

The background image shows a rural village scene. A woman in a grey dress stands on a dirt path, looking at her phone. A white goat is in the middle ground, and a brown cow is in the foreground. The buildings are made of corrugated metal and wood. The sky is overcast.

M4D Impact Products and Services Landscape

Quarterly Report July 2015, Hannah Metcalfe

1. Executive Summary	3
2. Mobile Network Operators and underserved populations	4
I. Mobile services and rural populations	5
II. mAgri services in India	8
3. Innovation Spaces in emerging markets	9
I. Innovation spaces in Peru	10
II. Innovation spaces engagement with MNOs	11
III. MNOs engagement with Innovation	12
IV. Innovation spaces and MNO engagement in Senegal	13
4. M4D Impact – Programme Vision	14

Innovation is happening across the developing world in a number of sectors, from health to energy, to mobile banking to agriculture. In most of these markets you cannot talk about innovation without referring to mobile. If mobile-enabled social innovation is to reach the scale we hope for, then engagement with Mobile Network Operators (MNOs) is key.

In this second edition of 2015, the M4D Impact Products and Services Quarterly Report looks to identify the ways in which Mobile Network Operators (MNOs) engage with other members of the Mobile for Development (M4D) ecosystem and what impact this has towards the socioeconomic development of countries across the emerging world.

Our previous [Products and Services Quarterly Report](#) highlighted this industry is evolving and diversifying into new capacities. This edition will specifically address two areas in which MNOs have the opportunity to support and enhance the innovation of M4D Products and Services.

The report will draw on recent examples of products and services, as well as organisations, that have deployed mobile for development initiatives in emerging markets.

The importance of rural populations for MNOs is becoming more apparent as MNOs look to connect more people to their networks. **The first section of this report looks at some of the needs and challenges MNOs face in connecting underserved communities** and what role mobile agriculture (mAgri) plays in enhancing the experience these communities have once connected.

While connecting new users to networks is important to MNOs, so too is providing existing users with high quality services that benefit their day-to-day lives. In the last edition we looked at the work of some of the innovation spaces we currently track, and the integral role they play within their own start-up communities. **The second section of this report develops this research to discuss the role that MNOs play in engaging and supporting innovation spaces.**

2. Mobile Network Operator and underserved populations

Sufficient connectivity is a primary requirement in order for M4D services to successfully support underserved segments of society through mobile.

- Approximately 67% of the global population is still not connected to the internet and there is an estimated 64% of the developing world that do not own a smart phone¹
- The majority of these are rural populations in developing countries
- The GSMA Digital Inclusion Programme highlights that there are currently 3.3 billion people living in rural areas, with 3 billion based in emerging markets
- Rural populations are becoming increasingly important to MNOs, as they look to connect more people to their networks
- Some of the key challenges for MNOs when engaging with rural communities are listed in the diagram below
- There are a number of efforts being made to address these challenges. To learn more on these see [Digital Inclusion Report 2014](#)
- The next slides will address perceived value by looking at the lack of local and relevant content
- The majority of rural populations are involved in agriculture and are frequently underserved by current infrastructures
- By offering reliable, localised information via mobile in these area there is a huge potential to impact farmers lives and livelihoods
- mAgri presents an opportunity for MNOs, as they are well positioned to influence, contribute to and benefit from the entire agriculture value chain

Some of the key challenges for MNOs when engaging with underserved populations:



**COST OF
CONNECTIVITY**



**NETWORK
COVERAGE**



**LITERACY AND
TECHNOLOGY
ADOPTION**



**CULTURAL
NORMS**



**PERCEIVED
VALUE**

¹ GSMA Intelligence

*These challenges are based on interviews conducted with 6 MNOs in Kenya, Zimbabwe, Cameroon, Iran, Bangladesh and Uganda

2i. Mobile services and rural populations

What is needed to engage rural populations?

