



mAgri

mAgri Case Study: Nokia Life Agriculture Service

Authors: Natalia Pshenichnaya & Victoria Clause





Introduction

Nokia Life is a success story from the field of mobile information services. Piloted and launched in India in 2009, scaled up across markets and continents, this information service from Nokia has already reached over 95 million users in India, China, Indonesia and Nigeria. And although it is not an operator-led mobile agricultural service, the significant scale of Nokia Life wouldn't be possible without strategic cooperation with as many as 18 mobile network operators across the four markets.

Powered with ambition to improve the lives of its users, Nokia Life provides access to the most essential information for rural, semi-urban and urban subscribers, with a particular focus on the low income segment. Owners of Nokia devices of Series 30, Series 40 and the Asha range can access information on education, health, agriculture as well as entertainment topics. This case study explores success factors of the Nokia Life service and spotlights its agricultural component, with a particular focus on the content development process.

Image 1 © Nokia



Key Facts about Nokia Life Agriculture Service

- The Nokia Life suite delivers Education, Health, Agriculture and Infotainment services to address the information gap and enable consumers in emerging societies to be better informed and to improve their livelihoods;
- Presently available in India, Indonesia, China and Nigeria, Nokia Life will expand to more countries in 2013.
- Launched in India in 2009, Nokia Life scaled to Indonesia in late 2009, China in May 2010 and Nigeria in June 2011;
- By the end of February 2013 over 95 million people had experienced Nokia Life services;
- Nokia Life is available on more than 50 devices across Series 30 Series 40 Nokia Phones including the Nokia Asha Range smartphones;
- Nokia Life is supported by 18 operator billings tie-ups in the four countries, with a potential reach of roughly 1.5 billion people;
- Nokia continues to hold the major market share in the mid and low-end phone market in India, Indonesia and Nigeria;
- Over 10 million unique updates daily in 18 different languages are disseminated via Nokia Life;
- Nokia Life relies on its ecosystem of over 90+ knowledge partners to support its information services;
- Nokia Life has recently expanded into data-based information services segment by launching Nokia Life+ in September 2012;
- Nokia Life Agriculture services provide farmers with tailored crop tips, agriculture news, market prices, weather information and advisory via richly formatted messages using SMS as the delivery channel.



1. The Market

Fertile grounds for rural mobile services

No wonder that India, with 70% of its population residing in rural areas and a constant economy growth rate (annual growth rate between 4% and 10% over the last 5 years) was chosen by Nokia for the initial launch of the Nokia Life service in 2009. Literally half of the population is involved in agriculture¹, with many of those farmers already using mobile phones (43% mobile penetration in India in 2009; total number of connections over 525 million in 2009, and over 890 million two years later in 2011). In fact a similar logic has brought many more service providers to this market, making India one of the most competitive markets for Rural Value Added Service (Rural VAS) providers. On the day of publishing this case study the **GSMA mAgri Deployment Tracker** reflected as many as 19 providers of mobile agricultural services in India. Another big factor that prompted Nokia to pilot in this market was a significant share of Nokia manufactured phones already out there in the hands of low-income users, mainly simple and inexpensive models (range starts from 25 US\$, with higher end models supporting Nokia Life priced around 150 US\$), and a high loyalty of rural users to the Nokia brand which remains today².

After a relatively quick uptake of Nokia Life in India, the service has been introduced to the economies with similar market characteristics: large population, with a significant proportion residing in rural areas, an agricultural focus of the economy, promising mobile penetration rates and well-established presence of Nokia in the market of mobile devices. In late 2009 Nokia Life was launched in Indonesia, a country with a population of more than 245 million, and 166 million mobile connections at the time of the launch. Agriculture constitutes a significant share in the GDP of Indonesia – around 15%, and provides employment to 40% of the working population.

China became the third Asian market for Nokia Life in May 2010, offering a potential of more than 840 million users of mobile telephony. Although only 10% of China's GDP comes from agriculture, it provides employment to at least 40% of the total workforce of the country.

Nigeria is the first attempt for Nokia Life to enter the African market. Although culturally very different from the Asian environment, there are major socio-economic similarities that made it possible for Nokia to transfer the success of the service to the African stage. Nigeria might be one of the largest potential markets in Africa for mobile agriculture services in terms of market size, as well as its relatively healthy economic situation compared to its neighboring countries³. At the same time Nigeria has a high percentage of rural population, mobile penetration rate (about 100 million connections), as well as a significant agricultural share in the country's output – a third of Nigeria's GDP is due to agriculture. Nigerian Nokia Life was launched in 2011, becoming popular led by the education services with the agricultural component of the service a close second in terms of popularity. Kenya became the second country in Africa for Nokia Life, when the service was launched there in February 2013.

