



mAgri

mKisan Baseline Report Executive Summary
A snapshot of the mKisan service in March 2013

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Introducing mKisan

mKisan is a mobile value-added agricultural service (Agri VAS) that provides farmers in India with practical, up-to-date advice and information on crop agronomy, animal health, weather forecasts and market prices for major crops through SMS and an interactive voice response (IVR) service. mKisan is operated by the mobile service provider Handygo with support from CABI and ILRI who provide agronomy and livestock content, and DigitalGreen. Handygo has received funding from the GSMA Mobile for Development Foundation as part of the mFarmer initiative. mKisan came online as a replacement for an earlier service, Behtar Zindagi, which offered a wider range of information on agriculture, health and education.

By the time of the baseline mKisan was operating in line with financial projections, achieving more than 75% of projected revenues for the month. In March 2013 Handygo had generated average revenue per user (ARPU) of \$0.89 (USD). Costs are not reported here due to the early stage of the service.

This baseline report presents a freeze-frame of the mKisan service 3 months after its launch in January 2013. It is intended to provide recommendations for service improvement and a starting point against which to evaluate the progress of the service over the coming year.

March 2013 Service Overview

○ Number of registered users (bought at least one subscription package)	327,338
○ Number of active users (registered users who accessed the IVR service)	169,994
○ ARPU (USD)	0.89

Key recommendations

- **Help potential customers and service users to understand the range of mKisan services and full value proposition** through improved marketing, on-the-ground distribution and ongoing communication in order to:
 - help potential customers become aware of the service and its benefits;
 - encourage customers to use all available channels;
 - educate service users about the pricing model and how-to-use.
- **Launch the mKisan helpline** to provide customised advice and increase the perceived value of the service.
- **Perform user testing** to improve service design.
- **Encourage those who are aware of the service to try it** by introducing a free trial period.
- **Market the service with value proposition of in-demand content** to increase repeat usage; feature the most valuable content in marketing communications such as advice on how to start a new type of farming.

Market overview

mKisan is available across six states in India: Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Maharashtra and Uttar Pradesh.

In Q1 2013, there were 333m unique subscribers in the Indian mobile market; this figure is projected to grow to over 500m by Q4 2017.¹ However, India is still a huge untapped market – with a population of over 1.2billion, market penetration was 27%, projected to grow to 39% by Q4 2017. 15 mobile operators are active in the area, leading to an extremely competitive market with high churn rates among prepaid subscribers.

The mAgri Deployment Tracker and a case study in Gwalior District (Uttar Pradesh) revealed a number of alternative sources of agricultural information available to the target market. At the time of launch, mKisan estimated a target market of 13.8m rural customers.

Available sources of agricultural information

	Product name	Offering	Delivery method
Mobile/Landline services	Avaaz Otalo (Avaaz De)	Market intelligence, education, peer-to-peer, agricultural news	IVR
	eSAgu (IIIT)	Learning/advisory	SMS/Web
	IFFCO Kisan Sanchar Ltd	Learning/advisory, market intelligence, weather, agricultural news	Helpline IVR
	Kisan call centre	Learning/advisory	Helpline (landline only)
	Reuters Market Light	Market intelligence, learning/advisory/weather/agricultural news	SMS
	Nokia Agricultural Life Services	Market intelligence, Learning/advisory, weather	SMS (closed Q4 2013)
	Dr DEKALB (for farmers growing DEKALB corn)	Learning/advisory	Helpline SMS
Person-to-person services	Department of Agriculture Extension	The government provides extension on agriculture, livestock and horticulture separately, from District down to village level	
	Agriculture University	Research and education	
	Department of Agriculture and Horticulture	At village level the main source of information is a government worker appointed to the <i>panchayat</i> (local government) in the village, called the <i>Gram sevak</i>	
Traditional media	<i>Mandis</i> (Agricultural Markets)	Money lenders in the <i>Mandi</i> offer agricultural information as well as short term loans	
		including various television shows, radio programs and written media	

¹ Data from GSMAi

The case study indicated that these alternative sources of information have uneven reach and limited access, especially for small farmers.

The customer – who is using mKisan?

Handygo reported that mKisan reached 169,994 unique users in March 2013. The following analysis of the demographics is based on random sample of 975 customers who were profiled for the baseline report.

Around 20% of profiled customers fall below the international poverty line of 1.25 USD a day (fig. 1). It is encouraging that Agri VAS are reaching some of the poorest farmers in these regions, even though they are a small segment of the total user base. The challenges to reaching more poor farmers come down to the cost of a handset, connection fees, and service costs. Network connectivity in rural areas is also generally lower than in towns and cities, making these customers harder to reach.