- In order to raise the perceived value for rural populations, MNOs and their partners must identify the relevant content that would bring direct benefit to these communities, should they use a mobile phone
- Local relevance extends beyond content that is simply interesting, to key information that specifically addresses the needs and challenges in these rural communities
- The World Bank reports that over 70% of the world's poor live in rural areas, and many depend on smallholder farms for their livelihood, meaning that agriculture offers a significant opportunity for MNOs
- The use of mobile in agriculture has enabled a level of outreach that was not possible with more 'traditional' programmes that relied on face-to-face training and extension services
- GSMA intelligence estimate the percentage of potential agricultural workers with a mobile phone, to grow from 35% of the total labour force in 2015 to 47% by 2020.
[See mAgri Market size and opportunity for agricultural value-added services](#)

Mobile Agriculture

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



Mobile Agriculture Products and Services

Information & monitoring services

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

Supply chain services

- Mobile services that allow management of supplier or distribution networks
- SMS services which offer traceability and tracking of crops

Mobile financial services for farmers

- Payments to farmers via mobile money
- Savings and credit products
- Micro insurance for farming inputs and crops

2i. Mobile services and rural populations

The Mobile for Development Impact site currently tracks [148 mAgri Products and Services](#) across emerging markets, (the majority are concentrated in Kenya and India).

As the number of mAgri services is expected to rise it is important to understand the value of these services for MNOs working in these markets.

A number of operators highlighted that when farmers have access to better quality agricultural inputs coupled with other services, productivity significantly improves.

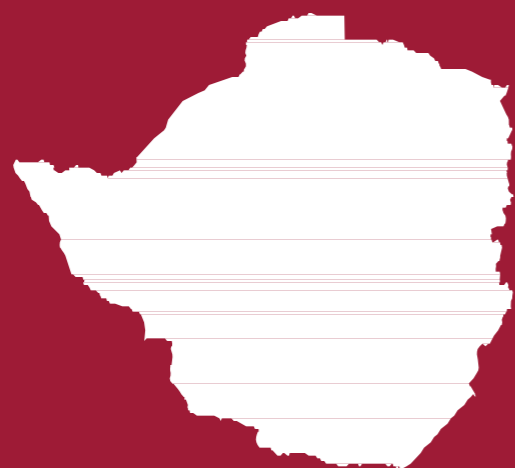
[Safaricom M-SHWARI](#) mobile banking service in Kenya, which is offered through M-PESA, is an example of how mobile services have the potential to increase productivity and income amongst farmers. This means that farmers have the potential to use services to repay the upfront investment made by the MNO.



SPOTLIGHT

Econet Wireless, 'Dial a Mudhumeni'

Zimbabwe



Like many farmers in the developing world, farmers in Zimbabwe lack relevant, timely information such as planting techniques, crop management, pesticide use and weather forecasts. This leaves them susceptible to the effects of harsh weather conditions, pests and disease.

This is coupled with other constraints, such as lack of access to crop inputs (resources that are used in farm production) and credit (support for financing agricultural transactions), and inadequate infrastructure to bring their crops to market.

'Dial a Mudhumeni' launched in June 2015, by Econet Wireless, an MNO in Zimbabwe allows farmers to easily connect with agricultural research and extension officers for advice.