Image 2 © Nokia



1 51% of total employment, 2010, World Bank
2 According to the Brand Trust Report, India Study, Nokia was the most trusted brand in India in February 2013.
3 Around \$2000 income per capita, World Bank.



Challenge for Nokia

For many years Nokia has been well-known as a handset manufacturer. However Nokia Life and other Nokia-branded services indicate that Nokia has an aspiration to become more than what is expected of them and turn into a solutions company. The main reason for this transformation however lies in the highly competitive environment surrounding the segment of low-end handsets. Although basic Nokia phones were, and still are dominating the majority of developing markets, the threat from Chinese manufacturers is growing, as well as forcing Nokia to either compete on the slippery grounds of the lowest price segment, or differentiate and find a way to cement their existing position in the market. It's interesting to note that Nokia is the only device manufacturer tightly embedding services into devices from the bottom of the device pyramid.

According to Nokia, the aspiration driving the transformation towards content and service provision comes from the idea that a mobile handset can be a life-changing technology, especially for populations that lack access to information and Internet. Due to the lack of Internet connection with feature phones, customers in the developing world are severely under-served in terms of content and information access. Nokia saw this gap as an opportunity to provide access to essential services, while transforming the mobile phone into a single-point of access to information and services that a rural customer needs. Nokia solutions portfolio goes beyond Nokia Life and includes features and services like Nokia maps, Nokia mail, Nokia music and others. Two of the most successful services however are Nokia Navigations and Nokia Life.

Each portfolio of services is specialised to the country in which it is rolled out, and based on research into user needs. This user research is not only conducted to inform the type of content offered through Nokia Life, but also in what form it is delivered. For example, research has been carried out to determine the optimal length of written information presented to users in various markets. Having successfully rolled out the service across four countries, Nokia have developed a sophisticated blueprint for conducting user research in new markets that informs the resulting service design.





2. Service Design

The Customer Journey

When a customer buys a Nokia phone Nokia Life comes pre-installed and there is no need for the user to download further software. A user guide [see images 3 and 4] is included in the box which provides information and images on how to subscribe to the service. When the user switches on the phone, the Nokia Life icon appears on the home screen or in the main applications menu. Once the user selects Agriculture from the Nokia Life menu they see a welcome screen with an introduction to the service. The user is then asked to provide some information that allows the service to be personalised:

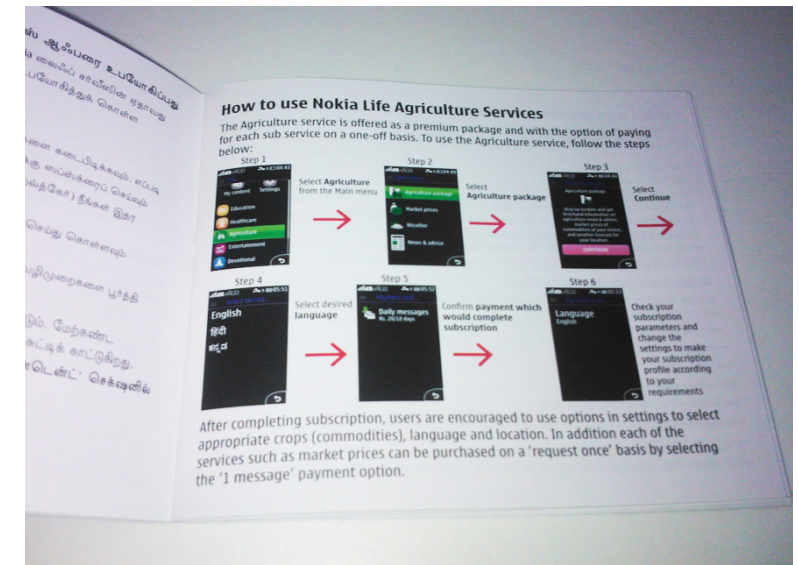
Image 3 © Nokia



- i. User chooses up to 3 crops or commodities from a menu (poultry, sheep, horticulture, fisheries, etc.)
- ii. User then enters the location of their farm. In some countries the user selects from a list of provinces, in other countries they must type in their zip or pin code.
- iii. User then is prompted to select a preferred language.
- iv. If there is a trial offer, user is informed that they are in the trial period for a certain time and will not be charged until a particular date.

This allows them to experience the service for free before subscribing. The collected information is sent to the Nokia Life servers for subscription confirmation and billing.