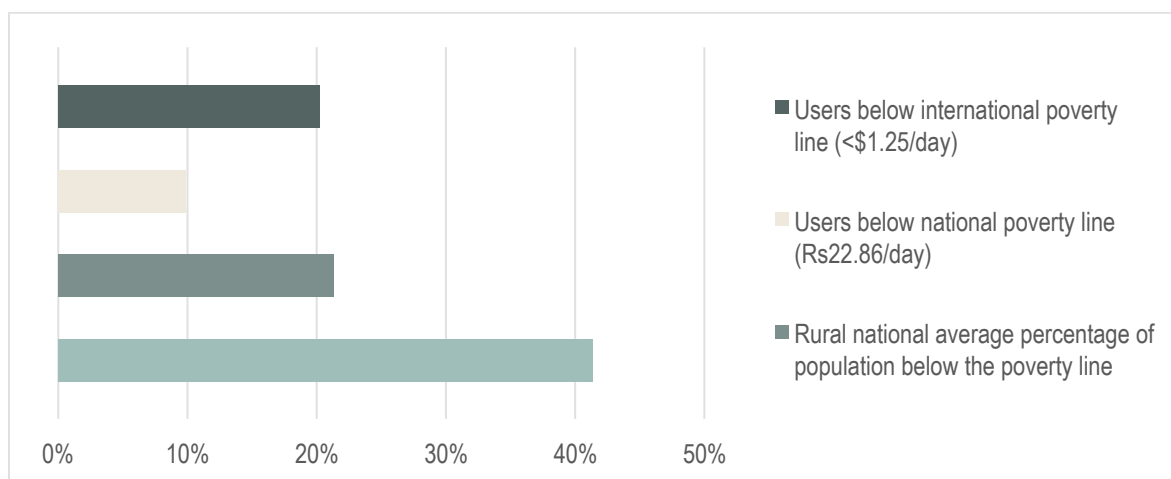


Figure 1: Sampled mKisan customers falling below the poverty line compared with national and state averages

Only 11% of the profiled sample were female: mKisan is reaching less women than are represented in the agricultural labour force nationwide (37%)². Women in India typically have lower levels of literacy and are less likely to own mobile phones or land.

The majority of profiled mKisan customers are young – 67% were below the age of 29 (fig. 2). The median age is 25 years, suggesting a slightly younger age profile than the national population (mean age of 26.8 years). Only a third of those surveyed (33%) were 30 years or older. This finding suggests that early adopters of mobile agriculture services come from younger generation of farmers.

² Extrapolated from World Bank data (2011)

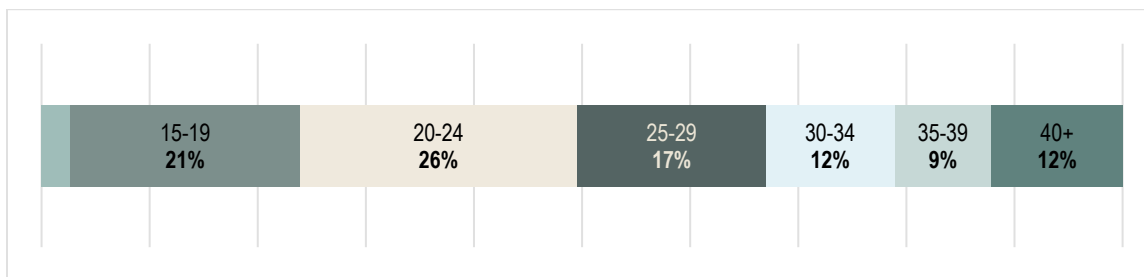


Figure 2: Age split of 975 randomly selected profiled customers

The profiling confirmed that the mKisan service is reaching small-holder farmers among other segments (fig. 3). Over a third of profiled users were small farmers with less than two hectares of land, while another third of customers appeared to be farmers with larger farm sizes. A significant minority possessed no land and had no crops or livestock. These customers include traders and students, and might include agricultural labour force who don't own their own land.

