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Version 1.1

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e-Krishok

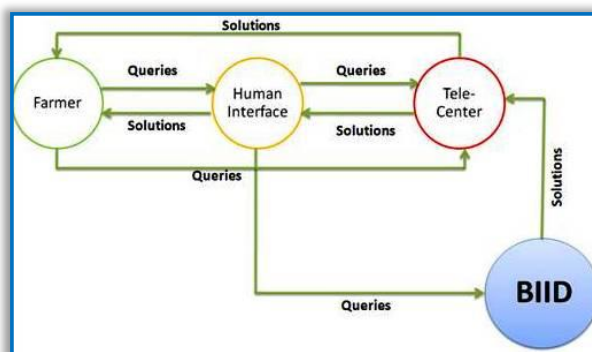
Submitted by Bangladesh Institute of ICT in Development (BIID)

Background on e-Krishok

Bangladesh Institute of ICT in Development (BIID) launched an ICT-based initiative known as e-Krishok (e-Farmer) in October 2008 in the agricultural sector in Bangladesh. The idea for e-Krishok arose out of the need to provide effective extension services in the agricultural sector in Bangladesh.

BIID has been supporting local cellular network operators and telecentre networks in more than 500 locations all over the country in order to reach rural communities with various ICT-based informational and advisory services. It was, therefore, logical to use this platform to introduce e-Krishok to the wider farming community. e-Krishok evolved as a major campaign to bring the benefits of ICTs to the grassroots level in rural Bangladesh.

The information delivery model applied by BIID is quite simple. A rural telecentre owner/operator is trained to use the user-friendly Bangla content available on the e-Krishok website. It includes farming technology, new varieties, disease prevention, input information (source and price), best practices and Frequently asked questions FAQ on agri-problems. A number of success stories from e-Krishok members are also being featured on the web. Many of these centres were set up by local entrepreneurs with micro-credit obtained through various micro-credit organizations such as Grameen Bank. The centre operator browses the web portal to locate the solution to a farmer's problem or query. In case she or he is unable to find a solution, she or he sends an e-mail to info@ekrishok.com. An agriculturist managed by BIID responds to all queries sent to this address on a daily basis. Hence, in about 24 hours, the centre operator finds a solution, which she or he passes on to the farmer. Farmers in the locations where e-Krishok was activated (100 locations all over Bangladesh) are mobilized using a local contact known as e-Krishok brand promoter, or BP. A BP communicates with farmers in two stages. In the first stage, a group of farmers (approximately 30–50) are organized in a courtyard for a meeting. In this meeting, the BP, along with identified local elderly farmers and opinion leaders, make farmers aware of information services available through their local telecentre.



To ensure sustained communication with a number of identified farmers, a BP would also encourage those who gather at the courtyard for a meeting to enlist as e-Krishok members and would take note of their most urgent problems in their current agricultural activities. In the next step, enlisted farmers would be contacted directly in their field or at home to further understand their farming problems or to help them reach solutions to problems already recorded. The role of the BP is to create a first-time trial of the service. For further inquiries or problems, a farmer would be required to come to the telecentre.

Launching and initial outcome of the e-Krishok campaign

As it was mentioned previously, e-Krishok was launched in October 2008, in ten locations around Bangladesh. At this initial stage the priority was on learning and addressing specific local needs such as appropriate varieties of seeds and technology, etc., plant diseases, input (pesticide and seed) sourcing, local experts, market information including price and contacts of retailers, wholesaler, bulk buyer, building the optimum delivery mechanism and fine-tuning the entire process so that the best possible service provision model could be built and implemented. The major questions were: 1) would the farmers accept this new technology?; 2) could e-Krishok gain the trust of the farmers?; and 3) was it an initiative that could reach critical mass so as to become sustainable?



The initial stage began in October 2008 and ended in April 2009. The major milestones in the piloting of the campaign were to: understand the local setting and farming-related issues; recruit BPs; set up the groups and create e-Krishok member ID; establish crop calendar-based problem identification systems; and organize problem specific information and advisory services, to enable online video-conferencing.

The key achievements of the initial stage are summarized in the table below:

The campaign key achievements	Farmers	Queries
Farmers reached (direct and indirect)	2500	
Registered Members (direct reach)	756	
Total queries from farmers handled by TELECENTRES in 10 locations (Trial of Services)		550
Total of farmers who benefited by applying information/advice obtained from telecentres (Beneficiaries)	150	
TOTAL	3406	550

The most crucial lesson learnt during the pilot of this project was the importance of earning the trust of the farmers, so that they would be motivated to seek the services of a telecentre or any other ICT-based service-delivery platform as and when needed. In some areas the project was more successful than in others. The factors that contributed to better outcomes were that: a) the entrepreneurs were motivated and participated wholeheartedly to reach farmers effectively through the campaign that helped the local entrepreneurs to promote their centre among



the local communities and get an edge over other local competitors; and b) the BPs were active and successful in connecting with farmers.