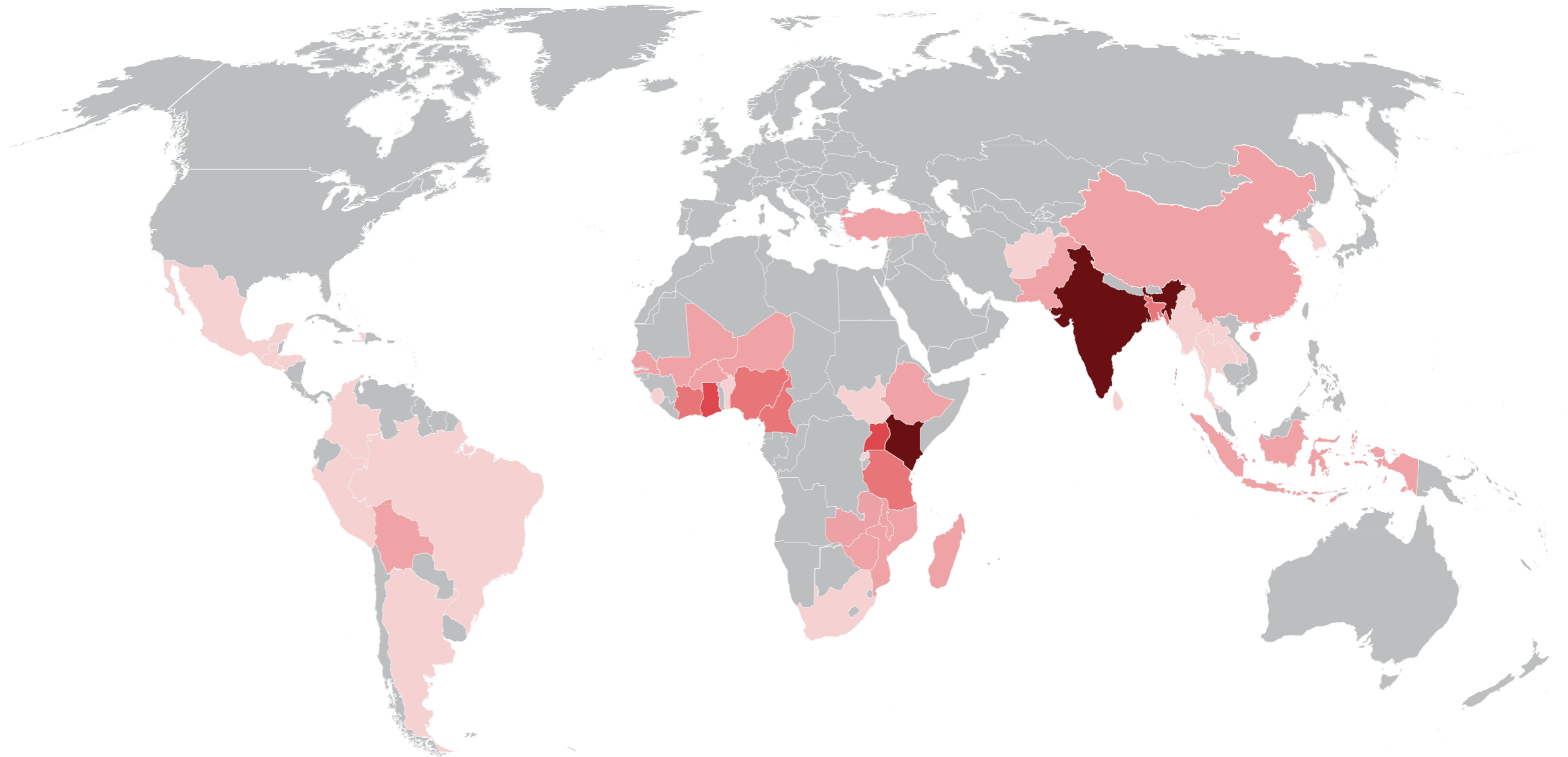
Econet Wireless noted that they realised the central role played by farmers in the country's economy and felt Econet should play its part.

The service was launched in partnership with the country's Ministry of Agriculture, and aims to assist farmers currently being forced to travel long distances to access critical information from agricultural extension officers, known as "mudhumeni".

A farmer dials 144 to access the [EcoFarmer](#) call centre. They are then routed to any of the specialist services available, namely agricultural marketing advisers and livestock specialists.

To learn more about this service see the [M4D Impact Products and Services Tracker](#)

2i. Mobile services and rural populations



Key
Number of mAgri services



Low

High



Countries not considered for the purpose of this report

2ii. mAgri services in India

While there has been an increase in initiatives that target farmers, many services have not achieved scale. One reason for this may be due to a lack of user centric design.

Below are three examples of mAgri services that have been created to serve the needs of users in India.



SPOTLIGHT

Vodafone Connected Farmer

India

Vodafone in May 2015 announced their Connected Farming India initiative. Vodafone have identified six mobile services. These range from:

- Agriculture Information services
- Receipt services to provide greater transparency in daily commodity supply chains
- Payments and loans
- Field Audits enabling auditors monitoring quality
- Sustainability and certification requirements to move away from paper records
- Local supply chain
- Smartphone enabled services to provide deeper functionality and richer sources of information than is possible using basic SMS and voicemail services

SPOTLIGHT

mKisan

India

mKisan is a mobile agricultural value added service (Agri VAS) operated by the mobile VAS provider **Handygo**. The service offers farmers in India practical, up-to-date advice and information on crop agronomy, livestock management, weather forecasts and market prices for major crops. Content can be accessed through push SMS subscriptions and a pull interactive voice response (IVR) channel.