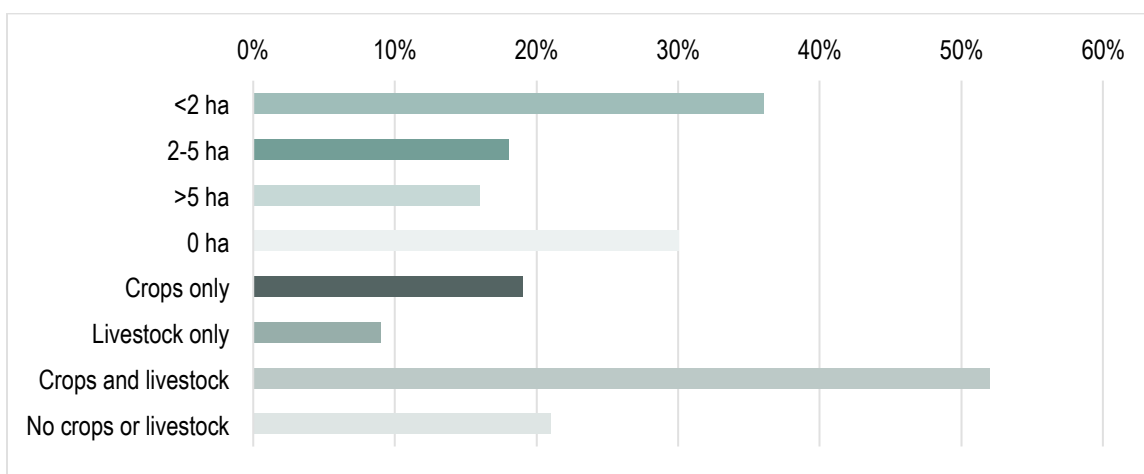


Figure 3: Farm size and type of 975 profiled mKisan customers

The customer journey

Further data analysis and user interviews provided insights into how these users interact with the mKisan service and what their expectations and information needs are. It also uncovered some of the challenges to building a regular user-base. The baseline research has found that although farmers could benefit from the service by making better informed decisions, whether choosing the right time for planting, selecting appropriate seed variety or negotiating a better price with the trader, there are still a number of bottlenecks on their journey from being a potential customer to becoming a regular user of mobile advisory services. This study has mapped out the bottlenecks along the customer journey with an estimate for the percentage of customers 'stuck' at each stage and possible reasons for customers failing to make the transition to the next stage (fig. 4).

Two prominent bottlenecks are: a basic unawareness of potential customers of the service and its value proposition due to the lack of significant marketing; and a ‘trial’ stage, when after initial trial customers do not come back to the service.

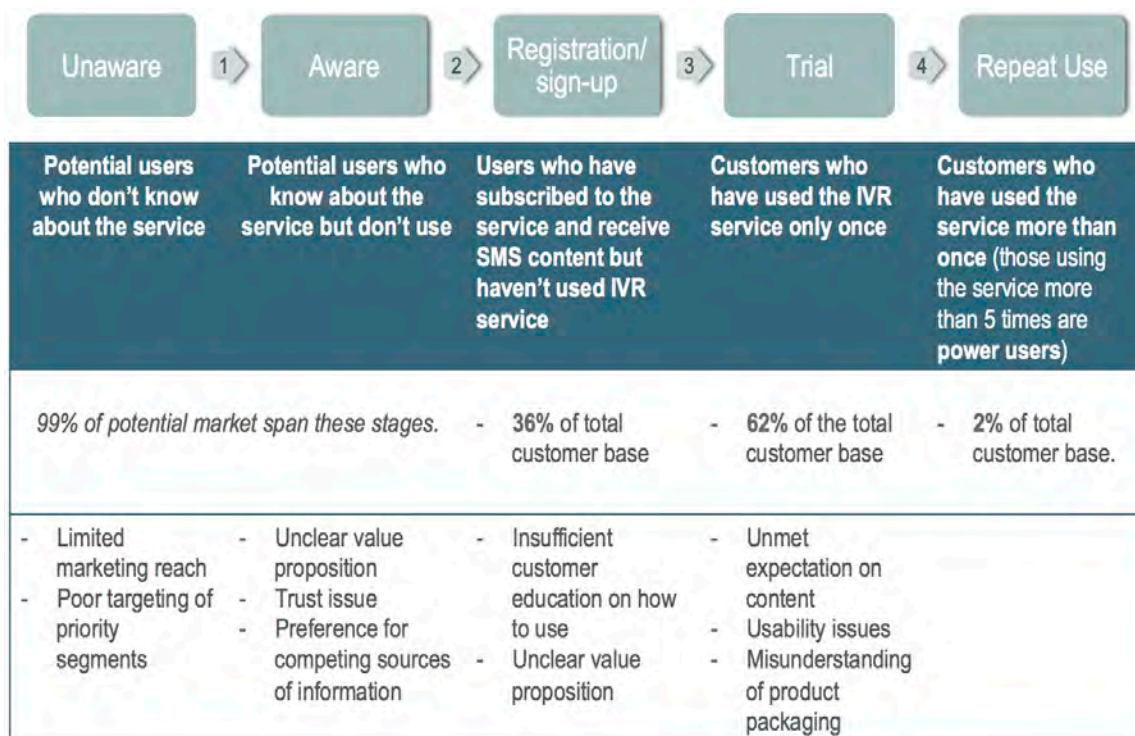


Figure 4: The mKisan Customer Journey calculated from call logs for March 2013.