Image 4 © Nokia





b) Features of Nokia Life: Push, Pull & Share

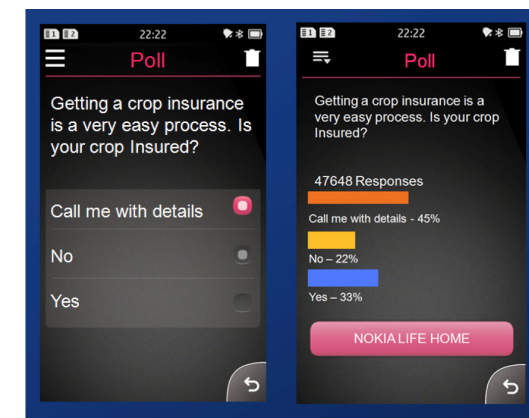
Nokia Life is primarily a push service where information is pushed out to farmers' phones. The reason for the 'push' type of service design comes from Nokia's belief that farmers prefer to rely on experts sending them information and are not used to asking for information. After subscribing, a farmer receives one tip per crop per day so if she has subscribed to 3 crops, 3 crop tips are pushed to her phone over the course of a day. Market prices and weather forecasts are also pushed out on a daily basis. Only when there is relevant agricultural news, such as a government announcement about a new scheme, are messages with news sent out and this is not usually on a daily basis.

Image 5 © Nokia.



In June 2012, Nokia Life introduced additional social elements including 'Call an Expert', Polls and Share. In some countries Nokia Life subscribers can request (or pull) more information by using the "Call Helpline" option at the end of certain tips (see Image 5). As Nokia Life do not have their own call-centres, farmers are then directed to a helpline that Nokia has partnered with to provide online support. Nokia Life can also collect information from farmers in the form of polls. Farmers respond to a poll question such as the one in the Image 6, and have the option to request further information if they select "call me with details". The responses collected from the polls are aggregated and displayed back to users in a graph on the screen.

Image 6 © Nokia.



Nokia Life allows users to share a message with people in their phone book (see Image 5). The reason for adding this feature was because Nokia understood that farmers can increase their social standing in their community by sharing valuable information within their community. In order to avoid a situation where farmers use up all their credit by sharing the information, Nokia has made only some tips and information shareable. The messages which can be shared display the "Share" button at the end of specific tips.



c) Cost:

Nokia Life uses a subscription model where farmers pay a monthly subscription fee [see fees in Table 1] to receive messages. In some countries like Indonesia, Nokia Life offers micro-billing for services whereby the user is billed daily over the course of the month. In the situation where a user does not have enough balance to pay their subscription, Nokia Life continues to send messages for a few days and attempts billing again. If payment is not received the service is halted temporarily and billing is attempted in frequent intervals. It is not uncommon for users to drop off the service and return after few days when they have topped up their balance.

Table 1: Nokia Life monthly subscription fees

India	China	Indonesia	Nigeria
INR 60/- per month	Yuan 5/- per month	IDR 500/- per day	N 250/- per month

Nokia Life User Testimonials:

- **Farmer:** "I earlier had to leave my day work and travel so far to check rates and sell crop for my family who was growing it in the village. Now with this I get rates of three nearby areas and I now sold my crop at a profit of Rs. 70/- per quintal."
- **Grain Trader:** "People now come to me to ask for information on where to sell... I want to continue using this service... I like it that people come to me and I don't want them to stop asking me for advice. I share the information with everyone around so I feel proud and good."
- **Farm Worker:** "I am learning better farming methods to improve yield of the land to enable me to become prosperous when I start my own farm."
- **Insurance Agent:** "As a small town insurance agent most of my customers are farmers. I subscribe to agriculture information as I see it as a means of helping my clients, and potentially I may become middleman."

d) Partnerships with mobile network operators

Nokia Life has partnerships with 18 mobile network operators (see Image 7) making the service available to almost the entire GSM footprint in the four countries they operate in. Nokia Life's objective is to work with all mobile network operators (MNOs) in a country, resulting in operational challenges, as the process of technical integration of servers, SMS gateways and billing interfaces with MNOs can take a few months for each partnership. MNOs benefit from higher customer retention, as users subscribing to Nokia Life services tend to churn far less than other customers. As is the case with any content provision agreements, the MNOs also take a share of the Nokia Life subscription fees.



Image 7.

