m-Powering Development Initiative

Background Document

"For a better world, a more peaceful world, we must harness the power of mobile communications to empower every global citizen to realize and unleash his or her full potential as a productive human being.

m-Powering acts as the beacon, the harbinger of real change by fostering new partnerships, for new innovations and acting today for a better tomorrow."

Brahima Sanou, Director of the Telecommunication Development Bureau

m-POWERING DEVELOPMENT

Leveraging Mobile Technologies for the Knowledge Society

Contents

The first decade of the new millennium witnessed phenomenal growth, in fact an explosion of two technologies - mobile and internet. Billions across the globe have access to these technologies that are having a far reaching effect on the world populace. The challenge lies in bringing to bear the full advantages, the amalgamation of these technologies that can be offered to every citizen of the world and not just a select few. The next evolution of mobile information and communication technologies is to empower people to transform their lives.

Leaders of the telecom fraternity have to join together to play an important role in ensuring technological advances are used in the most efficient and effective way to implement real change for sustainable development for the future.

The need of the hour is to form a partnership of resolve, a partnership of trust with a clear understanding of the mutually desired objectives to harness the capabilities and capacities of one and all.

The time is now to break the shackles of inertia to provide the next generation of global citizens the wherewithal to contribute in making the world more prosperous and peaceful.

The first step towards this important goal is commitment to the m-Powering Development Initiative. The Initiative is an international, multi-stakeholder platform that seeks to leverage the ubiquity of mobile technology beyond basic communications.

m-POWERING DEVELOPMENT

Leveraging Mobile Technologies for the Knowledge Society

In line with the Millennium Development Goals and principals of the information society, the Initiative is the result of series of ITU activities aimed at expanding and enhancing telecommunications services with a focus on the developing world. The initiative was inspired by the realization that mobile devices and services have the capability to both empower users as well as trigger development and economic activity.

This initiative seeks solutions to common problems in a collective manner in order to share information and facilitate complementary m-services. The goal is to empower users which will lead to sustainable development in the future.

In line with this, much is being done in the fields of m-health, m-government, m-education, m-banking, m-commerce, m-sport leading to socio-economic development in urban, semi-urban, and remote rural areas. However, achievements could have a greater impact if a de-fragmented approach is adopted by combining and crowdsourcing experiences.

The purpose of this report is to inform readers that mobile technology can do more than give the developing world a voice. It has the potential to empower global citizens, transform lives and stimulate economic growth and sustainable development for economies. Hence, we need to consider how we can effectively harness this technology to make a real difference in the lives of global citizens and future generations to come

Today the number of mobile phone subscriptions correspond to a penetration rate of 96.2% implying that mobile phones are the most preferred tools for communication.

KEY TRENDS & STATISTICS

As handset prices and service charges have decreased, the rate of mobile penetration has increased over the years. Billions of people who never had regular access to computers or fixed-line telephones, are now able to use mobile devices as daily tools for communication and data transfer. This upsurge of mobile phone usage has resulted in the developing world now being even more 'mobile' than some countries in the developed world

The ubiquity of mobile phones and the introduction of mobile-broadband services in the majority of countries in the world, coupled with the availability of smartphones and tablet computers, have sparked a steep increase in mobile- broadband subscriptions. They have experienced average annual growth of 41 per cent since 2007.Recent estimates show that in Africa, only 6.5% of people are Internet users, while nearly 281 million people (30%) are mobile subscribers.

Today the number of mobile phone subscriptions correspond to a penetration rate of 96.2% implying that mobile phones are the most preferred tools for communication.