Transition 1: moving customers from ‘Unaware’ to ‘Aware’ stage

In March 2013, mKisan reached 169,994 subscribers – just over 1% of the potential market.³ There is insufficient information about the remaining 99% to classify them as “Aware” or “Unaware”; however interviews with agricultural specialists and non-subscribing farmers in Gwalior District found that most there were not aware of mKisan.

Barriers:

- Poor targeting of priority segments
- Limited marketing reach

Recommendations:

- Increase on-the-ground presence through partnership networks and farmers groups. Focus on demonstration and customer education on value proposition.
- Collect users' demographic information to improve marketing strategy and business intelligence

mKisan is not reaching enough relevant potential users who are likely to become regular customers. The service is mainly marketed by blast SMS and outbound dialled (OBD) messages, in line with the standard marketing practices for VAS. Although this method reaches a large potential customer base and is a cost-effective way of acquiring new users, it is not proven to encourage re-subscription. It also has significant limitations when it comes to customer education and targeted marketing with customised value proposition. Collecting demographic data such as gender, region, district and occupation would help Handygo to customise value proposition and increase customer retention. However, it is understood that asking users for demographic data discourages service uptake and reduces service accessibility. This may be especially pertinent in a market like India's where customers are not accustomed to forming relationships with service providers. However there is still a possibility to collect profile information on an optional basis, in order to further customise the value proposition, especially for regular customers. In combination with transactional history, profile data would be valuable for business intelligence, user research, and ultimately service improvement.

Targeted marketing was carried out at agricultural fairs and markets. The baseline study has identified that this type of on the ground marketing is relatively successful: the agricultural fair in Gwalior (after which the case study was conducted) ran for 30 days and led to 2500 new subscribers to the service.⁴ Very few farmers or agricultural specialists in the area had heard of the service from other sources. The states in which mKisan has launched are large, and the impact of this marketing method seems to be small.

Handygo could extend their targeted marketing to farmers outside of agricultural fairs. Connecting with farmers groups, cooperatives and women self-help groups may give mKisan an opportunity to speak to more farmers for longer while maximising the quality of education around the service, and to reduce the cost for on-the-ground distribution. Making links with partnership networks (e.g. in agri-businesses) could help these farmers to connect with inputs and services.

Transition 2: moving customers from 'Aware' to 'Registration/Sign-up' stage

As mentioned, it is not possible from quantitative information currently available to differentiate and provide the segments' size estimate for the potential customers who are unaware of mKisan and those who know about the service but do not wish to sign up. However qualitative data from the case study highlighted some of the barriers for attracting new customers who are aware of the service to sign-up for the service.

Farmers may prefer to obtain agricultural information or services from other sources. A range of sources of agricultural information is available in India including traditional information sources such as agro-dealers and market traders. The case study in Gwalior district found evidence that existing sources of information may not be meeting farmers' demand, especially for poorer farmers, who are less able to access conventional sources. However, many of these services are free and have built up a loyal customer base. One non-subscribing farmer said: *"I think Rs30 is too much for some information which is available for free."*

⁴ Information provided by Handygo

Barriers:

- Possible preference for competing sources of information
- Unclear value proposition of mKisan
- Trust issues

Recommendations:

- Better education on value proposition through marketing and distribution
- Leverage on partners' trusted names
- Launch the mKisan helpline to provide customised advice and increase the perceived value of the service.

Users and non-users interviewed for the case study identified the following roles that they would like a service like mKisan to play:

Farmers' expectations of mKisan

Farmers' needs	Expectation met
Agronomy information regarding farming systems, livestock production, health and marketing, field preparation, <i>new ideas</i> in horticulture and floriculture how to maximise productivity by growing crops with little water	Most of this information is available through the service
Selecting and obtaining agricultural inputs including pesticides, fertilisers, seed varieties and best practice for their use in order to maximise productivity	Met to some extent
Government facilities including support for buying seeds and fertilisers	Yes
Market information including current prices for produce at local markets	Yes

Farmers especially expressed their capability with growing traditional crops and their wish to learn about new techniques: *"I would like to experiment and would like to know about what new things I can do. Staple crops like rice etc need a lot of hard work and also water. I would like to do something different."* Further data analytics confirmed this preference, as farmers using information services across all user groups were most likely to access information relevant to the establishment of new crops or livestock (fig 5). mKisan should be marketed on the strength of the information that farmers most want to receive.

