	24%	15%	9%	15%	20%	15%	18%	17%	35%	24%	13%	13%
	Indonesia	50%	46%	48%	38%	11%	7%	39%	34%	23%	20%	28%	27%	18%	22%	42%	32%	9%	9%	23%	19%	27%	28%	31%	20%	10%	10%	21%	17%	8%	7%	5%	4%	16%	14%	24%	21%	4%	0%
	Pakistan	48%	46%	42%	40%	45%	52%	21%	29%	42%	44%	42%	36%	22%	28%	45%	52%	42%	43%	14%	34%	19%	37%	16%	31%	19%	14%	15%	17%	12%	41%	15%	20%	22%	22%	36%	37%	19%	18%

Figure 3. Top barriers to mobile internet adoption. Percentage of mobile users who are aware of mobile internet but don't use it and reported the following as the top barrier to using mobile internet. Source: GSMA (2023). The Mobile Gender Gap Report 2023.

Q.10 Please suggest the best practices being followed internationally that can be adopted in the country to provide universal connectivity to all individuals, households, and communities?

Improved connectivity can be achieved through focusing efforts on demand-side barriers beyond infrastructure that prevent individuals from adopting the internet – especially mobile – or using it more. Prioritise the most underserved, which include women, the poor, rural populations and persons with disabilities[4]. Efforts to advance digital inclusion can be embedded across all phases of the policy cycle by using the GSMA's framework for action, which is a comprehensive policy approach to accelerate mobile internet adoption and use (Figure 2)[5].

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[3] GSMA (2023). The Mobile Gender Gap Report 2023.
[4] GSMA (2022) The State of Mobile Internet Connectivity Report 2022; GSMA (2023) The Mobile Gender Gap Report 2023
[5] GSMA (2021). Accelerating mobile internet adoption: policy considerations to bridge the digital divide in low- and middle-income countries
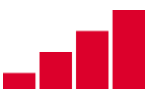
Framework for action: Comprehensive policy approach to accelerating mobile internet adoption and use

Figure 4: Source: GSMA (20221). Accelerating mobile internet adoption: policy considerations to bridge the digital divide in low- and middle-income countries

In line with the framework for action, the Government can consider the following recommendations that involve targeted action by a range of stakeholders:

- Collect and publish granular, reliable and gender-disaggregated data related to mobile internet adoption and use in accordance with international guidelines and standards.
- Conduct and support research to better understand the context, circumstances and needs of individuals not yet using mobile internet.
- Set policy priorities, targets and budgets. These should be based on data-driven assessments of the barriers to mobile internet adoption and use.
- Develop policy strategies that address all barriers in a holistic manner through a well-defined, collaborative governance model.
- Conduct regular, impartial impact evaluations and adapt digital inclusion strategies based on these insights.

As part of step three of the framework for action, the Government can consider implementing the following recommendations relating to each of the barriers to mobile internet adoption.

- *Affordability of handsets and data:* Approaches to improve affordability should include efforts to lower the cost of internet-enabled handsets and data through enabling innovative data pricing strategies and handset financing options, in addition to tax policies and targeted subsidies that promote the uptake of internet-enabled devices and data services. Policies should also create an enabling environment for mobile operators to achieve operational and other cost efficiencies. Given low data costs in India, the main focus should be on handset affordability (see also responses to Questions 14 and 15 on 'Affordability').
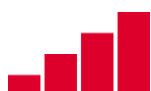
- *Knowledge and digital skills*: Initiatives aiming to improve digital skills should be aligned with user needs and tap into existing motivations to learn, which can vary by user segment. GSMA research shows that communication, social networking and entertainment are often the primary entry-points to mobile internet . The fact that most people access the internet through a mobile device should be reflected in these programmes. Where appropriate, independent learning can be facilitated through digital means, while in-person and "train-the-trainer" programmes are critical for first-time users and community learning.

- *Relevant content and services:* To ensure people have a compelling reason to go online and local businesses maximise the benefit of an online presence, policies should help remove regulatory barriers for digital businesses to thrive, foster innovation (e.g. frontier tech/AI), facilitate the growth of start-ups through dedicated programmes, and help priority sectors (e.g. agriculture, manufacturing, healthcare) and SMEs to deliver on their digital transformation plans. The Government can stimulate the local ecosystem by accelerating the digitalisation of public services.