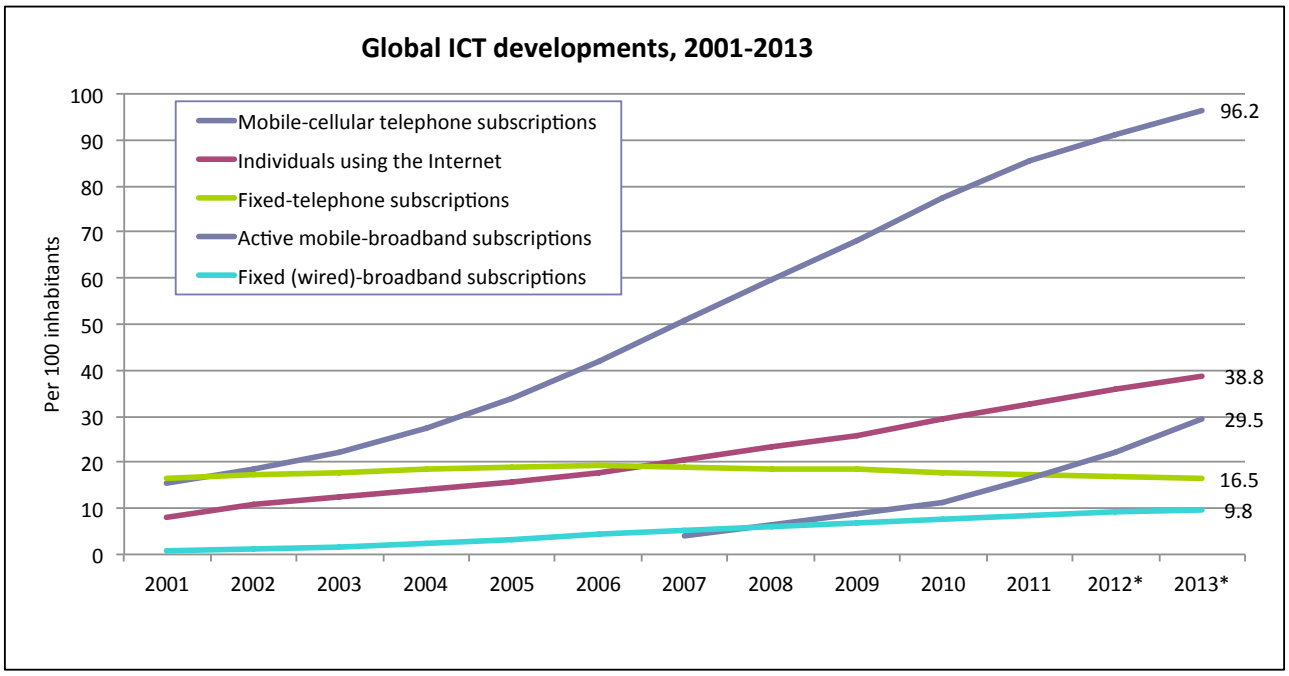

Chart 1: Global ICT penetration rates (Source: ITU statistics)

In 2013, there are almost as many mobile-cellular subscriptions (6.8 billions) as there are people in the world.

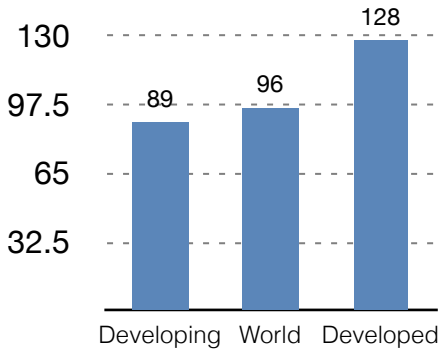

Chart 2: Mobile penetration rates. (Source: ITU statistics)

The benefits of mobile telephony are well known. They provide a wide range of services at a reasonably low cost and are becoming increasingly more affordable due to flexibility and various pricing models. For this reason, mobile telephony is a predominant mode of communication in developing countries and is evolving into a key contributor to socioeconomic growth.

Clear examples of this exist in the developing world. For instance, underprivileged citizens in rural villages now use mobile phone text messages provided by Short Messages Services (SMS) to receive commodity price information that plays an important role in enriching their lifestyles and livelihoods.

Mobile phones are also being used to provide medical services such as using SMS to remind patients of medical appointments and vaccinations or to disseminate information about non communicable diseases (NCDs) and to monitor patients.

Mobile-broadband subscriptions have climbed from 268 million in 2007 to 2.1 billion in 2013 with an average annual growth rate of 40%.

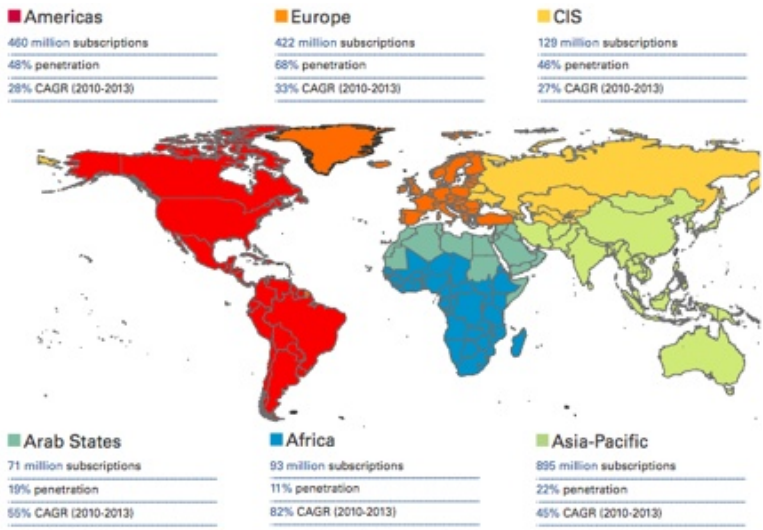

Figure 1: Mobile penetration rates.(Source: ITU statistics)

Mobile broadband continues to be the ICT service displaying the sharpest growth rates. Between 2010 and 2013, growth continued at a high rate of 40 per cent globally, 23 per cent in the developed world and 76 per cent in developing countries. Contrary to mobile-cellular penetration, no saturation point has yet been reached for mobile-broadband penetration, and growth is expected to continue at double-digit rates over the next few years.

Mobile technology is no longer about the phone itself about how it can be used and the data, content and applications it provides instant access to. In line with this, application developers are increasingly producing applications targeted directly at the developing world. These are better suited to address development challenges such as digital literacy and affordability.