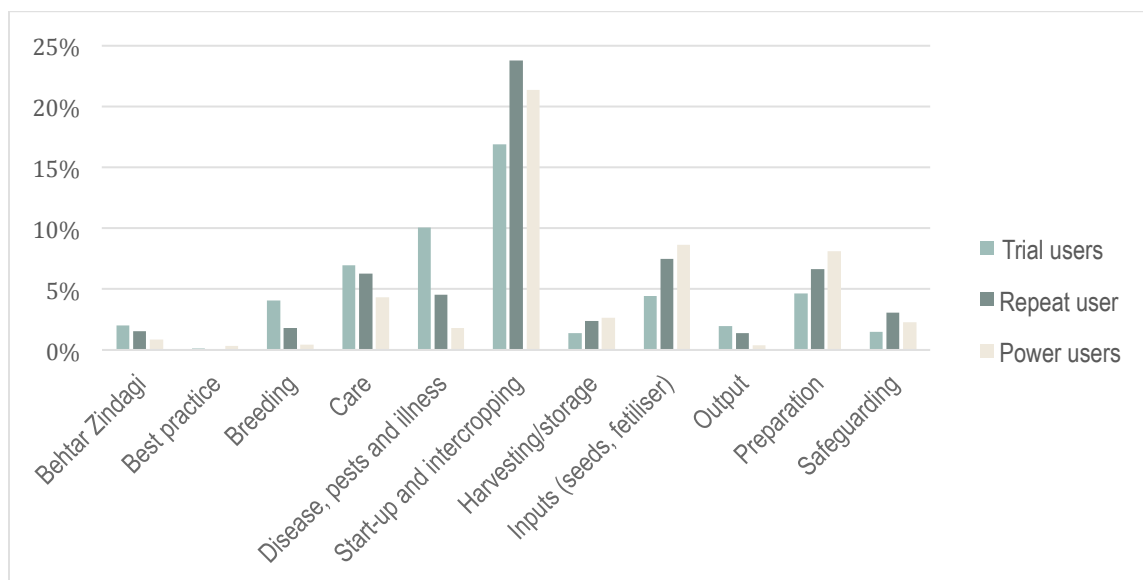


Figure 5: The most popular content types (by percentage of total count of accesses) across static information services (agronomy and livestock) for all customer segments. Behtar Zindagi was mKisan’s predecessor service, information from which is still accessible. Power users are those who used the service six or more times during March 2013.

Education of the customers is critical to ensure that they understand the service, know how to use it and are aware of the full range of information. Incentives for agents doing the ground acquisitions could be linked to the usage rate as well as a number of subscribers acquired, to incentivise quality demonstrations and educational time with the end-users.

When accessing information over the phone, farmers expressed a preference for two-way contact rather than an automated information system. As one farmer said, “Until the information exchange is two-way, there cannot be learning.” mKisan had not yet launched a helpline at the time of the baseline survey. Launching and marketing the helpline will increase trust in and usability of mKisan.

Farmers who learn about the service for the first time may not trust mKisan as a source of information: “Initially we had apprehensions about the reliability of the info. Whether it is being given because of some ulterior motive.” mKisan’s marketing campaign should further emphasise the calibre of its content partners, CABI and ILRI, as impartial sources of information on agriculture and livestock.

Transition 3: From Registration/Sign-up to Trial

Access to service is sold in packages of 10, 15, 20 or 30 rupees, each of which allows service access for a corresponding number of days. Upon purchase of one of the packages, the customer receives regular push SMS messages with agro-met advice and market price information. This subscription plan also entitles the customer to access advisory services through an IVR channel for the respective number of days (10, 15, 20 or 30).

Barriers:

- Lack of understanding on how-to-use and pricing model
- Lack of understanding on the full range on information available upon subscription

Recommendations:

- Ensure that both SMS and IVR services are marketed; incentivise on-the-ground agents based on the usage levels to encourage service demonstration.
- Use push SMS to encourage registered users to access IVR service
- Harness learning opportunities by targeting customer segments with user testing and content and service evaluation

However call logs from March 2013 show that 35% of the total customer base subscribed to the service but did not attempt to access the IVR channel.

Although this segment of users may be satisfied with the push content, they may not be aware of the full extent of the service offered by mKisan. Other users may be dissatisfied with the push content, or consider it insufficient for the price of subscription package. Communication with these users is essential, as they may become potential repeat users with a better understanding of the value proposition. Existing push content should be refined and tested in various formats to make sure it encourages subscribers to use the IVR channel. This approach should also target users who may have forgotten the IVR number.