In the very early stages of Nokia Life's development there was a question as to whether the product should be pitched to operators as an activity for social good, or as a business activity. The reality of negotiations with mobile operators has proven that positioning the product as a business benefit made more sense. However, not giving exclusivity to any operator at an early stage created an initial challenge for MNO partnerships. In India, for example, the service was initially launched with a single operator who accepted the non-exclusivity terms, and this helped other operators get on board, especially when the business sense the service brought to their operations became clear (e.g. demonstrably reducing customer churn rates once users subscribed to Nokia Life through a given MNO). From Nokia's point of view, Nokia Life is designed to differentiate their mobile phones by bringing



3. Agricultural Content Process:

A wide range of information and advice

The Nokia Life service provides customers with a range of information from weather and market updates to agronomy. (See Table 2)

Table 2

Crop & Commodity Tips	Market prices	Weather
Farmers receive localised information on: – Yield enhancement – Pest prevention and control – Best practices and techniques – Agri news	– Farmers receive daily prices from the three markets that are within 50-100kms – Nokia Life used to get market prices from Reuters. They have now established their own network of people who provide the local market prices. This allows Nokia Life to expand to include new crops	– Agro-met information and advisory – The first source for weather information is the Government meteorological department – For more granular weather information, Nokia Life uses local agricultural universities.

Nokia Life provides customized information and advisory in local languages across a substantial number of crops, commodities and markets across the four countries it operates in.

Table 3

Country	Crops & Commodities	Markets	Local Languages
India	275	7000	12
China	100	2000	Chinese
Indonesia	150	201	Indonesian Bahasa
Nigeria	30	111	3
TOTAL	460	9312	17

Creating high quality information

Nokia Life’s process for collecting and disseminating agricultural information has a number of stages.

Planning: The initial step involves identifying farmer’s information needs and planning what content to provide. Nokia Life ensures that tips are aligned with the crop life cycle in order to make them actionable for farmers. Customer insights collected by Nokia Life have shaped the design of the service and the information they provide. They have found that farmers want:

- Timely and actionable information from trusted sources
- Information on best practices, new methods and developments
- Information that is locally relevant and in their local language
- The information to be storable and referenceable
- Access to experts

Sourcing: Once information needs of farmers are identified, the content team identifies information and knowledge sources from which to aggregate high quality content for the Nokia Life service. For each market, prior to any interaction, Nokia Life scans potential candidates for knowledge partnerships. Because of the complexity of the partnership ecosystem required to provide a high-quality service, a country would typically take anywhere between 8 to 16 months to prepare for the launch.



Nokia Life works with over 30 information sources across the 4 countries (see image 8) including agricultural universities, NGOs, government bodies and online sources. The ecosystem partners include National Agro Foundation - India, China Ministry of Agriculture, Universities such as Tamil Nadu Agriculture University, NAMIN, reputed research institutes such as NHRDF, IMD-ICAR and private industry players such as Syngenta, Nongxintong, ITC eChoupal, Coromandel International, and many more.

Image 8



Customising content for women farmers
During registration, Nokia Life does not ask for a customer's gender. However, various user surveys show that there are women subscribers for the agriculture services. Currently, most of the tips provided are not gender-specific but Nokia Life is interested to understand how to create gender-specific content.

Creating content: Nokia Life has a knowledge editorial desk with a team of agricultural experts in each country. The raw content taken from the original source is first aggregated and analysed by the team of agricultural experts who validate and quality assure the content. In the second step the content is re-formatted ready for the Nokia Life channel which involves creating tips that range from 42 characters in the Chinese service, to 200 characters in Indonesia. Each tip is then reviewed by a copy editor who checks the content, before it is translated into the local languages required and finally uploaded onto the Nokia Life servers.

Quality Assurance: In addition to the team of agricultural experts working on the editorial desk, Nokia Life's content is also validated by external regional expert panels. The panels are made up of subject matter experts including agriculture scientists and topical experts from India, China, Indonesia & Nigeria from different regions in these countries. The panel of experts constantly provides the desks with updates, new insights & changes from the local regions. Nokia Life also maintains the quality of their content doing regular surveys of the customers' perception of the usefulness and actionability of the content. This customer insight is fed back into the content process. The quality assurance process is very stringent in order to ensure farmers receive accurate information and avoid situations where false information may damage their crops for example.

Hyper-local information: In order for information to be useful and actionable for farmers it needs to be localised with a high level of granularity. The Nokia Life tips are customised to ensure that the information is specific to a farmers' province or in some cases (e.g. India), the agro-ecological zone. The market prices provided are from three nearby markets between 50- 100kms of the customer's farm and the service provides the most granular agro-met weather data available in the country. Furthermore, as weather information is dynamic and constantly changing, the Nokia Life content team responds by adapting the tip to the circumstances. For example, if heavy rain is predicted, the tip would be adapted to advise the farmer to hold off from using pesticide until conditions change.



