

Village Phone Direct Manual

Enabling microfinance institutions to
bring affordable communication services
to the poor



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Table of Contents

Welcome	1
Part One: The Village Phone Model.....	2
A Village Phone Success Story.....	3
Benefits of the Village Phone Model	6
Village Phone and Village Phone Direct	7
Roles and Responsibilities in Village Phone Direct.....	9
The Village Phone Business Kit	10
Village Phone Communications Technology	10
Power technologies	11
Part Two: Village Phone Direct, Step-by-Step.....	13
Step 1: Get Institutional Commitment.....	14
Step 2: Assess Demand and Survey the Environment	15
Step 3: Create a Business and Financial Model.....	18
Step 4: Select equipment and define sourcing	28
Step 5: Select Operators	33
Step 6: Develop an Operating Manual and Training Curriculum.....	36
Step 7: Run a Pilot Program	38
Step 8: Market Village Phone	40
Step 9: Become an Airtime Distributor (Optional).....	43
Step 10: Demand Management	46
Step 11: Deployment.....	48
Step 12: Ongoing Operations.....	49
Conclusion	51
Appendixes	52
Appendix A: Sample Surveys.....	53
Appendix B: Pilot Phase Plan and Agreement Template	55
Appendix C: Stock Forecasting	59
Appendix D: Geographical Forecasting	60
Appendix E: Skymasts Antenna specification.....	61
Appendix F: Airtime Access.....	63
Appendix G: Signage Solutions.....	64
Appendix H: Operating Manual for Village Phone Operators	65
Appendix I: Phone Reference Guide.....	80
Appendix J: Reference Manual Template addressed to the Microfinance Field Officers.....	83
Appendix K: How to procure kits elements	86

Table of Figures

Figure 1: Village Phone Operations in Bangladesh, August 1997 - 2006	4
Figure 2: Village Phone sample rate of expansion	5
Figure 3: Village Phone Partner benefits	6
Figure 4: Roles and responsibilities in Village Phone Direct.....	9
Figure 5: Range extended by external antenna.....	10
Figure 6: Antenna to catch the line of sight.....	11
Figure 7: Business kit permutations.....	18
Figure 8: Business analysis variables.....	19
Figure 9: Long-term sustainability.....	20
Figure 10: Village Phone Growth Projection	21
Figure 11: Village Phone business model	22
Figure 12: Cash flow model	25
Figure 13: Hypothetical tariff plan.....	27
Figure 14: Business kit items.....	28
Figure 15: Mobile phone signal bars.....	29
Figure 16: Impact of marketing collateral during pilot program.....	31
Figure 17: Indicative revenue for MFI.....	45
Figure 18: Operational model.....	49

Introduction

Most of us take for granted the ease with which we can access telecommunications services at home, at work, and on our cell phones. For the more than two billion people subsisting on less than two dollars each day, this is largely impossible. This lack of telecommunications access can isolate those living in poverty from vital resources and severely impact their social and economic development.



It is with these issues in mind that Grameen Foundation works to combine the power of microfinance, technology, and innovative solutions to defeat global poverty. Building on the microfranchise concept developed by Grameen Telecom in Bangladesh, Grameen Foundation has focused on replicating the sustainable and successful Village Phone model in various places including Uganda and Rwanda.

With Village Phone Direct, Grameen Foundation has drawn upon lessons learned from past and present Village Phone experiences to develop a model that is flexible, adaptable to its environment, and can easily be modified to address the needs of diverse markets. Through the Village Phone Direct Manual and its community-focused website, www.villagephonedirect.org, organizations will now have the tools and resources to launch Village Phone Direct initiatives for their communities.

Created in the spirit of open source sharing and cooperation, the Village Phone Direct Manual is an organic document that will expand and grow as additional organizations implement similar initiatives. Through the Village Phone Direct Assistance website, Grameen Foundation will also contribute to the Village Phone community by empowering organizations to share their experiences, assist others in their efforts, and learn about new and innovative ways in which telecommunications access is helping to address the issues faced by people living in poverty.

As we all work toward making telecommunications access a universal reality, we hope this manual will be a vital tool that is utilized by many as one solution in the fight against global poverty. Please feel free to contact us at vpd@grameenfoundation.org with questions and comments.

Alex Counts
President, Grameen Foundation

Foreword

It is widely recognized that information and communication technologies (ICTs) are an important tool for broader social and economic development. There are many examples around the world which demonstrate this, but very few stand out like the successful the Grameen Village Phone model.



Nobel Laureate, Professor Muhammad Yunus and his team have shown the incredible potential to empower and unleash the entrepreneurial spirit of poor villagers, especially women, by combining microfinance and access to communications through a mobile phone. Recognizing this ground-breaking work, ITU awarded Professor Yunus the inaugural World Information Society Award in 2006 and was honoured when he accepted to serve as an Honorary Patron of ITU's *Connect the World* initiative.

