



Mobile for Development Impact Products and Services Landscape Annual Review

Hannah Metcalfe - March 2015



1. Executive Summary

GSMA Mobile for Development (M4D) brings together our mobile operator members, the wider mobile industry and the development community to drive commercial mobile services for underserved people in emerging markets. We identify opportunities for social, economic and environmental impact and stimulate the development of scalable, life-enhancing mobile services.

In today's developing world, there is a growing number of people who acknowledge the integral part that their mobile phone plays in their day to day lives. As mobile phone penetration grows in emerging markets, device prices come down, and internet access expands, Mobile for Development is becoming a driver of both business growth and social good. Whether you are a student looking to further your education, a taxi driver looking to take payments more easily, a nurse wishing to access live medical records or a farmer seeking information on optimising your crop yields, in today's emerging markets the chances are there is the potential for a mobile product and service to serve your needs.

In 2012 the M4D Impact Programme launched an open data portal for the developing world's mobile industry; **Mobile for Development Products and Services Trackers**. The aim was to offer the industry access to high quality data to help improve business decision making, increase total investment from both the commercial mobile industry and the development sector as well as to accelerate economic, environmental and social impact from mobile solutions. The M4D Trackers now contain data of over 1800 deployments and more than 1400 organisations across a variety of sectors that M4D is involved in.

This is the first edition of the M4D Impact Products and Services Landscape Report which evaluates the products and services that are tracked by the GSMA Mobile for Development team. It will offer insights found from data hosted on our trackers including:

- Overview of the definition of M4D
- What our trackers can offer
- The state of M4D as a whole, rather than just individual sectors
- A comparison of products and services by sector
- The most progressive regions in M4D
- Organisations that are leading in M4D
- M4D Champions: Spotlight on products and services of Safaricom and Airtel
- Highlights of 2014: Tackling Ebola with mobile
- Services that our trackers are showing as replicating in more than one market

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I. What is Mobile for Development?



Connected Women

Mobile products and services that promote women's access and use of mobile in low- and middle-income countries.

- SMS service providing specifically designed information to female entrepreneurs
- Pregnancy advice via IVR to expecting mothers



Green Networks

The use of renewable energy sources by the mobile industry to power a new and existing off-grid base stations in developing countries.

- Renewable energy sources and their location showing number of renewable energy base stations, diesel fuel price as well as relevant organisations



Employment

Mobile products and services that support work opportunities for the underserved through skills training, job connection and business support.

- SMS-based service allowing job seekers to upload their CV via mobile
- Project management application



Mobile Money

The number of live and planned mobile money services for the unbanked.

- Financial transactions made via mobile phone or SIM-enabled device
- Conditional cash transfer mobile money international remittance service



Disaster Response

Mobile products and services that play a role in disaster and crisis response.

- Application for aid organisations to send messages to cell phone users
- SMS service to monitor & combat human trafficking in refugee camps



Education

Mobile products and services that increase access to educational resources and life-enhancing tools.

- SMS and audio lessons delivered daily to the customers
- Anonymous medium through which students can consult lecturers



Energy & Water

Mobile products and services that leverage mobile tech and infrastructure to provide underserved communities with improved energy services.

- Comprising a solar panel, a control unit including battery, a USB mobile charging point and two LED lights
- Water pump powered by a nearby base station



Agriculture

Mobile products and services that support actors along the agriculture value chain through commercially sustainable agricultural information and advisory services.

- SMS service for information sharing between farmers
- Information via voice and SMS on farming practices, and disease prevention



Health

Mobile products and services that offer medical support and information in both the planning phase and those which have been commercially deployed.

- Mobile app to improve environmental compliance against malaria
- Android phones service to address maternal health programme barriers

II. What our tracker offers

Mobile Network Operator (MNO)*

- What is my competitor doing in M4D?
- What sectors are most popular in the markets I work in?
- Who has implemented a service?
- How scaled are they?
- How viable are they?

Donor or Investor

- What is the landscape of Mobile for Development services across the globe?
- What is the subset of Mobile for Development services offering mobile financial services (MFS)?
- What is the landscape of M4D across sectors in my country?

GSMA M4D
trackers are one of the best resources in the world for answering these questions.

Entrepreneur

- What is the competitive landscape for services, so I can research and position my new offering accordingly?
- What MNOs can I partner with?
- Is anyone else doing it?

