

Chapter 8

International Best Practices

Every developing country is facing the increasing challenge of feeding its citizens within the limited resources available for agriculture production. Use of communication networks for the dissemination of information is considered as an alternate option to improve the information deficit faced by the farmers of these countries. Some projects were extremely successful in achieving its target. This chapter look at four such success stories.

1. Esoko (Ghana)
2. Kushaal Zamindar (Pakistan)
3. M-Farm (Kenya)
4. Govi Mithuru (Sri Lanka)

8.1 Esoko (Ghana)

Agriculture is an important sector in all the developing nations as most of the workforce in these nations depend on agriculture for their livelihood. In Africa this is more so as the continent spent billions of dollars for bridging its shortfall in food availability. Agriculture is very crucial in Ghana, an African nation where 53 % of the population is involved in agriculture related activities. The progressive steps taken in the agriculture sector in Ghana is looked closely by other countries as Ghana is a country which achieved goals of hunger reduction in millennium Development Goals and the hunger reduction target of World food summit. The essential component of any such strategies includes the adaptation of small farm holding farmers to new technologies. Every country is embarking upon technology driven solutions in

information dissemination as well as other areas while these efforts are praiseworthy they do have a danger of creation of digital asymmetry. Therefore any efforts in this direction need to look into the realities which is existing in the region.

Esoko is a project which leverages both web based and mobile technology for bringing together various stakeholders in the agriculture value chain. In addition to SMS alert, the platform provides extension messages, marketing matching, farmer survey and data collection. The farmers are benefitted with better harvest and better price while other stakeholders also benefitted by more information about the requirement of farmers.

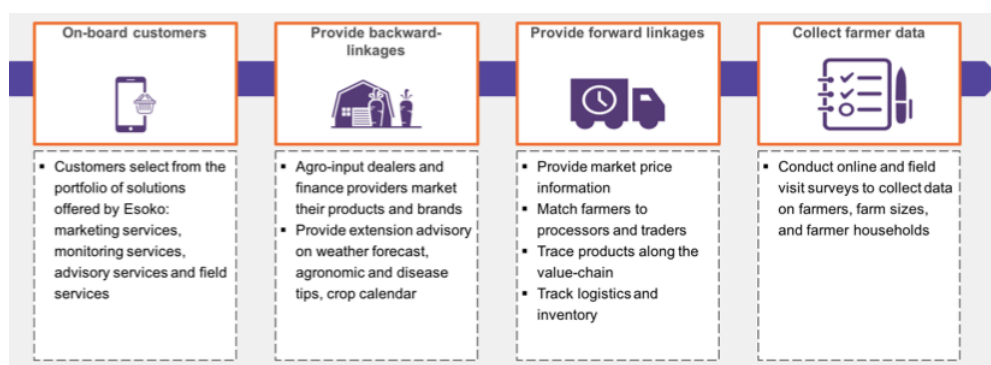


Figure 8-1 Operating Model of Esoko (World Bank Group, 2017)

Information provided under this platform can be segregated into following segments

- Farmers : Pre-harvest Advice which includes weather forecast, input details, disease prevention tips etc
- Farmers and Buyers : Real time Market prices
- Farmers and Buyers: Market place for farmers and buyers
- Input dealers: Advertising platform for input commodities
- Logistic tracking
- Governments/NGOs : Data collection and surveys

Esoko is different from the other SMS services because it is not just a push service but includes two way communication reducing the information asymmetries. Beginning from a very modest start, Esoko has reached 3.5 lakh subscribers with in five years and was able to help small farmers in 15 african countries. The impact study conducted by

Francois van Schalkwyk et al (2017) indicates various positive impacts created by this project (Schalkwyk, et al., 2017).

1. Improved bargaining power: The Esoko success in disseminate the market price information has helped the farmers to confidently bargain for better prices. Most of the time farmers sell their produce outside the farm gate itself to traders and better knowledge about the price will tilt the balance of power in bargaining to the farmer side
2. Value chain transparency : The Esokos success has brought transparency to the entire value chain. The farmer can now access the price information of not only his usual market but also other markets thus discovering entirely new markets. This has modified the traders approach to the farmers as the farmer now knows the position of the trader with more accuracy. The farmer's awareness about the roles of each actor has empowered him in the value chain.
3. Improving the ecosystem : The Esoko's requirement of data and its processing has generated the necessity of more data collectors, experts and processing personal. By finding more efficient way of dissemination of information Esoko has contributed to technological innovation and created requirement of more trainers and institutions for guiding the stake holders. Another key uptake of this project is the existing extension mechanism has reinvented itself in this new scenario and the extension functionary has started functioning as an enabler to the use of these kind of technological innovation.

While the impact of Esoko is positive, the risk of farmers discontinuing the subscription and thus losing the benefit of the information dissemination is very high. In addition, the traders may evolve new strategies differentiating informed and non informed farmers and bargaining selectively so that he will be benefitted. The continuing funding is also a challenge as initially the project was funded by donor organization and its own capital. It is necessary that a sustained model emerges where the subscription rates can be kept minimal so that farmers can access the service but sufficient to sustain the business. In many developing nations in Africa while mobile subscription is increasing rapidly, the coverage is not universal. The coverage in many rural areas is still not adequate creating bottleneck in upscaling the project. The

quality of information is very critical. Many a times prices provided by the government agencies which provides market price information may not be accurate which in turn affect trust of the stakeholders in the project.