SPOTLIGHT

Krishi Mobile

India

Krishi Mobile, created by **Awaaz De**, is a mobile voice service for smallholder farmers in India, offering information on sustainable agricultural practices. Krishi Mobile allows agricultural experts to send timely and relevant agricultural information covering topics like agricultural extension and plant protection. This allows farmers to listen to the advice, but also respond with questions and feedback creating a hub of information exchange for farmers in the Kheda district in India.

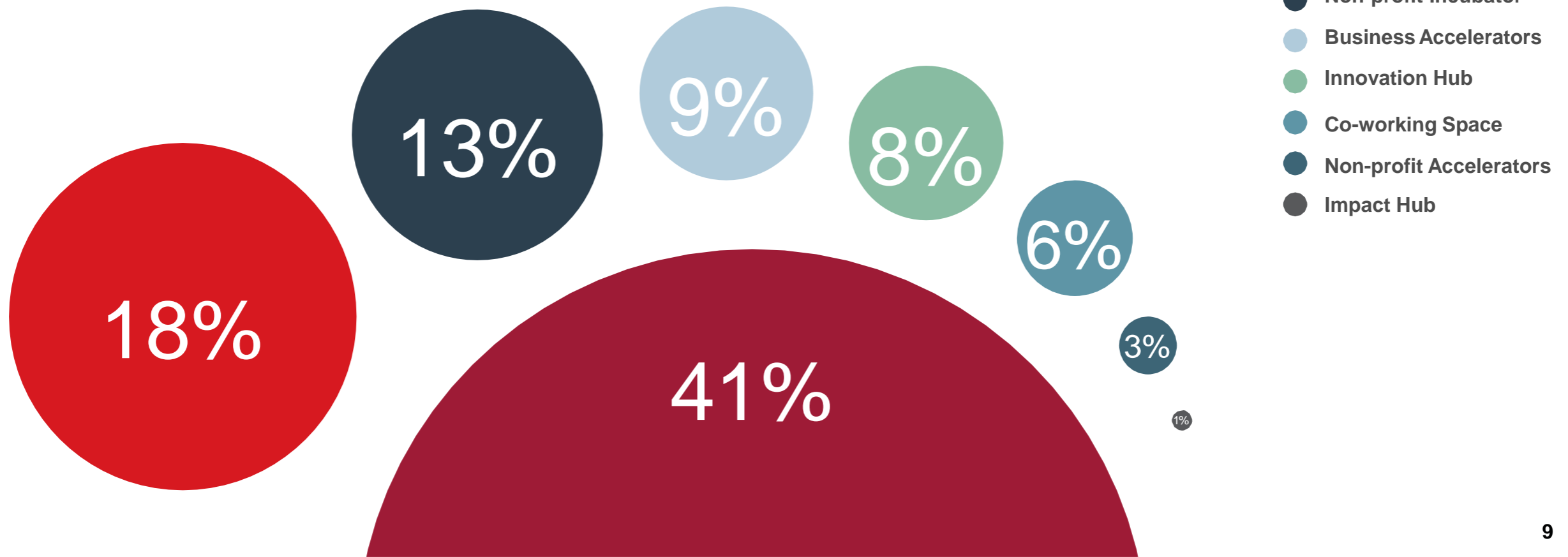
3. Innovation spaces in emerging markets

While connecting new users to networks is important to MNOs, so too is providing existing users with high quality services that benefit their day-to-day lives. In order to do this MNOs must keep up with the latest innovation.

- One way for MNOs to discover innovative solutions is through engagement with innovation spaces
- In our [last quarterly report](#) we identified over 150 innovation spaces, that are working towards creating an infrastructure that can support technology, entrepreneurship and innovation in emerging markets
- The diagram below shows the breakdown of innovation spaces that we are tracking, with Technology Hubs making up the majority
- Of these 150 innovation spaces 10% currently have partnerships with MNOs
- A further 17% of these spaces have partnerships with International Over The Top (OTT) Players
- This highlights that there is still a great opportunity for further collaboration between MNOs and Innovation Spaces

Innovation Spaces on the M4D Impact Site *

*Visit our [glossary page](#) to learn more about the M4D Impact definitions



3i. Innovation spaces in Peru

In nascent markets like Peru entrepreneurs often struggle to get access to information on key technical and business practices for their ventures.