- *Safety and security:* The Government should make sure that appropriate policy and legal frameworks are in place that recognise safety and security risks, such as those related to data sharing and the use of AI-based solutions, and provide users with relevant capabilities and tools to address them. This can include, awareness campaigns, trainings, helplines or reporting mechanisms, for example. To build confidence and trust, co-regulatory models should be adopted to tackle disinformation. Furthermore, data privacy laws should be in place that protect the fundamental rights of individuals to privacy while being flexible enough to encourage innovation.

- *Access:* Enablers such as electricity, formal ID, sales agents, and accessibility features are key to increase internet adoption. Registration processes for mobile and other digital services should be inclusive and transparent, which requires balanced SIM registration requirements and consistent application of consumer protection rules across the digital ecosystem. Accessibility of services, sales channels and training facilities for underserved groups should be considered and accessibility features should be improved and their development encouraged.

- *Infrastructure deployment:* Furthermore, the TRAI can encourage mobile broadband expansion by creating an enabling environment by putting in place pro-investment and pro-innovation policies that reduce the costs and uncertainty around spectrum allocation, licenses and permits, adopt best practices on tax policy, uniform implementation of RoW, ease in small cell deployment, and remove other obstacles to network deployment.

Q.14 Is there any need for policy interventions to increase Digital Affordability (digital devices and digital connectivity) among specific sections of society, for example, women, students, farmers, fishermen, economically weak, etc.? Please respond with suitable justification.

Those who remain excluded from the benefits of mobile internet are disproportionately poorer, less educated, persons with disabilities, rural, and women. As affordability ranks high among the barriers
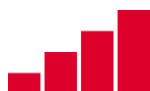
they face, there is a need to address this issue, taking into consideration different socio-economic backgrounds and demographics. However, measures to improve affordability for certain population groups should not adversely impact market dynamics.

Some mobile operators have created data offers that specifically target underserved or disadvantaged customer segments. These can include people who are enrolled in social security programmes, or people living in certain (remote) locations. Policies and regulations should provide the flexibility to develop these and other pricing strategies in ways that benefit underserved users.

Subsidizing social tariffs or internet-enabled handsets may also be considered (see the response to Question 15). Eligibility criteria for such programmes should be carefully established in consultation with the private sector and other government stakeholders. Eligibility should be linked to wider policy objectives, which may range from improving productivity in agriculture to improving women empowerment. For example, handset subsidies have been provided to help improve distribution of public health insurance benefits to targeted women, while data subsidies have been provided to help certain students access remote learning[6]. In other words, beneficiaries of affordability interventions through subsidies of handsets or data should be considered in the context of a specific initiative.

Women usually experience the affordability barrier more acutely than men, due to lower average incomes, lower access to external sources of finance and less financial independence.[7] Therefore, women should be prioritised for affordability interventions, especially those living in rural areas as they are the most digitally excluded: mobile internet is used by 62% of urban men, 42% of urban women, 47% of rural men, but only 26% of rural women in India.[8]

Q.15 What measures should be taken to make digital devices and digital connectivity affordable to the citizens for empowering them to maximize the benefits of an inclusive digital society? Please provide your answer with best practices being followed internationally in this regard.

Data costs in India are among the most affordable worldwide. Although efforts to improve data affordability of ever larger data bundles remains important, the main focus should be on improving handset affordability, particularly of smartphones. This becomes apparent when analysing device ownership in India (see Figure 4) [9]. The data show that a large proportion of the population still owns a basic phone, especially women. The data also reveal a significant gender gap in smartphone ownership (29% women vs. 48% of men). While there are other reasons, affordability is among the top barriers to handset ownership.

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[6] In Togo and Indonesia respectively

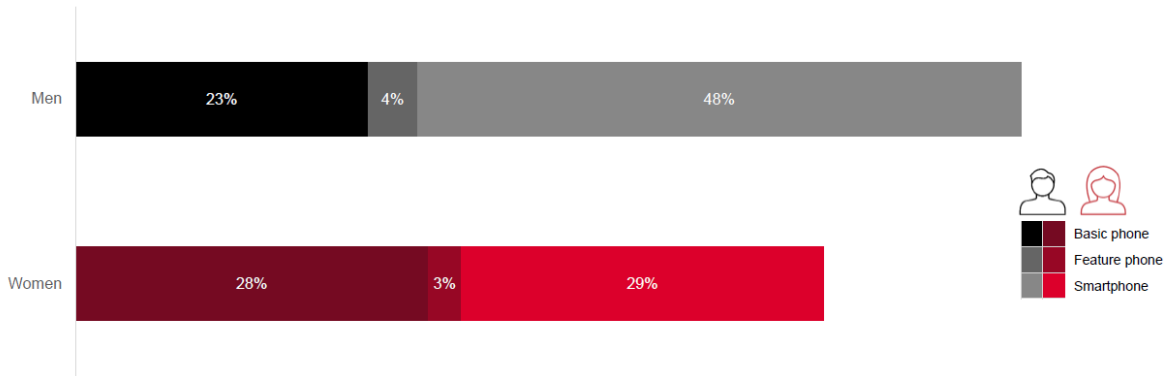[7] GSMA (2022). Policy considerations to accelerate digital inclusion for women in low- and middle-income countries.