The next generation in these developing countries will be the first to experience mobile technology and the benefits that ICTs can bring. This is likely to mean increases in participation in the economy through more innovation and entrepreneurship as more people have the right access to information to set up their own businesses and see their ideas come to light.

In developing countries, the number of mobile-broadband subscriptions more than doubled from 2011 to 2013 (from 472 million to 1.16 billion) in 2013.

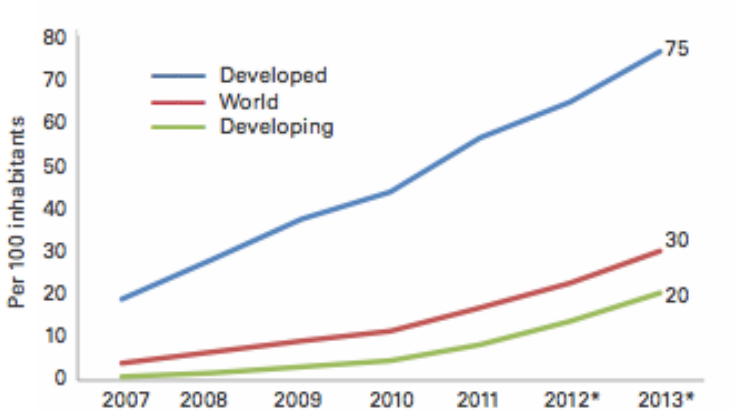

Chart 3: Active mobile broadband subscriptions (Source: ITU statistics)

By end 2011, more than 160 economies worldwide had launched 3G services commercially, and 45 per cent of the world's population was covered by a 3G mobile network.

The emergence of mobile Internet services (both prepaid and postpaid) has played a key role in the surge in numbers of mobile-broadband subscriptions in developing countries, bringing Internet to a large number of users who have limited access to fixed-broadband services.

In most developing countries, the market for mobile- broadband services is still in its infancy, and operators are offering a variety of solutions geared to different market segments.

It is expected that, once the high-end segment is covered, a number of offers targeting low-income, low-usage segments will emerge in the near future, thus bringing Internet to an increasing number of people.

Future Trends

In the next 5 years, there will be more mobile users than desktop users. From phones, tablets, laptops and devices such as smart meters, mobile technology leaders predict that more than 50 billion devices will be connected to the web by 2020

Coupled with the growth of connected devices, beyond 2013, there will be a few key trends that will impact mobile technology for development. These include:

- Mobile Payments Systems/ Mobile Money/ M-commerce
- Mobile Augmented Intelligence
- Mobile Facial Recognition
- Mobile Petabyte Storage
- Mobile Gigabit Bandwidth
- Mobile Education Networks
- Cheaper Smart Phones

These trends have already begun to empower citizens and foster sustainable development. For instance, the emergence of mobile payments systems in Kenya (M-Pesa) and cheaper smart phones have had a significant impact the democratization process in developing countries as they provide affordable connectivity to rural villages and contribute to prosperity, business and innovation. The emergence of the "app economy'' is another trend we are likely to see as mobile applications not only empower citizens but have a multiplier effect on stimulating growth, entrepreneurship and productivity in developed and developing economies

Considering this, it is now important to examine the implications of these future trends and how they can be used to further promote the initiative in the developing world.

m-EDUCATION

“As the digital world becomes part of the broad cultural environment, technological literacy is increasingly vital for participation on daily life” *Dr. Hamadoun Toure, ITU Secretary General.*

Education is an essential human right. It is the foundation of developed societies and a driver of economic success. m-Education is key for the next generation to develop the necessary skills to better prepare them for the exigencies of the business and social life. Easy access to information anywhere and anytime, means opportunities for a better education for anyone who is willing to learn.

m-EDUCATION

The Initiative seeks to transform educational institutions into thriving centers of excellence.

Using advances in mobile technology, m-Powering Development will encourage high speed reliable wireless connectivity to create an enabling environment for students (children and adult learners) to learn and exchange ideas with teachers, peers and also counterparts in other countries.

Today, the capabilities of mobile communications and broadband internet access are the main technological enablers for m-Education schemes. With all these capabilities, m-Education solutions and applications have great potential to improve and extend the education of millions of people around the world. However, the full potential of mobile learning has not yet been fully explored.

In order to make real progress in this sector, changes need to be made within schools and institutions in the developing world. Mobile technology should be used as a platform for education and learning in these areas.

Once collaboration is established between industry, governments, the academia and other stakeholders within the ICT sector and outside, to leverage mobile platforms for the benefit of education and learning, the challenge now remains in how create operating platforms and encourage capacity building content development and sustainability at the national level in developing countries.

In this field, key questions to be addressed include:

- What type of policies, programs, and incentives can better foster the adoption of m-Education schemes in mainstream education?
- Which business models can provide the ideal mixture of public -private-academia partnerships for m-Education?
- What kind of financing mechanisms can enable m-Education solutions and make them commercially sustainable?
- How can we promote a safe, responsible, and healthy use of mobile technologies and improve human capacity?
- What should be the standards to ensure service quality and inter-operability?

