South Asia • India

Reuters Market Light, Creating Efficient Markets

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Executive Summary

A venture promoted and supported by Thomson Reuters, Reuters Market Light (RML) offers highly customized and localized agricultural and related information service. Using a subscription economy model, RML provides information services via mobile phone-based Short Message Service (SMS) primarily aimed at farmers. RML SMS cover localized weather forecasts, crop advisory, proximate market data and crop prices, and relevant policy and national and international news. With such information, a farmer subscribing to the RML service is equipped to overcome the information asymmetry that impedes agricultural communities’ growth and earnings, especially in the context of falling yields. Equipped with information, farmers can thus make informed decisions about their agricultural practices and sales and will be able to create wealth through a rise in agricultural productivity and incomes while waste and market inefficiencies are likely to minimize.

The value proposition of RML arose from a realization of deficient extension services in the agricultural sector of a developing country like India which contributes to the existing information asymmetry among its farmers. RML advisory belongs to what is called ‘information precision agriculture’ and has great potential to promote sustainability post-Green Revolution. Initiated in 2006, with full fledged operations launched in October 2007, RML currently operates in nine Indian states with a subscription base of over 175,000 (by the end of 2009), and is adding anywhere from 300 to 2,500 subscriptions every day, depending upon the day of the month or season. With plans of scaling up operations nationwide in India by April 2010, RML will have expansion in distribution networks through tie-ups with other players in the rural markets and retail outlets, and hence the subscription figures are set to rise dramatically. RML aims to build half a million subscriber base by the end of 2010.
Context

According to the 2001 census\(^1\) of India, 72.2% of India’s population\(^2\) lives in about 638,000 villages\(^3\) and the remaining 27.8% lives in about 5,100 towns and 380 urban agglomerations. Agriculture is the primary source of livelihoods for most in rural areas. The National Commission for Enterprises in the Unorganized Sector (NCEUS) in India reported\(^4\) that there were an estimated 457.5 million workers in 2004-2005 in India. Of these, 86.2% (394.9 million) work in the unorganized sector, and of which 64% (252.8 million) were engaged in the agriculture sector. While 35.2% (89 million) were agricultural labourers, 29.5% (74.6 million) were marginal farmers, 15.8% (39.9 million) were small farmers, and the rest medium or large farmers. Thus marginal and small farmers (with up to two hectares landholding) together constitute 114.5 million agricultural workers\(^5\), and the marginal, small and semi medium farmers (under four hectares landholdings) altogether comprise about 95% of India’s total operational landholding.\(^6\) (See Table 1: Structure of Agrarian Population; and Table 2: Distribution of Operational Landholdings in the Annex).

Another report\(^7\) of the NCEUS cited above, records that the average monthly income of a farmer household is estimated at Rs. 2,115 per month (approximately US$47\(^8\)) with monthly per capita income as low as Rs. 385 (approximately US$8.6) at all India level. The average monthly income for farmers with landholding less than 0.01 hectares (marginal) to 10 hectares and above (large) ranges from Rs. 1,380 (approximately US$31) to Rs. 9667 (approximately US$215) respectively. The Consortium of Indian Farmers Associations (CIFA) argues that the overwhelming majority of farmers are economically worse off than the lowest-paid government employee in India, who earn on an average Rs 10,000 (approximately US$225) a month.\(^9\) Sri P. Chengal Reddy, Secretary General of CIFA, argues that between 1951 and 2004, the income ratio between agriculture workers and non-agriculture workers widened from 1:1.8 to 1:5.2.\(^10\) (See Table 3: Average Monthly Income from Cultivation by Size of Landholding in the Annex).

These statistics show that the agricultural sector in India is in a state of crisis. The reasons behind the crisis need to be understood both in long and short term contexts. Therefore the agricultural sector in India which is subjected to multiple pressures is examined below.

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\(^2\) India’s population, as per the July 2009 estimate, was approximately 1.17 billion. Census of India. Office of the Registrar General and Census Commissioner, India.
\(^3\) Census of India: Number of Villages. Office of the Registrar General and Census Commissioner, India.
\(^5\) According to the Government of India’s Farmers’ Survey of 2002-03, there were an estimated 75 million marginal-small farmer households in India in 2002-03.
\(^6\) Pitale, 2007
\(^7\) Condition of Work and Promotion of Livelihoods in the Unorganized Sector (2007)
\(^8\) In the case, the currency change used is US$1 equals Rs. 45.
\(^10\) Reddy, 2009
ISSUES OF INDIAN FARMERS

The agricultural community in rural India is beset by many infrastructural constraints such as lack of roads, access to regular water for irrigation, poor tele-density\(^\text{11}\) (varies state to state), and other agri-technologies. Besides, the vulnerabilities of small and marginal farmers further increase due to lack of access to formal education\(^\text{12}\) and training, low levels of accumulation such as savings and other types of assets with few linkages to formal credit and insurance, unavailability of genuine and affordable agricultural inputs like seeds and fertilizers, and unfriendly public policies such as Agriculture Produce Marketing Act (APMA).\(^\text{13}\) The Green Revolution\(^\text{14}\) gains of the 1980s also have not been sustainable into the 1990s. Farmers from successful Green Revolution regions report unsustainable agricultural production and need increasing levels of inputs to maintain or increase the falling yields compared to the 1980s.

Analyses of the agricultural sector in India reveal important insights about the bottlenecks that constrain agricultural productivity and earnings in India. Small farm landholdings, inadequacies in the quality of crop farming, trader dominance in agricultural produce marketing, and relatively rigid food consumption patterns at the household level tend to undermine the growth of the agricultural sector in India.\(^\text{15}\) According to the agricultural development process cycle, such characteristics make Indian agriculture predominantly a commodity oriented and supply-driven system and hence the market-orientation is lacking.\(^\text{16}\) The value addition to total food production in India is estimated to be a mere 7%, whereas in China, the Philippines and the UK the same is 23%, 45% and 188% respectively.\(^\text{17}\)

Vaswani et al (2003) argue that the Indian agricultural sector, according to the agricultural development process cycle, is relatively underdeveloped and is in transition from ‘commoditization to commercialization’.\(^\text{18}\) Essentially, the value addition in the Indian agriculture sector will happen only with farmers’ knowledge and understanding of consumer

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\(^{11}\) Tele-density is a term commonly used to describe the number of telephone lines per some unit of the population (often per 100 people); also, the density of telephone lines in a community - Center for International Development at Harvard University. [http://cyber.law.harvard.edu/readinessguide/glossary.html](http://cyber.law.harvard.edu/readinessguide/glossary.html), accessed on 20/11/2009

\(^{12}\) 13.6% of all farmers attained secondary and above education according to the NCEUS (2008) report.

\(^{13}\) The APMA, enacted and administered at the state level, was introduced in India to protect farmers from the exploitation of intermediaries and traders and to ensure better prices and timely payments. The Act requires all agricultural produce in bulk to be purchased only through state government-operated markets, barring farmers from selling produce directly to private buyers, except on retail basis. The Agmarknet.nic.in, the website of the Directorate of Agriculture Marketing and Inspection, Ministry of Agriculture, Government of India states that, “Over a period of time these markets have, however, acquired the status of restrictive and monopolistic markets”. However, recently several states have introduced a number of exceptions to the Act (Misra, 2009). (Pitale, 2007)

\(^{14}\) Introduction of high-yielding varieties of seeds and increased use of fertilizers and irrigation after 1965 in India is known as the Green Revolution. This provided increase in production needed to make India self-sufficient in food grains, thus improving agriculture in India. [http://countrystudies.us/india/104.htm](http://countrystudies.us/india/104.htm), accessed on 15/11/2010.

\(^{15}\) Vaswani et al, 2003

\(^{16}\) Ibid.

\(^{17}\) FICCI, 2002

\(^{18}\) Vaswani et al, 2003
preferences as well as the latest developments in the markets. “Future increases in agricultural growth have to be essentially achieved through increase in yields or transition to high value crops. This coupled with changing consumer trends and rising consumer income, especially in the non-agricultural sector and urban areas, is creating opportunities for high-value agricultural products like fruits, vegetables, fish, eggs, milk, meat etc.”

A key bottleneck in the Indian agricultural sector highlighted in an editorial of a leading newspaper is a striking example of market anomalies. The editorial noted that rice farmers suffered losses in all regions of India, except in Andhra Pradesh, over three cropping years ending with 2006-2007, and wheat farmers fared relatively better. The editorial further criticized that, “…farmers do not really gain much even as consumer prices go through the roof. This anomaly of farmers suffering losses, even in crops for which the government provides support prices while consumers pay high prices, deserves urgent official attention. Clearly, fat margins accrue to those who control the series of transactions farm produce undergoes after it leaves the farmer and before it reaches the consumer.” Research shows a total mark-up of about 60% to 75% in the marketing chain of agri-produce - from ‘Farm Gate’ to ’Retailer’. The wholesaler margin over farmer is usually in the range of 30% to 35%; wastage borne by the farmer usually range from 15% to 25%; transportation cost borne by the farmer is about 10%.

In such a scenario, information for farmers becomes a critical factor to overcome the various bottlenecks and - to improve yields using cost effective and timely agricultural inputs, in the form of alerts on crop advisory and climatic conditions, and to improve earnings based on market prices and relevant market and policy news. While there are various factors that contribute to low productivity and growth rates in rural India, the mitigation of information asymmetry, can, to some extent, facilitate farmers in achieving agricultural productivity and wealth creation.

**Mitigation of Information Asymmetry in India’s Rural Economy**

The Indian National Sample Survey in 2003 revealed that only 40% of farmers in India had access to modern technology for farming. (See Table 4: Access to Information on Modern Agriculture 2003)
Technology through Govt. Programmes/Institutions by Land Size Class; and Visual 3: Information Sources of Farmers in the Annex). The Government of India appointed National Commission on Farmers (NCF) in its fifth and final report in 2006 emphasized the need for knowledge connectivity in rural India and stated, “farm families urgently need the right information at the right place and the right time in order to enhance agricultural efficiency and competitiveness.” The fourth report of NCF in 2004 had stressed “the importance of developing and sustaining two-way flow of information between the farm families and experts/agencies of all kinds” and proposed setting up Village Knowledge Centres (VKCs) in 600,000 villages by 2007 under the Mission 2007.