SPOTLIGHT

UTEC

Peru

Entrepreneurs we have spoken to highlight that less than 10 years ago there was very little innovation in Peru, with very few people possessing the necessary skills to pursue entrepreneurship. Now there is a growing interest in the Peruvian startup ecosystem.

UTEC, a private non profit university was founded in 2011. It focuses on attracting the best students, irrespective of income, offering loans and scholarships.

UTEC is backed by a group of entrepreneurs who have established successful businesses in a number of industries in Peru.

Each component of UTEC's offer is designed in line with the trends and demands that globalisation poses to modern technology and innovation.

There are three pillars of the university: Learning, Research and Entrepreneurship.

Within the entrepreneurship pillar, UTEC Ventures offers an accelerator program which provides education, seed funding and mentorship to entrepreneurs, which they collect equity from, in order to fund further student scholarships in the university.

UTEC is currently supporting 8 startups in their accelerator program.

UTEC is also part of [Startup Peru](#), a government programme, created to accelerate innovation in Peru. Through this programme UTEC supports a further 15 entrepreneurs.

While this ecosystem is showing huge potential in Peru, there is a fear that if entrepreneurs are not given further support and funding, this industry will lose credibility before it has been given a chance to grow.

UTEC is working hard to address cultural challenges in Peru pursuing innovation by working closely with entrepreneurs encouraging them to share and collaborate their ideas.

They are also working to establish a network of experts including MNOs, Entrepreneurs and Investors in order to mentor early stage entrepreneurs with the necessary business skills to scale.



3ii. Innovation spaces engagement with MNOs

As the number of innovation spaces increases across emerging markets, there is a growing opportunity for MNOs to embrace innovation that disrupts markets, and reassess their business models.

- MNOs must innovate to stay relevant in this changing environment
- MNOs are looking to develop value propositions beyond voice and data plans
- While MNOs may choose to create their own innovation spaces, there is also a great opportunity to collaborate with existing spaces
- Operators such as Safaricom Kenya and Vodafone Ghana, now have dedicated teams working on more innovative mobile solutions
- The M4D Impact team have spoken to a number of innovation spaces as well as MNOs, to better understand the mutual benefits of these two players

The value of innovation spaces for MNOs

Innovation spaces can offer:

1. Potential partnerships through which new products and services can be developed and introduced into the market
2. MNOs insights into how to improve and develop new ways of engaging with the eco-system
3. An open space for MNOs to explore new and innovative solutions, that they may not have the opportunity to identify internally due to organisational constraints
4. MNOs the potential to widen their customer base, e.g. in rural populations, through the start-ups and projects that they are supporting

The value of MNOs for innovation spaces

MNOs can offer:

1. Advisory role on key technical and business practices and business development
2. Financial support of core business focuses, like acceleration or incubators programmes
3. Access to market through their large customer base and marketing capabilities
4. Competitive rates for internet connection and electricity to support innovation spaces with co-working facilities. One of the biggest costs for innovation spaces that we spoke to is providing reliable internet and electricity for their co-working spaces

3ii. MNOs engagement with Innovation

Orange announced in the beginning of July its largest international developer challenge to date across 13 countries, in order to support local start-ups and drive innovation in Africa and the Middle East.



SPOTLIGHT

Orange

While there is an increase in the number of smartphone apps being created, they are yet to gain traction in many emerging markets due to challenges with engagement and last mile access.

As a result, entrepreneurs are still encouraged to continue innovation on services that work on more basic handsets.

Orange has been addressing this need in a number of recent initiatives.

As well as its International Developer Challenge, Orange has exposed its SMS API, in five new countries, in order to support local services and the growing entrepreneurial community in these countries. The SMS API will be made available to entrepreneurs in Cote d'Ivoire, Cameroon, Congo, Guinea, Niger and Senegal.

SMS A2P (Application to Person) is a fast growing business in the region, through the Orange SMS Web Service, start-ups will be able to develop new SMS-based services and benefit from a range of SMS volume discounts and tariffs offered by Orange.



Orange is currently present in 19 countries across Africa and the Middle East, and has more than 100 million customers in the region.

This presence gives the operator a substantial role in the economy and development of Africa through supporting the creation of mobile solutions to improve the daily lives of these communities.