The International Telecommunication Union (ITU) is the leading United Nations agency for information and communication technology issues. As part of our development mandate, ITU works with many partners to help extend the benefits of ICTs to people around the world. This mandate was reinforced by leaders at the World Summit on the Information Society in 2003 and 2005, who emphasized the role of ICTs as a catalyst to help reach the United Nations Millennium Development Goals by 2015. We believe that the Village Phone model and similar complementary initiatives offer significant potential to help reach these internationally-agreed goals, by expanding access to ICTs to many currently un-served populations, especially in rural and remote areas.

It is in this context that the International Telecommunication Union is pleased to partner with the Grameen Foundation in publishing the Village Phone Direct Manual, and translating it into the six official languages of ITU to stretch its reach into various regions. Levering our network of 191 member states and over 600 Sector Members, including many leading ICT industry companies, our ambition is to help Grameen Foundation spread the Village Phone model to as many countries and communities around the world as possible.

I wish the Grameen Foundation and its many partners great success in the implementation of the Village Phone Direct model.

Mr Sami Al Basheer Al Morshid,
*Director, Telecommunication Development Bureau
International Telecommunication Union*

Welcome

Building on the pioneering work of Grameen Bank in Bangladesh and in partnership with microfinance institutions and telecommunications operators, Grameen Foundation has led initiatives to bring affordable telecommunications to the rural poor in Uganda and Rwanda. The success of these “Village Phone” programs has created tremendous global interest in starting similar initiatives.

With this manual, the Grameen Foundation introduces Village Phone Direct, a variation of the Village Phone program. Using this model, organizations can implement a Village Phone project without the need for a formal contractual relationship with telecommunications operators. The Village Phone Direct program is targeted at microfinance institutions that already have established channels for serving poor people in semi-urban and rural areas, although other types of organizations, such as telecommunications operators, local or international NGOs, and other organizations, can also implement a Village Phone Direct program.

This manual provides microfinance institutions and similar organizations, with a template for creating local, sustainable Village Phone Direct programs that simultaneously bring telecommunications and information services to the rural poor, create viable new businesses for micro-entrepreneurs, and expand the customer base of telecommunications operators.

Organizations interested in implementing a large scale, nationwide approach that would require the creation of a new company, a formal partnership with the telecommunications operator(s), and a coordinated effort by several microfinance institutions in the country, should consult the [Village Phone Replication Manual](#)¹.

The information presented in this Village Phone Direct manual is shared in the spirit of international cooperation. Grameen Foundation will continue to act as a clearinghouse for Village Phone information, and share its findings through updates of this manual, and through its website www.villagephonedirect.org.

ABOUT GRAMEEN FOUNDATION

Grameen Foundation is a global non-profit organization that combines microfinance, technology, and innovation to empower the world's poorest people to escape poverty. Founded in 1997 by a group of friends who were inspired by the work of 2006 Peace Prize Laureate Dr. Muhammad Yunus and Grameen Bank in Bangladesh, our global network of microfinance partners has impacted an estimated 16 million lives in 22 countries across Asia, Africa, the Americas, and the Middle East. Dr. Yunus is also a founding and current member of Grameen Foundation's board of directors. For more information on Grameen Foundation, please visit www.grameenfoundation.org.

ABOUT ITU

ITU is the leading United Nations agency for information and communication technology issues, and the global focal point for governments and the private sector in developing networks and services. For more than 140 years, ITU has coordinated shared global use of the radio spectrum, promoted international cooperation in assigning satellite orbits, worked to improve telecommunication infrastructure in the developing world, and established the worldwide standards that assure seamless interconnection of a vast range of communications systems. ITU also organizes worldwide and regional exhibitions and forums bringing together the most influential representatives of government and the telecommunications industry to exchange ideas, knowledge and technology for the benefit of the global community, and in particular the developing world.

¹ISBN 92-1-104546-0. Found online at <http://www.gfusa.org/pubdownload/~pubid=1>

Part One: The Village Phone Model

“If a poor woman gets hold of one mobile phone in the village, then this is a sure bet that her entire family can move out of poverty in two or three years.”

-Professor Muhammad Yunus, 2006 Nobel Peace Prize Winner, and Founder and Managing Director, Grameen Bank

Access to communication services in many developing countries can be extremely challenging, especially for the rural poor. Millions live without the ability to contact people beyond their local villages or are forced to physically travel to another village in order to have access to telephones.

Not making that phone call can be costly in many ways. Without a telephone, a crop farmer may not learn the current fair market price for his or her goods and, as a result, will lose in negotiating sale prices with middlemen. Family members may not learn that relatives are sick, and thus be unable to provide support or resources for treatment before the sick relatives' condition worsens. A much-needed remittance of cash cannot be coordinated with a family member working outside the community. Studies have shown that there is a cost to *not* making a phone call – which can be up to eight times more expensive than the cost of the actual phone call².

Although it is particularly challenging for telecommunications providers to make services available in rural areas³, such services do exist. Government regulators often place “Universal Access” requirements on the telecommunications companies, resulting in an infrastructure investment that makes access available to some degree. These services typically operate at a loss, and the telecommunications operator maintains them as part of their licensing obligation.