Information asymmetry in itself leads to inefficient and fragmented markets, high transaction costs, wastage of produce in the context of poor storage conditions and low returns on investments for farmers due to lack of accurate information on market pricing. Information asymmetry creates a large number of middlemen (brokers and wholesale traders who provide market price information to farmers) between farmers and buyers, lengthening the value chain often without true value addition. In the Indian market, fresh produce moves through the value chain from 120-250 million farmers to five million multiple middlemen to 7,500 local wholesale markets to five million multiple middle men to 500,000 consumers at the end of the chain. Farmers, as well as the end-consumers, do not get the fair prices of the produce due to this market inefficiency (refer to Visual 1 below).

Visual 1: Agricultural Value Chain

Farmers Middlemen Markets Buyers

Farmers Multiple Middlemen Buyers

250m 5m 500K

---------------- Local Markets -------------

7500

Source: Amit Mehra, MD, RML

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26 NCF, 2006:32
27 Ibid.
28 VKCs were proposed to be set up as information-kiosks with integrated use of the internet, cable TV, community radio and vernacular press (NCF, 2006).
29 Pitale, 2007
30 Mehra, 2008
Along this extensive value chain, farmers seldom get accurate information about local markets or the preferences of the end-consumers. Market price inefficiency amounts to 20% in price variations for the same crops in neighboring markets with farmers getting only 25% of the final price for their raw produce and buyers paying 20% more for the produce. In the context of volatility of farmers’ earnings, increased risk of natural disasters and rising commodity prices, farmers face great risk and uncertainty due to lack of timely information.

Studies show that agricultural productivity and earnings in India can be substantially improved by serving the information needs of farmers. In fact, information precision agriculture is being touted as the next evolution for Indian agriculture after the Green Revolution. In the Vodafone-ICRIER study of 2009, interviews were conducted with small farmers at village levels and in wholesale markets in select districts of Maharashtra, Rajasthan, Tamil Nadu, New Delhi and Uttar Pradesh states. The study looked at the impact of mobile phones and in particular mobile-based information services on agricultural productivity in these states. Small farmers ranked their information needs in the following order of priority: seed varieties, market price, plant protection and fertilizer application. Information about seed varieties or fertilizers i.e. agricultural inputs also assumes great importance as substandard inputs are often peddled to small farmers causing huge losses in the process. As an enhancement in agricultural extension, information becomes significant in sharing of agricultural research and development (R&D) with farmers. (See Visual 2: Information Needs of Farmers in the Annex).

To sum up, the lack of access to customized, personalised and real-time information lead to farmers losing at all levels – raw material procurement, pre-sowing stage, pre- and post-harvest stages, and at the level of markets. Quality and reliability of existing sources of real-time information in an infrastructural-deficient nation fail the test of serving farmers adequately. Fortunately, modern technology can help farmers to face their information challenges, which is explored in the following sections. Modern technology and specifically communications infrastructure is a beacon of hope for rural India. Its footprints are slowly being felt in India’s rural space.

**Missing Links: Mobile Telephony and Value Added Services in Rural Markets**

31 Ibid.
33 In 2009, droughts in India have seen more farmers applying for work under the NREGS (National Rural Employment Guarantee Scheme) as their yields have not been profitable enough. NREGS was launched by the Government of India after enactment of National Rural Employment Guarantee Act (NREGA) on August 25, 2005, which promises 100 days of employment to villagers in India through manual labour. (Arango, 2008)
34 Mittal et al, 2009; Jensen, 2007
35 Mittal et al 2009
36 Ibid.
37 Ibid.
38 Narula, 2009
If the sources of information for farmers are critically lacking, the means of delivery, i.e. a dependable, affordable and well networked communications infrastructure in rural India needs to be strengthened and enhanced. (See Box 1: India’s Telecom Growth Story in the Annex). Improving the means of delivery of critical and timely information to farmers and other rural groups depends on the communication infrastructure and the telecommunications industry. While the government plays its part in creating the suitable policies and communication infrastructure, the impetus also has to come from private telecom players to build viable and sustainable business models for rural markets. Communication infrastructure is accepted as a vital link in encouraging the growth of the agricultural sector in India. Communications infrastructure is slowly expanding in the rural areas, and mobile telephony in particular is favoured for its ease of use and cost effectiveness.

The unfolding rural mobile revolution has vast potential for the rural communities and their livelihoods. Now more than 60% of total mobile users in India are from rural areas, and in absolute terms, over 136 million (total mobile users in India – over 500 million by the end of 2009). Currently, the rationale for mobile service providers to expand into the rural markets and into the value added services (VAS) segment of mobile telephony is strong in the face of declining revenues despite the increasing subscriber base. (See Graph 1: Decline in Mobile Revenues in the Annex).

Bharti Airtel’s profits slid for the first time in its history in the September quarter of 2009. Reliance – another large mobile phone service operator – also performed less with its profits falling by more than 50% compared to 2008. Vodafone Essar's revenues declined by 7% in the September quarter compared with the June quarter of 2009. In a 2009 article, Krishna argues “How does this make sense? More subscribers mean more revenues, and more revenues mean more profit, right? Well, not exactly.” The same article explains that the new subscribers are mostly from the ‘bottom of the pyramid’ segment and therefore contribute relatively less to revenues. Mr. Romal Shetty, head of the Telecom Practice of KPMG India quoted, “Till we reached the 300 million mark, each subscriber was contributing to the top line (gross revenue) and the bottom line (profits) [of cellular operators]. But after 300 million, not everyone's been contributing. Today, between 10% and 20% of an operator's subscribers are not contributing [to revenues]. They have just taken the phone to receive incoming calls.”

This suggests that in a developing country such as India, the business strategies and business models may need to be reconsidered and changed dramatically. In the case of telecom companies in India, extensive coverage and customer acquisition with subscriptions in rural

39 Rajmanohar, 2009
40 With more than 110 million subscribers as of 2009, Bharti Airtel is now India’s largest mobile phone service operator, the world's third-largest single-country mobile operator and the sixth-largest integrated telecom operator.
41 Krishna, 2009
42 Ibid.
43 Prahalad, 2004
areas may not necessarily add up to the profits as expected,\(^4^4\) as most of the low-income subscribers prefer to save costs by largely opting to have a mobile phone to receive incoming calls or text messages (see Chart 3: Usage Patterns Among BoP Mobile Owners in India in the Annex). The mobile phone companies therefore cannot afford to stay focused solely on increasing their subscriber base and the voice-based business, but also need to pay attention to value added services (VAS) to increase the usage of mobile phone service among their subscribers.

As compared to other economically advanced countries, currently VAS in India\(^4^5\) contributes to only about 10% of the mobile service operators’ revenue in India.\(^4^6\) The potential for growth in VAS in India will be in the data and email information segments (see Pie Chart and Graph 2: VAS Performance Forecast in the Annex). Mouli Raman, Co-founder and Chief Technology Officer, OnMobile, a VAS provider in India stated that, “There is an urgency [among cellular operators] that we haven’t seen before. We had some products in the pipeline on which operators were not keen on earlier because of other preoccupations. But now they are really pushing them through so that they can take [the service] to market much faster.”\(^4^7\) The CFO of RML, Mr. Prem Prakash Saboo also expressed similar sentiments “when RML started in 2007, no mobile service company was interested in RML, but now situations have changed and the mobile phone companies see value in our business for themselves and coming to us.”\(^4^8\)

Reuters Market Light offers such a value creating and enhancing service for the farmers in rural areas as well as for the mobile service companies and other companies and institutions with interests in agricultural community.

### RML’s History & Development

RML’s promoter is the London-based financial information company Thomson Reuters. Thomson Reuters provides information tailored for professionals in the financial services, media and corporate markets. Thomson Reuters’ news reaches over 1 billion people every

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\(^{4^4}\) Krishna (2009) notes that the average revenue per user (ARPU) of the mobile operating companies in India has been falling consistently (from around Rupees 300 per month in 2006 to less than Rupees 200 per month in 2009) due to the lowering of tariffs. However, revenues of mobile companies have so far not been impacted as much as they continued to add subscribers. With extensive subscriber base, but lower ARPU, the scope for achieving greater profits diminishes and experts predict a fall in the EBITDA margins of telecom companies, which mean lower profitability, and making telecom companies less favourable for investments. Indeed, Prahalad, in an interview, argued that AMPU (Average Margin Per User) than ARPU (Average Revenue Per User) is better metric of performance for telecom companies and they should focus on Value Added Services (VAS).

\(^{4^5}\) Currently, VAS services in India primarily cover astrology, entertainment and sports information. Prasad (2009) suggested that the mobile VAS market in India in 2009 was to the tune of Rs. 100,000 million and contributed to the mobile operator’s revenue in the range of 9% to 12%. With 70% growth rate, mobile VAS market would double by 2011, and its contribution to the mobile operator’s revenue is expected to reach 18% to 22%.

\(^{4^6}\) Krishna, 2009

\(^{4^7}\) Ibid.

\(^{4^8}\) From a personal interview with the case authors.
day. It also supplies over 500 of the world’s largest news broadcasters with 7,500 video news stories a month.\(^\text{49}\) In 2009, Thomson Reuters’ revenues amounted to US$3.21 billion.\(^\text{50}\)

In 2004, a Reuters employee from Sweden, Mans Olof Ors, sponsored by The Reuters Foundation, joined Stanford University’s Digital Vision Program on a fellowship and conceptualized the idea of information services for farmers. The idea then came alive as the result of an innovation push by Thomson Reuters to look for business ideas and models with long-term significant revenue potential. Thus, Project Market Light was born and India was chosen as its testing ground.