The spread of the project to 15 countries in Africa is an encouraging factor in this project. The project is functioning in private sector which shows that business models which are sustainable can be developed in the agriculture extension sector even in developing countries. It also shows while such projects can offtake in private initiatives, the donor and government agencies has important supporting role in these kinds of new interventions.

8.2 Kushaal Zamindar (Pakistan)

Kushaal Zamindar is a Value added service offered by Telnor Pakistan. Telenor is the second largest telecom operator in Pakistan. Unique subscriber penetration of Pakistan is still at low levels around 47 % even though 85% of the area is covered by the mobile operators. 66% of the Pakistan's rural population depends on agriculture as their main source of income. This settings has opened up a new business opportunity to Telnor (Palmer & Darabian, 2017).

The project concentrates on voice messages. It consist of pre recorded outbound voice messages to the farmers and IVRS facility so that farmers can call and pull the relevant messages. Pre-launch and stakeholder engagement has been started way back in 2015 January, soft launch was done during November 2015. The product team has used the initial period to carry out various upgradation based on the farmer feedbacks. During the initial stakeholder engagement period, Telnor conducted surveys with farmers, input dealers and middlemen to know the system better and to guage the information needs of the farmers.

Khushaal Zamindar's Out Bound calls is designed as a conversations in a typical house hold. The conversations revolve round the agriculture practices weather conditions and even about health & nutrition. In addition there is a weekly show "Zarae Baithak" which can be accessed through the IVRS during which farmers can call in and ask questions and receive expert advices. There are 4 main characters in the OBD conversations. They are

Dashir : Male progressive farmer who adopts scientific methods

Naik Bhakt: His wife who asks several questions on the agricultural practices.

Akram: their son who is an agricultural student.

Karambah : Uncle who represent the old generation with lot of experience.

The importance of new scientific methods is brought out through the conversation between these four characters. (Palmer & Darabian, 2017)



Figure 8-2 Behavioral Changes under Kuzaal Zamindar (Palmer & Darabian, 2017)

A study conducted by GSMA (Palmer & Darabian, 2017) elaborates some of the key findings. These are

- 1 The acquisition of the farmers is an important aspect in the success of the program. Telnor has done some marketing by selectively doing outbound calls which was highly successful. The word of mouth is yet another important factor in the in the subscription. While Telnor has tied up with NGOs in marketing the service, it was found that this process was not much cost effective.
- 2 Multistep self registration was very difficult for the farmers. Registration through Call center agents was successful but could not be upscaled due to

cost constraints. Selecting default crops etc through IVRS is still a challenge for many farmers

- 3 Around 51% of the users has tried the pull method and they are more satisfied with the service than the others. Relevant information need to come without much delay in an IVRS as passing through multistep IVRS is difficult for farmers.
- 4 The service is still given free supported by income generated by in-service advertising. The company need to balance the act of in-service advertising with positive farmer experiences. Initial experience shows even companies (mainly input related advertisement) who give advertisement are happy as they are getting more business.

This south asian experience in an interesting example of using telecom network for the benefit of the society. This example also was in a private sector funded through the advertising keeping the service free for the farmer. While the initial experience is encouraging the study reveals that still the information flow has not broken the patriarchal nature of the society in use of the information. The study could not reveal any major changes in the information flow to the women farmers indicating that technology is having difficulty in surpassing social barriers.

8.3 M-Farm (Kenya)

M-Farm is a project rolled out in Kenya during 2010 by a small private company to enhance the market related information to farmers. The information about the price is expected to create better bargaining power to the farmers. It helps them in getting the retail price of their product, help the to buy their inputs directly from manufactures and help them to find buyers to their product. It also assist them in collective buying of their input and collective selling of their output. MFarm team independently collects the price information using data collectors with geocoding so as to ensure that the price information is collected from the wholesale traders in the specific market. It provides price for 47 products in 5 markets in SMS searchable data base and through website.

The service is provided through SMS on a payment basis. Each SMS to MFarm will cost 10 KSH while normal SMS costs only 1 KSH. The farmers subscribing to such

services is an indication that the information received through this service is benefitting the farmers in fetching better prices. As in any developing country, the farmers in Kenya used to get the price information from buyers or middlemen. After the use of M-Farm these behaviors were modified to a great extent. Heike Baumüller in his research has indicated following salient points (Baumüller , 2013).

- Price information from the M-Farm is mostly used at the selling point when the product is ready to sell.
- At the growing stage M-Farm is particularly important as a source of demand information while the radio is cited as the main source of price information
- The information from M-Farm had an impact on the decision whether to increase the cultivation of a particular crop during the growing stage.
- Almost all respondents of the survey agreed that they have benefitted by the MFarm in getting prices.
- In market choices, most of the farmers have sold their produce to collection centres (M-Farm also enables the collective selling)
- A third of the farmers still use radio as the source of their price information. As per the farmers what distinguishes M-Farm from radio is that they are able to get the information as and when needed and this is a great help at the time of harvesting.