However, while by some estimates more than 77 percent of the world's population now lives within range of a mobile network, the vast majority of these people are not benefiting from advances in information and communication technologies (ICT). A study done by the London Business School concluded that an increase of ten mobile phones per every 100 people within a country increased GDP growth by 0.6 percent⁴. This same phenomenon of GDP growth is now being witnessed in Africa, where mobile telephony has become the communication system of choice. An increase in mobile phone use provides not only the opportunity for communications infrastructure expansion to a new customer base, but also offers poor people with the proper technology the ability to make phone calls and communicate outside their communities.

Village Phone addresses the issue of communication access for the rural poor by creating a “channel to market” through microfinance institutions. As a client of a microfinance institution, a potential Village Phone Operator uses a loan to purchase a Village Phone business kit that costs between US\$50 and US\$300 and contains everything needed to start a Village Phone business, including a mobile phone. The Village Phone Operator sells use of the

²Grameen Telecom's Village Phone Programme in Rural Bangladesh: a Multi Media Case Study. Canadian International Development Agency, March 2000

³High cost of initial infrastructure, relatively low call volumes, high maintenance costs due to harsh environments, cash box collection needs, cash security costs (for coin operated phones), low card availability (for prepaid airtime systems), need for technical literacy and numeracy, remote locations, high transportation costs and a lack of low-cost handset availability

⁴Moving the debate forward – The Vodafone Policy Paper Series – Number 3 – March 2005

phone to people in the community, thereby earning enough money both to repay the loan and generate a profit. It is through profits from the Village Phone business that Grameen Bank and Grameen Foundation have seen Village Phone Operators provide their children with education and nutritious food and, ultimately, lift their households out of poverty.

Village Phone is successful because the business model is a “win-win” for all parties involved.

- The Village Phone Operator has a new source of income and an elevated status in the community.
- The communities served by Village Phone Operators can now make phone calls at an affordable price, whereas previously the members of these communities were forced to travel several kilometres to access telephones.
- The microfinance institution gains a new product to offer their clients (and attract new clients), earns money from the loans, and may receive a margin on the sale of prepaid airtime.
- The telecommunications operator earns money through the volume sale of airtime on existing infrastructure.

As microfinance institutions, you play a critical role in this partnership. By their very nature, microfinance institutions often have built deep roots into semi-rural and rural communities. Yours are trusted institutions with detailed knowledge of the local communities and well-established infrastructure and business processes for regularly visiting these communities to transact financial services with your clients. These deep links into the community are essential for introducing new services. Although the potential contribution you can make to new business initiatives targeting rural and semi-rural communities is often undervalued, you can provide an important ‘channel to market’ in bringing telecommunications services to the rural poor.

A Village Phone Success Story



In the history of the Bangladesh Village Phone program, over 98 percent of Village Phone Operators repaid their loans in full – a phenomenal success rate. Similar numbers have been seen in Uganda. In Rwanda, Village Phone Operators are repaying their loans ahead of schedule and are purchasing additional phones for secondary locations.

One of the greatest success stories in international development has been Grameen Bank’s Village Phone Program in Bangladesh. In rural villages where no telecommunications service has previously existed, mobile phones are provided to very poor men and women who use the phone to operate a business providing communications services to their community. These micro-entrepreneurs purchase the phone with a loan from Grameen Bank and then sell the use of it on a per-call basis. The benefits to both the Village Phone operator and the community have been tremendous. The typical “village phone lady” in Bangladesh has an average income three times the national average.

The most obvious benefit of the Village Phone program is the economic impact that this communications tool brings to the entire village. There is clear evidence of this impact in Bangladesh, including higher prices paid to Village Phone users for their goods and better exchange rates when repatriating funds. For the cost of a phone call, a family is able to avoid the expense of sending a productive member to deliver or retrieve information by travelling great distances in person. Some creative and entrepreneurial users of the technology identify new business opportunities, including the resale of information to others in their communities. The technology also serves to link regional entrepreneurs with each other and their clients, bringing more business to small enterprises. Phones have even been used in emergency situations, such as accessing medical assistance during natural disasters.

Village Phone In the News

Village Phone successes have received attention far and wide.

“Farmers from the villages use the phones to call the city markets to find out prices for their produce. Previously they were a little bit short-changed by their middlemen. The middlemen would say a lower price than what the actual market price was. So now they can call the market themselves to find out what the actual price of eggs or whatever their produce is. An independent study found that half the people who use the phones regularly, traders in rice or bananas, for example, make more money from their business and they save 10 hours in travel time.”

- *NPR Marketplace, September 25, 2002.*

“Phones have helped elevate the status of the female phone operators in the village. Surveys have found that the Village Phone Operators become socially empowered as they earn an income, gaining participation in family decisions in which, in rural Bangladeshi society, women usually have no say.”

- *World Resources Institute, 2002*

Because the phone operators are typically female and the phones are in their places of business, women who might otherwise have very limited access to a phone feel comfortable using Village Phones. Furthermore, as these phones become important for the whole village, the status of women in the communities where they work is enhanced.