In January 2006, Amit Mehra, who was then Vice President for Content Operations in Reuters, based in London, was offered the role of project leader for Project Market Light with a start-up grant of GBP 100,000 from Reuters Innovation Programme (see Visual 4: RML Development Phase in the Annex). Amit, originally from India, accepted the offer and conducted first round of exploratory research with over 400 farmers and 150 traders from across India to understand their information requirements and viability of a service proposed by the Project Market Light (which was later named by Amit and his team as Reuters Market Light in 2006). Amit was excited to note the research findings that 70% of the farmers mentioned information as a critical requirement for their productivity and earnings. However, the let down for Amit then was another finding - that the farmers were not convinced that their information needs could be met through RML’s concept, as presented to the farmers at that time.

Reflecting on the initial days of RML in India, Amit stated that, “\textit{when we started the Project Market Light we held certain assumptions about the Indian agricultural markets, the behaviour of farmers, roles of other players in the agricultural sector and availability of information. One assumption was that information would be available and easy to aggregate and deliver. Despite having access to expert data on crop advisory from reputed agriculture research universities in India, we still had to source and build much of the content for our agricultural advisory. In order to provide reliable and quality information, that was relevant and free from bias, we learnt that we have to invest in building own content development resources, and we had to incur costs there.”}

Another assumption held by Amit and his team was that there would be support from other players in the market. Instead there was scepticism from many quarters about RML’s value proposition. Although the surveys of farmers showed that they were not interested in buying the service, but Amit firmly believed that if the product is made and presented appropriately, the farmers would see the benefits. Yet another assumption of Amit that proved wrong was that there would be distribution and marketing networks in rural areas which could be leveraged. The telecom operators, arguably the main partners for RML’s kind of service, were

\(^{49}\) Thomson Reuters is the world’s leading source of Intelligent Information. Thomson Reuters aggregates financial information from different sources and exchanges and OTC markets on 35,000 companies.

\(^{50}\) See [http://thomsonreuters.com/content/press_room/corp/corp_news/Q309_earnings](http://thomsonreuters.com/content/press_room/corp/corp_news/Q309_earnings).
sceptical about the paid subscription-based value added service. So Amit and his team had to build their own sales and distribution network and processes. (See Visual 5 below).

Several months were spent in researching the market and building a prototype, Amit mentioned. However, he was excited when the team’s assumption - about farmers that they may take long to appreciate the service - was proved wrong. Once the concept was prototyped and tested, it was readily accepted by farmers. In July 2006, RML launched the first module of its pilot: concept testing. Prem, RML’s CFO, illustrated that this round involved surveying over 1,500 farmers every 15 days. These surveys revealed that the need for information cuts across all segmentation of farmers regardless of landholding sizes and earnings.51 In this phase of prototyping, it was discovered that 80% of farmers were willing to pay for information services. This phase was important for another reason as the surveys on various pricing points allowed RML to settle on an acceptable price point decision of US$4 per quarter. For Amit, this phase, in effect, strengthened the case for RML’s social value proposition and also demonstrated that it was of financial value as well for RML itself and all its stakeholders.

Visual 5: Sample Process

51 It must be noted here that landholding sizes does not dictate the type of crop grown. Amit Mehra in a personal interview emphasized that often ‘small landholdings grow high value crops like soya beans, horticulture and fruits and vegetables in Maharashtra’. 
At this time, the content was actively developed. Content sourcing and development team visited Mandis. Sunil Tambe, the head of Content Development at RML, personally engaged with over 150 farmers to understand crop cycles, crop varieties and their grades and quality.

Standardizing content also presented challenges to the RML content team. For example, unit sizes varied between markets which prompted the team to include specific information in SMSs such as ‘1 box’ equals ‘1 kg’ as an explanatory note at the end of text messages. Translations between local languages proved difficult as the names for the same crop at times differed and posed issues of terminology. Sunil’s content team resolved the issue by combining a standardized name of a crop along with the local name of the crop. The team also engaged with linguists in order to learn to simplify text messages and customize it to the SMS format. A key challenge of the SMS medium lay in its 3-4 words allowed per screen especially in low-priced mobile handsets. Sunil said that, “this dictated the way language was deconstructed and pieced together to ensure accuracy in a message.”

After the first pilot in which free trials were run, 85% of farmers expressed interest in buying the product, and were willing to pay an average of US$1.50/month for it. Amit mentioned that, “during this small trial, a distributor channel through an operator was also set up. An important learning during this phase was that distribution points were not readily available.”

The first phase of research revealed great disinterest on the part of farmers towards RML’s concept. During prototyping phase (after free trials of the service), 80% of the farmers tended to accept wholly the value of the service, the mobile phone technology supporting it and were willing to pay for RML’s information service. The prototype phase appears to have been effective because RML was no longer an abstract concept as in the first round and the free trials may have convinced the farmers that they could access and use relevant information in a cost effective and timely manner at affordable rates.

In April 2007, production began with a scaled up trial of over 7,000 farmers. At this time, sourcing, content aggregation, delivery and marketing were all done from scratch and an end to end operating model was built (see Visual 6: An End-to-End Operating Model of RML on the next page).

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52 Mandi is a wholesale and retail marketplace where farmers meet to buy and sell agricultural products and there are about 7,500 mandis in India (Mehra, 2008)
Amit shared that the process of building the value chain was implemented with the least amount of support. The RML team had to constantly prove the idea to farmers, to the government, to telecom companies, and even to the parent company Thomson Reuters, which initially requested that RML seek external funding. Amit was happy that after RML received favourable responses from potential external funders, Thomson Reuters agreed to fund the project internally. On value added for an RML subscribed farmer and wider impact of RML information service in rural India, Mr. Tom Glocer, CEO, Thomson Reuters, observed, “for me, the really great thing about Project Market Light is that it provides the exact sort of market transparency to create fair and efficient markets at the bottom of the pyramid and not just in the dealing rooms in London.”

RML officially launched its service in October 2007 in Pune district of Maharashtra, a state in Western India and the service was inaugurated by Mr. Sharad Pawar, the Minister for Agriculture, Government of India. Currently operating in the Indian states of Maharashtra, Haryana, Punjab, Gujarat, Rajasthan, Himachal Pradesh, Uttar Pradesh, Madhya Pradesh, Karnataka, Andhra Pradesh and West Bengal and with plans to cover all states in India by April 2010, RML offers weather, market information, agricultural best practices and news information to rural farmers.

**RML’s Business Model**

RML, a cell-phone based SMS information service, (See Table 5: RML Service Details in the Annex) provides farmers with important agricultural and related information, which is sold on subscription basis to farmers at different rates for varying periods of 3, 6 and 12 months (See Table 6: Subscription Rates below). RML’s smallest subscription plan is Rs. 260

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53 Reuters, 2009
(approximately US$4) for three months. The SMSs provide farmers customized and up-to-date, local markets and commodity pricing, news, crop advisory and weather forecasts information.

Table 6: Subscription Rates

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<thead>
<tr>
<th>No</th>
<th>Subscription Duration in Months</th>
<th>Cost of Subscription in Rupees (US$)</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>260 (US$ 6.60)</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>500 (US$ 12.67)</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>850 (US$ 21.56)</td>
</tr>
</tbody>
</table>

Source: RML Documents

The service subscribing farmers receive four to six SMSs per day – one market prices’ advisory for two crops in three markets chosen by the subscriber; one crop advisory; one weather alert and one news alert. Currently, RML covers over 150 crop types and 500 markets and is consistently adding to this list. The information is messaged at preset times to the subscribers. The service has recently changed to offer all crop prices for six proximate mandis for individual subscribers. Amit states that “the aim is to facilitate greater transparency in the Indian agricultural markets allowing individual farmers to increase their productivity and maximize their revenue, and this new distribution channel helps to meet those goals.”

Weather information allows farmers to make decisions about harvesting and protecting their crops. Market information provides visibility of market prices, which helps farmers get the fair price for their crops and allows them to choose the market to which they sell accordingly. This carries reputational benefits as well for them. Farmers who were previously swindled by middlemen now stand up for themselves proclaiming the going price, thus compelling middlemen to listen. Amit is happy that now even the middlemen and the concerned government functionaries are taking RML subscriptions to stay informed about the commodity prices in the markets.

Crop advisory helps farmers with advice and information on farming techniques (See Chart 1: Crop Advisory – Sample Messages in the Annex). Wider national and international policy related news can be very valuable for farmers as well. Amit feels that the news of a particular crop getting an export tariff or crop failure in a certain region of the country provides valuable information for farmers to time their decision on market activities.

Prem argued that, “the availability of information is not always enough to help all rural farmers. Farmers in rural India are segmented by RML into three categories based on landholding size: subsistence and marginal farmers (<2 hectares), small farmers (2-<5 hectares) and medium farmers (5-10 hectares). A small farmer, for example, may not be able to afford paying labour in emergency harvest situations or rent a warehouse to store his stock

54 Shashidar, 2009
in order to wait for prices to climb before selling. Small, medium and marginal farmers have the maximum risk from exposure to uncertainty from weather and pricing, but are not as likely to be able to act on the information provided”.

RML is innovating to overcome these markets constraints for such groups of subscribers. For instance, financial access to credit is an issue for medium or small landholding farmers with marketable surplus. RML is exploring tie-ups with banks for pledge loans against warehousing. For warehousing options, RML is trying to resolve it by exploring local tie-ups with non-governmental organizations (NGOs) and coordination efforts that will enable farmers to link up to rent space for harvested crops or to learn new techniques. However, the target market for ancillary services like loans or warehousing will not be the subsistence or marginal farmers i.e. the rural poor. It will likely be farmers in the mid-large landholding ranges with marketable surpluses. Subsistence and marginal farmers are likely to benefit more from RML’s advisory on agricultural inputs and prices of inputs in order to improve their productivity and earnings.

RML further segments the subscriber base by geographic regions and then by high and low value crops. Currently, 60% of subscribers’ crops are high value and 20% are low value. A high value crop, such as grapes, could grow on a smaller farm than a grain, but will be more sensitive to weather and market information. This translates to an immediate target market of medium landholding farmers and progressive, role model types in villages. However, Manav Yashroy, Vice President of Sales at RML, stated that beyond the above segmentation, the most important market segment for RML are those farmers with marketable surpluses, and in the Indian context, these will include growers of grain, pulses, oilseeds and cereals. Such farmers are less than market savvy, compared to a grape grower owning two hectares in Maharashtra and well connected digitally. Those farmers with marketable surpluses accumulate their produce but often fail to get good prices due to their lack of knowledge about market pricing and trends or agricultural input prices. Such farmer groups will benefit the most from the RML service and are therefore specifically targeted.