This initial phase led the BIID to identify four major areas of greater focus and formulate recommendations within the identified areas for replication of the campaign:

1) Content Provision and Delivery

Scaling up the initiative in more locations would require a stronger expert consultation. Furthermore, greater focus would be required to serve farming activities in livestock, poultry, fisheries and some non-conventional crop cultivation such as strawberries, mushrooms, etc. Above all, fertilizer recommendations for yield maximization were increasingly in demand by farmers. On the delivery front, the BPs role in getting the solutions to the farmers in their fields and/or homesteads would be crucial. The goal of the strategy is to motivate farmers to visit an ICT access point.

2) Capacity Building

The experiences in the pilot phase showed that centres tend to forward queries to the agricultural experts without making adequate use of the information platform available at www.ekrishok.com.

3) Field Coordination and Monitoring

The level of field coordination that was required of the BIID for only ten locations clearly indicates that such field coordination in replication in more locations dispersed all over the country will require decentralized provision for field coordination. Hence, the BIID would employ a regional coordinator to cater to telecentres in each division of the country.

4) Collaboration with the Government

In view of the long-term vision of the campaign to induce behavioral change of farmers as well as to develop a sustainable model of content management and delivery to farmers, the BIID underscored the need for a systemic change that would bring together private resources (ICT networks) and government facilities. The Government's provision of agricultural information and services through the DAE, the AIS and other allied bodies such as the Soil Research Development Institute (SRDI), etc. constitute a huge resource pool that, if deployed effectively in partnership with private sector, would bring about revolutionary changes in the information landscape to farmers.

Replication and scaling-up of e-Krishok nationally

The success of the initial stage convinced the BIID that e-Krishok was a viable initiative, able to reach farmers at the grassroots level with compelling benefits, which encourages farmers to change their behavioral mindset. Farmers at the ten locations increasingly began to look at the telecentres from which e-Krishok is available as their preferred source of information and advice. From BIID's perspective, this achievement of changing behavioral patterns justified expanding the initial intervention to 100 locations throughout Bangladesh.

The replication and scaling up of e-Krishok to 100 locations began in October 2009 and ended in February 2010. In less than five months, the results of the campaign exceeded expectations formed as a result of the pilot project.

The results of this replication and scaling-up phase are summarized in the table below.

The campaign key achievements	Farmers	Queries
Farmers reached (direct and indirect)	14228	
Registered Members (direct reach)	12668	
Total queries from farmers handled by TELECENTREs in 10 locations (Trial of Services)		6793
Total of farmers who benefited by applying information/advice obtained from telecentres (Beneficiaries)	2310	
TOTAL	29206	6793

During this replication, BIID incorporated a new service called Fertilizer Recommendation Software (FRS), developed by the SRDI and supported by Katalyst Bangladesh. As a test case the software-based fertilizer recommendation was introduced in 20 locations. A tool for precision farming, the FRS has started to show promising uptake by e-Krishok member farmers, providing impetus to the local Krishi offices of the Government for participation in the campaign. This is accomplished through the organization of courtyard meetings for farmers, sharing FRS details from government officials, and then following up by inviting the farmers to additional group meetings at strategically located centres to demonstrate the service online.

It can be said without equivocation that this replication and scaling-up phase was a success. However, in view of the long-term sustainability of the initiative, a few components in the service-delivery model were criticized for not being cost-effective or sustainable. One criticism is the use of salaried brand promoters, and the other criticism is the financial incentives and future direction for the access points. The first criticism targets the sustainability issue – who will continue to pay the brand promoters if they are to be removed from the service delivery model, and how will their role be filled in. The criticism targets the financial issue and ask the question how and when to commercialize transactions between a farmer and a centre. The major outcome of the e-Krishok initiative was to have built trust and confidence among the farmers for an ICT platform to deliver information and advice to farmers.

There are several examples that illustrate how e-Krishok can be applicable in the lives of farmers. These examples clearly demonstrate how e-Krishok is able to bring about positive change in the lives of farmers through the use of ICTs.

Ujjal had an agricultural problem where the potato plants were attacked by pests, which spread rapidly to the healthier plants. A swift solution was crucial, before further damage was done to the harvest and, consequently, the family's food supply. The solution for Ujjal's problem was found thanks to the online agricultural information repository provided by e-Krishok service.

