



# Case study

## Airtel Green SIM

MARCH 2015

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# Executive Summary

Green SIM is a packaged service offering available exclusively on the Airtel network which provides voice-based agricultural information to help rural farmers to improve their farming practices. Green SIM agriculture content services, as well its marketing and distribution are managed by IFFCO Kisan Sanchar Limited (IKSL) which is a joint venture between the Indian Farmers' Fertiliser Cooperative Ltd (IFFCO), the largest farmers' cooperative in India and Bharti Airtel, the largest mobile network operator in the country, with over 200 million subscribers.

In 2009, IKSL received seed funding from the GSMA mAgri programme to invest in their internal infrastructure for helpline services and also to setup processes to ensure content quality. This case study provides an overview of the Green SIM card evolution, and the achievements of IKSL to date.

YEAR LAUNCHED	2007
BUSINESS MODEL	Revenue share on SIM and airtime sales with mobile network operator; messages are operator subsidised for indirect benefits
TARGETED DEVICE	Basic/Feature/Smart phone
PRIMARY DELIVERY TECHNOLOGY	Outbound Dialling (OBD), SMS, decentralised call centre
PRODUCTS & SERVICES	Push voice and text content and access to agricultural helpline
MARKETS DEPLOYED IN	India
ESTIMATED NUMBER OF USERS	3.1m

## KEY INSIGHTS:

- **Agri VAS leads to indirect benefits for the operator:** The continuing exclusive relationship with IKSL for the Green SIM service has led to increased rural customer loyalty and acquisitions for Bharti Airtel.
- **There is a successful business model for Agri VAS outside of directly charging the consumer:** Through a revenue share agreement with Airtel on acquisitions and airtime sales for Green SIM subscribers, IKSL have been generating sufficient profit margins to sustain the business and specifically the agriculture messaging component. Farmers are not charged for the agricultural messages nor are they charged a premium for calling the farmer helpline. The company broke even in March 2011.
- **Successful adoption of rural VAS requires a large upfront investment in on-the-ground marketing:** IKSL used a number of on-the-ground mechanisms to acquire users for Green SIM-cards, particularly those in traditionally underserved areas.
- **Relationships with other ecosystem players are critical:** IKSL provides a platform for vital information dissemination to the user 'communities' of partner organisations, leveraging partner content and farmer networks to provide valuable bespoke services and increase acquisitions.

- **The style of the content is just as important as its substance:** The way a message is delivered to users has been found to make a real difference to how long users listen to content. Users prefer to listen to engaging content – either in the form of dialogues between two characters or content with a musical accompaniment.
- **There is an opportunity to diversify mAgri VAS offerings into more comprehensive services tailored to the needs of rural users:** During a customer survey, IKS� discovered that farmers don't just lack information about agriculture – they are also interested in learning about health, education and employment for their families. They now provide information in these three areas; these categories of messages have achieved some of the highest listening rates on the platform.



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# Introducing the Green SIM

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The Green SIM service was launched with an aim to provide farmers in rural villages with relevant agricultural information while giving Bharti Airtel a tailored offering for the rural market. Launched in 2007 after a successful pilot, the Green SIM card provides subscribers with regular network services, just like any other Airtel SIM card, but in addition it provides free voice and SMS messages with agricultural content. Customers also have access to a helpline (for which they pay regular network rates) where they can speak directly with agricultural experts to ask questions. Agricultural content is a mix of state-level, district-level and more localised (zone-level) information and is well received by the user base: 98% of farmers interviewed trusted the information they received from IKSL. Airtel Green SIM users receive four voice SMS and one text SMS daily on topics covering agriculture, education, health and employment. Green SIM cards cost the same as a regular SIM card, approximately 1 USD.



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# Partnership background and business model

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One of the critical success factors for the Green SIM service is the partnership between Airtel and the Indian Farmers' Fertiliser Cooperative (IFFCO) to leverage its extensive marketing, sales, promotion and distribution network.

Incorporated in 1967, IFFCO is the largest organisation in India responsible for distribution and production of fertilizer for farmers through a cooperative network, now totalling around 40,000 societies. Additionally, IFFCO runs 158 Farmers Service Centres where farmers can purchase agro-inputs. Through combined direct and indirect contact, IFFCO has the ability to reach 330 million people in India. The established contact points that IFFCO has with farmers provide Airtel with multiple channels where potential new customers might encounter their brand and become aware of the Green SIM service.