The motivation of this customer segment is not well understood at this point; future monitoring will address this.

Transition 4: Moving customers from 'Trial' to 'Use' stage

Barriers:

- Lack of understanding around package model
- Problems with service design

Recommendations:

- Help users discover the agronomy and livestock content
- Offer pay-as-you-go model for infrequent users
- Perform user testing to ensure the menus are intuitive and easy to navigate; reduce number of steps to reach content
- Ensure on-the-ground agents are communicating what to expect and what a user gets when buying a package
- Analyse the success of SMS reminders

Trial appears to be a very important step in customer experience, and the biggest drop-off point for the users.

Analysis of mKisan call logs shows that over 97% of IVR customers used mKisan on only one day in March 2013⁵ (fig. 6). However, the smallest service package entitles users to access the IVR service for **10 days**. It is apparent that most of the customers have not been taking full advantage of this opportunity.

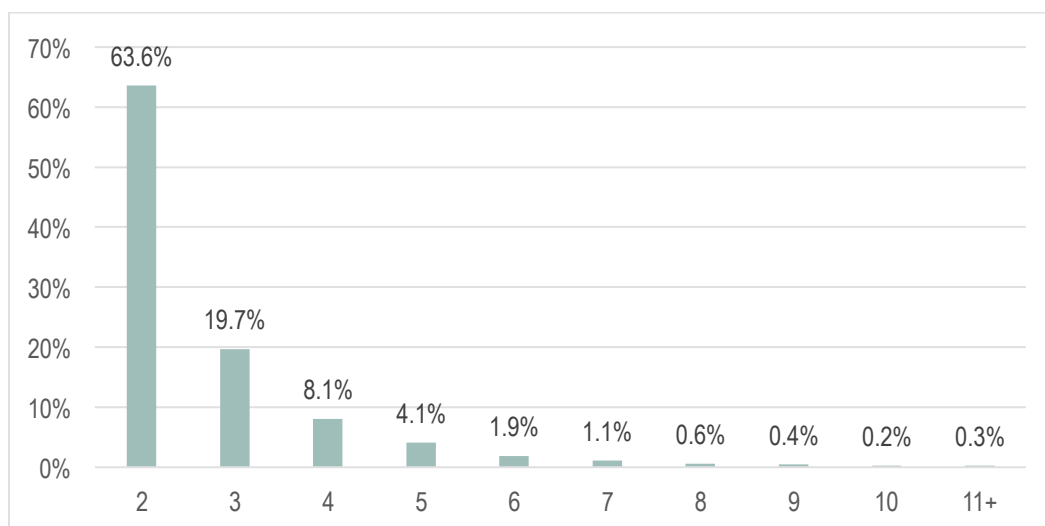


Figure 6: Number of days repeat customers accessed IVR services in March 2013

⁵ Due to the nature of the data, it is not possible at this time to increase the grain to 'number of calls' – number of days used is the best measure of return rate currently available.

Call logs show that 95% of trial users accessed the service for up to two minutes only. This could be explained by the compact nature of the information most accessed at this stage: market prices (57% of all accesses) and weather (31% of all accesses). It is possible given the data under examination that this segment of users only wishes to access content once a month. If the customer is only interested in e.g. market prices, or a specific piece of agronomy info, they may have gained all the info needed in one sitting and may return next month or even later. Handygo could offer a pay as you go (PAYG) pricing model more suited to this type of customer.

A small minority of trial users (5%) accessed mKisan for more than two minutes; a few accessed the service for over an hour. Trial users may have been unaware that their subscription purchase entitles them to at least 10 days access to mKisan. Handygo currently send out SMS reminders encouraging subscribers to use the service. Further analysis around these reminders may suggest where and whether this approach is effective. Field agents must also educate the user on this point at the time of subscription.

It is also possible that customers who have tried the service but didn't come back found the service difficult to navigate, had trouble finding what they were looking for, or were expecting a different type of service. Problems around service design define the customer's first experience. The case study highlighted that some farmers found the IVR service difficult to use and were not impressed by the content they accessed; one farmer said: *"The service takes a lot of time but at the end one gets lesser information."* User testing should be performed to explore these hypotheses in more detail.

Handygo currently send out SMS to inform users about new content related to previous user behaviour. Future analysis should help to assess the success of these messages. However, this pigeon holing of customers into one content stream may not be ultimately valuable to the service providers. Analysis of use across content categories shows that repeat users are more likely to access a wider range of content, whilst trial users tend to access only one type of information. mKisan may encourage repeat use by leading customers to content they haven't explored before.