NOTE: This is a list of a few choice examples only - not exhaustive list

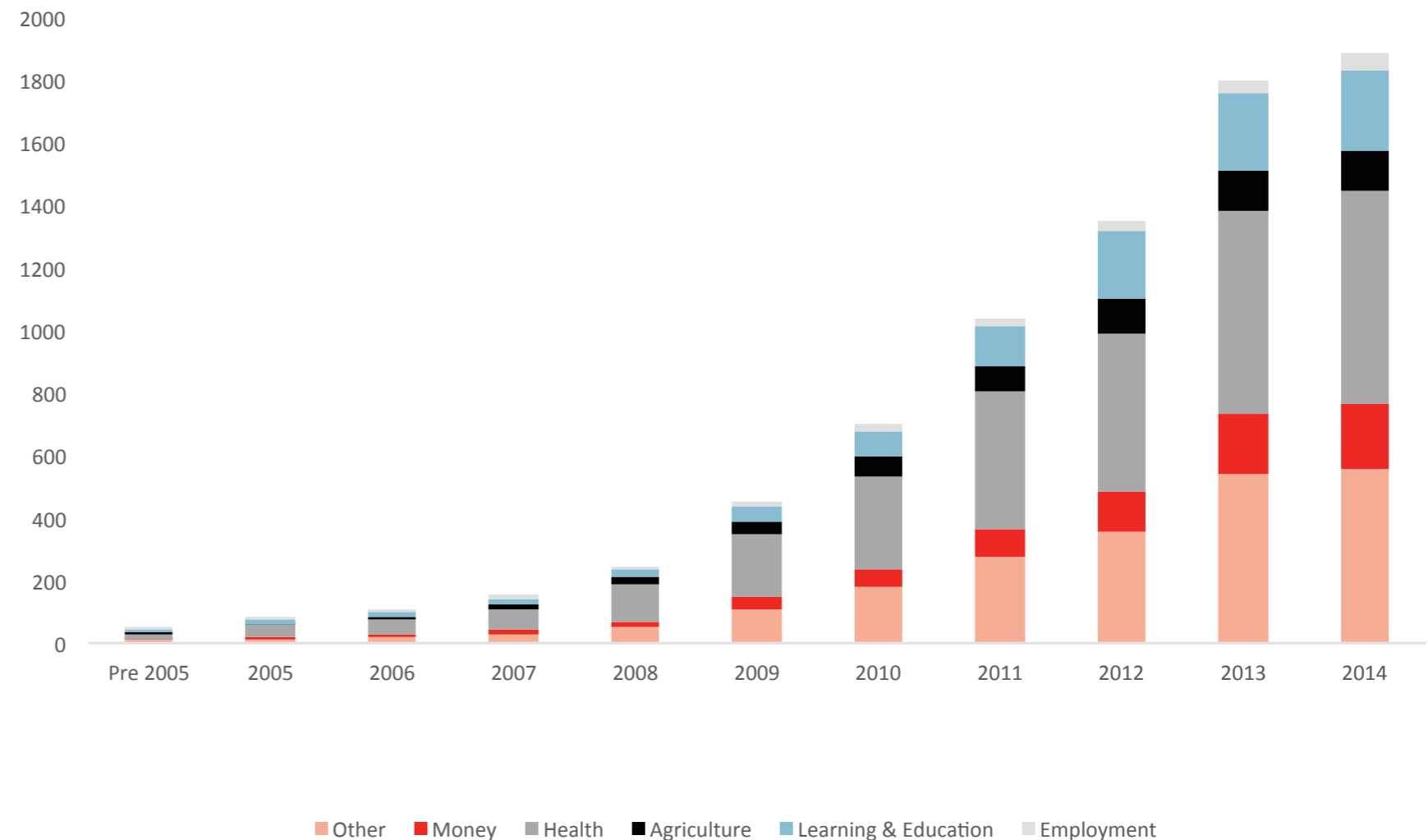
*As evidenced by requests from the VAS Workshop Alumni. This group of operator contacts working in VAS was convened throughout 2014 to better understand the challenges in and potential solutions to implementing value added services (VAS), including M4D VAS, and how the development community can better work with MNOs for mutual benefit.

I. M4D products and services

Overview of the last 10 years and the future of M4D

- Mobile for Development (M4D) sector has enjoyed strong growth over the last 10 years
- More than 1,800 products and services run by 1400 unique organisations
- Health continues to lead in volume of products and services being launched but this is because a large amount of services in the Health Tracker are pilots and not necessarily sustainable services that will last indefinitely
- Mobile Money is a small sector on the graph - but there are now over 100 million active mobile money accounts globally
- Lower income groups are still prevalent in emerging markets - vital need to continue innovation on services that work on both 2G feature phones as well as 3G and 4G smartphones