Financials

Currently, RML’s revenue does not cover costs - which include content sourcing (fixed cost), delivery (SMS – variable cost), toll-free customer support (variable cost), sales and distribution network (channel discounts and variable cost), R&D (fixed cost) and overheads (variable cost). RML is committed to its long-term vision and is also committed to searching for ways to lower costs for itself and its subscribers. Prem, RML’s CFO, says that although the current model is subscription based, revenue streams are seen in a long term horizon. Concurring with Prem, Amit states that “like most start-ups which require an average of 3-5 years to breakeven, RML is also on a similar growth path”. Eventually it is expected that RML’s revenue streams will grow to include revenue from advertisements, institutional sales (to the likes of telecom and agri-input companies), and sales of similar products for other trades (such as fishermen, livestock and poultry farmers). (See Table 7: Subscription Economy Model - RML Financials Projections on the next page).
Table 7: Subscription Model – Financials Projections of RML (2007-2010)

<table>
<thead>
<tr>
<th>£m</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of registered farmers (m)</td>
<td>0.07</td>
<td>0.36</td>
<td>0.70</td>
<td>1.94</td>
</tr>
<tr>
<td>Average revenue per user (£)</td>
<td>2.00</td>
<td>4.20</td>
<td>5.90</td>
<td>6.50</td>
</tr>
<tr>
<td>Farmers content business</td>
<td>0.14</td>
<td>1.51</td>
<td>4.13</td>
<td>12.58</td>
</tr>
<tr>
<td>Farmers commerce business</td>
<td>-</td>
<td>0.46</td>
<td>4.06</td>
<td>10.71</td>
</tr>
<tr>
<td>Traders content business</td>
<td>-</td>
<td>0.50</td>
<td>5.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Total Revenues (£m)</td>
<td>0.14</td>
<td>2.47</td>
<td>13.19</td>
<td>33.29</td>
</tr>
<tr>
<td>Operating Profit (£m)</td>
<td>0.46</td>
<td>0.49</td>
<td>3.17</td>
<td>11.65</td>
</tr>
<tr>
<td>Net Profit (£m)</td>
<td>-1.42</td>
<td>-2.47</td>
<td>-3.69</td>
<td>0.01</td>
</tr>
<tr>
<td>Operating Margins</td>
<td>-324%</td>
<td>20%</td>
<td>24%</td>
<td>35%</td>
</tr>
<tr>
<td>Net Margins</td>
<td>-1,000%</td>
<td>-100%</td>
<td>-28%</td>
<td>0%</td>
</tr>
<tr>
<td>Free Cashflows</td>
<td>-1.65</td>
<td>-2.81</td>
<td>-3.77</td>
<td>-0.07</td>
</tr>
<tr>
<td>Cumulative Cashflows</td>
<td>-4.46</td>
<td>-8.23</td>
<td>-8.30</td>
<td>-0.07</td>
</tr>
</tbody>
</table>


Amit also observed that although currently, in the RML business model, the information flow is toward rural areas, plans are in the pipeline to develop and sell information and news analysis about rural markets to Thomson Reuters’ mainstream customers globally. That would be a much bigger revenue generator for both RML and Thomson Reuters. RML will build up an impressive database on agricultural commodities and other rural product markets, rural consumers and their spending and consumption patterns. Such a database of would be of interest to Thomson Reuters’ mainstream customers worldwide.

Prem, RML CFO, revealed that the coverage of market price information is the biggest cost driver for RML as it is people-intensive. The company currently has a workforce of 600 people, 3% to 4% of which are at the corporate level and the rest are field level staff. With respect to revenue generation, revenue leakage has been observed through informal sharing of RML’s service between farmers and it is estimated that each customer shares messages with approximately 5-10 others, so that nearly half a million farmers are reached and benefitted by RML’s information service free of cost. Technically, RML has over 175,000 individual subscribers and has sold over 250,000 subscriptions. Nearly 40% of farmers, who did not re-subscribe, did not know how to re-subscribe since RML shifted its customer outreach and intake process from paper based and direct sales to voucher card service sold at retail outlets with a toll free customer service.

Revenue share between RML, as content developers and aggregator, and telecom operators and other such tie-ups is an issue that still needs to be resolved, observed Prem. Mobile VAS, as a revenue segment for the telecom operators in India, is still under development, and therefore this issue will take a while to get resolved.
**Content Sourcing**

Information on weather, market price information, agricultural best practices and news alerts are the four services provided via text messages. RML has created a content sourcing network of market reporters. A team of reporters track 600 markets in the country. Sunil, the Content Head of RML, stated that the content sourcing network has a state head, a regional content sourcing manager and local chief content reporters and market reporters in every market. Reliability of information is ensured as a dedicated team of reporters are present in every state where RML has a presence. They visit the markets and provide real time information on price movements on commodities at the end of the business day to subscribers. RML employs around 500 to 600 content members. Validation of information is done through six sigma processes and multiple checks on data through logbooks of reporters, random visits to mandis and auto scanning of information feeds on pricing averages.

For weather data, RML sources information from 1,800 weather stations globally and is in the process of developing tie-ups with Indian weather stations. General market information and news are from Thomson Reuter’s own networks.

Crop advisory, best practices and other expert knowledge is sourced from the Indian Council for Agricultural Research at Punjab Agricultural University and other research institutes free of cost. RML gets the information from the academic institutions, puts it in SMS form and sends it back to them for validation, before relaying to its subscribers.

**Distribution & Sales**

In the initial phase, farmers had to fill out application forms at the local post offices, or at farmer gatherings to RML sales team, specifying their preferences on crop types and markets. The direct sales model followed initially did not succeed as the sales team was not adequate in penetrating and reaching out to the rural clientele due to factors like lack of residential address data, migration and so on. Realizing the shortcomings of the direct selling model, the RML team decided to switch to selling through retail outlets. The sales team now gives presentations to farmer gatherings and farmers purchase the RML voucher cards at the nearby retail outlets.

Amit states that “this model of direct sales was cumbersome, so we devised a new system of customer intake. Similar to the mobile prepaid recharge cards, we developed RML voucher cards (see Visual 7: RML Voucher Cards in the Annex), to be sold through retail outlets. After purchasing a RML voucher card, the subscribers call the customer helpline number,”

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55 Roy, 2008  
56 RML had developed a tie-up with the public sector post offices in Maharashtra for sales of subscriptions.  
57 Shukla, 2009
given on the card, and provide a unique ID number from the card for registration and relaying their personal details, crop and mandi(s) preferences. Within 24 to 48 hours of registration, the service gets activated and the subscriber starts receiving customized SMSs.” (See Visual 8: RML System below).

Visual 8: RML System’s Distribution Channel Partners

Currently, there are 4,000 retail outlets that sell RML subscription cards. With operations in nine Indian states as of January 2010, RML has a subscription base of over 175,000, and adds anywhere from 300 to 2,500 subscriptions every day, depending upon the day of the month or season. With expansion in distribution networks through tie-ups with other players in the agricultural markets and retail outlets, the subscription figures are set to rise faster. With its plan of scaling up its operations nationwide in India by April 2010, Amit aims to build half a million subscriber base by the end of 2010.

RML service subscriptions can be bought and renewed with pre-paid cards available at the Sarpanch58 offices and retail outlets such as post offices, agri-input stores, grocery stores and through other distribution channels, which are growing with each tie-up that RML forms. SMS service is available in local languages in 3, 6 and 12 month subscription periods. The sales team has one state head, four to five area sales managers, supervisors and field staff. The supervisors and field team is outsourced, as needed, from the staff temping agencies.

Distribution of RML cards is done through several distribution channel partners at the regional level. But Prem, the RML CFO, mentioned that the tie-up with local post offices through a Memorandum of Understanding (MoU) with the Maharashtra Post Office has not been very successful as the pace of growth was very slow and the local post office staff was not motivated to promote RML subscriptions. Around October 2009, RML signed a deal with Idea Cellular, a mobile service provider with good penetration in rural Maharashtra. Prem adds that we are planning to expand our retail outlets from 4,000 to 10,000 in different states as part of an expansion plan in the coming year. RML’s other tie-ups in 2009 include a rural retailer Aadhar of Future Group in Punjab, with Nokia for all India and in Gujarat with

58 Village Headman
Biostadt\textsuperscript{59}. RML and its distribution partners have a revenue sharing agreement (see Table 8 below).

### Table 8: RML Distribution Channel Partners

<table>
<thead>
<tr>
<th>No.</th>
<th>Channel Partner</th>
<th>Geographic Area</th>
<th>Year of Tie Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maharashtra Post Office</td>
<td>Maharashtra</td>
<td>2007</td>
</tr>
<tr>
<td>2</td>
<td>Idea Cellular</td>
<td>Maharashtra (Rural)</td>
<td>2009</td>
</tr>
<tr>
<td>3</td>
<td>Aadhar Future Group</td>
<td>Punjab</td>
<td>2009</td>
</tr>
<tr>
<td>4</td>
<td>Nokia</td>
<td>India (all the states)</td>
<td>2009</td>
</tr>
<tr>
<td>5</td>
<td>Biostadt</td>
<td>Gujarat</td>
<td>2009</td>
</tr>
</tbody>
</table>

Television, radio, newspapers, local events in districts, a vernacular customer support center, and a CRM tool to manage data and complaints provide marketing support for RML.

## RML’s Value Creation

### VALUE FOR FARMERS

By creating content on crops, fertilizers, weather and local and global agricultural markets,

RML has the potential to minimize information risks and uncertainty to farmers. RML also indirectly educates farmers to differentiate between information and decision making. Amit stated that “the emotional value of possessing critical information that was previously out of reach for farmers is very high.”