In a Canadian International Development Agency (CIDA) commissioned study, it was concluded that the Grameen Village Phone program yields “significant positive social and economic impacts, including relatively large consumer surplus and immeasurable quality of life benefits”. The study concluded that the consumer surplus for a single phone call ranges from 2.64 percent to 9.8 percent of mean monthly household income. The cost of a trip to the city ranges from two to eight times the cost of a single phone call, meaning that the real savings for poor rural people is between \$2.70 and \$10.00 for individual calls. The income that Village Phone Operators derive from the Village Phone is about 24 percent of the household income on average – in some cases it was as high as 40 percent of the household income.

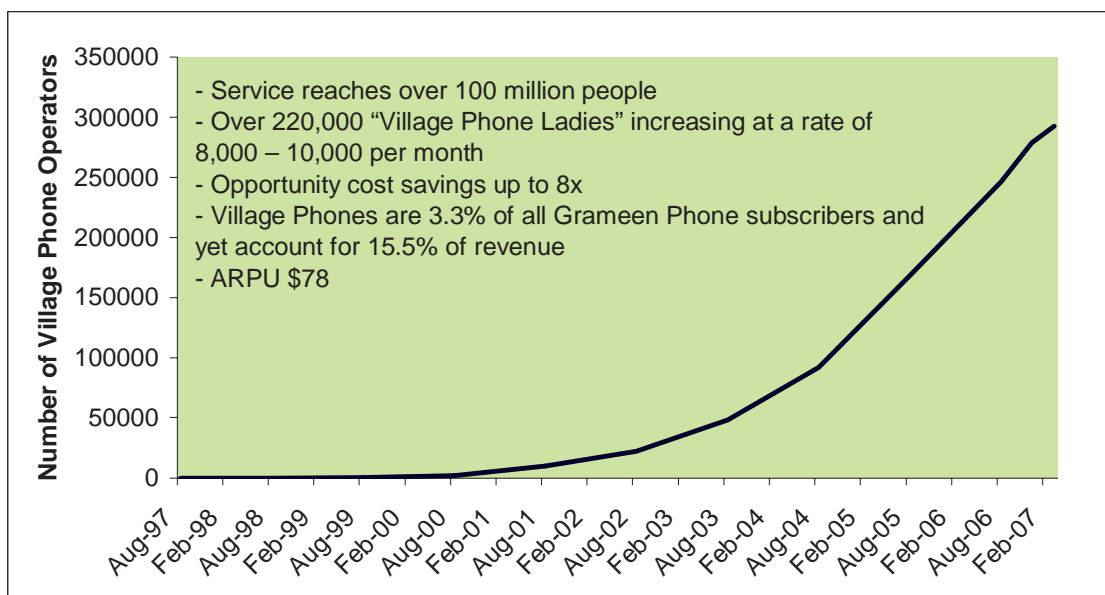


Figure 1: Village Phone Operations in Bangladesh, August 1997—2007

Grameen’s Village Phone program in Bangladesh has been incredibly successful, with 300,000 Village Phone Operators (as of May 2007) establishing a clear path out of the poverty cycle.

Building upon the success in Bangladesh, and to demonstrate that the success of Village Phone is not dependant on the unique parameters of Bangladesh, Grameen Foundation, along with MTN Uganda, launched MTN villagePhone Uganda in November 2003. As of May 2007, there are over 7,000 rural Village Phone Operators throughout Uganda, each earning enough money to repay their microfinance loan and put money aside for their family’s food, education and health needs. These Village Phone Operators are typically poor, rural, micro-entrepreneurs who already have a well-established primary business, such as a road-side shop. Village Phone Operators often repay their Village Phone loans in advance and offer the microfinance institution a constant revenue stream by buying prepaid airtime cards from them.