M4D industry over the last 10 Years

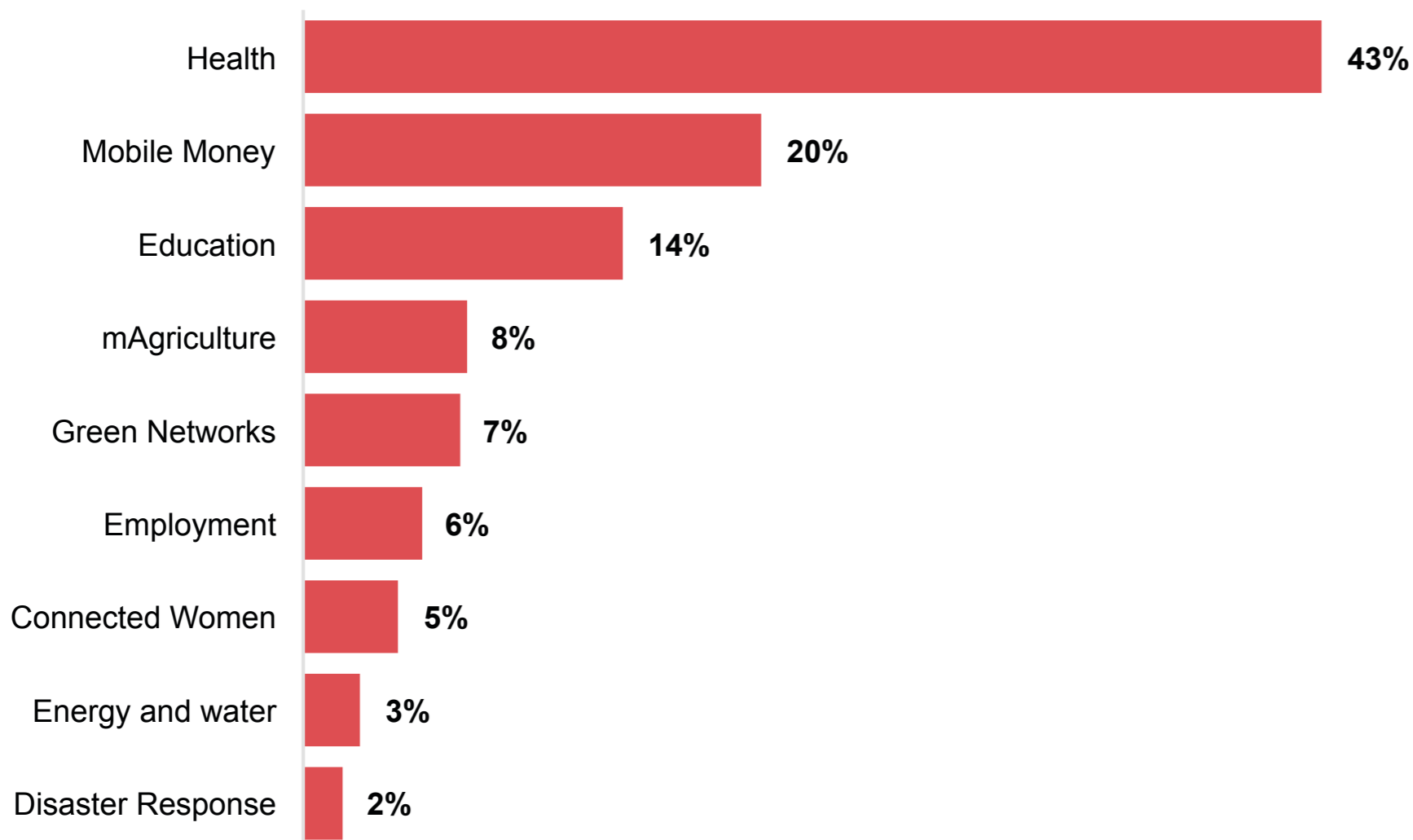


II. Products and services by sectors

The GSMA M4D Trackers enable users to quickly locate sectors in which they operate, in order to view the activity of relevant organisations.

The launch of the new trackers has enabled faster and more efficient ways of analysing across sectors, with data now stored in one central data base.

Percentage of total number of M4D services by sectors



Understanding mobile health

mHealth in emerging markets has the potential to improve health outcomes and continues to be the largest sector in M4D. However it is necessary to understand some of the reasons why.