Key questions in m-Education focus on how collaborations between stakeholders can technically and economically help transform the operations of education institutions in developing countries.

m-HEALTH

Smart phones can allow for EEG imagery of for real time analysis of 3D reconstructed brain maps

Advances in the mobile technology pave the way for a healthier life. m-Health solutions are developed to connect medical scans, exams and other reports conducted in the developing world to the expertise and opinions of locally unavailable specialists.

m-Health has the potential to transform healthcare innovation. The transformational potential of m-health services extends well beyond traditional voice services to include more sophisticated health delivery such as remote clinical care, electronic patient monitoring, remote diagnostics, and access to (and input into) public health information.

m-HEALTH

The objective is to facilitate a movement towards scalable and sustainable mainstreaming of mobile technologies for improved health services.

m-health will have a significant impact on how healthcare is delivered in the coming years. Advanced m-Health solutions appear every day in the form of new devices and applications that allow better health management.

In some developing countries, mobile technology is the only viable tool to reach patients. Considering this, the value proposition is that mobile technologies can help take care of people virtually, offloading the physicians' capacity. In this way patients with remote access to hospitals no longer need to show up in an emergency room, they can get an access to the health service remotely, and will be able to use the system any time, day or night over mobile applications and video technology.

As advances in capabilities such as integrating voice, video and Web 2.0 collaboration tools into mobile devices, significant benefits can be achieved in the delivery of health care services.Yet, the challenge still remains in terms of scalability and sustainability at the national level in low and middle income countries. More steps are needed to identify best policy measures for an enabling environment as well as elaborating suitable funding schemes to have an equitable sharing of the costs associated to m-health services.

Leaders in m-Health now need to consider how they establish sustainable pilot projects for healthcare in developing areas that can be replicated and scaled up. In this field, key questions to be addressed include:

- Which aspects of m-Health should be replicated and scaled up?
- How can we effectively facilitate and maintain the use of new technologies?
- What kind of applications can help connect experienced medical professionals with patients in remote and underdeveloped areas?
- Is there a clear delineation of roles within the health ecosystem between public and private healthcare providers?
- What should be the standards to ensure service quality and operability?

Key questions in m-Health involve methods to incorporate technological in the field to ensure affordable and viable health care services through mobiles. The advantages of m-Health services are numerous, although technological and economical sustainability still needs to be addressed

m-GOVERNANCE

Mobile technology is now an important vehicle for efficient service delivery in the public sphere. The portability and ubiquity of mobile phones allow for greater transparency, accountability and the availability of public services instantly, in the pocket of each citizen.

m-Government is at the heart of public service delivery at any location and at any time. Parallel to the evolution in the telecommunications sector, governments reinforce their capacity to leverage the use of ICTs to improve their internal functioning, as well as interactions with citizens and businesses.

m-GOVERNANCE

The objective is to enable governments to create and develop more efficient, user friendly services that will facilitate the creation of platforms for shared functions integrating both hardware and software.

m-governance seeks to extend access to existing services, expand the delivery of new services, and increase active citizen participation in government operations to change operating processes within the public sector.

It is expected that, in the case of developing countries, the introduction of m-Government services will open new channels for connecting poor and underserved citizens to basic public services.

Governments looking to adopt the tools of m-Government to become more responsive, accountable and transparent must also consider that the process is only likely to be effective and transform the government-citizen relationship when both elements of 'mobile' and 'government' are incorporated.

Hence, the potential remains to be explored to better provide public services through the mobile.

In this field, key questions to be addressed include:

- What measures are to be taken to create an enabling environment for m-Government in legislative and regulatory terms?
- Do governments have the institutional capacity to respond to technological transformation and citizen's demands?
- How can countries play a constructive role in enhancing sustainability and enabling scale whilst maximizing the impact of m-Government programs?
- How can we facilitate the development and adoption of new mobile technologies and applications in the public sector?
- How can we improve human capacity to make citizens aware and able to make use of m-Government services?
- How can we best define the roles of and compensation schemes for operators and service providers?

Key issues in m-Governance relate to public service delivery and accessibility, institutional capacity and the impact of new technologies and applications for m-Governance in the most effective way.

m-BANKING

Portable devices and mobile internet access promise financial transactions on the go. This enables greater inclusion and convenience. Mobiles have already started to replace wallets as they tend to re-shape business life.

Financial transactions and payments are important part of modern life. m-Banking is the key component for all m-applications. It is essential as it serves to provide solutions for the payment of costs for the m-services rendered. In the absence of mobile payment arrangements, no service could claim to be fully be mobile.

m-BANKING

According to the World Bank, more than 2.5 billion adults do not have access to a formal bank account. This corresponds with 48% of the world's adult population not being able to access basic financial services.

m-Banking offers a solution to the problem of financial exclusion. With more than 6 billion mobile phone subscriptions in the world today, access to a variety of financial services is possible through mobile devices. This accessibility changes the landscape for the unbanked, as well as offering an alternative means of accessing services to those who already have a bank account. These services empower the poor through improved access to finance and lower transaction costs.