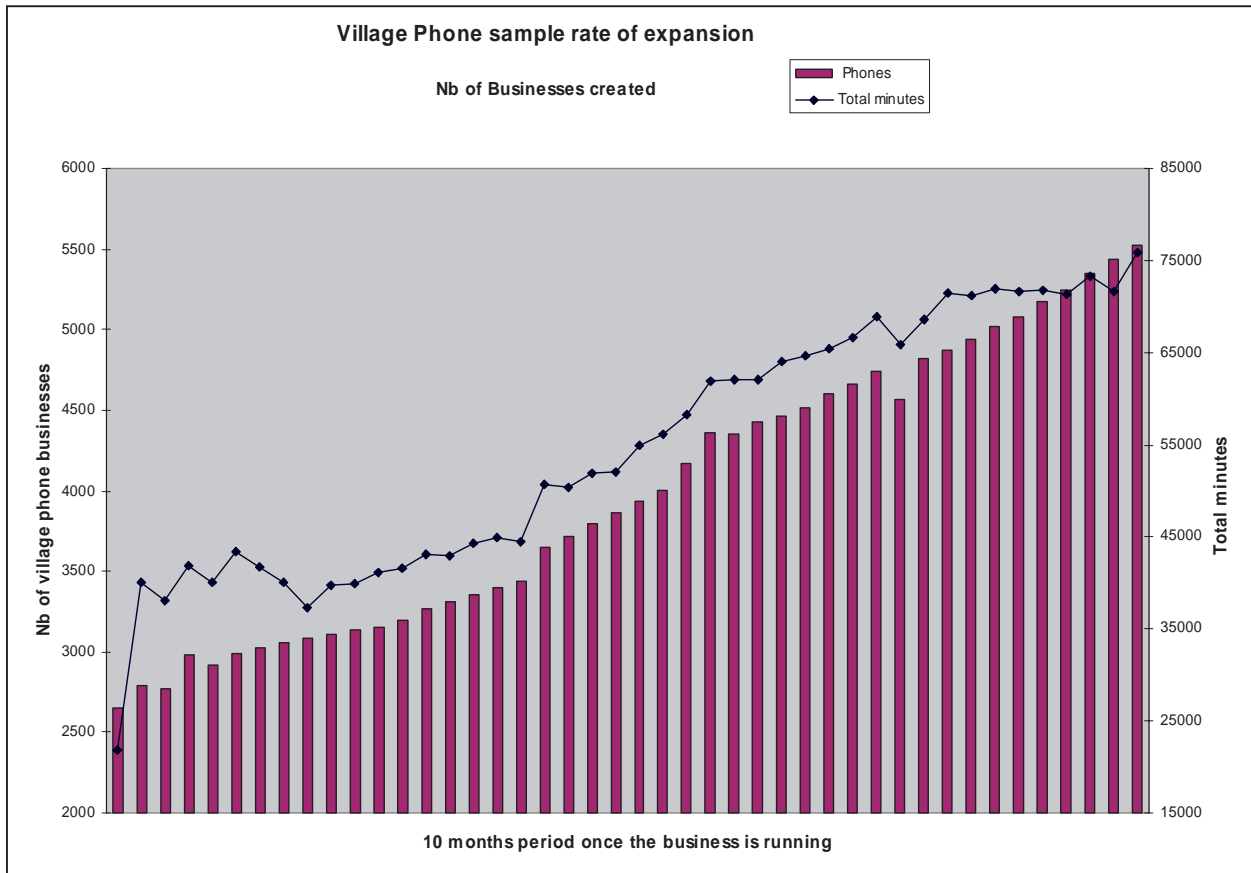
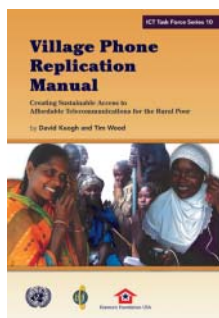


Figure 2: Village Phone sample rate of expansion

Grameen Foundation has since replicated Village Phone in Rwanda and has pilot projects underway in the Philippines and Cameroon.

Drawing on this history of accomplishment, Grameen Foundation wrote the “Village Phone Replication Manual.” This manual has been distributed worldwide and was launched at the United Nations World Summit on the Information Society in November 2005 by José Antonio Ocampo, the UN Undersecretary General of Economic and Social Affairs. This Village Phone Replication Manual has been used to catalyze new Village Phone initiatives in Senegal, Nigeria, the Democratic Republic of Congo and Cambodia.

Village Phone has become recognized as a solid business model for reaching rural populations. It is also acknowledged as a sustainable development tool by governments and development agencies such as the World Bank, United Nations (UN), International Finance Corporation (IFC) and United States Agency for International



“Village Phone is ahead of its time and is leading the way by example.”—*Sarbuland Khan, Director, Division for ECOCSOC Support and Coordination, and Executive Coordinator of the Secretariat of the United Nations ICT Task Force.* “This Replication Manual is an invaluable how-to source for setting up a Village Phone project. It contains a realistic, practical, and detailed set of instructions, templates, and lessons learned, and it is generic enough to be applied in any context where a Village Phone initiative can help empower people and promote development.”

Benefits of the Village Phone Model

As a member of a microfinance institution, a potential Village Phone Operator uses a loan to purchase everything they need to start their business. Individual villagers can then visit their local Village Phone Operator and make affordable calls. The Village Phone Operator earns revenue from a margin on each call made. Should local individuals already possess their own SIM card; the operator can charge a handset rental fee for the call.

Although one tends to think large scale, we have found that communities as small as 100 households can support a Village Phone Operator business. People with existing businesses such as a shop or restaurant make the most successful Village Phone Operators. This obviously depends widely on the business model used.

With proceeds from the business, the Village Phone Operator contributes to her loan repayment and also purchases additional prepaid airtime cards or vouchers. As a microfinance institution, you earn money from the loans and also commissions on airtime, should you become an airtime distributor. The telecommunications operator earns money through volume of sales of airtime and the equipment distributors earn money from selling to new clients.