Amit observed that thus far RML’s subscriber base consists mainly of medium farmers with 5-10 hectares landholding, who grow medium-value crops, and approximately 20% of poor/marginal farmers use RML services. Random customer feedback from farmers is collected every six weeks by an independent marketing research agency Indian Market Research Bureau (IMRB) to improve products and processes. The socio-economic and emotional benefit to farmers is summarized in farmer testimonials below (also see Visuals 9 and 10 on Customer Testimonials in the Annex).

Punjabrao Shelke, a farmer in Akola district of Maharashtra and a RML subscriber, received weather update from RML through SMS on a sunny day in October, which usually is not a rainy season, informing him that it would rain heavily today. Making a judgment based on RML SMS, Shelke immediately acted and hired extra labour to harvest his soybean and cotton on the same day. As predicted and informed by the RML SMS, it rained heavily. Unfortunately, beside Shelke's, the standing crops of many others were destroyed by the untimely rain.

Hemant Vasantrao Shendre, from Sawargaon of Chandrapur district in Maharashtra, grows soybean, red chilies and gram, and has been a RML customer for over a year. He waits for the

\textsuperscript{59} Biostadt is into selling of plant protection and crop productivity products.
RML SMS before deciding on selling his produce. He tracked the soybean prices through RML messages, sold his produce at the opportune time, and earned Rs. 300/- extra per quintal. He made an additional profit of Rs 45,000 (approximately US$1,000) by selling 150 quintals of soybean at the price he thought was good for him.

Gurjand Singh from Bhawangarh of Bathinda district in Punjab is one of the early RML customers. RML’s messages on market prices fetched him an excess of Rs. 750/- on his basmati produce, thus helping him reap an extra benefit of Rs. 37,500 (approximately US$835) on 50 quintals. Similarly, a farmer from Maharashtra, as he reaped 23% higher profit, that too without compressing the long supply chain, stated, “The RML service helped us keep a tab on the market, it informed us about the price trends; helped us decide where and when to sell our produce”.

The above testimonials demonstrate that armed with relevant, timely information, farmers make better decisions about their crops. The value lies in the high relevance, personalized and localized information that RML provides. The value created by the information service allows a farmer in different aspects from buying seeds to the final stage of selling harvested produce. Amit stated that, “contrary to assumptions about farmers’ attitudes towards RML service, we were pleasantly surprised that farmers took little time to get excited about the idea. In addition to saving money, farmers also reported feeling more educated and with improved social status.”

There is also scope for a lateral expansion in the consumption of RML’s service. For example, Prem observed that bricklayers were found to use the service on occasion for its weather forecasts, government agricultural extension officers, local middlemen/traders, and even companies with interest in rural markets are now subscribing to the RML service. Conventional white-collar traders have also expressed interest as the service provides the most detailed on-the-ground supply and demand information.

A potential area for RML’s intervention in the agricultural sector will be in providing customized information about value addition activities to farmers. Information about value addition activities can be presented in the form of end-consumer food preferences, desired quality and standards of agricultural produce bought by those higher in the value chain, quantity of produce required and processing of raw produce thus far not explored by farmers. By facilitating farmer-market linkages, RML will aid in removing market imperfections created by informal and unreliable value chain actors and promote in its place vertical integration which will reduce risks and improve production efficiencies. RML’s value proposition to farmers will thus increase substantively through a focus on value additions to the agricultural production system.

60 As we have discussed in the context section of the case, Vaswani et al (2003) argued for value additions in the Indian agricultural sector and stated that it is an under explored aspect of agricultural production. Some of the benefits for farmers from value additions are increased farmer-market linkages, reduction in price risks and efficiency in production systems.
VALUE FOR EMPLOYEES
RML’s nearly 600 workforce are deployed at the local mandis. Educational attainment level of most of the market reporters is 12 years of formal school education and some are graduates. The majority of the reporters are from the same rural localities as the mandis. Prem revealed that on an average, the RML field staff earn Rs. 8,000 to 9,000 (approximately US$178 to US$200) per month, which corresponds to salaries of staff at a similar level in metropolitan cities in India. Salaries of staff with higher levels of responsibility and job profiles go up to Rs. 50,000 to Rs. 70,000 (US$1,111 to US$1,556) per month. Additionally, according to Sanjeev, Vice President of Human Resources at RML, exposure to RML training and subsequent work experience translates into valuable experience for rural market reporters, which prepares them for additional avenues in sectors such as insurance, agri-business and telecom industries.

Market reporters on the ground in different regions report on minimum, maximum and average prices in commodity products and arrivals per unit per crop. Sanjeev, the VP, Human Resources at RML, added that the market reporters are with at least twelve years of formal education and job training for them includes one week of training and a short trial period with a buddy in the field.

VALUE FOR RML AND THOMSON REUTERS
Despite the fact that RML, in 2009, can still be considered a start-up enterprise and far from achieving breakeven currently, but with its service product catering to masses, RML is expected to create good value for the agricultural community in particular and great value for its promoter, Thomson Reuters. The Market Light Project was started with the idea that it would have long-term significant revenue for the company and that value will be captured for the company in the future. The core of Thomson Reuters is information/content, and RML is a way of growing their business innovatively and in so far unchartered markets. India primarily is a pilot market for RML, and given the response of various stakeholders in the service so far, the company is already exploring scaling up to other developing regions in Africa and elsewhere. Thomson Reuters stands for transparency and empowering people with information, however, RML adds an interesting dimension to this empowerment story by reaching so far unreached populations and markets and empowering them with critical information inputs, and in the process creating new markets for Thomson Reuters.

Thomson Reuters’ management also plans to expand the service to countries in Africa, South America and Asia after solidifying the business model and necessary partnerships, and have already started exploratory studies in some countries.

Distribution of Value
Currently, 60 % of the farmers who avail RML services are mostly medium landholding, with marginal farmers amount for about 20%. Yet, given the benefits of the RML service, the vision to create wealth in rural markets may very well come true. At this stage of its development, RML’s business model needs scale and therefore is capital intensive. Hence,
relatively little value is captured by RML itself, and more is spread out to the farmers. Farmers have the power of dictating the price point for the subscription - if it is not worth the price to them, they can simply unsubscribe. Gradually with the value of such a service being felt by different stakeholders, changes in market dynamics, including in the business models of mobile phone service operators, and once fully scaled up nationally, the venture may be profitable for RML. However, lowering costs and increasing the value of service such that farmers are willing to pay and more and more farmers become subscribers would be important. Amit also feels that they have to think of a different strategy and pricing structure for poor and marginal farmers to expand the customer base. Currently, based on customer feedback provided by the operations team, Amit is happy that poor and marginal farmers benefitted with the RML service free of cost through sharing of information by fellow farmers, who are RML subscribers.

Despite the fact that increasingly middlemen along the distribution channel of the agricultural produce too are becoming RML subscribers, value is captured for the farmer instead of his buyers. It is only fair that farmers become aware of how much their crops are sold for and the fact that they gain value by using RML service, away from their buyers is a just shift. The disparity between farmers who have the service and those who don’t can be stark at times. One farmer noted that he would have lost his whole crop had he not harvested it early. When an RML representative asked him how he knew he would have lost it, another farmer standing next to him said, “…because I lost mine.” Not all farmers experience such a dramatic impact. However, the availability of information empowers them to make decisions and some of those decisions can have a major impact on their business. The price of the service is affordable, but it presupposes that a farmer has a cell phone, can read or access a literate family member or a fellow resident in village, and can make use of the information he receives.

Constraints & Solutions

The business model discussed earlier set forth the value propositions and various constraints that RML faces in the rural sector. This section uses the analytical tool ‘Strategy Matrix’ to discuss and understand RML’s experience in managing constraints with appropriate strategies (see Strategy Matrix below on page 23). As RML is still a new business, some of the strategies were announced only in 2009 and are in the process of being implemented in the near or medium term.

The lack of knowledge and skills constraint from a mostly illiterate rural populace is being overcome by RML farmers themselves who usually rely on their children, or someone literate in the village, to read the SMSs. To resolve this constraint, RML expressed interest in ‘Combining Resources and Capabilities’ through back-end tie-ups with NGOs who could, for example, help farmers learn new techniques or coordinate information-based initiatives necessitating economies of scale among farmers. While this is a future initiative, in the current period, RML is pursuing a strategy of ‘Adapt Products and Processes’ by offering
voice-activated services (in testing phase in rural Punjab) to overcome illiteracy issues. However, the cost of the voice SMS is higher than the text SMS.

Local usage of crop terminology is another constraint between different markets as is unit size measurements. RML overcame these constraints by standardizing terminology by introducing standard terms alongside locally used terms. Unit size measurements tended to vary widely depending on package sizes. RML resolved this by including an explanatory note about the actual weight of packages.

Faced with constraint of lack of distribution and sales partners, RML invested in creating its own field team and also developed voucher cards, supported by a back-end call centre for customer registrations and complaints management. To a certain extent, RML has also combined resources and capabilities by selling the cards retail stores and educating the store staff to sell the cards. This is not different from a traditional business with a retail point of sale. Amit observed that a tie-up with Idea Cellular for penetration into rural Maharashtra and linking up with Nokia, which currently sells four million handsets per month in India, will ensure better penetration of rural markets for RML.

Physical infrastructure constraint has not exactly been overcome, as RML had to create its own distribution and content networks by investing to remove the constraint. However, by adapting products and processes through use of cell phones and the existing infrastructure of cell towers, RML is able to overcome some of the physical infrastructure challenges innate to rural India.

Content enhancements are ongoing in RML by expanding datasets on other prices of agricultural inputs like labour and including spot and future prices of commodities. Physical infrastructure constraints like warehousing will be addressed by RML in the near future by providing information about the nearest warehousing options to farmers. A pilot study is currently underway.

Some other constraints are the lack of good physical infrastructure combined with geographically remote expanses makes it expensive to cover the great variety of relevant news that is relevant to the widely dispersed farmers. In rural social networks, trusting a newcomer like RML’s information service is a concern.