4. IT

The Nokia Life model involves integration with mobile network operators (MNOs) for billing purposes and service providers for SMS gateways. Nokia Life has created a specific server and technologies to make micro-billing possible and to improve the customer experience on low-end and feature phones by making the content appear similar to how it would show on a smart phone. On the content side, Nokia Life has developed a Content Management System (CMS) to manage the vast amount of content and content partners. When entering a new market, the Agri Knowledge Editorial Desk software created for Nokia Life is licenced to a local knowledge partner who is trained to use the system.



5. Marketing Strategy

Nokia is a brilliant example of building a successful and popular service mainly by making it accessible as well as ensuring an excellent user experience by providing a high quality of service. Nokia has leveraged its existing marketing and distribution capacity in full, not to mention the strength of the Nokia brand and unprecedented customer loyalty in selected markets earned by years of Nokia's leading position as a handset provider.

Having spent literally zero dollars on advertising, Nokia Life has managed to gain 95 million users. All of them have discovered the service organically after un-wrapping the box with their new handset and reading the hard-copy manual guide. To prompt the user to try the service Nokia Life sometimes offers a free trial period.

At the moment Nokia Life doesn't have incentives to change its marketing and distribution strategy, with a preference to invest instead in content and overall user experience. Newer versions of the product are in the pipeline, and its updates are based on the user feedback and expanding understanding of the changing user needs.



6. Future strategy for Nokia Life

The success of Nokia Life in the four markets suggests that the service will expand to other regions. With the newly modified criteria for selecting the target market – high numbers of potential young customers across urban, semi-urban & rural areas and significant existing uptake of mobile services – it might be challenging to find the next market with the same potential as China and India have. However, new markets in Africa seem attractive enough for Nokia to plan further expansion in the continent.

Volume of operations is crucial for the success of the business model Nokia Life has chosen. Costs as well as the importance of creating dynamic, highly localized content are often underestimated. However, Nokia Life with its system of knowledge desks has always seen the content as a core of the service, recognizing that content, not the technology, creates the largest portion of value perceived by the user. If the content is valuable and impacts the economic situation of the individual customer, that's when the user is eager to pay for the service.

In light of this logic, Nokia Life would choose a market where volumes of subscriptions can justify the costs of creating high quality content at the standard that has been successfully established over the last years in four current markets. Kenya became the second African market to benefit from Nokia Life services, as the service was launched in early 2013.

Nokia also recently launched Nokia Life+ in September 2012, which offers the service over mobile data networks (Nokia is exploring the possibility of adding the Agriculture service to Nokia Life+). This is in response to forecasted trends of data uptake from the middle and bottom of the pyramid in developing countries. Nokia Life+ has been launched in 21 countries (India, China, Indonesia, Nigeria, Philippines, Vietnam, Bangladesh, South Africa, Malaysia, Kenya, Pakistan, Egypt, Saudi Arabia, Turkey, Singapore, the United States, the United Kingdom, Ireland, Tanzania, Uganda and Ghana).

Monitoring & Evaluation

Nokia Life collects feedback from users to understand the impact of their service on farmers' lives. On a weekly basis, the knowledge desk speaks to around 4-5 users to understand how they use the service and what they like or dislike. The users are randomly selected by location and crop. The anecdotal evidence collected from user feedback shows that as a result of receiving information from Nokia Life:

- Farmers are in a better position to negotiate with middlemen and get better prices.
- Farmers have changed their behaviour. For example, farmers report that they bypass middlemen and go to directly market themselves.
- Farmers can see information on other crops and are looking at growing additional crops or switching to new crops.

Nokia Life key lessons:

1. Farmers are information savvy – they need not be tech savvy to consume information.
2. So long as the information provided is timely, locally relevant and accurate, farmers do not mind paying monthly subscription fees.
3. Content is King – to get the services right, investments in sourcing, curating, editorial, review and translation of content must not be compromised.
4. People other than farmers are also interested in agricultural information, such as traders, dealers and buying agents.



GSMA Head Office
Seventh Floor, 5 New Street Square, New Fetter Lane, London EC4A 3BF UK
Tel: +44 (0)207 356 0600
www.gsma.com
mAgri@gsma.com

Authors:
Natalia Pshenichnaya – npshenichnaya@gsma.com
Victoria Clause – vclause@gsma.com

Acknowledgements:
Bhanu Potta, Global Product Leader – Learning & Knowledge Services for Nokia Life