[8] GSMA. (2023). The GSMA Consumer Survey 2022.

[9] GSMA. (2023). The Mobile Gender Gap Report 2023.

Share of population by handset type in India
% of adult population

Figure 5: Handset ownership in India

A handset is deemed unaffordable if the price represents an excessive share of a person's income. While there is no commonly agreed threshold for the price of an internet-enabled handset as a proportion of monthly income, the cost of a handset is a significant barrier for those with limited purchasing power, especially those with irregular incomes. For example, for an individual living on $5.50 a day or less, a $100 handset would account for 60% of their monthly income or more.

Affordability is a particularly high barrier for women and people living in rural areas. Women in LMICs tend to have lower income levels than men, be less financially independent and have lower levels of financial inclusion, all of which limit their options to save money, access credit and afford handsets. People living in rural areas tend to have lower incomes that are more prone to fluctuations and seasonal variations than their urban counterparts. Moreover, the price of a handset in rural areas tends to be higher than in large cities, due to high transportation and logistics costs, as well as the commissions taken by intermediaries[10].
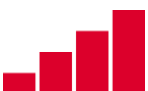
Measures that can help improve the affordability of handsets fall into two broad categories: reducing device costs and improving people's ability to pay. Ultimately, the affordability of handsets also depends on willingness to pay and perception of 'affordable', driven by a person's needs, preferences and perceived value to their life[11]. Approaches to tackle the handset affordability challenge will vary depending on whether end users are unbanked or underbanked, struggle to earn enough money at certain times of year or have enough money to pay for a handset in a lump sum or in instalments. Non-income-related constraints also have an influence, such as awareness of mobile internet, digital skills, mobile-related safety and security concerns and the social norms that constrain certain groups from accessing and using mobile and mobile internet, especially women.

To help reduce costs of device ownership, the Government can:

- *Remove sector-specific taxes and fees*: Alleviating the tax burden consumers face with internet-enabled devices would have a direct impact on device affordability and ownership,

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[10] GSMA (2022). Making internet-enabled phones more affordable in low- and middle-income countries
[11] GSMA (2022). Making internet-enabled phones more affordable in low- and middle-income countries

particularly for the poorest in society. Some governments have also implemented VAT exemptions to further improve affordability of handsets.

To help improve the ability to pay, the Government can:

- *Enable innovative financing options:* These measures can help to increase the options consumers have to spread the upfront cost a device. The Government can introduce policies that enable individuals to pay for a device in instalments when they do not have sufficient income to pay the amount upfront. Alternative credit assessments have the potential to greatly expand device ownership as it could enable individuals without a credit history to gain access to credit or third-party device financing. Sector-specific restrictions that prevent mobile operators from providing better access to credit, including through alternative credit scores, in a responsible manner should be removed, while these approaches should safeguard a user's privacy and avoid over-indebtedness[12].

- *Provide handset subsidies:* Handset subsidies for targeted user groups can be developed in consultation with the private sector. This can be achieved through direct subsidies for targeted user groups to increase device ownership or through enabling upgrades from basic phones to internet-enabled devices. Mobile operators can provide helpful insights into consumer preferences and behaviours, which can inform eligibility criteria. Subsidy programmes are very complex and are not always the solution to increasing handset ownership and should be considered as part of a wider range of policy measures to improved handset affordability. To assist with the complexity of subsidy programmes, the GSMA created a handset subsidy toolkit which provides a framework with key questions and considerations to support governments with structuring subsidy programmes.

As the affordability barrier disproportionately affects women, wider policy and regulatory barriers that are discriminatory to women accessing finance and can impede their ability to afford handsets (and data) should be addressed. For example, the Government can review and revise regulations and laws (e.g. inheritance, property, equal pay for work of equal value laws) that affect women's access to finance or ability to earn an income. According to the World Bank's Women Business and Law database, India scores a 25 out of 100 on the 'pay' indicator, which highlights certain discriminatory regulations that affect women's ability to earn an income.[13] For example, there is no protection for women who are not equally renumerated for work of equal value in India.[14]

Any approach to making handsets more affordable needs to include an awareness-raising component. Consumers often have an exaggerated view of handset costs that leads them to believe that owning a handset is not an option[15]. Common misconceptions of entry-level smartphones – that they are low quality, break easily and do not confer the desired social status – lead consumers to aspire to less affordable higher-end models. Consumers need to know there are cheaper handsets that can meet their needs and that financing solutions are available.