The microfinance institution is the cornerstone of the operation. At a minimum, you will provide the equipment, and train your staff and the future Village Phone Operators. Depending on the environment, you can decide to contact the telecommunications operators and equipment providers and negotiate reseller rates for your clients. You might also decide to create marketing material to help your clients boost their business. You can decide the level at which you need to be involved in order to make your Village Phone Direct offering a success.

The Village Phone model works because it is designed so that all parties “win,” as shown in Figure 3.

<i>Partner</i>	<i>Essential Service Provided</i>	<i>How they “win”</i>
Microfinance institution	Loans, the Village Phone business kit and training to Village Phone Operators	Income from loans and airtime sales, and a new product to market to clients
Village Phone Operator	Affordable telecommunications to members of their community	Profitable business which earns a steady income
Community members	Customer base for Village Phone Operators	Access to affordable telecommunications
Telecommunications Operator	Communications infrastructure coverage	New revenue generated from airtime sales from a previously inaccessible market niche
‘Other’ Equipment Supplier	Batteries and signage	New revenue from a previously untapped market

Figure 3: Village Phone Partner benefits

Benefits to the Microfinance Institution

- **Increased revenue:** Revenues generated on airtime commissions and loan interest will cover the costs you incur in managing the product and in supporting Village Phone Operators. Also, the community-wide economic benefits of a Village Phone will empower other community members, who will be more efficient in their business and therefore better at handling their own loans. This will result in a better performance of your loan portfolio as a whole.
- **Reduced operating costs:** Village Phone also offers you a means of lowering operating costs via communications, and the potential to increase your clients' revenue or expand their current operations. For example, your loan officers will have the option of calling the Village Phone Operators and other clients in the community, rather than having to physically meet with them or rely on other communication channels.
- **New clients:** Village Phone provides you with an opportunity to attract new clients with this new loan product, thus increasing outreach, generating loan income, and having a positive impact on the community at large by delivering the benefits of Information and Communication Technology (ICT) into rural areas. It can be used as both a marketing tool and a way to reward loyal clients by choosing them as future Village Phone Operators. You can use the Village Phone Direct program to differentiate your institution from others, and you can use Village Phone as a tool to attract micro-entrepreneurs. Through Village Phone you can build loyalty, as clients see their peers rewarded for their fidelity and dependability.
- **Airtime distributor:** As a microfinance institution, you also have the opportunity to become an airtime distributor – reselling prepaid airtime in a partnership with the local telecommunications operator. By becoming a distributor, you will be able to ensure that a supply of prepaid airtime is available to your Village Phone Operators, so they can operate their businesses confidently. The commissions paid by the telecommunications operator on airtime sold can also be negotiated. This commission will generate revenue on every airtime second sold throughout your network of Village Phone Operators, or on any airtime sold if the dealer agreement extends more broadly.

Benefits to the Village Phone Operator

- **Income:** At the local level, the entrepreneurs who decide to become Village Phone Operators must see a return on their investment for the business to be sustainable. The income generated by the phone calls can go directly into the repayment of the business kit loan. Once the loan is repaid, the Village Phone business continues to turn a profit and the operator can collect all the revenue. Also, typically, a Village Phone Operator manages another business, such as a small shop. The increased traffic generated by their Phone clients also generates additional revenue for their other business.
- **Status:** The community status of the Village Phone Operator increases as their support, knowledge and contribution to the community increases.

Benefits to the Customer

- While obtaining market information and arranging business services clearly are benefits, for rural villagers the fact that they no longer have to travel many kilometres simply to make a call provides the greatest value.



Village Phone and Village Phone Direct

The Village Phone model that has been used in Bangladesh, Uganda and Rwanda, calls for the creation of a detailed partnership with a telecommunications operator that has a nationwide public access strategy. Multiple microfinance institutions are involved in this partnership to reach as many rural locations as possible. To be sustainable, this initiative must operate in a market that is sizable enough to generate revenues to support a company to run the operations. The Village Phone model also requires scale and a high degree of coordination, consolidations, management and institutional infrastructure to underwrite its sustainability.

However, not every market can provide the necessary foundational elements for a joint venture and large scale approach. For example, the microfinance sector may not have reached sufficient scale or the telecommunications network coverage may not be pervasive in enough rural locations. Unfortunately, it is often countries where these foundational elements do not exist that a product like Village Phone is most needed and where access to affordable telecommunications services in rural areas can bring the most benefit to communities.

Village Phone Direct was developed to allow microfinance institutions to bring the benefits of telecommunications to local communities, without necessarily a joint venture infrastructure to coordinate the operations. Village Phone Direct enables easy access to the equipment necessary to start a Village Phone business. It utilizes existing services available from telecommunications operators, and it provides training materials for creating a sustainable business.

Village Phone Direct can be implemented by any microfinance institution worldwide, with the guidance provided by this manual. It can serve any community within reach of telecommunications operators' coverage. It can also be implemented by telecommunications operators who have not yet developed a strategy for rural public access communications and want to conduct a trial to test the market.

Roles and Responsibilities in Village Phone Direct

Three to five core parties are needed to make a Village Phone program a success. Figure 4 illustrates their roles and responsibilities.