Although market information is demanded by a higher number of users at this time, there is a clear evidence that other types of information have great potential once discovered by the user. Firstly, users who reach advisory services spend more time listening to the content (fig.7), and secondly they are more likely to become repeat customers which suggests high level of quality and satisfaction with these type of services (fig.8).

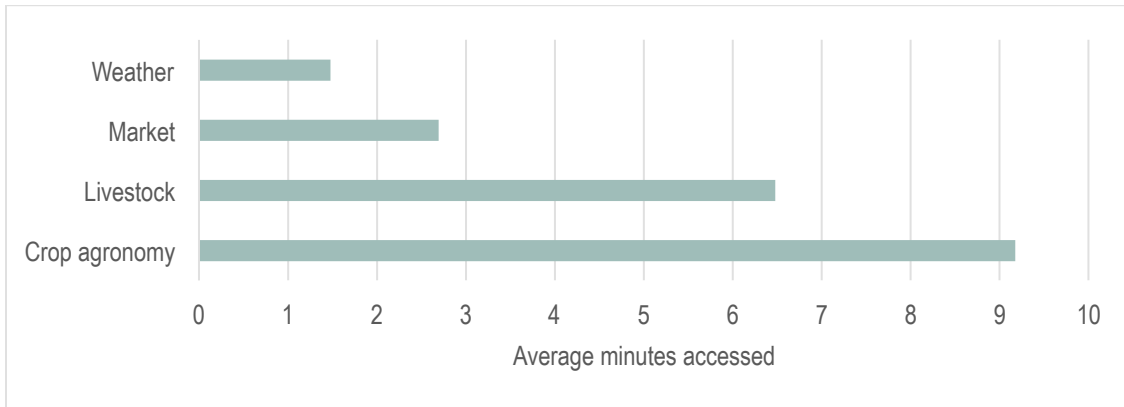


Figure 7: Average time spent listening to each content type from across all customer segments.

Crop agronomy and livestock have attracted the lowest number of customers of all the services. However, when users accessed these services they listened for longer – an average of over 9 minutes per user for crops and 6.5 minutes per user for livestock. There is an indication that the quality of the content is satisfactory, as 20% of the customers who accessed crop advisory became repeat visitors in March 2013, compared to 1.5% of market information users.

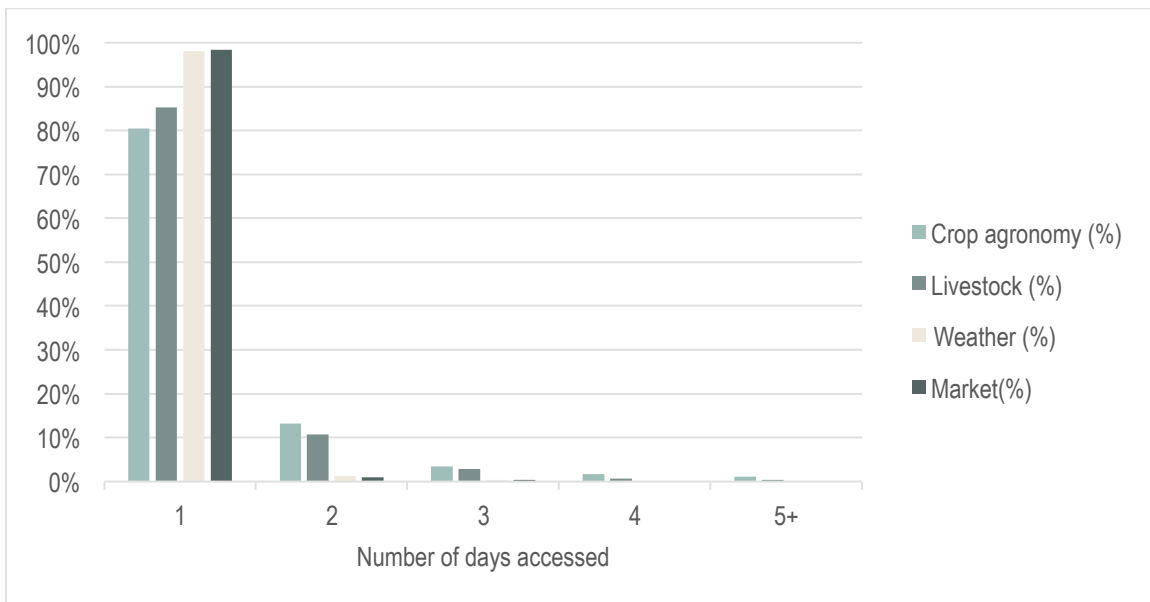


Figure 8: Number of days unique customers accessed IVR services in March 2013 – note that crossover exists between services such that a customer accessing agronomy may also have accessed markets

Although crop agronomy and livestock are not the most popular content categories with users, they attract repeat customers and tally well with farmers' needs. mKisan should be marketed on the strength of agronomy and livestock content in order to attract repeat customers.