Another constraint is that farmers need to be educated on the usage of certain types of information such as weather forecasts, and its evaluation. Many reportedly did not realize that forecasts are just predictions. Sometimes RML sends SMSs which are gentle reminders that decisions are to be made by the farmers and that RML is only an information provider and cannot be held responsible for any actions taken on the information and their consequences. Access to credit is also an issue for poor and middle farmers. To overcome this, RML is exploring tie-ups with banks and microfinance institutions (MFIs) for increasing access to loans for farmers.
Revenue leakage is an inevitable issue. Farmers will tend to share the service or forward the messages, but RML sees this as a test opportunity for the new farmer. Prem feels that eventually, the farmer will want his own subscription, tailored to his unique crops. According to Prem, “revenue leakage will be checked when the value of information customization is realized by the farmer.” Therefore, the RML team is not too bothered about revenue leakage at this stage, since there is a feeling in the team that the non-subscribing farmers would gradually realize and learn to appreciate the value and affordability of RML subscription, as against the higher costs of missing the regular information. See the Strategy Matrix below.

### Strategy Matrix

<table>
<thead>
<tr>
<th>CONSTRAINTS</th>
<th>STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market information</td>
<td>Adapt products and processes</td>
</tr>
<tr>
<td>Created rural outreach</td>
<td>Invest in removing market constraints</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Leverage the strengths of the poor</td>
</tr>
<tr>
<td>Regulatory environment</td>
<td>Combine resources and capabilities with others</td>
</tr>
<tr>
<td>Co-creation of thriving agri</td>
<td>Engage in policy dialogue with government</td>
</tr>
<tr>
<td>market</td>
<td></td>
</tr>
<tr>
<td>Physical infrastructure</td>
<td>MoU with State Marketing Committees</td>
</tr>
<tr>
<td>Cell phone-based service</td>
<td></td>
</tr>
<tr>
<td>Sales and reporting networks</td>
<td></td>
</tr>
<tr>
<td>Built from scratch</td>
<td></td>
</tr>
<tr>
<td>Knowledge and skills</td>
<td></td>
</tr>
<tr>
<td>Terminology standardization;</td>
<td></td>
</tr>
<tr>
<td>voice; Text based services</td>
<td></td>
</tr>
<tr>
<td>Access to financial services</td>
<td></td>
</tr>
<tr>
<td>Short, affordable contracts</td>
<td></td>
</tr>
<tr>
<td>(price of 1 chai/ day)</td>
<td></td>
</tr>
<tr>
<td>NGO’s train, poor on best</td>
<td></td>
</tr>
<tr>
<td>practices</td>
<td></td>
</tr>
<tr>
<td>Source from agriculture</td>
<td></td>
</tr>
<tr>
<td>institutes</td>
<td></td>
</tr>
<tr>
<td>Source from government info</td>
<td></td>
</tr>
<tr>
<td>on content</td>
<td></td>
</tr>
</tbody>
</table>

### Actors

The RML team lamented the lack of a strong ecosystem of partnerships and even competition when they started. Amit says that they expected more players to share the R&D and market education burdens. Prem argues that as a result of the lack of proper competition, they had to setup an end-to-end operating model, for which they incurred costs - from content sourcing like market pricing (fixed cost) to SMS delivery to customer support call centre (variable cost) to sales and distribution (variable) to R&D (fixed).

There are huge barriers to entry that discourage competition. RML says they are waiting for a credible competitor to help shoulder the burden of creating the market. Some have made
initial steps, but they are potential partners – handset providers and telecom network operators. Prem claims that most companies think “why should we enter that business? Why create, manage and innovate when RML is already working on those headaches?” However, it may be noted that there are some similar ventures that were launched in India around the same time that RML was launched.

The Indian Farmers Fertilizer Co-operative Ltd. (IFFCO), a fertilizer manufacturing company in India had joined hands with Airtel, a leading telecom operator in India, in 2007 to launch a new subsidiary for providing agriculture and animal husbandry related information to the farmers.61 Named as IFFCO Kisan Sanchar Limited (IKSL), its pilot was started in the Eastern Uttar Pradesh, where IFFCO is based. The IKSL model primarily works by retailing directly through the (its) extensive network of co-operative societies. Similarly, in 2009, the leading IT service and consulting company from India, Tata Consultancy Services (TCS) launched a service named mKrishi, a mobile-based Agriculture Advisory System. Initiated by the TCS Innovation Lab-Mumbai and supported by the Sir Ratan Tata Trust, mKrishi allows farmers to send queries to agricultural experts in local languages through a mobile phone and receive personalized advice or information. Prem, however, offered certain points that differentiate RML from all other services, and the primary being that unlike IKSL (IFFCO) and mKrishi (TCS), RML is promoted by Thomson Reuters, which is an information and news company, and that is their core competence. TCS and IFFCO services may be able to create value for farmers, but they currently lack the expertise of Thomson Reuters.

The new value chain and distribution network created by RML does not displace the existing long chain of intermediaries between the farmer and the market (see Visual 1 on page 7). This long chain is also the main source of information for the farmer about market prices (see Visual 3 below). RML is not displacing the existing long chain but is providing information which can influence the nature of transactions in this chain. RML has combined into one reliable source, information which may otherwise come from multiple sources. Interestingly, the RML experience in Maharashtra has not eliminated middlemen but instead converted them into a meaningful and less exploitative part of the value chain, as market transparency improves. Even the ITC’s e-choupal experience does not eliminate middlemen but only converts them into more responsible middlemen by allowing them to manage information kiosks and cash disbursement. Agricultural yields do suffer from exploitative middlemen who supply substandard agricultural inputs. RML, by addressing the information loopholes such as quality of agricultural inputs and good sources of inputs, can promote market transparency benefitting both farmers and end buyers. The issues that RML faces are faced by other companies in India in that they have to create the market themselves without the benefit of competitors educating the market and creating awareness. Prem suggested that, “once the operations of RML got up and running, RML’s service is better recognized and it has been able to strike partnerships with government agricultural departments, agri-input companies, telecom operators, telecom intermediaries, universities, and trade partners.”

61 IFFCO, 2008
DISTRIBUTORS
Initially, RML developed a tie-up with the government-run Maharashtra Postal Circle to distribute, sell and support RML without charging for its services. Thomson Reuters’ reputation and the RML team’s efforts at establishing relations with the state government of Maharashtra worked in establishing a tie-up with Maharashtra Postal Circle. RML trained the post office staff to understand the product to perform successful customer intakes. At these locations, farmers viewed sales demonstrations and once satisfied, they subscribed to service. As the direct sales method and the post office channel failed to produce satisfactory results, RML resorted to developing its own voucher card along the lines of a mobile recharge card, which is retailed to distributors and retailers (‘trade partners’) on a revenue sharing basis. RML now has a tie-up with mobile service providers and handset manufacturers like Nokia to distribute the service.

CONTENT CREATORS
A team of reporters track 600 mandis in the country. Covering the assigned mandis, reports gather information about minimum, maximum and average price of commodities and arrivals per unit per day for day’s activities, the same day. Initially, the information was collected only for two crops and three markets, but now the information service covers all crops in the six closest markets. There are also partnerships with agricultural universities and institutes in Maharashtra and Punjab for crop advisory content such as seed varieties, plant protection and
fertilizer application. Agricultural institutes share data free of cost, and the RML’s content team aggregates, scans, and translates it into local languages.

**FARMERS**

Farmers are the primary actors in the RML venture. After initial reluctance and questioning its viability, the farmers were receptive to the idea of RML’s service. Farmer acceptance is fast becoming apparent with the penetration of rural areas and the strength of the increasing subscription base of RML.

RML estimates cost savings for farmers in Maharashtra in 2008 to be around Rs. 100,000 (about US$2,222). The Indian Council for Research in International Economic Relations (ICRIER) refers to significant cost savings for farmers who use RML services (or similar information services) in terms of time, money and fuel but as of now these have not been quantified.

**OTHER PARTNERS**

RML has a tie-up with a mobile service provider Idea Cellular in Maharashtra and Goa circles as it has a good rural base. RML has also tied up with Nokia for its Life Tools program throughout India to distribute the services. Nokia is providing different types of content for various consumer groups under its Life Tools program and in this program, agricultural information service, is one of its VAS. Other tie-up of RML includes 1,800 weather stations globally - to provide weather alerts at the local levels within a 50 km radius to farmers – and with BioStadt India Limited – a company that provides agricultural, human care and veterinary services to farming community - in Gujarat.

**Results**

**RML**

The RML service has helped farmers increase their crop yields and improve productivity. Approximately US$8,000 is the highest reported saving by a farmer according to the information shared by RML. From early studies, about 70% of subscribers have changed their behaviour after using the technology, changing when they harvest and when and where they sell (see Tables 9 and 10: Impact of RML on Farmers in the Annex). In a sample survey of 89 farmers on the impact of commodity prices/arrivals messages on farmers, conducted by the Indian Market Research Bureau (IMRB) on behalf of RML, it was found that 35% farmers waited to receive their messages before selling their produce; 60% chose a market for selling their produce on the basis of RML messages and 62% chose a price point for their produce based on RML messages. In another sample survey of 199 farmers, 64% found that RML messages on crop prices to be very relevant and 34% found weather alerts to be very relevant for their crops as against 32% who found weather alerts very relevant for the locality. The

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62 Roy, 2008
63 see [http://www.icrier.org/thinkink/15may09.html](http://www.icrier.org/thinkink/15may09.html)
64 Shukla, 2009a
survey found that 76% of farmers felt the weather alerts were completely or very readable and 98% found that the commodity price alerts were completely or very readable.

Manav, Vice President of Sales at RML, shared findings from another survey on the impact of RML, which is conducted by IMRB on different groups of farmers every two months. IMRB found that RML had influenced farmers’ decisions and improved their knowledge, for example on cropping patterns, usage of sprays and seed sowing activities. Sanjeev, the head of Human Resources at RML, stated that RML becomes a channel for ‘information dissemination’ from ‘huge repositories of knowledge in universities and research institutes’. Anecdotal evidence, shared by Sunil Tambe, Content Services Head, describes the changed behaviour of a soybean farmer who was initially on his way to the market when he got a RML policy news alert that soybean crops were being exported to China. He immediately changed his decision to sell his crop and instead decided to wait for the crop prices to climb. Finally, he sold them at a higher price and earned an extra Rs. 12,000 (about US$267).