According to data from GSMA Intelligence, it is estimated that between Q4 2008 and Q4 2014, the India mobile telecoms market acquired over 340 million subscribers. More than 50% of these customers are expected to come from rural areas of the country. New customer acquisition in rural markets was necessary for Airtel to tap into a sizeable share of this growth and to help secure a leadership position in the Indian rural telecom market. IFFCO's incentive to enter into partnership with Airtel was to enhance its engagement with the farming community and its cooperative members by using mobile telecommunications as a platform. IFFCO has used the Green SIM to leverage mobile to expand the scope and scale of its agricultural extension activities and rural outreach.

The IKSL business model adopts a virtuous circle approach: Farmers receive free information and access to a qualified helpline at normal tariff; by being associated with helping farmers improve their livelihoods, Airtel gains rural market share, increased customer loyalty and further exposure as a leading mobile operator in India; IFFCO gains brand recognition, preference, and increased sales transactions by increasing the useful services it offers to farmers, providing both direct and indirect revenues through the sale of mobile connections and Green SIM recharges.

The GSMA mAgri programme provided a grant and technical assistance to IKSL in 2009-10 to strengthen their service by enhancing the content management system and to set up processes for quality assurance. These improvements were designed to help scale the service by increasing its effectiveness for small-holder farmers.

As a result of the early successes owed in large part to IFFCO's reach, in 2012 IFFCO signed an exclusive contract with Bharti Airtel for five more years, an indicator that Airtel views this value-added service as a beneficial offering in their portfolio. Evidence of the Green SIM's importance to Airtel is reflected in the following statistics:

- **Increased rural acquisitions:** 5% of all of Airtel's rural acquisitions come through IKSL and their field force. IKSL report an average of 150,000 new users acquired for Green SIM each month.
- **Increased rural customer loyalty:** 60% of customers stay on their Green SIMs for longer than 12 months – an improvement on the expected level of loyalty among these customers.

The number of activated Green SIMs has stayed relatively stable since 2011, despite a higher than average churn rate in rural areas. In August 2014, IKSL reported 3.1 million Green SIM users – with just under half of these users accessing push voice (OBD) content.

IKSL have extended their links with NGOs, local governments and businesses in order to provide tailored content to more than 40 target farming ‘communities’. IKSL partner with organisations who can offer free, locally relevant content, increasing the value proposition for end-users. They can also leverage these organisations and their own established and robust marketing channels to acquire new users.

The Green SIM has been shown to reach the poorest - 88% of users earn less than 2 USD per day and about 71% earn less than 1 USD per day. In December 2014 the prestigious Indian financial newspaper ‘The Economic Times’ presented IKSL with an award for the ‘Best Use of Telecom for Social Good - For Profit Company’.



# Country Context: India

	2008	2013
<b>POPULATION</b> (% OF WHICH RURAL) <sup>1</sup>	1,175m (70%)	1,252m (68%)
<b>GDP TOTAL</b> (OF WHICH CONTRIBUTED BY AGRICULTURE)	1.2tr (17.8%)	1.9 tr (18.2%)
<b>% OF LABOUR FORCE WORKING IN AGRICULTURE</b>	51% <sup>2</sup>	47% <sup>3</sup>
<b>CEREAL YIELD</b> (KG PER HECTARE)	2,638	2,975
<b>UNIQUE SUBSCRIBER PENETRATION IN Q<sup>4</sup></b>	13%	32%
<b>NUMBER OF mAgri SERVICES IN Q<sup>4</sup></b>	9	23

The rural population of India continues to grow, albeit at a pace slower than the country's urban areas. Though measures of poverty are disputed, the number of rural and urban poor decreased between 2009-10 and 2011-12, suggesting multiple coordinated efforts to alleviate poverty are having an effect.<sup>5</sup> While the cereal yield per hectare in India has increased since the last case study in 2011, the amount harvested per hectare remains less than half of the cereal production in the top ten high-yielding countries. Furthermore, changes in India's climate have strongly affected agricultural production, and some regions experienced unprecedented droughts in the summer of 2014. The sum of these occurrences help demonstrate that there is still a need for a service which aims to empower farmers and increase food security in India.