Q.18 Please suggest the best practices followed internationally that can be adopted in the country to promote mass digital literacy for different segments of society.

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[12] See also GSMA (2019). Digital Credit for Mobile Money Providers. A guide to address risks associated with digital credit services.
[13] World Bank (2023). Women, Business and the Law: Economy data for India.
[14] Ibid.
[15] GSMA (2022). Making internet-enabled phones more affordable in low- and middle-income countries
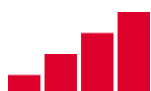
A lack of knowledge about the mobile internet, its benefits, and how to use it is a main barrier to mobile internet use in India. This leads to people either not gaining access or restricting their use to a limited number of services and applications, especially women.[16] To improve knowledge and basic digital skills, the below recommendations can be considered.

Launch awareness campaigns.
The Government can consider launching awareness campaigns on both the benefits and potential risks of using mobile internet and how to address them. Campaigns that use a variety of media are most effective to reach people not yet using mobile internet. Such campaigns can be used to improve general knowledge of the internet, address misconceptions such as gender stereotypes, and promote safe and responsible use.

Understand local context and user needs.
Understanding a target population's needs, goals and aspirations is the first step in developing relevant and appropriate mobile digital skills strategies and interventions.[17] A needs-based approach can ensure interventions appeal to the target population, align with their goals and help them acquire the digital skills they need to use mobile devices and services effectively and safely. Based on research in India, the GSMA has developed a useful framework to classify user needs, which is presented in Figure 5.

The mobile internet fulfils needs across all 11 categories in this framework, although in some areas more than others, depending on the user. This is reflected in the graph, where darker colours indicate that mobile internet is central to needs, while lighter colours indicate that mobile only plays a role for some. A framework like this can be an effective way to prioritise use cases in digital skills programmes.

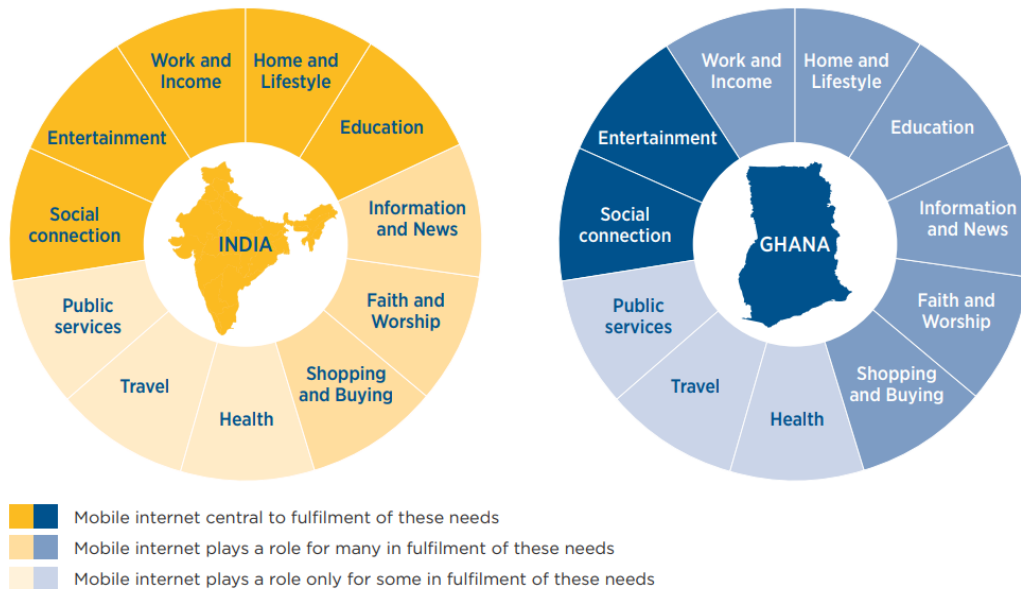**Model of needs: India and Ghana**

Legend:
- Mobile internet central to fulfilment of these needs
- Mobile internet plays a role for many in fulfilment of these needs
- Mobile internet plays a role only for some in fulfilment of these needs

Figure 6: Model of needs. Source: Understanding people's mobile digital skills needs: insights from India and Ghana.