With the uptake of mobile services mobile solutions for financial transactions and commodity payments have paved the way for other mobile services. NFC technology, for instance, is becoming more popular with the introduction of NFC compatible handheld devices. According to GSMA, NFC mobile payments are expected to exceed US $180 billion globally in 2017.

Given its pivotal role as an enabler for other m-services and businesses, m-Banking promises increased economic activity for developing countries with opportunities extendable to rural and underserved regions.

Yet, there is still need to tackle with challenges and elaborate potential benefits for developing countries, thereby contributing to their economic development through mobile ICTs.

In this field, key questions to be addressed include:

- Are mobile money systems and m-Banking fulfilling their true growth potential?
- Do the regulatory practices in countries enable cross sectorial partnerships between banks and mobile operators?
- What are the emerging issues the industry will face in the coming years?
- How can we human capacity to make citizens aware and able to use m-Banking services?

Key questions in m-Banking focus primarily on the financial inclusion, the growth potential of the industry and enabling environments for innovation, interoperability and cross- sectorial partnerships

m-COMMERCE

Commerce is at the heart of economic activity that fosters economic development. Mobile solutions exist to facilitate m-Commerce and lead sustainable development in the future but much remains to be done in the developing world.

Citizens living in remote and rural areas can be empowered through m-Commerce solutions and can now facilitate trade practices, promote products in new markets and look for potential buyers for goods at a better price. This enables small entrepreneurs to develop new businesses and reach new markets, ultimately leading assisting trade practices in developing countries.

m-COMMERCE

According to BI Intelligence in January 2013, 29% of mobile users have now made a purchase with their phones. Walmart estimated that 40% of all visits to their internet shopping site in December 2012 were from a mobile devices.

m-Commerce leads to economic developments as it stimulates economic activity by matching the supply and demand at a fair price.

It also provides an excellent platform where users can interact with the service providers through a mobile and wireless network, using mobile devices for information retrieval and transaction processing.

This interaction provides an opportunity for producers and small entrepreneurs to benefit from access to previously inaccessible new markets. Simultaneously, it also enables consumers to better access information on prices and find better quality products at lower prices.

Although m-Commerce seems like a derivative of e-Commerce, the differences are significant in terms of features and characteristics.

Numerous real-life examples demonstrate that ubiquity, personalization, flexibility and localization features lead to more economic development in remote and underserved regions of the developing world.

Therefore, m-Commerce should also be part of development agenda to empower citizens. In this field, key questions to be addressed include:

- What measures, in legislative and regulatory terms, can be taken to create an enabling environment for m-Commerce?
- What should be the standard to ensure information safety and security of transactions provided over the mobile platform?
- How do we establish confidence and quality assurance for trading over the mobile?
- How can we improve human capacity to make citizens aware and able to make use of m-Commerce services?

Key questions in m-Commerce focus primarily on creation of an enabling environment for increased availability and access to m-Commerce services as well as technical solutions for the safety of transactions.

m-SPORTS

The inclusion of mobile handsets day to day daily life has had an impact on various aspects of social life.

Sports unify and mobilize individuals can create a common social language among people with different nationalities. The unique nature of sports serves as a good opportunity for mobile technologies to reach low-income level citizens and to promote the intrinsic values of sport.

m-SPORTS

The objective is to facilitate interactions between professional and aspiring sportsmen and women in order to enhance skills through mobile technology

The introduction of smart mobile phones has ushered in a new era with increased capabilities in terms of access to sports related information as well as interaction among sports fans. Considering this, quite a number of sports related applications have been developed which provide new channels to spread the benefits of mobile technology.

For instance, by utilizing video technology, qualified coaches will be able to remotely provide tips and observe potential players in developing countries. Furthermore, professional players would be able to instantly interact with aspiring players and record inspirational talks or advice that would reach countless people

Hence, there appears to be much to discover with m-Sports in order to fully spread the mobile revolution to each and every layer of society particularly in the developing world. Mobile sector partners are therefore encouraged to pool resources together to help develop the potential and fund promising athletes who could, in future years, make a real impact in the world of sports.

In this field, key questions to be addressed include:

- What type of incentives can better foster the implementation of other pilot projects in this field?
- What kind of business models and partnerships can enable the development of m-Sports applications in line with the purpose of the initiative?
- How can we gather essential funding for this initiative that ensures win-win outcomes for all involved?
- How can we improve human capacity and enable citizens reap the most benefits from mobile solutions?

Key questions in m-Sports focus on pooling resources to fund interactive applications that will help develop social and cognitive abilities and transform the lives of aspiring sportsmen and women by connecting them to real opportunities.