As mobile becomes an increasingly popular communication channel (unique subscribers increased by 20 percentage points since 2008), its potential to be used as a tool for social good increases in many sectors, including agriculture. The mAgri deployment tracker presently lists 23 services in India, up from nine in 2008, which illustrates increasing competition in this market.

The Telecoms Regulatory Authority of India (TRAI) is particularly active. Stringent control of processes before a customer is registered has created an environment where primarily interested customers are enrolled. IKSL views TRAI's actions positively, particularly because their customer churn rate has decreased since the regulation was enacted.

1. All statistics in this table are sourced from [data.worldbank.org](http://data.worldbank.org), unless specified

2. 2010 data

3. 2012 data

4. GSMA Intelligence. Unique subscriber penetration = number of unique mobile subscribers (not the total number of SIMs)/total population. Note that many subscribers in India will have multiple SIMs, which has in the past inflated the number of mobile subscribers thought to exist in the country. <https://gsmaintelligence.com/analysis/2014/05/measuring-mobile-penetration/450/>

5. <http://timesofindia.indiatimes.com/india/New-poverty-line-Rs-32-in-villages-Rs-47-in-cities/articleshow/37920441.cms>



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# Service design

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IKSL sell branded Airtel Green SIM cards which provide rural interest information in the form of 60 second voice messages alongside the usual Airtel network bundle. Agricultural information is pushed out five times per day. During the initial period five messages were sent as voice messages; from 2012, this was changed to four voice messages and one SMS (on weather or market information). Users receive content based on their agro-climatic zone, the cropping pattern of the zone and the crop calendar, or based on their membership in an exclusive group ('community') with focused services.

IKSL's helpline can be accessed by Green SIM owners by dialling a short code (534351) to speak to an agricultural expert at the standard market call rate. Call centres are available in 19 states with advice offered in 14 languages. IKSL's call centres have proved so successful that in 2012 they won a tender to manage government-funded Kisan call centres, which are run independently.



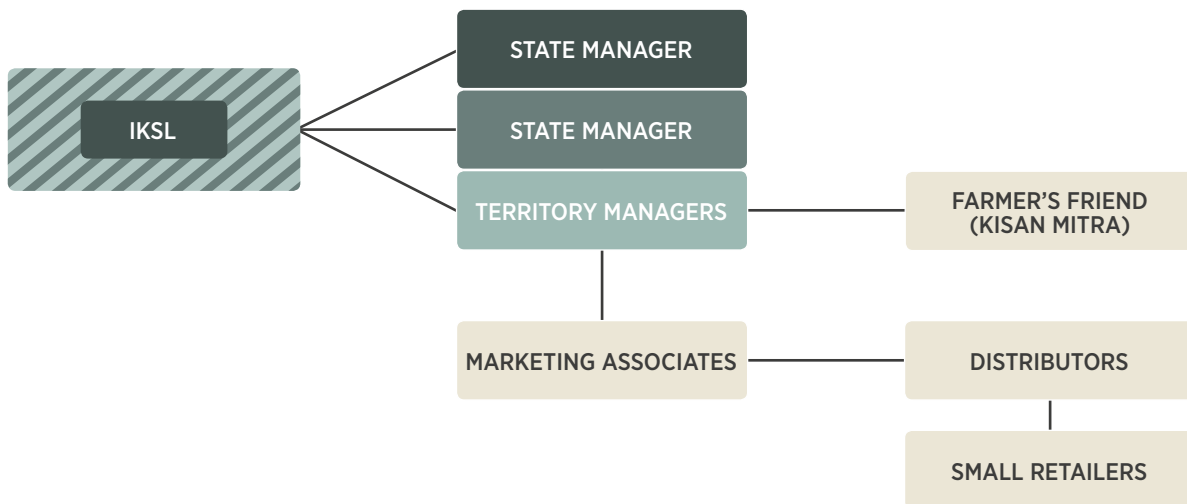
# Marketing the Green SIM

India contains 22 telecom ‘circles’, of which IKSL has a dedicated sales and marketing team for the Green SIM service in 19. Those teams include IKSL management staff who oversee 302 marketing associates (see Figure 1).