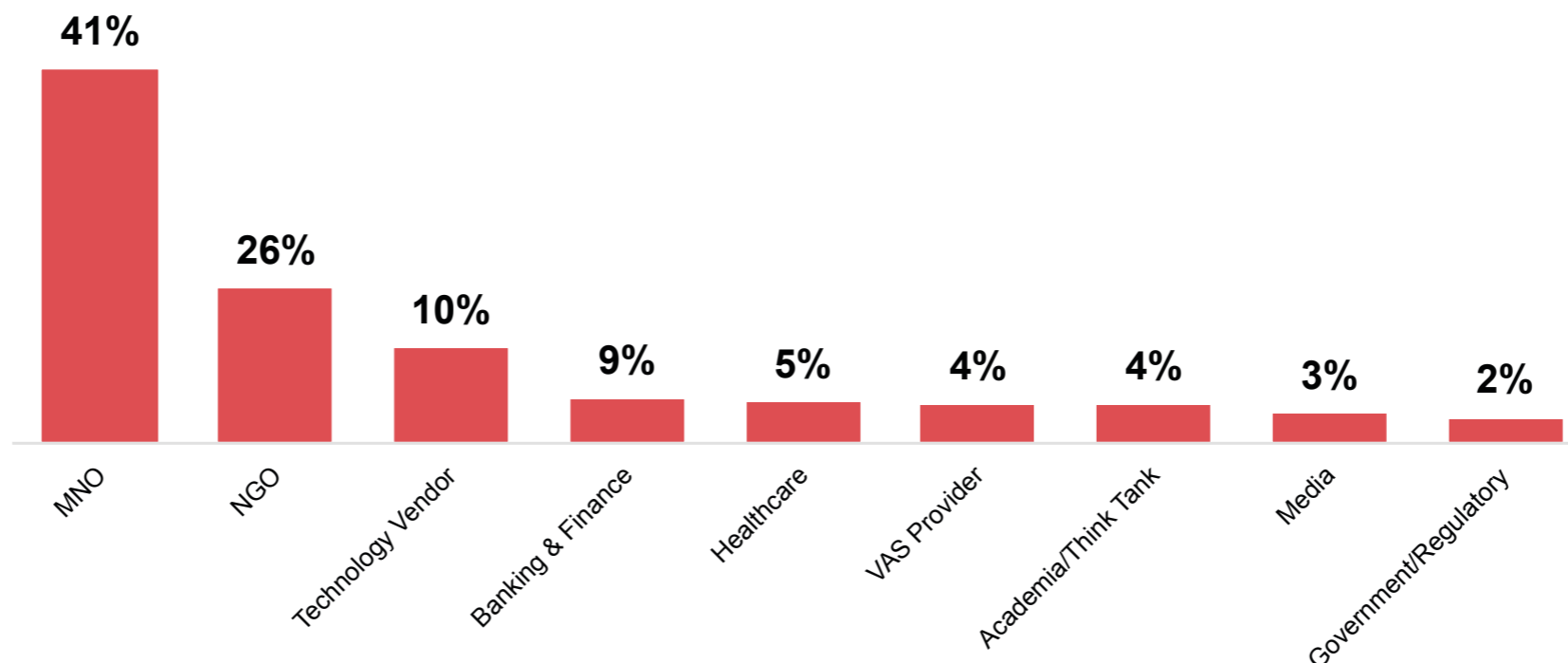
- There are many common applications that can deliver different health services to varied audiences. For example:
 - Safe sex information to youth
 - Pregnancy advice to new and expecting mothers
 - Medical training refreshers to community health workers
- A lot of these products and services are pilots, and not necessarily sustainable services that will last indefinitely
- Tracking these products and services allows us to monitor the transition from mHealth pilots to more large scale services

III. Who is launching M4D products & services?

GSMA M4D Trackers track what type of organisations are deploying products and services to assess who is active in this space.

- Mobile Network Operators (MNOs) have a significant footprint in this sector, accounting for 41% of products and services that have been deployed in developing markets
- MNOs have an advantage when launching products and services as they already have:
 - An established brand
 - Access to a large consumer base
 - Distribution channels within the market
- The M4D Impact programme is interested to know how we can shift activities to support more MNOs in launching products and services to release the M4D opportunity for them and the wider M4D ecosystem
- In order for Mobile for Development products and services to be successful, organisations need to partner to leverage each others strengths
- Working with MNOs can be challenging because organisations often struggle to consider the goals of the MNO
- MNOs provide NGOs the chance to offset costs and operate within a different, more commercial model than traditional models that rely on grants, donations or payments by governments

Tracked M4D Services by Organisation



IV. M4D Champion: Safaricom, Kenya

With 3 clicks on our Tracker you can see this snapshot of information about Safaricom's products and services.

- Safaricom has at least 17 M4D products and services classed as M4D in Kenya.
- Safaricom is perhaps best known for the mobile-based money transfer service M-Pesa which launched in Kenya in 2007 and is arguably one of the most successful mobile money services to date.
- The success of M-Pesa may also account for the burst in mobile innovation in Kenya. It is often the case that mobile money acts as the foundational platform on which other services are built and are proliferating.



Mobile Money

- M- PESA
- Lipa na M-PESA
- Mshwari



Health

- Linda Jamii
- Jamii Smart
- Help
- KEMSA
- M-Tiba
- Daktari 1525
- Early Infant Diagnosis
- Health Presence
- KIMMN Chip
- TB Care