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[16] GSMA. (2015). Accelerating Digital Literacy: Empowering women to use the mobile internet.
[17] GSMA (2021) Understanding people's mobile digital skills needs Insights from India and Ghana.
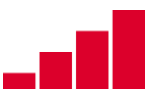
<u>Digital Literacy trainings must take into account women's unique needs, preferences and social norms.</u>

Women may struggle to attend certain digital literacy trainings because they may be unsuitable for all women's needs (e.g. dominated by men in settings where it is considered inappropriate for women to interact with males outside the family).[18] Women also typically spend significantly more time than men on unpaid work (e.g. childcare and other domestic responsibilities), which could affect their ability to attend digital literacy trainings (e.g. due to the time of day or the time required to travel to them). Therefore, it is important to ensure digital skills and literacy programmes take into account women's unique needs and preferences and are hosted at a time place and a place that is convenient and safe for women to attend.[19]

Local social norms that influence gender roles and expectations can play a significant role in shaping people's learning preferences and are important considerations when designing mobile digital skills interventions. For example, research conducted in low-income communities in Uttar Pradesh and Tamil Nadu in India found that women were often expected to stay close to home and tended to have smaller social networks than men that often centred around the domestic space. Among the women sampled, interaction with strangers was often not approved of, and there needed to be a strong justification to travel further afield. Local social norms also often stigmatised women's use of mobile devices and services, especially mobile internet. Consequently, women and the gatekeepers in their lives (husbands, fathers, mothers-in-law, etc.) were frequently ambivalent about mobile digital skills training. They had a strong preference for it to be held in familiar spaces close to home where women felt safe and comfortable. There was also a preference for group learning with female peers to ensure peer support and social acceptability of the training among the family and wider community.[20]

<u>Invest in training and capacity building initiatives</u>, including through mutually beneficial partnerships with the private sector.

As included in the Policy, India has a number of digital literacy training initiatives including PMGDISHA, which focuses on basic digital skills. There are several recommendations that can add to PMGDISHA's success, if not already taken into account, such as leveraging in-person and "train-the-trainer" programmes for first-time users and community learning. Where appropriate, further experimentation and independent learning can be facilitated through digital means. Because adults will need basic digital skills training, initiatives should go beyond school curricula. The government can leverage community centres, post offices, libraries, other existing social structures as well as companies to implement basic digital skills programmes.

In February 2023, Jio Reliance and GSMA announced the national roll-out of their Digital Skills Program, a joint initiative which aims to provide need-based training to rural women and individuals from marginalised and low-income groups to help them achieve digital access. As a part of this program, the GSMA and Jio teams worked together to assess prevalent digital skill gaps and develop need-based digital skills training toolkits that are India-specific. The toolkits were designed post extensive field research and user feedback. Over 1,000 rural women and men from Uttar Pradesh and Tamil Nadu participated and provided inputs for the refinement of the digital training toolkits during

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[18] GSMA (2022). [Policy considerations to accelerate digital inclusion for women in low- and middle-income countries.](#)

[19] GSMA (2022). [Policy considerations to accelerate digital inclusion for women in low- and middle-income countries.](#)

[20] GSMA. (2021). [Understanding people's mobile digital skills needs: insights from India and Ghana.](#)
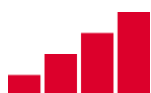
the trial phase. The national roll-out phase is now underway, with the program being rolled out across 10 states[21].

<u>Incorporate digital skills development across education policies.</u>
Incorporating basic digital skills development in school curricular at all levels can help address the digital skills barrier. The Government can consider equipping teachers on an on-going basis with the relevant skills to provide digital skills training, and providing students with access to suitable devices at school to develop and practice digital skills. Given the primary – and often only – way to access the internet is by mobile, such programmes should reflect this. By creating incentives for an environment of lifelong learning, the Government can expand digital inclusion through encouraging digital skills.

Q.22 What should be key performance indicators to measure, monitor and track the progress of the key factors of digital inclusion in the country mentioned below? a) Digital Connectivity b) Digital Affordability c) Digital Literacy

The indicators outlined by the UN (and ITU) in the Meaningful Connectivity Framework are a suitable starting point of indicators to track. However, there are several additions and edits possible. The biggest addition would be to include survey-data, to ensure a people-centred approach instead of only capturing supply-side information such as coverage, affordability, etc.