In short MFarm has been a great help to the farmers in giving them information about markets. While the information benefitted them in better bargaining, the choice of market was influenced mostly by the collective selling concept. The need for addressing the issue by multiple interventions is very clear as information alone may not be able to help the farmers in deciding about price and markets.

8.4 Govi Mithuru (Sri Lanka)

Govi Mithuru is a Value Added Service initiated by Dialog SriLanka. Dialog SriLanka is the largest telecom operator in SriLanka. The service was rolled out in association with several other partners including the department of agriculture who in turn ensures

the quality of the advices. The services mainly concentrate on reducing the use of chemical fertilizers by the farmers. Srilanka's extreme use of chemical fertilizers has started to affect the productivity of the land and increase the cost of cultivation. Srilanka's use of chemical fertilizer is 50% higher than India's and FAO has identified chronic kidney and lung diseases in most of the rice growing districts due to this abnormal use of chemical fertilizers. The advices which effectively reduces the use of chemical fertilizers without reduction in productivity has reduced the cost of cultivation to a large extent. Govi Mithura's slogan secure crop and family health has generated interest in the farmers (Palmer & Darabian, 2017).

Even though initially subscriber base has increased very slowly, during the last quarter of 2016 with strong VAS marketing push and word-of-mouth promotion 250,000 registered users were added making it the most successful VAS service by the operator. Key insight from the field received during launch period includes the importance given by the farmers on family's health. The advisories about the ill effects of the use of easily available chemicals on the health of the family has forced farmers to take a different course. It is to be noted that even before this information was available to farmers but farmers used to discard this information as acting on it was considered too risky (for productivity) by the farmers.

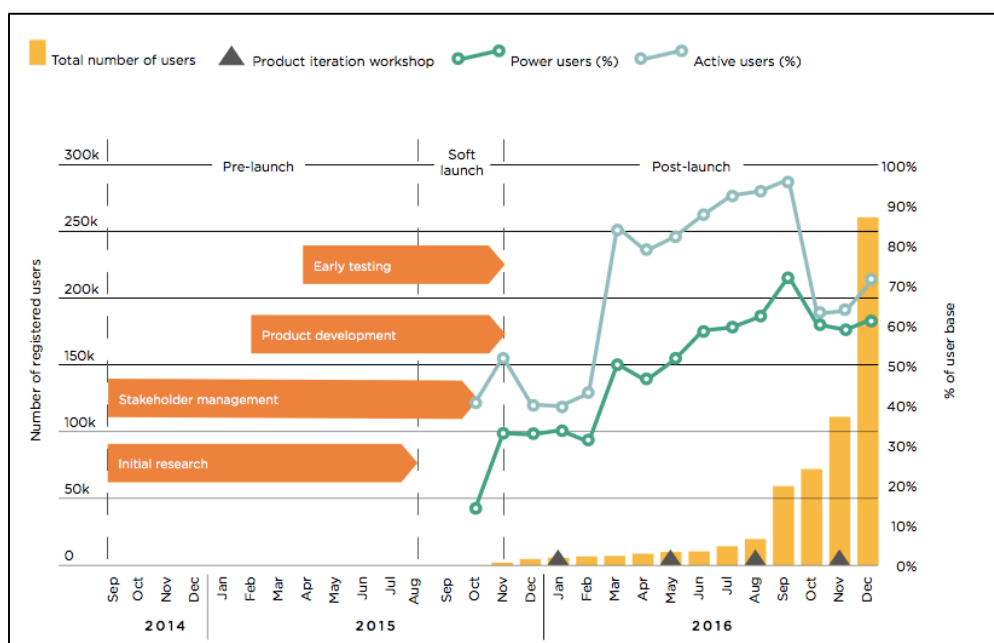


Figure 8-3 Timeline of Govi Mithuru (Palmer & Darabian, 2017)

The study conducted by GSMA indicates that even though there is an effect on income levels but they are not statistically significant. But even then a huge number of farmers uses the service by paying 1 LKR per day for each crop. It can be inferred that the concern about the health of the family had also encouraged the farmers to follow the advice and continue the subscription. 32% of the users are women indicating how gender barriers can be overcome by mobile technology. Other factors which came out strikingly are the importance of timelines of the message and the trustworthiness of the messages. While softwares were put in place to ensure the timelines, the support from the department of agriculture on the quality of the messages probably created the trustworthiness of the system.

Thus the Srilankan experiment has resulted in a sustainable model by combining farming advices with health consequences resulting in positive impact in the sector. Broadening the content has resulted in the increase of the subscribers and the use of voice message has resulted in easy ongoing engagement with farmers.

This international experiences shows that many countries across the world is trying to use the mobile and voice technologies for the information dissemination to the farmers. Reaching out to each of the farmers using conventional methods are quite impossible due to the shortage of skilled manpower and the cost involved in such rollout. Use of communication network provides an alternative channel since the number of telecom customers has risen substantially during last 15 years in most of the developing countries. The last chapter will provide the details of the best practices which can be replicated in India from these international experiences.