Energy Access

- M - KOPA



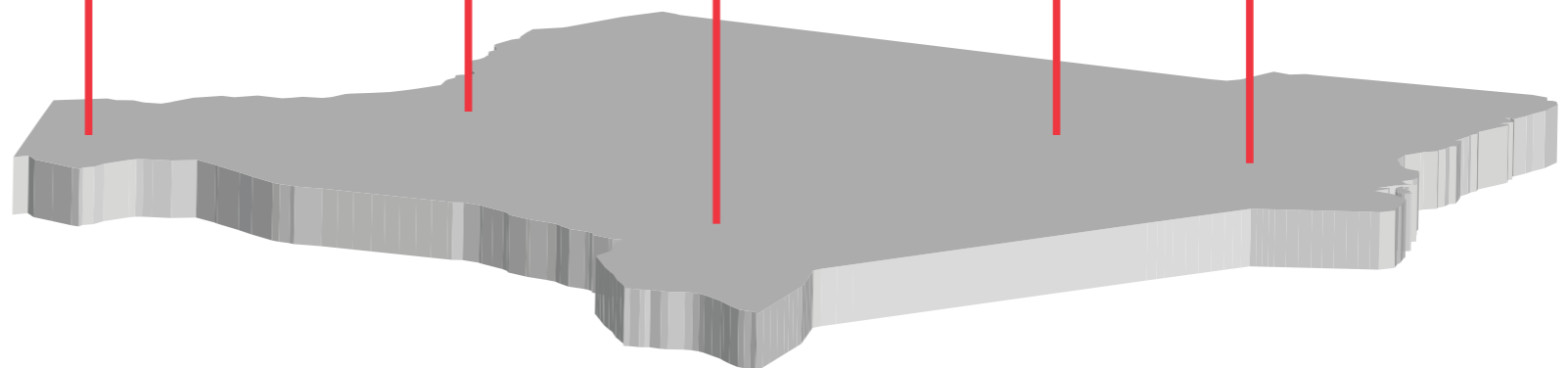
Education

- Shupavu
- Instant Classroom



Agriculture

- iCow
- Kilimo Salama



Do you know of a champion we should highlight here?
Please let us know at M4DImpact@gsma.com

V. M4D Champion: Airtel, India

- Bharti Airtel has operations in 20 countries across Asia and Africa.
- M4D trackers highlight that of the 184 products and services in India, Airtel accounts for the largest proportion with 13.



Education

- Apna Chaupal
- Airtel mEducation
- Airtel Live
- 3 Pack Education Portal
- Class on the web
- LearnNext
- Tamil Nadu Spices Community



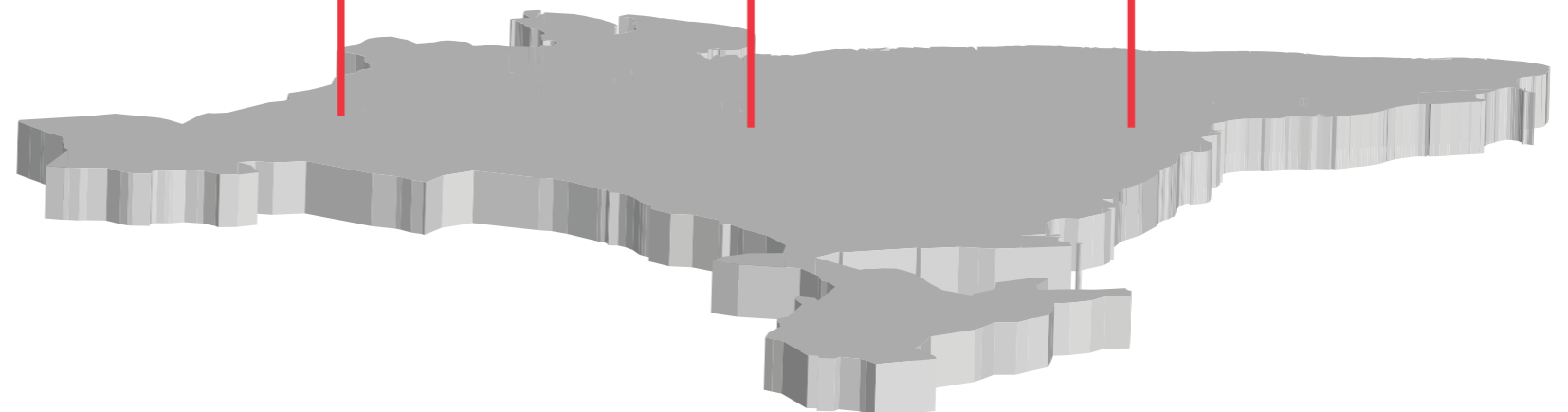
Mobile Money

- Airtel Money



Health

- Daily Health Tips
- Mediphone
- mDhil
- HelpVacciDate Service
- KEMSA Virtual Bank Service



Do you know of a champion we should highlight here?
Please let us know at M4DImpact@gsma.com

VI. 2014 highlights - Tackling Ebola with mobile

The M4D Products and Services Tracker enables visibility across sectors. This has proven useful when highlighting the potential of mobile in the high profile case of Ebola.

Mobile networks and the connectivity they provide can be a lifeline for those affected by natural disasters and other humanitarian emergencies.

The Health Tracker currently has over 15 products and services that focus on the Ebola crisis, and many existing services have been adapted to target this crisis.



Challenges

The response to Ebola has in some cases resulted in a confused over-the-top approach, with a danger of spamming the citizens with conflicting or duplicate information (known as "humanitarian spam").