The GSMA captures granular, gender-disaggregated information on the digital divide through its Consumer Survey. This face-to-face survey is conducted for several years now among a nationally representative sample of around 2,000 adults (age 18+) in India (and several other low- and middle-income countries where 1,000 adults in each country are surveyed). It measures how people use mobile internet, as well as barriers that people face to using it or using it more. Demographic indicators include gender, location, education and occupation. The Survey includes questions on:

- Mobile internet use (online or offline)
- Handset ownership (by type of device)
- Awareness of mobile internet and its benefits
- Barriers to mobile internet use (includes questions about literacy and digital skills, affordability, relevance, safety and security, access
- Mobile internet activities (types and frequency of use)

We recommend for a similar methodology to be adopted in India to complement data that can be gathered through indices. Further details on the GSMA Consumer Survey can be found in Appendix 1 of the State of Mobile Internet Connectivity Report and the Mobile Gender Gap Report 2023 Methodology paper.

Additional indicators to the UN Meaningful Connectivity framework that could be measured can be found in GSMA's Mobile Connectivity Index (MCI). The MCI contains 32 indicators tracking digital inclusion, drawing on a range of data sources. They include for example spectrum assignments, a measure on online security but also availability of locally relevant content. Further details can be found in the MCI Methodology Report.

The GSMA recommends that mobile related digital inclusion indicators are prioritized because mobile is the primary way most people access the internet in low- and middle-income countries, accounting

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[21] https://jep-asset.akamaized.net/cms/assets/pressrelease/jio-and-gsma-program-07-02-2023.pdf
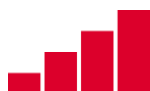
for 85% of broadband connections in 2022[22]. The proposed indicators for Digital Affordability 3.115 (g) and (i) refers to the type of mobile phone owned and used. These indicators should be put under 'Digital Connectivity' instead, as well as specify which types of mobile phones it intends to track. The GSMA recommends that these two indicators should track three different types of mobile phones segmented by basic phone, feature phone, and smartphone.

The GSMA defines the different types of mobile phones as follows:

Basic phone: A basic phone can make calls and send text messages but is not internet-enabled (i.e. unable to visit websites/access social networking websites/send emails/use apps). A basic phone has a small screen and a basic keypad with several letters per button.

Feature phone: A feature phone is an internet-enabled mobile phone with a small screen and basic keypad with several letters per button. A feature phone may have some pre-installed apps but does not have the ability to download apps from an online app store, such as Google Play or the App Store. Smart feature phones are a sub-group of feature phones.

Smartphone: A smartphone is a mobile phone with a touchscreen display, an advanced operating system (Android or iOS) and the ability to download apps from an online app store, such as Google Play or the App Store.
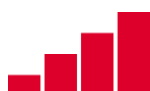
Q.26 What efforts are required to provide reliable digital connectivity to MSMEs at affordable costs to empower them through new technologies for effective participation in the digital economic activities?

Concerted efforts are needed to ensure MSMEs and in particular, women micro-entrepreneurs in India, can reap the full benefits of connectivity and engage in online trade. GSMA's research on mobile use by micro-entrepreneurs indicates that female micro-entrepreneurs were 37% less likely than male micro-entrepreneurs to use mobile internet in India (see Figure 6).[23]

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[22] International Telecommunication Union (ITU) estimates for 2022.
[23] GSMA (2023). Understanding women micro-entrepreneurs use oof mobile phones for business: Evidence from 10 low- and middle-income countries.

Mobile internet adoption among micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed

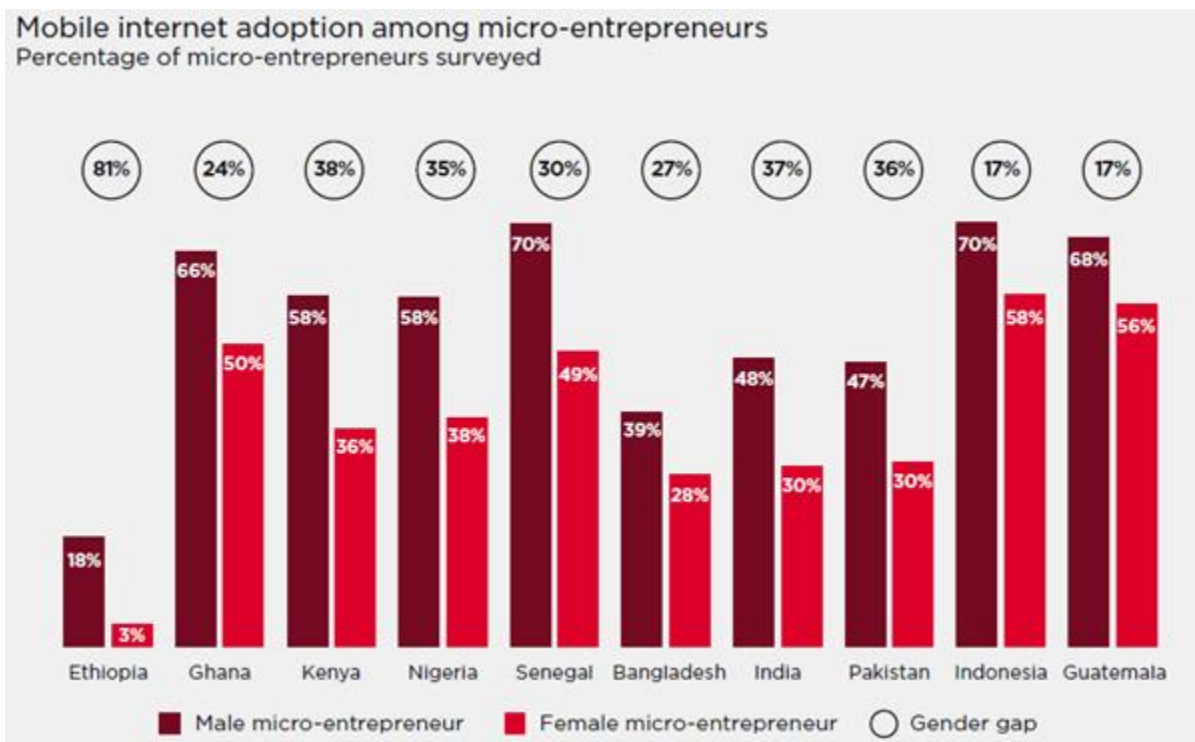*Figure 7: Mobile internet adoption among micro-entrepreneurs. Source: GSMA (2023) Understanding women micro-entrepreneurs' use of mobile phones for business*

GSMA's research also showed that in India, women micro-entrepreneurs are less likely than men to use a mobile phone for business, even when they use one in their personal lives.[24] Most micro-entrepreneurs own a mobile phone, but in India, a notable proportion of women borrow one for business use.[25] Among countries surveyed by the GSMA, India has the highest rate of phone borrowing, with 25% of female micro-entrepreneurs borrowing a mobile phone for business compared to 19% of male micro-entrepreneurs.[26]

To close these gender gaps, the Government can address the key barriers preventing mobile-owning micro-entrepreneurs from starting to use mobile for business or using it more, in India. The top barriers women micro-entrepreneurs in India reported were a lack of perceived relevance (e.g. preference of cash payment); safety and security concerns; and a lack of digital skills and confidence. To address these barriers, the Government could:

- Help raise awareness of the potential benefits of mobile for women micro-entrepreneurs and the relevant mobile-enabled content, apps and services that are available (e.g. through awareness-raising campaigns and digital literacy initiatives).
- Build the knowledge, confidence and digital skills of women micro-entrepreneurs to use mobile for business (e.g. how to use key apps and services and stay safe online). For example, governments could invest in digital skills training initiatives that include a focus on women

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[24] GSMA (2023). Understanding women micro-entrepreneurs use oof mobile phones for business: Evidence from 10 low- and middle-income countries.
[25] GSMA (2023). Understanding women micro-entrepreneurs use oof mobile phones for business: Evidence from 10 low- and middle-income countries.
[26] GSMA (2023). Understanding women micro-entrepreneurs use oof mobile phones for business: Evidence from 10 low- and middle-income countries.
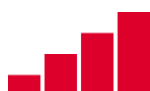
micro-entrepreneurs and embed mobile digital skills training in existing training initiatives that target micro-entrepreneurs.

The Broadband Commission for Sustainable Development's Working Group on Connectivity for MSMEs produced a policy paper with a framework to assess MSME connectivity as well as with policy recommendations to increase digital inclusion of small businesses. The framework is made up of five key elements: access, affordability, relevance, knowledge and digital skills, and safety and security (see Figure 7)[27].


Figure 8. Framework of MSME Connectivity. Source: Broadband Commission for Sustainable Connectivity. (2023). Making Digital Connectivity Work for MSMEs.