Access to the right information at the right time is undeniably changing the lives of rural farmers. Before farmers were at the whims of middlemen, but now they command better and fair prices, thus gaining important power in their own market relationships. As mentioned earlier, buyer-seller relationships have not been adversely jeopardized due to SMS farming trends. It appears to have led to a readjustment in buyer-seller relationship in mostly harmonious ways and may evolve on a beneficial footing. A power shift has taken place between the farmer and middlemen but it has occurred quietly without violence.

In terms of socio economic segmentation, RML includes the small, medium and big farmers amongst the majority of its subscribers. RML’s service is targeted at farmers with marketable surpluses and this is the main segment that RML is trying to reach out to at this stage. Manav argues that for RML, landholdings or cash value of crops may matter less compared to those farmers with marketable surpluses like grain, cereals, oilseeds and pulses. The farmer with a marketable surplus needs services like RML. In Maharashtra, for instance, high value crop growers are mostly literate, extremely knowledgeable about agriculture and savvy about market conditions and for such segments, RML’s value proposition may not make a major difference directly. The RML service will make a bigger and direct difference to those farmers with marketable surpluses - who lack agricultural knowledge and timely information about market pricing and trends. Such farmers also stand to gain with implicit shifts in power dynamics vis-à-vis their position in the marketplace and with the relatively more resourceful traders.

Amit shared that though very poor subsistence farmers are not directly availing the service; there are users who fit the definition of ‘poor’. Around 20% of the current subscriber base of RML belongs to the poor farmer category with landholdings of two hectares or less. It is also within the realm of possibility that due to the revenue leakage phenomenon, poor farmers may be receiving forwarded RML messages without even subscribing to the RML service.
SOCIAL IMPACT

With the use of the RML service, farmers gain information and knowledge, and as a result get more respect from fellow farmers and agricultural traders. The emotional value proposition from RML is clearly very high for farmers as following anecdotes reveal. Before using the service, a farmer stated that: "I get a very poor price for my crop. I do not trust my buyer. I take my produce to the market and have to accept his money. I am not treated with respect".

While building its content, RML has dealt with variations between crop names and unit sizes across regions, and perhaps even local markets. Sunil, the Content Head of RML, remarked that from the agricultural knowledge domain point of view, RML brings forth standardization in terms of agricultural terminologies and educates the farmers at the same time. RML facilitates communication and understanding between farmers and other groups across geographic regions and local markets and it works both ways. RML understands the commodity markets better and the farmers get to learn new terminologies thereby extending their vocabulary of agricultural knowledge. In times of globalized markets, this can assist the farmers in their efforts towards alignment with national and global markets. Another benefit from knowledge dissemination, which is more important, is that through its crop advisory, RML influences best practices by informing farmers about it. This has great potential for environmental sustainability practices to be disseminated and promote its usage among farmers.

ENVIRONMENTAL IMPACT

Being an innovative and untested concept, so far RML has been focused on setting up the operations network and company start-up procedures, and has not focused on environmental or sustainable agriculture aspects per se. However, given that RML is in a unique position to influence farming practices, to look beyond productivity and earnings and towards sustainability, this venture represents a good opportunity to exert influence for the benefit of the environment. As sustainable agricultural practices are not yet fully part of the mainstream agricultural knowledge or dissemination activities, RML’s information dissemination may not directly lead to implementation of sustainable agricultural practices in the near future. Environmental spinoffs from RML are likely to be indirect, small and coincidental at best, such as transport costs saved by avoiding unnecessary trips to markets on days of suboptimal prices or unexpected closure. The prevention of crop wastage, excess usage of water, as in flood irrigation, and availability of warehouses are some other environmental benefits that could result from the use of RML services.

Amit noted that we would be interested and open to offering more sustainable farming tips, but we have simply been focusing on providing standard information during the start-up phase. RML could potentially engage in creating a body of environmental best practices by collaborating with research institutions, NGOs and other civil society organizations that are involved in such work. Though this would entail RML stepping beyond its current content sourcing networks and seek out appropriate sources, RML would be ahead of the trend by following best practices on sustainable agriculture.
Conclusion

As discussed in the context section above, the present agricultural production system in India is mainly a supply-oriented model and is in a phase of ‘commoditization’, in the agricultural development process cycle.65 The business concept and model of RML, through its information and advisory services to farmers and others, would contribute to the vertical integration of the agriculture sector with the increasingly organizing retail and other industry sectors and also to the value additions to the agri-production activity. Hence, RML would likely contribute towards the ‘commercialization’ of the agricultural sector66 by removing market imperfections and inefficiencies and thereby lead to higher productivity and earnings for farmers in future.

With strong backing from Thomson Reuters, a specialist news and analysis company, the RML team is confident about the value proposition of its business model. Aside from farmer testimonials provided in this case, and independent research study on the related subject commissioned by Vodafone in 2009, as well as academic studies67, corroborate the positive impact of such services. To improve its economic viability, RML plans to cut costs and encourage its partners to shoulder part of the content and sales outreach burden in order to focus on their expansion plans across India.

Beyond farmers, RML’s value proposition is noticed by other groups such as the telecom industry, small traders, banking and insurance service providers, and government officials in rural areas that have a stake in the rural market. RML’s service is a good value-add for its channel partners especially the mobile service companies which face declining revenues in the urban sector. By providing value-add services, like RML’s agricultural advisory in rural areas, mobile service companies will penetrate an unexplored and underserved but vast rural market of consumer groups who are in need of such services. In this context, RML already recognizes the scope for lateral expansion of its target consumer groups. To be truly beneficial to the massive rural population, including low-income farmers, RML must establish partnerships, particularly with the agriculture-related service providing companies, to fill the missing links in the entire ecosystem, as envisaged in RML’s business model.

If RML wishes to stick to its business of providing news and information only, they must think critically about the type of news and information they are sending and its potential impact. The media hold immense power and RML has a lot of opportunity to shape the way farmers think and practice cultivation. The crop advisory information can and should include actionable advice on sustainable agricultural practices. The information that RML sends not only has the potential to make a difference to a farmer’s bottom line, but to the nation’s food security and the environment.

65 Vaswani et al, 2003
66 Ibid.
67 Jensen, 2007; Narula, 2009
This case highlights some common barriers to entry and constraints faced by businesses in rural areas. Specifically the vastness of rural India and the low educational attainment levels of many of its inhabitants pose important barriers to businesses that are new entrants to rural India. Many businesses like MFIs and Bank Correspondents are forced to create their own costly infrastructure for outreach purposes. Nearly all businesses initially attempt to leverage existing networks such as NGOs but lack of scale, professionalism and financial resources make this unfeasible. Different companies and industries deal with costs in their own ways. MFIs simply pass this cost on to the borrower in the form of high interest rates, others see it in terms of a long-term strategy and are willing to foot the bill in the near term, and yet others make clever use of government schemes to set in place a rural supply chain. It is important that more companies who wish to do business with the rural market establish their own networks. These networks provide valuable jobs to local people who otherwise might migrate to already crowded cities. The initial costs of establishing a footprint in rural markets will be rewarded in the long term multiple times where there is a good value proposition. The bottom line is that the more competition and the more outreach, the better for rural India, but only as long as companies consider the impact of their actions in a context beyond immediate or short-term profits and change their orientation towards long term sustainability.

The value of information is universal and paramount. Providing information to those who do not have access to it and who are in critical need is an important service, independent of the specific benefits to farmers. Value additions in the Indian agriculture sector as well as value added services in the mobile phone industry are in urgent need of attention – and both hold promise for improving the situations of farmers, while creating value for several stakeholders including the mobile service companies and content aggregators like RML.
REFERENCES

INTERVIEWS
- Farmers
- Mr. Tom Glocer, Chief Executive Officer, Thomson Reuters - not interviewed, but taken his statement from Reuters website.
- Mr. Amit Mehra, Managing Director, Reuters Market Light - personal interview
- Mr. Prem Prakash Saboo, Chief Financial Officer, Reuters Market Light - personal interview
- Mr. Mouli Raman, Co-founder and Chief Technology Officer, OnMobile - not interviewed, his statement taken from a newspaper report
- Mr. Sanjeev, Vice President of Human Resources at RML - personal interview
- Mr. Sunil Tambe, Head of Content Development, Reuters Market Light - personal interview
- Mr. Manav Yashroy, Vice President of Sales, Reuters Market Light - personal interview

PUBLICATIONS

WEBSITES
- ICRIER website, http://www.icrier.org
## Table 1: Structure of Agrarian Population (million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Rural Population (million)</th>
<th>Cultivators (million)</th>
<th>Agri-Labor (million)</th>
<th>Total (4+5) (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>361.1</td>
<td>298.6 (82.7)</td>
<td>69.9 (17.9)</td>
<td>71.9 (19.7)</td>
</tr>
<tr>
<td>1971</td>
<td>548.2</td>
<td>439.0 (80.1)</td>
<td>78.2 (14.2)</td>
<td>37.8 (6.9)</td>
</tr>
<tr>
<td>1991</td>
<td>846.4</td>
<td>628.9 (74.3)</td>
<td>110.7 (13.2)</td>
<td>40.3 (4.8)</td>
</tr>
<tr>
<td>2001</td>
<td>1028.7</td>
<td>742.6 (72.2)</td>
<td>127.3 (12.1)</td>
<td>45.6 (4.4)</td>
</tr>
</tbody>
</table>

Data in bracket indicate percentages


## Table 2: Distribution of Operational Landholdings - All India

<table>
<thead>
<tr>
<th>Category of Holdings</th>
<th>No of Operational Holdings</th>
<th>Area Operated ('000 Hectares)</th>
<th>Average Size of Operational Holdings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marginal (Less than 1 hectare)</td>
<td>71179</td>
<td>76122</td>
<td>28121</td>
</tr>
<tr>
<td>(1.0 to 2.0 hectares)</td>
<td>21643</td>
<td>22814</td>
<td>30722</td>
</tr>
<tr>
<td>Semi-Medium (2.0 to 4.0 hectares)</td>
<td>14261</td>
<td>14087</td>
<td>38953</td>
</tr>
<tr>
<td>Medium (4.0 to 10.0 hectares)</td>
<td>7092</td>
<td>6568</td>
<td>41398</td>
</tr>
<tr>
<td>Large (10.0 hectares and above)</td>
<td>1404</td>
<td>1230</td>
<td>24163</td>
</tr>
<tr>
<td>All Holdings</td>
<td>115580</td>
<td>120822</td>
<td>163357</td>
</tr>
</tbody>
</table>

Note: Figures in parentheses indicate the percentage of respective column total.