As with any disaster response, a coordinated approach is required:

- Using appropriate channels for information sharing (for example info-tainment ahead of disaster - integration of important information into existing media channels)
- Avoiding duplication of existing services
- Collaborating or partnering with relevant actors or organisations in the mobile, vendor, humanitarian, government and disaster management sectors
- Integrating approved content from organisations like World Health Organisation (WHO) or local government
- When multiple communication channels are used, or multiple organisations communicate information, it must be standardised to avoid confusion and mixed messaging. The Disaster Response programme have a resource, **'Guidelines for the use of SMS in disaster'** which addresses challenges such as these

Call Data Records

- The potential value in the use of Call Data Records (CDR) has attracted attention during the Ebola crisis. CDR refers to a data record produced by a mobile phone that contains information on a single instance of a phone call or other communication transaction that was handled by that device
- The analysis of CDR could be used to evaluate the effectiveness of travel restrictions, monitor population movements in affected areas and predict where disease may spread next
- Both Mobile Network Operators and organisations working in this space continue to be aware of the sensitive nature of using such data and the privacy and security issues associated with this. **The GSMA Disaster Response Programme** has released a series of guidelines and best practice for the analysis of CDR

VII. Spotlight: UNICEF U-Report – Ebola in Liberia



SPOTLIGHT

Disaster Response

Unicef: U-Report, Liberia



U-Report is a free SMS-based system that allows young people to access vital information and services using a mobile phone.

U-report was deployed in Liberia in November of 2014 to give young people access to basic information on Ebola prevention and on services available near them. Currently deployed in over 6 countries in Africa; it also allows youth groups or others at a national level to see the trends most important to their peers.

It is made up of:

- Weekly SMS messages and polls to and from a growing community of Ureporters
- Regular radio programs that will broadcast stories gathered by Ureport
- Newspaper articles that will publish stories from the Ureport community

U-report has been modified and improved with the help of a group of teenage girls in Monrovia, Liberia.

- These girls helped translate questions about Ebola into a language that would relate and appeal to children living in Liberia. Unicef provided sample questions which these girls turned into ‘text talk’. For example “Are you aware of the Ebola disease” became “do pple no abt Ebola” and “What information source do you trust” became “which 1 will pple take on d info abt Ebola”

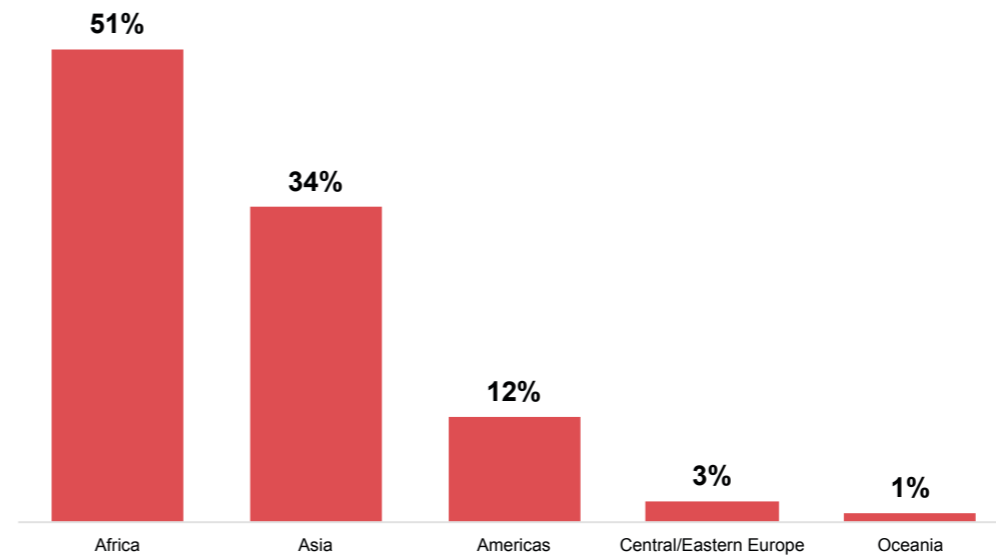
By the end of November 2014 more than 400 people had registered to become U-Reporters in Liberia.

VIII. M4D by regions

GSMA M4D Trackers are unique in their ability to effectively map M4D activities on a country by country basis or by specific regions.