THE WAY FORWARD

How can we make the best use of the power and potential of the mobile revolution? In order for mobile technology to act as a real catalyst for economic growth in developing nations, policy-makers, regulators and sector players will have to overcome the challenges and focus on creating new services and applications in a cohesive and collaborative way. Leaders should be working together to pool resources, understand realities and constraints and build systems that are both sustainable and effective for communities

The evolution of mobile technology calls for industry leaders and organizations to harness this technology and work together to mobilize resources in order to fuel economic growth, reduce social barriers and promote sustainable development. Whilst efforts have been made in various m-fields, knowledge needs to be shared and information exchanged in order to develop long term sustainable development policies designed to reap the benefits of reliable mobile tele-connectivity and ensure implementation. The data illustrates that although the subject fields are divergent, they are all interconnected by the use of mobile technology , affordability and accessibility. Thus common problems seem to arise in every field of m-powering. Some of these shared questions include:

- Which type of policies/programs/projects should be developed or encouraged?
- What kind of business models can be used? Which models work in developing countries?
- How can an enabling environment that benefits all stakeholders be created and fostered?
- What are the roles of policy makers, operators, regulators and service providers in this process?
- How can we improve citizen awareness and knowledge to use m-services?
- What should be the standards to ensure quality, safety and effectiveness? What criteria do we use to determine this?

Strategic guidance in the development and implementation of the m-Powering Development initiative is needed in order to transform the vision into action and approach these problems in an effective way. Participants from all areas and sectors have been invited to foster collaboration between business leaders, experts and policy makers to create win-win outcomes for all involved. The initiative will ensure that mobile ICTs empower global citizens and are conducive to national growth. It will also help renew public and private sector commitments to deliver one vision of ICT for all as partners act as a TEAM *(Together Everyone Achieves More)*; combining efforts and working together to achieve results.

ITU, together with other partners and stakeholders in the different constituent parts of the mPowering Initiative, call for Partners to join this noble cause and help empower people by being part of the mPowering Development Initiative and jointly work to identify projects and activities that would leverage mobile technologies for development.

Appendix 1:

Member Projects per Initiative

m-HEALTH

1. Ministry of Health, Mauritiana: The Ministry has been working with ITU on several e-Health and e-Employment Initiatives. Together, the organizations are working on assisting the Government of Mauritania in establishing a telemedicine unit in rural areas.
2. Verizon Communication Corporation, United States: Verizon has been involved in several strategic dialogues about broadband driving development at ITU. The focus has been infrastructure and how fiber and wireless networks or other communication technologies be leveraged to improve medical education and support health care providers. Verizon Foundation has invested nearly $490 million in communities with a focus in developing sectors.
3. Nazounki Global Medical Network, France: Nazounki has partnered with CIRA, an image compression software publisher, to create a customized version of its solution for mobile phones. Using a Windows Mobile phone, physicians can have a discussion at the same time as they are viewing a medical image, which is crucial for conferring about treatment. Nazounki purchased eleven ACER DX900 and X960 Smartphones with Windows Mobile 6.1, which have 2.8-inch VGA display screens. It also purchased nine phones for doctors in Africa. In addition, 22 doctors in Nazounki's network in France purchased their own Windows Mobile phones. Use of mobile solution helps expand network. Since implementing a Windows Mobile solution, Nazounki has added physicians to its network in Europe every year, and attracted the attention of physicians in other countries. As a result of this interest, Nazounki opened a new office in Thailand in 2009.
4. World Health Organization (WHO), Switzerland: M-health for tobacco control was promoted during ITU TELECOM World 2011 (The intersection of mobile health technology and tobacco control). There have also been Innovation Working Groups (IWG) and partnerships with the Norwegian Agency for Development Cooperation who has announced 8 grants for mobile technology aimed at capacity building and support for innovative uses of mobile technology to advance maternal and child health, with a focus on expanding programs to wide-scale implementation. M-health Development programme is also being developed in partnership with the UN Foundation and Vodaphone.
5. International Telecommunication Union (ITU) and WHO, Switzerland: The UN information and communication technologies (ICTs) and health agencies, have come together in a ground breaking new partnership to focus on the use of mobile technology to improve prevention and treatment of Non-communicable diseases (NCDs). This partnership aims to contribute to global and national efforts to save lives, minimize illness and disability, and reduce the social and economic burden due to NCDs.

m-EDUCATION

1. United Nations Educational, Scientific and Cultural Organization (UNESCO), France: UNESCO has implemented several projects aimed at using mobile technology for education purposes. Mobile Learning Technology Concept Development is one of these projects through which UNESCO aims to identify specific mobile technologies to support the achievement of Education for All. UNESCO partnered with Nokia as of May 2011 for this initiative. The organization also has numerous Mobile Learning Publications and Working Paper Series that illuminate the ways in which mobile technologies can be used to support the United Nations Education for All Goals. Mobiles for Reading has also been introduced as part of a longstanding partnership with Nokia aimed at researching how people use mobile technologies to access and read text. Additionally, UNESCO is working with Worldreader, a non-profit organization that optimizes books for consumption on digital devices, to study the habits and preferences of mobile readers in seven countries: Kenya, Zimbabwe, India, Pakistan, Ghana, Nigeria and Ethiopia. The results of this study will provide governments and other relevant stakeholders information that will help them better utilize mobile technology to advance literacy, especially in developing countries.
2. USAID, United States: USAID has been leveraging mobile technology for M-education through work with ITU, UNICEF, UNESCO, World Bank, GSMA and other private partners. The focus has been on conducting conferences, international workshops and roundtable discussions about activities related to the use of mobile technologies for communities in low resource settings of developing countries. USAID also feature projects including ICDT4D, applications for development and initiatives in developing countries.m-Education Alliance serves as a coordinating body for donors, public and private sector leaders, project implementers and academics to build and share knowledge and foster innovative and cost-effective developments using mobile technologies (broadly defined) for promoting quality education in low-resource environments. ITU became a member of the mEducation Alliance in October 2012 in order to contribute together with other likeminded organizations to the ongoing and future projects on mobiles and education.
3. Ministry of Transport, Maritime Affairs and Communications (MTMAC), Turkey: “Movement of Enhancing Opportunities and Improving Technology”, abbreviated as FATIH, is among the most ambitious educational investments due to its country-wide large- scale. Together with Ministry of Education, MTMAC implements FATIH Project which aims to establish “Smart Classes” in all schools in Turkey. With this project, 42.000 schools and 620.000 classes will be equipped with the latest information technologies and turned into computerized education classes (Smart Class). The equipments will include smart boards (a touch panel LCD) and 16.000.000 tablets to distributed to students.FATIH project is planned to be completed in 4 years and will cost approximately 3-4 billion USD.