Marketing associates identify small retailers and distribute Green SIMs to them. They also engage in ‘canopy marketing’: often in the forecourts of one of the 40,000 IFFCO societies, a portable, branded canopy frame is erected from which the marketing associate distributes collateral, answer questions, explains the product and conducts customer acquisition activity. Commission is linked to two KPIs: a fixed percentage based on the number of users enrolled via a particular associate; and a variable component linked to achieving targeted quality parameters (e.g. loyalty and listening behaviour) of these subscribers. This approach enables IKSL to encourage marketing associates and their teams to attract ‘information hungry farmers’ to the service, who are likely to become loyal Airtel customers.

**FIGURE 1**

## STATE LEVEL ORGANISATIONAL STRUCTURE



Acknowledging the diversity in the rural landscape, IKSL have introduced a variety of ways to acquire new customers. Kisan mitra, or ‘farmer’s friend’, are respected local farmers recruited as knowledgeable members of the target farming communities. This model was introduced in 2013 and, at present about 2,000 kisan mitras are active in the field. These service ambassadors promote and distribute the Green SIM to groups of farmers in their village and in places nearby, while being incentivised on the basis of farmer enrolment. Due to their established position in the village, they lend further credibility to the IKSL brand. Being on the ground, they are able to educate potential users through live service demonstrations.

Through links with NGOs and businesses, whose content is delivered through the IKSL platform, IKSL adopts a 'ground force' for whom promotion of the Green SIM service is mutually beneficial. Groups of farmers acquired in this manner are called 'communities'. These partnerships are critical to the IKSL business model and enable IKSL to provide a "last mile" service to connect communities of rural farmers. Usually, these communities have a common subject of interest and are supported in the background by an institution or an organization with a commitment to the group/community.

## COMMUNITY CASE STUDIES

### THE SUGAR MILL FARMERS:

IKSL approached sugar mills with a proposition to increase their operational efficiency. By contacting their network of farmers with timely instructions and advice, they could decrease the amount of sugar cane they had to reject due to quality or time issues:

“The sugar mill is an ecosystem; the cane farmers have to maintain a certain level of quality... the quantities and the date on which it is to be brought to the sugar mill is also specific... For all these things they used to have... cumbersome manual processes... Now we have convinced them to use an SMS-based system. These transactional SMS messages come directly from the sugar mill to the farmers through IKSL's platform.

Mr Sudhakar,  
Head of IT and Business Development, IKSL

IKSL has links with five sugar mills in three states, Uttar Pradesh, Haryana and Tamil Nadu, and around 7000 farmers using the service via this model.

### FISHERMEN IN ODISHA:

IKSL have been commissioned by the Odisha state government to deliver messages to fishermen. Content is provided by the Indian National Centre for Ocean Information Services (INCOIS), and covers topics such as potential fishing zones and life-saving weather warnings:

“We posted a message, it was an alert about the likelihood of a cyclone, so the fishermen were returning back to the coast... The coast guard got curious as to why so many of them (the fishermen) were returning at one go and they stopped some of them and asked. The fishermen told them that “there's a likelihood of cyclone so we are returning back”... The coast guard got surprised as to how they got the information... Normally it is them who get the information and pass it around.”

Mr Sudhakar,  
Head of IT and Business Development, IKSL

IKSL recently celebrated the acquisition of 100,000 fishermen users in Odisha. The State Government of Odisha has engaged IKSL for enrolment of 100,000 additional fishermen, and these success stories have created a business opportunity to expand into other coastal areas.

# Content

## PUSH SERVICES

IKSL essentially offer two services: a generic agri VAS for the mass market and a bespoke service for certain communities. Agricultural content offered through push messaging is therefore twofold:

- **'Top down'** content is drawn from 108 geographical zones identified by IKSL. Information based on the seasonal calendar is shared, making farmers aware of the most commonly grown crops in a particular zone, and even includes weather forecasts.
- **'Bottom up'** content is targeted at 'communities' of farmers (such as the sugar farmers and fishermen in the examples above) who are historically difficult to communicate with. This particular content is usually provided by a government body, NGO or business who has an interest in sharing the information with this audience. The performance in terms of pick-up rates as well as average listening duration (ALD) of such communities is observed to be much better than that of the non-communities.