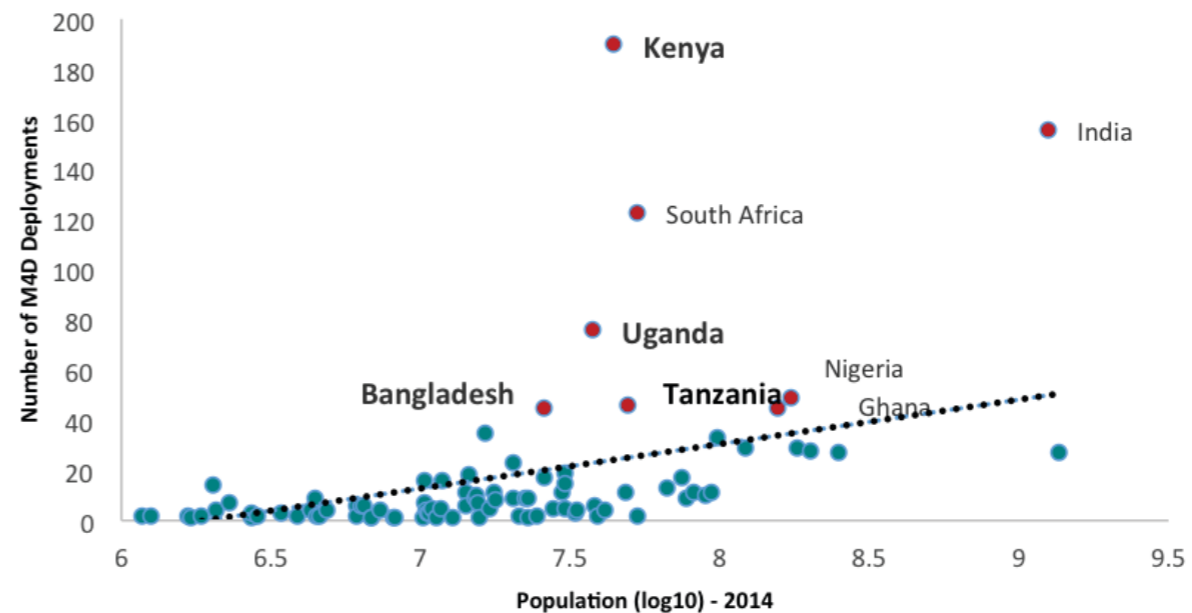
- Over half of the products and services that GSMA Mobile for Development track can be found in Africa; given the technology boom in the region, this is not surprising

Percentage of Products & Services by Region



- Our data, when displayed against population size, highlights the 8 countries that were leading in Mobile for Development at the end of 2014
- We might expect the number of products and services in a country to increase with population size; Kenya, Uganda and Bangladesh in particular, are exceptions to this
- Kenya is leading with nearly 200 products and services on our trackers – a result of the rapid development in its technical infrastructure over the last 10 years

Number of M4D Services Versus Population

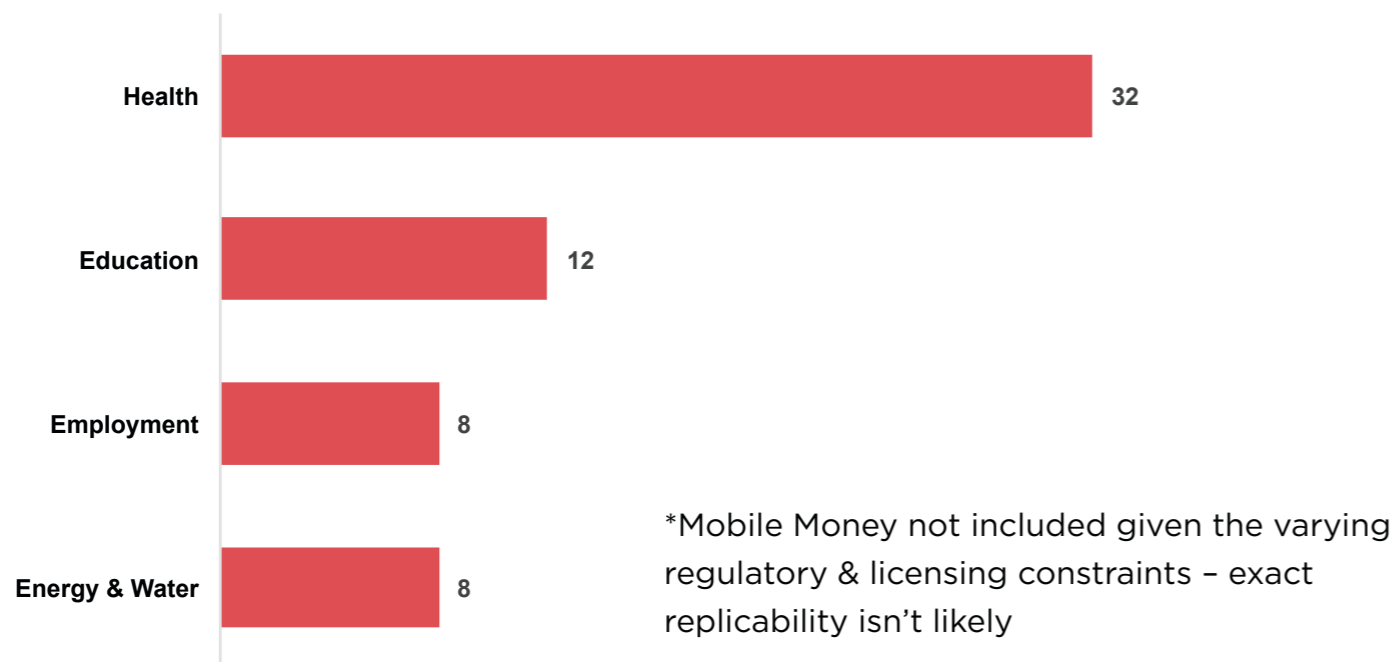


IX. Geographical scale in mobile products and services

GSMA M4D trackers enable us to identify products and services that have been replicated across geographies.