m-GOVERNMENT

1. Ministry of Information, Technologies and Communications, Colombia: The Ministry has been meeting with the ICT Minister in India recently to exchange experiences about the massification of ICT in both countries. The Ministry is actively involved in the promotion of 4G in Colombia and have been working with mobile operators in the region including Anditel, Avatel, Comcel, Tigo, Directv, Emcali, ETB, Entel, International Communications Networks, Movistar, Telmex, UNE and NII Holding. Their projects have also been featured in the WSIS Stocktaking Report 2012 as a 'success story.'
2. Ministry of Transport, Maritime Affairs and Communications, Turkey: The Ministry has been working with Turkish telecommunications firms and network providers to advance mobile technology in Turkey and invest in the local economy. There has also been a focus on locally made equipment and on the provision of 3G and 4G services.
3. Federal Ministry of Communication Technology, Nigeria: The industry target by 2015 is that Mobile Penetration (per 100 people) will increase to 80.0 from 58.7. The Ministry is focused on spreading mobile infrastructure in Nigeria especially to rural, underdeveloped areas where 40% of the population has no mobile coverage. In addition, they are focused on accelerating mobile phone expansion programs to deploy base stations in rural areas and ensuring an enabling environment for consumers by monitoring operators and anti-competitive behavior.
4. Telecom Regulatory Authority, India: India has the fastest-growing mobile market in the world, with more than 700 million subscribers. In 2011, TRA banned mobile phone users in India from sending more than 100 texts a day in order to restrict telemarketing. 'LTE-advanced' is being developed with ITU in line with 4G evolution. This involves promotion of the use of LTE devices in developing countries by 2013 and global operators are expected to start using this technology by the end of the year. It is estimated that by 2016, 830 million subscribers worldwide will have access to mobile data solutions through LTE networks. There has also been advances and support for 'Fixed Mobile Convergence' technology aimed at integrating fixed and mobile networks to create a unified communications structure that benefits both consumers and service providers.

m-COMMERCE

1. Intervale, CJSC, Russia: Specialists of Intervale have taken part in the operation the Standardization department of ITU as a part of the delegation of the Russian Federation. They are an initiator and developer of a row of recommendations for ITU in the field of safety of financial mobile transactions. The company is a member of the development sector where they have an active operation in the research commission. Intervale has been involved in remote financial transactions which are carried out in open network the Internet and networks of mobile communication and operations in the field of standardization. Intervale has also become an Associated Member of ITU Development Sector (ITU-D) to participate in the 2nd ITU Study Group as an official Expert Editor and Rapporteur.
2. Safaricom Ltd., Kenya: Safaricom launched the Kipokezi service in May 2010 that enabled its subscribers to send and receive email and online chat through standard mobile phones. Any phone with an SMS service can use Kipokezi. Prior to the service fewer than one in ten Kenyans had accessed the Internet but the Kipokezi launch allowed more than a third of the population to exchange email and online chat messages. Safaricom together with many other companies including Forgetmenot Africa have come up with different services for use by the public ranging from weather updates to market prices and even entertainment updates. They have also launched M-Pesa, a mobile payments scheme.
3. C-SAM, USA: C-SAM is uniquely placed with its patents, products and people, to help customers embrace this bold new vision, unleashing the power of more than 5 Billion connected consumers worldwide. C-SAM's customers are providers in the developed markets as well as the emerging markets, where they use C-SAM's solutions to reach out to users across the entire demographic pyramid. "Mobile Payments – Innovation via Collaboration," is being organized through One Million Acts of Payments Innovation, an industry group started in January 2011 to address payment industry developments and technologies. The event is sponsored by Access Group, Payments Market and Cisco.
4. GSMA Ltd., United Kingdom: Number of projects taking place including: Spectrum for Mobile Broadband, Public Policy, Mobile and Privacy, m-Youth, Mobile Energy Efficiency, Tax, Roaming, Mobile and Health, Government Programme, Mobile and Environment, Mobile Identity, Mobile for Development, Mobile for Development Intelligence, Mobile Money for the Unbanked, Green Power for Mobile, Mobile Enabled Community Services, GSMA mWomen, mAgri, mHealth, mLearning, Disaster Response. They recognize that a challenge facing mobile industry stakeholders in the developing world is the lack of publicly available data and analysis to support business decision making and to clarify the socio-economic impact of mobiles. The industry is moving beyond basic voice to the use of mobile to deliver services in adjacent sectors such as health, financial services, agriculture and education hence, the adoption of so many initiatives across sectors.