By tracking KPIs such as the average pick-up rate (APR) and average listening duration (ALD) of each message, IKSL have identified some interesting trends:

- Through A/B testing, IKSL have discovered that users prefer more stylised content. Messages recorded as a dialogue, or with music in the background, achieved higher ALDs than messages containing the same content read out as a dictation.
- Other messages popular with farmers were those related to agricultural treatments based on indigenous knowledge – e.g. spraying plants with sour buttermilk mixed with garlic to discourage wild cows/ stray animals from eating them. These methods are cheap and effective farming solutions which may have been forgotten in some areas over time.
- In a survey carried out during 2012 on behalf of IKSL,<sup>6</sup> subscribers indicated that they would also like to receive information related to education, health and employment alongside the usual agricultural content; after adding this additional content, IKSL achieved some of the highest ALDs on the platform. Typical examples include messages on prevention of disease, primary health and hygiene, the availability of educational courses in selected institutions and of scholarships for deserving students, and school admission schedules. IKSL view this additional content as an opportunity to provide a "one stop" information service for farmers on their platform, helping to increase loyalty and boost service usage.

Since April 2012, average listening durations have increased from 28 to 43 seconds, indicating that around 60% of users are now listening to the full 60 second message.

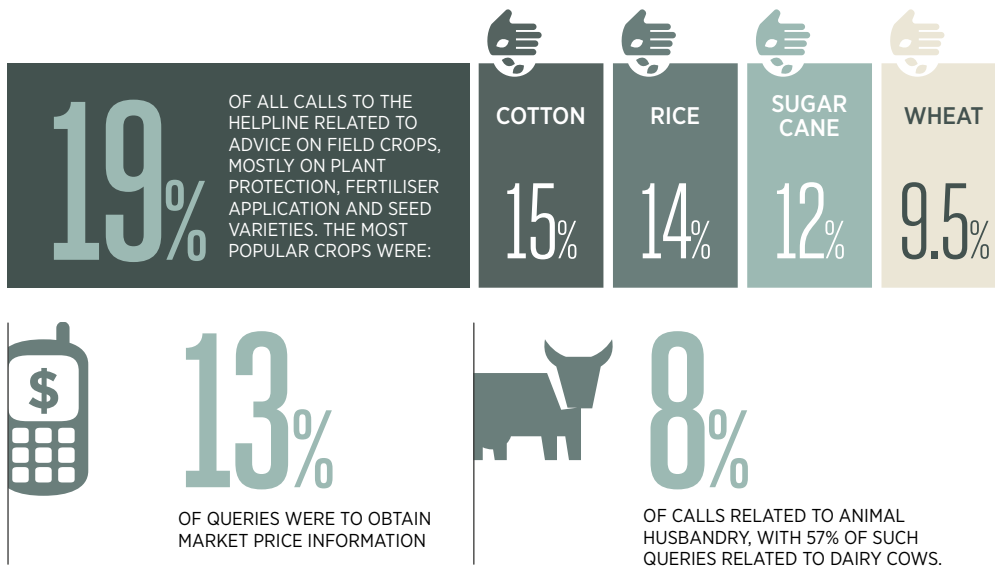
In addition to measuring KPIs, content provided via the Green SIM also regularly undergoes a two-step quality assurance process managed first by a panel of agricultural experts and subsequently by an independent research body called the Centre for Agricultural Bioscience International (CABI). CABI, an IKSL partner for the past several years, also performs content auditing and creates fact sheets on new topics when necessary.

6. By M/s Ipsos Research Private Limited, covering around 25,000 households in the states of Maharashtra, Uttar Pradesh and Karnataka.

## HELPLINE

IKSL's expert helpline provides bespoke advice to farmers at the usual network rate.

Through calling back helpline customers, IKSL track which information users are able to implement on their own farms. They found that farmers tend to act in situations with an immediate damaging impact on their livelihoods; least acted upon was advice which required future actions or action over a longer period of time. This knowledge has helped IKSL focus their content offerings to short-term and immediate solutions that the end users need.