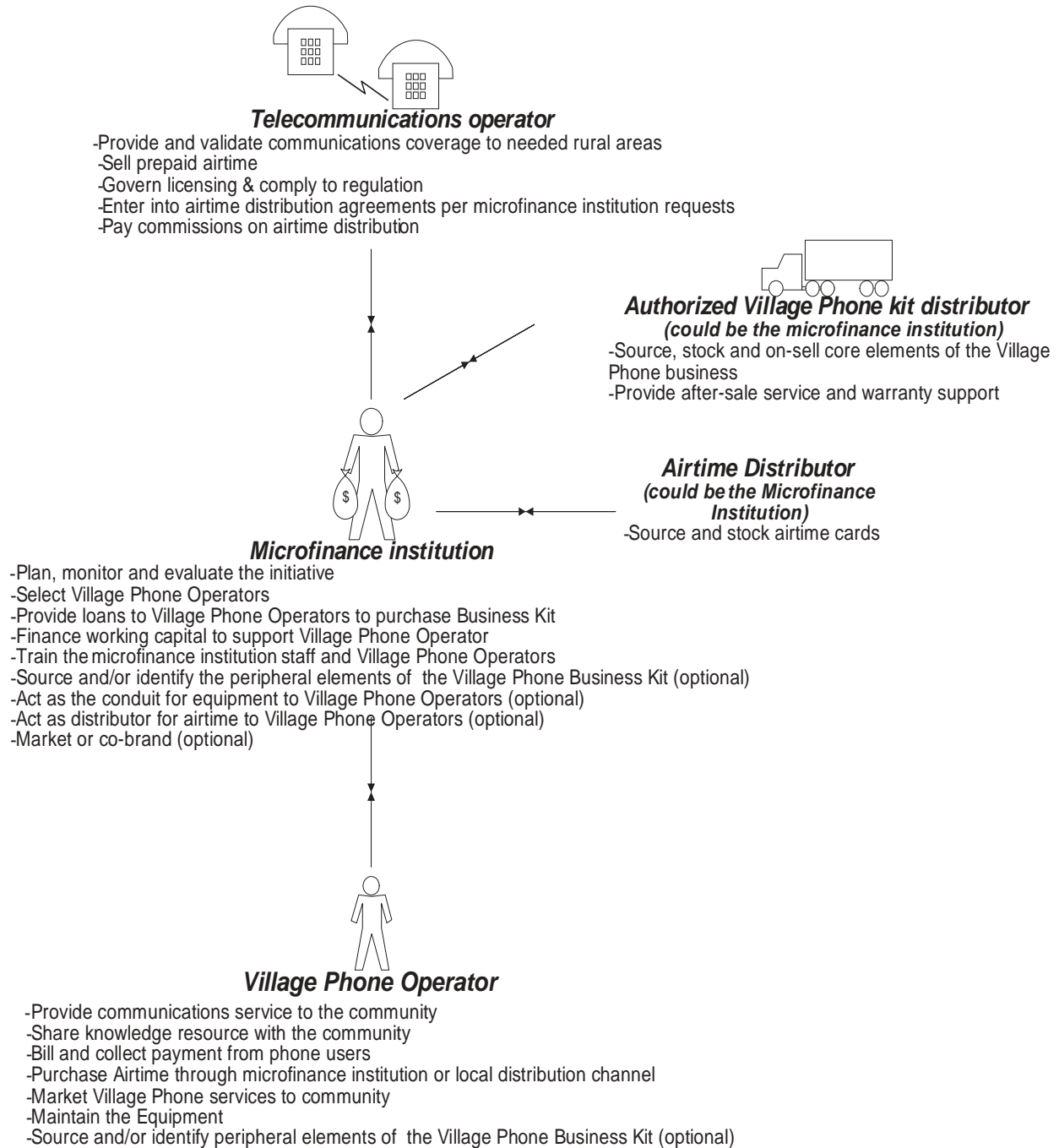


Figure 4: Roles and responsibilities in Village Phone Direct

The Village Phone Business Kit

The equipment and materials necessary for an individual to start a Village Phone business vary depending on the local environment.

The Village Phone business kit provided to the Village Phone Operator should contain the following elements: mobile phone; earpiece; SIM card or telecommunication access card; airtime; antenna, cables, and coupler; phone battery solution; and marketing signage and branding. For more details, see [Step 4: Select equipment and define sourcing](#).

The Village Phone business kit should cost between \$50 and \$300, depending on which elements of the kit are necessary, as well as the quantity purchased, the shipping fees, and local taxes and duties.

The section [Step 4: Select equipment and define sourcing](#) goes through the details of the business kit.

Village Phone Communications Technology

The Village Phone Direct model relies on existing telecommunications infrastructure to provide service. Because the telecommunications operators invest in infrastructure for higher population density areas first, rural villages are left without strong network coverage. In these areas, it can be difficult or impossible to receive a signal on a mobile phone, despite the fact that it is technically within the range of a base station. With the help of a signal booster (Yagi antenna), available as part of the Village Phone business kit, these communities can reliably access the telecommunications network for the first time.