Varied Initiatives

5. Administración Nacional de Telecomunicaciones (ANTEL), Uruguay: 2014 ITU World Telecommunication Development Conference is to be hosted in Uruguay in cooperation with ANTEL. ANTEL expects to invest US$140mn to deploy fiber-to-the-home (FTTH) technology this year. The company is working to deploy FTTH in the cities of Atlántida, Colonia, Durazno, Fray Bentos, Las Piedras, Maldonado, Punta del Este, Melo, Mercedes, Minas, Pando, Progreso, Salto, San José, Treinta y Tres and Trinidad in the medium term. In capital Montevideo, Antel has already deployed FTTH in certain areas including Carrasco, Buceo, Malvín, Parque Batlle, Larrañaga, and Parque Rodó. ANTEL is promoting a series of activities to stimulate the study of IT in Uruguay in order to prepare stakeholders for joint ventures with huge markets like China.
6. Intel Corporation, United States: Intel technology helps secure and protect mobile devices. Intel has recently been working on creating a framework for mobile application development. Intel IT is streamlining the process of building multi-platform mobile applications in a Windows development environment. The World Ahead program is focused on giving students the IT tools for Education and facilitation of IT. They have also been working on Atom chips for mobile devices as well as developing a "mobile execution environment" that's being designed to serve as the base level of a wireless software stack.
7. Real Madrid Foundation, Spain: The Foundation has recently signed a new partnership with the Microsoft that will allow the two organisations to work out new projects for Latin American youth. A total of five different programs will be launched in Argentina, Brazil, Colombia, Educator, and Mexico, with Microsoft to donate software and cash. The Foundation has also collaborated with Cisco to create a Wi-Fi network for fans to be able to easily utilize their mobile devices and smart phones to quickly and reliably access several applications specifically designed to engage with sports stadiums, as well as accessing Internet and social media during the game. These initiatives are aimed at encouraging fans to use the Connected Stadium Wi-Fi network for Internet connectivity which helps free up cellular networks, allowing spectators to text and call throughout the games.
8. Telkom SA, South Africa: TELKOM Mobile has recently given free access to Wi-Fi to all South Africans at any of over 1,500 Wi-Fi hotspots across the country. The free Wi-Fi promotion is aimed at lowering the barriers to access the internet for many South Africans. Telkom has also lauchedn Business Circle for SMEs. A widely recognized trend across all emerging markets, including South Africa, is that SMEs play a major role in economic growth and job creation. Best placed as an operator with the entire set of core components required for true convergence, including fixed, data, cloud, IT and mobile capabilities, Telkom Business is on a determined path to innovate to the benefit of the SME market. In their on-going journey to convergence the team’s offerings are evolving from simple fixed and mobile bundles to more tailor-made solutions. Convergence is one of the organizations key strategic initiatives in building a sustainable future. They aim to lead the provision of converged services in South Africa in support of their mission statement: Seamlessly connecting people to a better life.out the games.

Varied Initiatives

9. Alcatel-Lucent, France: Alcatel-Lucent has been working with other private firms such as Qualcomm Technologies to develop small cell base stations that enhance 3G, 4G and WiFi networks to improve wireless connectivity in residential and enterprise environments. By working together, they intend to accelerate the adoption of small cells and alleviate the impact of mobile data on wireless networks. As an ITU-D Member, Alcatel-Lucent supports many concrete programs of ITU-D, mainly those related to the training of ICT professionals in developing countries through the network of the ITU Centers of Excellence. Alcatel-Lucent supports ITU-D's Youth Education Scheme and Youth Incentive Scheme; two programs aimed at providing scholarship and training experiences to youths from developing countries in the domains of telecommunication. Alcatel-Lucent, through its Digital Bridge Initiative, also became a founding member of the "Connect the World", an initiative launched by ITU, whose purpose is to connect 800,000 villages to ICT by 2015. Alcatel-Lucent and ITU-D have currently deepened their collaboration to translate initiatives for the regions of Africa, Arab states, Latin America, Asia Pacific, and Central and Eastern Europe into concrete projects and carry them with all appropriate stakeholders. This would give birth to the implementation of projects in line with Alcatel-Lucent's Broadband for all programs.
10. Groupe Tunisie Telecom, TunisiaTunisia has one of the most developed telecommunications infrastructures in the North African region and sports some of the continent's highest market penetration rates. The mobile sector has experienced exceptional growth since the introduction of competition in 2002. A nationwide fibre optic backbone and international access via submarine cables, coupled with some of the lowest broadband prices in Africa have supported rapid development of the Internet sector.

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