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# User Success Stories

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The farming successes enjoyed by the Green SIM users can broadly be grouped into four categories derived from the receipt of actionable information to: prevent crop loss, increase profit from crop sales through informed pricing, boost agricultural production, and to enable better, more cost-effective use of farming tools such as insecticides and healthy diet regimens for livestock.

## IMPROVED CROP YIELD AND INCREASED INCOME

Odisha state: **Harekrishna Prusty** made a query to get advice on pest control for his crop. After being advised to spray a chemical that would eliminate the pest at a low cost, he was able to successfully farm an additional eight acres and increased his net income from the harvest by 8,600 INR per acre.

## ACCURATE MARKET PRICES TO EARN MORE FROM CROP SALE

Maharashtra state: **Bapurao More** obtained the price for which soybeans were being sold at a nearby market from the service instead of relying on a middleman. As a result, he earned 150 INR more per quintal (equal to 100 kgs) sold of his crop.

## WEATHER INFORMATION TO PREVENT COSTLY WASTAGE

Haryana state: **Rajender Singh** listened to a message on weather forecasting that suggested he should delay spraying his crop due to impending rains. Spraying before the rains would have meant the loss of 350 INR for each of his 15 acres, or 5,250 INR total.

## INFORMED PLANTING TO PREVENT LOW CROP YIELDS

Himachal Pradesh: **Ranjit Singh** experienced a particularly low crop yield in 2013. He called the Green SIM helpline to get help with selecting the wheat varieties he should plant to boost production, spending 500 INR to do so. With the information gained and applied, Ranjit experienced an income increase of 21,000 INR, achieving a profit of 20,500 INR.

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# Looking ahead

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## MOBILE DATA PRODUCT DEVELOPMENT

Airtel estimates that 50% of the current IKSL user base have data-enabled handsets, and of these users, approximately 20% use data on their phones. IKSL plan to experiment with content provision via the mobile internet, and are trialling an mAgri portal which will provide vital information to farmers online. They envisage using pictures and video to augment the current service.

## BUILDING ON WHAT WORKS

The IKSL partnership has considered offering life insurance products to their customer base, but there was low demand for such a service among the target audience. Similarly, mobile financial services of any sort has historically had low levels of adoption by Indian consumers, owed in part to low technological literacy, particularly in rural areas.

Despite the multifaceted commercial successes of the Green SIM, there are presently no plans to launch the service in markets outside of India. Instead, IKSL intend to continue building on the gains made during the past five years of operation, spurred on by recognition of their Green SIM card: In December 2014 the prestigious Indian financial newspaper 'The Economic Times' presented IKSL with an award for the 'Best Use of Telecom for Social Good - For Profit Company'. Nevertheless, IKSL has been sharing experience and expertise with a few countries interested in developing similar initiatives.

## THE NEXT FEW YEARS

The exclusivity agreement that IFFCO has in place with Bharti Airtel until 2017 should help ensure that farmers and fishermen can continue to benefit from information that strengthens food security in India and enhances lives. Continued success for the IKSL partnership will be reliant on the smooth functioning of their brand marketing operations to help acquire and keep customers, as well as the incorporation of relevant content from other verticals that their customers have an interest in so that usage of the platform continues to grow. Both activities will enhance the value-add that this VAS provides to Airtel, and help ensure that IKSL can maintain and increase the level of scale it has achieved to date.



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The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences.

For more information, please visit the GSMA corporate website at [www.gsma.com](http://www.gsma.com). Follow the GSMA on Twitter: @GSMA.



## Mobile for Development

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Mobile for Development 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 impact and stimulate the development of scalable, life-enhancing mobile services.



## mAgri

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mAgri catalyses scalable, commercial mobile services that improve the productivity and incomes of smallholder farmers and benefit the agriculture sector in emerging markets. The GSMA mAgri Programme is in a unique position to bring together mobile operators, the agricultural organisations and the development community to foster sustainable and scalable mobile services that improve the livelihoods of smallholder farmers. This report is part of the mFarmer Initiative, launched by the GSMA mAgri Programme in 2011 in partnership with USAID and the Bill & Melinda Gates Foundation.

For more information about GSMA mAgri Programme visit our website at:

[www.gsma.com/mobilefordevelopment/programmes/magri](http://www.gsma.com/mobilefordevelopment/programmes/magri)

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Published March 2015

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