Chaina's case is different and it relates to a disease which attacks bottle gourd plants, resulting in very low yields. She benefited from the e-Krishok service available at a local telecentre from a courtyard meeting organized by a BP of e-Krishok, following the same procedure of e-Krishok as in the previous case.

Previously, Iqram regularly faced agricultural problems and the solution was to use pesticides. This time Iqram found out about the use of agricultural solutions from the local Community Information

Center (CIC) through the e-Krishok Campaign. By applying the solution from CIC, Iqram estimates that he was able to save nearly 90 per cent of his rice crop.

From the beginning of 2009, Mojid Ali was facing problems with his Cucumber's field. Thirty-five per cent of Ali's cucumber field began shrinking gradually and becoming weaker. The cucumbers were attacked by pests. According to Ali he went to CIC and told them what he was experiencing. CIC suggested that he use 'Sex Feromon' to kill pests and 'Sumithion', 'Sitap', 'ripot' to get rid of *Mojaik* disease.

More cases are available at <http://www.ekrishok.com/frmListSuccessstory.aspx>

The above examples clearly illustrate how e-Krishok is able to change and impact the lives of rural farmers in a positive way. e-Krishok has given them a valuable source of information and advice, which they sorely lacked before. Through e-Krishok, they were able to increase their livelihood and living standard. Now the farmers are able to better plan for the future a clearer frame of mind.

The success of e-Krishok has convinced BIID that it is a viable ICT-based service, which is of real value to farmers. This belief has fueled the hunger and drive to expand the campaign to even more locations all over Bangladesh. Currently, there are 100 locations where farmers can take advantage of e-Krishok; however, this is about to change.

By the end of 2011, e-Krishok will be available in over 500 locations and by the end of 2015 e-Krishok will be in over 5,000 locations all over Bangladesh. Towards this end, BIID is now currently working with various governmental and non-governmental organizations to mobilize the necessary resources required for such a massive scaling-up of the campaign. BIID intends to adopt the following key strategies to achieve its goal of implementing e-Krishok at 5,000 locations by 2015. Innovation plays a crucial role in service delivery mechanism. Farmers need easily accessible service facilities as well as a user-friendly interface to become familiar with the ICT-enabled system. A touch-screen based kiosk is running at pilot level and scopes are being explored to use this technology on a large scale.

BIID is working hard to build e-Krishok as the brand of choice for farmers whenever they are in need of any information and advice. For the farmers, e-Krishok will grow to become a symbol of service, which is dependable, reliable and always there. In the near future, e-Krishok will be available not only in select information centres, but in all places where information is served through the means of ICTs, particularly through Internet and mobile phones.

Concluding Remarks

Past experience suggests that farmers do pay for services once they understand the benefit of said service. As we have seen in the project locations, some centres are already providing information as a transacted service. With branding and standardization of the service provision comes the opportunity to introduce elements of commercialization in the service-delivery model. With that in mind, in the first stage (during the nationwide scaling up starting from March 2011) fee-based registration will be required for farmers to avail services. This will be a nominal fee of Tk. 10 to 15 (or about \$0.14–0.21) for an initial trial period (up to 4–6 months). At the end of the trial period, BIID will seek to introduce a standard fee per transaction. It is expected that the telecom partner supported by the Government of Bangladesh (GoB) will be able to add value in developing an innovative-payment mechanism to ensure that the network continues to provide services. One of the means could be "prepaid cards" for farmers only. There are other options for partnerships such as commercialization and expansion of e-Krishok, which are correspond closer to what is happening on

the ground. BIID already signed an MoU with Advance Chemical Industry (ACI), a leading agri-input supplier in Bangladesh, to work jointly to take the e-Krishok campaign nationwide.

To conclude, it should be noted that e-Krishok is first and foremost a campaign in Bangladesh that seeks to provide information and advisory services to farmers through the means of ICTs as the delivery mechanism. e-Krishok is a distinct initiative, which focuses on long-term perspectives, rather than traditional project based initiatives. However, in order to institutionalize the use of ICTs and to make ICTs an everyday, commonplace tool in the lives of farmers, an adjustment in the mindset of the farmers is necessary. This change will not take place in a short time-span. Indeed, it may take more than a generation to achieve. What e-Krishok has demonstrated is that such a service can be of benefit to farmers in rural Bangladesh – it is able to increase the income and opportunities of farmers, thereby, instigating positive growth in the socio-economic development of rural Bangladesh.

BIID demonstrated through e-Krishok that farmers are willing and capable of change when they perceive that change is in their favour. BIID showed that farmers will trust new technology if it was amply demonstrated to work. Now BIID is working hard to ensure that this trust is not lost by gaining a critical mass of users who will ensure the sustainability of e-Krishok.