- In order to assess whether a product and service has achieved scale we expect to analyse the number of people subscribed to a particular mobile service
- Getting access to this commercially sensitive data is challenging and in many cases not possible
- However all products and services are tagged with relevant countries, which means we can find products and services that have been replicated across geographies
- Understanding the ways that other organisations have replicated their service helps us identify industry best practices, as well as foster knowledge sharin
- From the 1822 products and services that were tracked as of Dec' 2014, there are over 80 unique products and services present in more than one country
- Health continues to be the most significant, reflecting the size of the sector
- Based on the disproportionately small number of M4D services in education, entrepreneurship and energy and water compared with health and mobile money sectors, we believe there is an untapped opportunity
- For more information on scaling products and services see: Scaling Mobile for Development: **Harness the opportunity in the developing world**

Product and Services launched in more than one country



We are interested in hearing from organisations that have recently replicated their service in another market, or are looking for ways of successfully replicating their product and service.

Get in touch! M4DImpact@gsma.com

X. M4D services: launching in more than one country in 2014



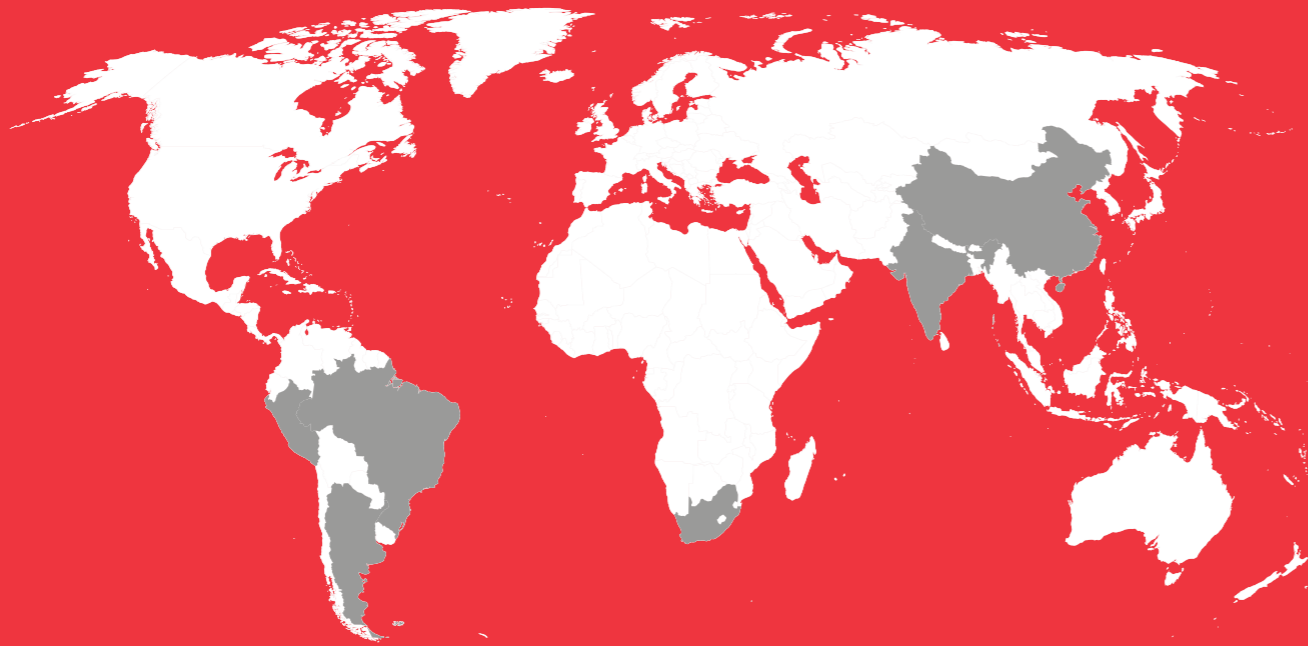
SPOTLIGHT

Employment

LaborVoices: 10+ countries across Africa, Asia, and Latin America

LaborVoices provides employers with regular feedback on their workers by repeatedly polling workers through their mobile phones about their safety and working conditions.

The modular, cloud-based nature of the LaborVoices' SmartLine means that this service can quickly build out the supporting infrastructure for the LaborVoices Smartline in several countries.



The collapse of the Rana Plaza building in Dhaka Bangladesh in May 2013, which killed more than 1,100 factory workers, was a sobering reminder of the conditions to which factory workers in emerging markets are often subjected. However, with ambiguous supply chains that span the globe, it is often hard for corporate brands to be fully aware of their global workers. LaborVoices may have found a solution in providing companies and their supply chains with an early warning system based on direct feedback from workers, by repeatedly polling workers through their mobile phones. LaborVoices have achieved scale and now work in over 10 countries in emerging markets and have recently launched a service in Bangladesh; hundreds of workers are now using the LaborVoices SmartLine to share feedback on their safety and working conditions, quickly and anonymously. The SmartLine provides brands and suppliers real-time visibility into factory conditions, enabling them to identify and solve problems before they become urgent.



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