In addition, Orange extended its acceleration and incubation efforts by opening a Orange Fab programme in Cote D'Ivoire. The startup accelerator is designed to help Ivorian startups, develop and improve initiatives that have a social impact.

Through Orange Fab entrepreneurs get access to distribution channels, marketing and the expertise of Orange employees.



3iv. Innovation spaces engagement with MNOs in Senegal

One essential component of success for innovation spaces is partnering or collaborating with other key players in the ecosystem.



SPOTLIGHT

CTIC Dakar

Senegal

CTIC Dakar is the leading business incubator in Senegal for IT and Mobile Services Entrepreneurs.



CTIC Dakar's mission is to empower high-potential and high impact entrepreneurs, advising them on their business models and strategies as well as connecting them with the ecosystem that they need for their businesses to succeed.

Since 2011, CTIC Dakar has supported 62 companies. 20 of them are now generating revenue.

In addition, 15 of these companies are directly focused on social impact, including initiatives that look to create software to support chicken farmers, and mlearning platforms supporting high school children.

What makes CTIC Dakar significant in this space is that they have established an advisory board that includes representatives from all the leading MNOs in Senegal.

CTIC Dakar also have a close partnership with Orange in Senegal who have provided financial support for the many events they run including coding days and hackathons.

As of 2014, CTIC Dakar achieved 75% sustainability with only 17% of their revenue dependent on external grants.

This has meant that CTIC Dakar are more independent when making decisions that affect their business. For example, this allows them freedom when deciding which organisations they partner with.

It recently established a partnership with Tigo in Senegal, who will support CTIC's core business focus through funding their accelerator programme.



6. M4D Impact - Programme Vision

Platform and Web Development

Goal: To provide a freely available, online resource that serves as a portal for all stakeholders in the M4D ecosystem. Thought leadership is provided through open access to data and insights to inform investment and design decisions, in order to drive scale and impact of mobile products and services in emerging markets

Local Content

Goal: To drastically increase the amount of locally relevant content available to consumers in emerging markets, work to ensure a more open internet for emerging markets who will receive it predominantly through mobile – which is currently dominated by mostly closed platforms.

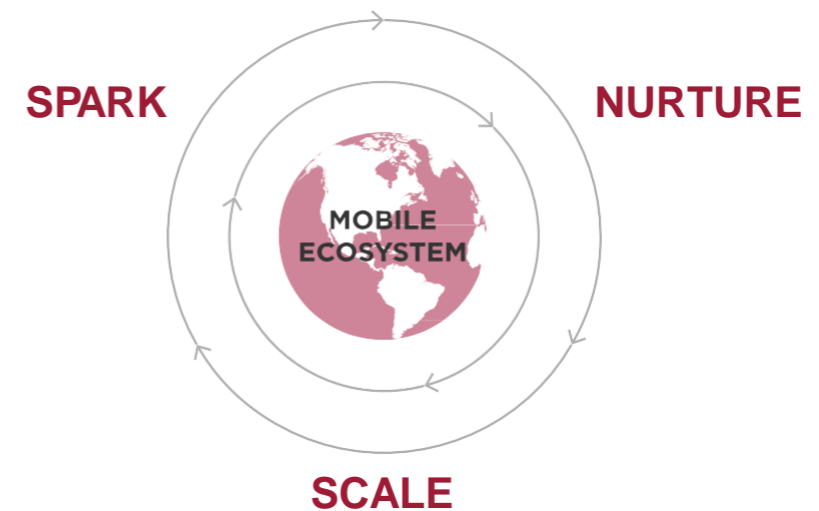
Partnering with MNOs through Value Added Services (VAS)

Goal: To help close the knowledge gap between the international development community regarding how best to engage with MNOs and the mobile industry to partner to deliver M4D services at scale.

Evaluation Services

Goal: To offer evaluation services (focused around analysing raw mobile customer usage data to improve uptake) to M4D Service Providers to help them address barriers to scaling crucial services to underserved populations in order to increase the social and commercial impact of these services.

OBJECTIVES & OUTPUTS



Insights & Analysis

Market Trends, Thought Leadership, Data and intelligence



Community

Collaboration and partnerships via convenings



Mobile for
Development Impact

Questions? Feedback?
M4DImpact@gsma.com



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