Strengthening the segment of repeat and power users

In March 2013, only 2% of the total customer base accessed the service on more than one day. Of these, 95% are in the repeat user segment, accessing the service between two and five days during the month. The most popular content with this segment was market information (44% of accesses), followed by agronomy (33%), weather (17%) and livestock (5%).

Repeat users are more likely to be taking full advantage of the service: 22% of repeat users use three of the four content types available. In customers accessing the service more than five times (the *power users*), this figure jumps to 60% (fig. 9).

Barriers:

- Lack of relevant content for livestock farmers

Recommendations:

- Extend services (e.g. market prices) to include livestock information
- Generate more power users by marketing most popular content

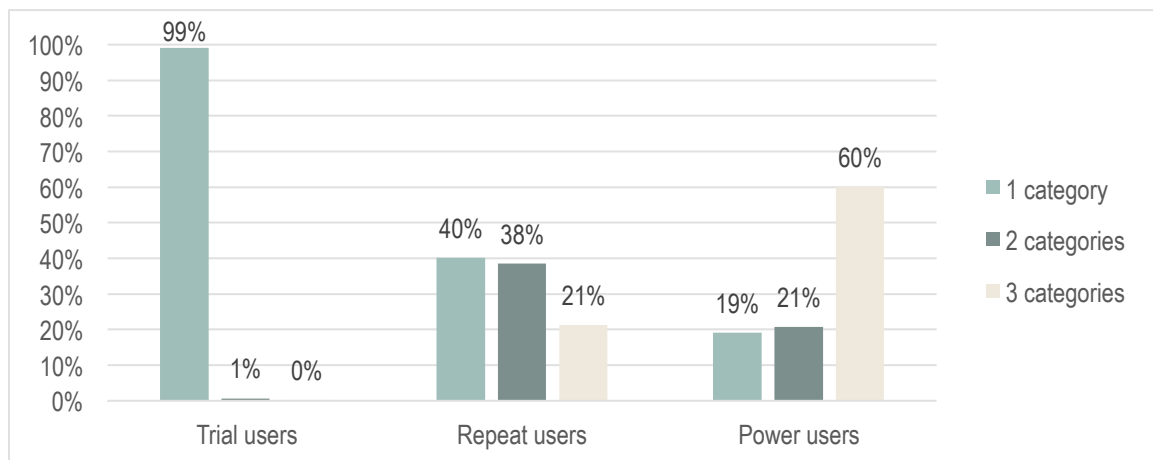


Figure 9: Number of categories of content accessed by each user segment.

These three categories tend to be agronomy, market prices and weather. The latter two content types are currently less relevant to livestock farmers. mKisan should consider extending services to provide more information for this group.

In terms of static content, information about new crops and farming practices drives service use, especially among power users. mKisan should focus on marketing the service by featuring the strength and utility of this content.

Next steps

The methodology for the baseline study summarised in this report breaks the conventional scope of monitoring and evaluation review and intends to provide actionable insight and some level of business intelligence to the service provider as well as to the wider mobile agriculture industry. This is because we recognise that the success of business-lead services could be more adequately assessed by a business-oriented framework and appropriate user segmentation. Structured business intelligence insights combined with qualitative data collection are more likely to result in the 'learning' component than a single report on progress against a set of indicators. The mFarmer initiative intends to apply a segmentation approach when analysing the behaviour change within the target population across all four mFarmer projects. It will also assess the impact created within the segments of users with higher likelihood for attributable changes in income and livelihood, such as repeat and power users, for one of the selected projects.

About the GSMA Association

The GSMA represents the interests of mobile operators worldwide. Spanning more than 220 countries, the GSMA unites nearly 800 of the world's mobile operators with 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in industry sectors such as financial services, healthcare, media, transport and utilities. The GSMA also produces industry-leading events such as Mobile World Congress and Mobile Asia Expo.

For more information, please visit the GSMA corporate website at www.gsma.com. Follow the GSMA on Twitter: @GSMA.

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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

About the GSMA mAgri Programme

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.

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GSMA mAgri team is closely working with the ALINE Initiative within Firetail Consultancy, for the monitoring and evaluation of GSMA funded projects.

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