Recommendations for governments to improve MSME connectivity include:

- *Gather data*: The Government can survey MSMEs to determine their level of connectivity, needs and challenges. Relevant data on MSME connectivity is largely unavailable as there is no data gathered globally to determine how MSMEs are using their connectivity and no studies of MSMEs that are not yet online.[28] The Government can address this gap by improving the quality and availability of gender-disaggregated data on MSME connectivity to measure the status quo, track progress and study the barriers facing MSMEs.
- *Access:* The Government can support the development of public access points, and focus on lowering costs of deployment of connectivity with improved implementation of right-of-way

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[27] Broadband Commission for Sustainable Connectivity. (2023). Making Digital Connectivity Work for MSMEs.
[28] Broadband Commission for Sustainable Connectivity. (2023). Making Digital Connectivity Work for MSMEs.
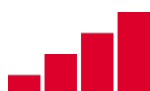
and small cells regulations, considerations for open access or infrastructure sharing approaches, and an effective roadmap for spectrum allocations.[29]

- *Affordability:* Strategies, such as the National Broadband Plan, can help on the demand-side, to make connectivity affordable. For instance, a conditional cash transfer – in the form of a connectivity coupon or a device subsidy – could help get enterprises online and realising the benefits of mobile internet.[30]

- *Relevance*: The Government can help to create an enabling environment for MSMEs to go online and to leverage enablers such as digital financial services. The Governments can also develop e- government services that enable MSMEs to more efficiently interact with government, which can also provide incentives for MSMEs to formalize, so that they can benefit fully from digital connectivity.[31]

- *Knowledge and digital skills*: Digital skills training relevant to MSMEs can be introduced in secondary and tertiary education, including vocational training. Additional training can take place at public access points, community centres, and in tech hubs, which aim to help startups, many of which are digital companies.[32]

- *Safety and security*: The Government can help develop digital confidence with efforts to prevent cybercrime and cybersecurity incidents. Additional support can create awareness and help MSMEs implement and comply with consumer protection laws. Developing a digital ID for users will enable them to authenticate themselves and protect their digital assets. Likewise, a digital 'economic ID' could help MSMEs to demonstrate their credibility and creditworthiness to grow their businesses, and could be a step toward formalization for informal businesses.[33]

Q.30 Stakeholders may also suggest any other measures not covered in the consultation document to improve Digital Inclusion in the country with suitable justification.

For the digital inclusion policy to be successful, a clear governance framework for implementation is required. None of the barriers to mobile internet adoption can be considered in isolation. Existing policy initiatives are often fragmented, however. In large part, this is due to a distribution of responsibility between ministries, regulators and other agencies for the various factors that impact digital inclusion. Successful policy strategies recognise the cross-cutting nature of digital inclusion and the need to address all barriers in a holistic manner through a whole-of-government approach.

Adopting a whole-of-government approach means taking a cross-sectoral and cross-organisational view of the formulation and implementation of digitalisation policies and frameworks in order to realise intrinsic collaborative efficiencies and therefore streamline decision making processes.[34] The benefits of this approach to governments and societies are significant; these include cost savings by avoiding duplication of efforts and a way to ensure inclusivity by taking into account the perspectives of different stakeholders.[35]

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[29] Broadband Commission for Sustainable Connectivity. (2023). Making Digital Connectivity Work for MSMEs.
[30] Broadband Commission for Sustainable Connectivity. (2023). Making Digital Connectivity Work for MSMEs.
[31] ILO. (2021). Small goes Digital.
[32] Broadband Commission for Sustainable Connectivity. (2023). Making Digital Connectivity Work for MSMEs.
[33] GSMA (2019). Economic Identities for Small Business Owners – Insights from Nigeria.
[34] GSMA. (2020). Advancing digital societies in Asia Pacific a whole-of-government approach.
[35] GSMA. (2020). Advancing digital societies in Asia Pacific a whole-of-government approach.
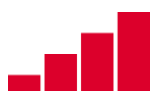
Such an approach requires policymakers to prioritise collaborative governance models that ensure digital inclusion initiatives are supported across ministries, regulatory authorities and all participants in the digital ecosystem (including non-government). To strengthen coordination among such internal and external stakeholders, some governments have opted to create action task forces or even formalised multi-stakeholder platforms that bring together representatives from government, the private sector, civil society and the technical community to set strategic priorities for advancing digital inclusion and implement action.

For the gender digital divide in particular, appropriate organisational structures, capacity and processes to effectively incorporate gender goals and considerations in strategies, policies, plans and budgets should be in place. For example, councils, steering committees, champions or gender focal points can be considered, including relevant departments and stakeholders. Moreover, regular, impartial evaluations to understand the impact of policies on women and adapt digital inclusion strategies based on these insights should be conducted. These evaluations should assess whether women disproportionately benefit from policy interventions or whether they experience unintended negative consequences.