Source: Agricultural Census Division, Ministry of Agriculture, Government
Table 3: Average Monthly Income from Cultivation by Size of Landholding, 2003

<table>
<thead>
<tr>
<th>Holding Size (Hectares)</th>
<th>Income in Rs. (Monthly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal</td>
<td>435</td>
</tr>
<tr>
<td>Small</td>
<td>1578</td>
</tr>
<tr>
<td>Semi-Medium</td>
<td>2685</td>
</tr>
<tr>
<td>Medium</td>
<td>4676</td>
</tr>
<tr>
<td>Large</td>
<td>8321</td>
</tr>
<tr>
<td>All Sizes</td>
<td>969</td>
</tr>
</tbody>
</table>


Table 4: Access to Information on Modern Technology through Govt. Programmes/Institutions by Land Size Class, 2002-03

<table>
<thead>
<tr>
<th>Source</th>
<th>&lt;0.4 hectare</th>
<th>0.4-1 hectare</th>
<th>1-2 hectare</th>
<th>2-4 hectare</th>
<th>&gt;4 hectare</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in Training Programmes</td>
<td>0.5</td>
<td>0.8</td>
<td>1.2</td>
<td>1.7</td>
<td>2.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Krishi Vigyan Kendra</td>
<td>0.4</td>
<td>0.6</td>
<td>0.8</td>
<td>1.1</td>
<td>1.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Extension Worker</td>
<td>2.7</td>
<td>5.6</td>
<td>8.1</td>
<td>9.2</td>
<td>11.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Government Demonstration</td>
<td>1.1</td>
<td>1.9</td>
<td>2.7</td>
<td>3.2</td>
<td>4.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Any Government Source</td>
<td>-</td>
<td>5.4</td>
<td>8.9</td>
<td>12.5</td>
<td>-</td>
<td>7.2</td>
</tr>
</tbody>
</table>

# Table 5: RML Service Details

## Service – Features, Advantages and Benefits

<table>
<thead>
<tr>
<th>Offering</th>
<th>Features</th>
<th>Advantages</th>
<th>Benefits (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Price</td>
<td>• Prices for 2 crops in 3 markets&lt;br&gt;• Min/Max/Avg price for day’s trading&lt;br&gt;• Arrivals (as per units) per market&lt;br&gt;• Variety Based Crop Prices</td>
<td>• Customized market information&lt;br&gt;• Choice of crops&lt;br&gt;• Market update sent the same day&lt;br&gt;• Arrivals information from markets&lt;br&gt;• Price information from markets&lt;br&gt;• Terminal and local markets covered</td>
<td>• Sure when you get the right price&lt;br&gt;• Sell where you get the right price&lt;br&gt;• Enables to negotiate the deal better&lt;br&gt;• Confident as decision is informed</td>
</tr>
<tr>
<td>Crop Advisory</td>
<td>• Tips on complete cultivation process - sowing, growing, protecting, harvesting&lt;br&gt;• Season, Crop and Region specific&lt;br&gt;• Pest outbreak alerts</td>
<td>• Information sourced from experts across universities and institutes&lt;br&gt;• Actionable&lt;br&gt;• Relevant to region&lt;br&gt;• Receive latest information</td>
<td>• Higher productivity&lt;br&gt;• Enhanced quality of produce&lt;br&gt;• Prevents losses due to pest alerts</td>
</tr>
<tr>
<td>News</td>
<td>• Informs about govt. policy decisions, subsidy announcements, etc.&lt;br&gt;• Domestic and Global market trends&lt;br&gt;• Agritech related information&lt;br&gt;• Regional news – market closure, etc&lt;br&gt;• Weather alerts — rains, storms, dry spell, etc.</td>
<td>• News reaches before any other media&lt;br&gt;• Customized news&lt;br&gt;• Crop and region specific news&lt;br&gt;• Remain connected to latest events</td>
<td>• Self based on trends forecasted&lt;br&gt;• Decision on which crop to cultivate supported by forecast on returns&lt;br&gt;• Avoid losses by receiving govt. warnings on adulterated agri inputs&lt;br&gt;• Take cultivation decisions like sowing/harvesting based on weather alerts</td>
</tr>
<tr>
<td>Weather Update</td>
<td>• 50Km radius / Taluka specific information&lt;br&gt;• Rainfall (mm);&lt;br&gt;• Chances of rainfall (%)&lt;br&gt;• Relative Humidity (%)&lt;br&gt;• Temperature – Max/Min</td>
<td>• Localized information&lt;br&gt;• Information ahead of any other media&lt;br&gt;• Mobile media allows increased frequency of updates</td>
<td>• Plan actions based on forecast&lt;br&gt;• Save costs of agri inputs based on early warnings&lt;br&gt;• Empowerment increases confidence in decision making</td>
</tr>
</tbody>
</table>

Source: Company Documents

---

# Table 9: Impact of RML on Farmers

Of 199 and 89 respondents respectively receiving SMS on weather and commodity price/arrival

<table>
<thead>
<tr>
<th>Relevance of Information</th>
<th>Weather</th>
<th>Commodity price/arrival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very relevant for my locality</td>
<td>32%</td>
<td>30%</td>
</tr>
<tr>
<td>Very relevant for my crop</td>
<td>34%</td>
<td>64%</td>
</tr>
<tr>
<td>Not at all relevant for my locality</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>Not at all relevant for my crop</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Readability of SMSes**

| Completely/Very much readable | 76%     | 98%                     |
| Not/not at all readable       | 8%      | 15%                     |

Source: Company Documents
Table 10: Impact of RML on Farmers

<table>
<thead>
<tr>
<th>Response</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wait for the message before I decide to sell my produce</td>
<td>35</td>
</tr>
<tr>
<td>I wait for the message before I decide which market to sell my produce in</td>
<td>60</td>
</tr>
<tr>
<td>I decide the price at which to sell my produce on the basis of the message</td>
<td>62</td>
</tr>
<tr>
<td>None</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Company documents.

VISUALS

Visual 2: Information Needs of Farmers

Case Study: Reuters Market Light: Creating Efficient Markets

Visual 3: Information Sources of Farmers


Visual 4: RML Development Phase

Source: Amit Mehra, MD, RML

Visual 7: RML Voucher Card

Source: RML Documents
Our Enthusiastic Customers

Kailash Narhari Sonawane

Early December, he received RML news that prices of cotton would increase as supply in the market was lesser than expected. He held back the sale of 92 quintals @ Rs. 22,000 per quintal. 5 days later, he sold his produce at Rs. 23,500 per quintal.

Hemant Kshetra

He got a tip to sow seeds for Soybean 3 inches into the soil. Earlier he used to sow it 5-7 inches deep. By doing this, his produce increased by 1 quintal.

Visual 10: Customer Testimonials

An RML Customer
Case Study • Reuters Market Light: Creating Efficient Markets

Graph 1: Decline in Mobile Revenues

- **ARPU**s are dropping as volumes increase
  - With increased competition, **tariffs** of voice calls have gradually declined over the years
  - Most of the subscribers added are from the bottom of the pyramid with low usage resulting in reduced ARPU
- Operators are focused on acquiring customers. The fall in ARPU will continue unless operators look at alternative revenue streams like **VAS**
  - It is unlikely tariffs will increase given aggressive competition between operators to add subs
  - Minute of Usage (MoU) in India is already the second highest in the world at 476 (Jun 07), behind only USA

**Mobile ARPU**s are Declining Precipitously


Pie Chart and Graph 2: VAS Performance Forecast

Chart 1: Cotton Advisory – Sample Messages

Source: RML Documents

Chart 4: Usage Patterns Among BoP Mobile Owners in India

Mostly calls, SMS, missed calls, balance checking

### Box 1: India’s Telecom Growth Story

**India’s Telecom Growth Story**

India’s tele-density in 1948 i.e., just after independence, stood at a meagre 0.02%. By 1998 i.e., 50 years after independence, the tele-density increased to mere 1.94 %, with a small increase of 1.92%. The tele-density increased from 1.94 % in 1998 to 18.31% in 2007. The growth in tele-density in the period 1998 to 2007 was driven by both the public and private sector players and mainly with the new technology i.e., wireless or mobile technology. During this period i.e., 1998 to March 2007, the number of mobile phone subscribers in India increased from 18.68 million to 206.83 million. According to the Telecom Regulatory Authority of India (TRAI), by the end of October 2009, there were 525.65 million telephone subscribers, with overall tele-density reaching 44.87 in India. The wireless or mobile phone subscriber base in India reached 488.40 million by the end of October 2009, with tele-density at 41.69 (TRAI, 2009). The rural mobile phone subscription base in India in October 2009 stood at 13; the rural mobile phone subscriber base outpaced the urban subscriptions for the first time – 48 million new connections in rural India as opposed to 32 million in urban India (Thomas, 2009). Though 136 million rural mobile connections may seem low as compared to 329 million urban connections, telecom industry watchers claim that the urban market is more or less saturated with tele-density reaching 95% and the next 500 million mobile subscribers will mostly be from the rural India (Thomas, 2009). Mobile phone equipment as well as the mobile service operating companies in India are looking to expand aggressively into rural India. The rural tele-density has grown from 1.9% in 2005 to over 15% in 2009. Mobile phone usage among farmers is only around 3-5%, but 2-3 million subscribers sign up each month.
January 2010

The information presented in this case study has been reviewed by the company to ensure its accuracy. The views expressed in the case study are the ones of the author and do not necessarily reflect those of the UN, UNDP or their Member States.

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