An antenna can increase signal access in two scenarios, as described in the following paragraphs:

Antenna as signal booster

For GSM-based networks, it is theoretically possible to extend the functional range of a base station up to 35km, reaching well into rural areas. Village Phones deployed with an external antenna extending out to 35km from a base station can operate where others cannot. In areas where base stations are configured for extended range by the telecommunications operator, it is sometimes technically possible to extend the range to 70km.

Figure 5 shows how a Village Phone Direct handset with the external antenna extends beyond the range of an ordinary handset.

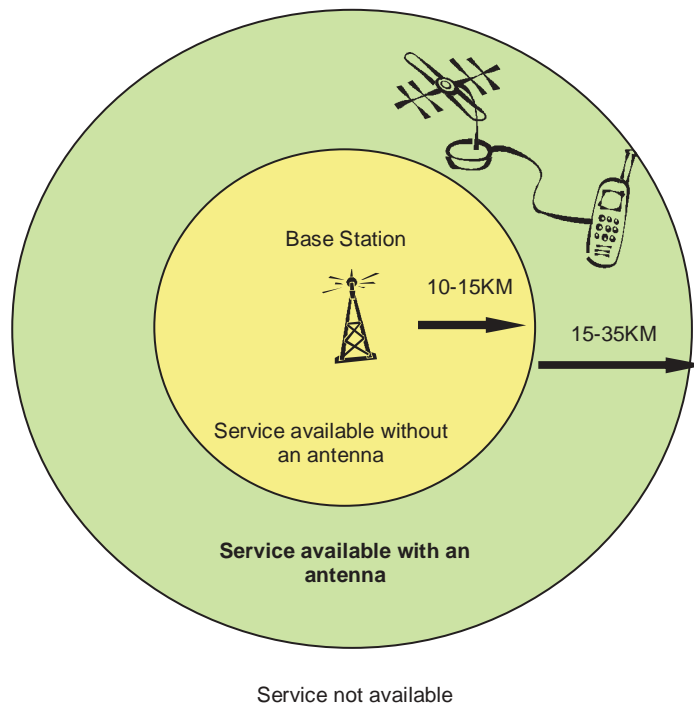


Figure 5: Range extended by external antenna

Antenna to catch the Line Of Sight

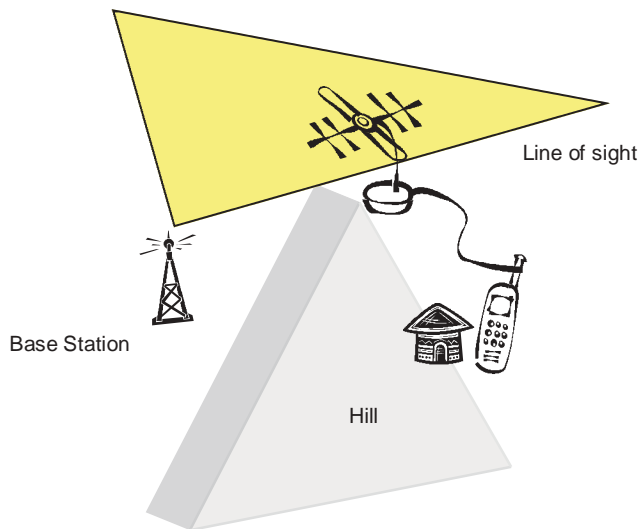


Figure 6: Antenna to catch the line of sight

If the village is not in the Line Of Sight (LOS) of a base station, the phone will not get a signal and calls cannot be made. If an antenna is placed at a height of 10 meters, it may catch the line of sight of the base station signal, and the phone will catch the signal. Figure 6 demonstrates the importance of antenna placement.

In general, terrain, weather and air quality, and other obstacles are factors that affect the strength of the signal. We recommend visiting potential locations and testing with an antenna before deploying a Village Phone business.

Power technologies

Most Village Phones operate in areas where a reliable electricity supply is not available. Operating a business in this environment clearly dictates that a charging solution must be a part of the equipment package. Several options are available, including a lead-acid car battery, a solar solution, and an AA battery-powered device. However, we believe there are other possible solutions, and we invite others to share ideas and experiences regarding power technology with us.

Automobile Battery Solution

A lead-acid automobile battery has been the most common rechargeable solution to-date. Automobile batteries are a common source of power in many developing countries and are readily available. A car battery can charge a phone for up to two months, at which time the Village Phone Operator must take the car battery to be recharged at a charging station, common in rural areas.

An automobile battery solution consists of three main pieces: the battery, a battery connector, and a standard mobile charger (LCH-12). This solution is explained in detail in [Step 4 in the Recharging solution – Automobile Battery](#).

Solar-Power Solution

For the most part, currently available, off-the-shelf solar solutions that claim to charge mobile phones do not do so reliably and, in fact, could potentially cause damage to the phone battery. Because a Village Phone is required to be 100 percent reliable (as it is a business and a source for family income), the solar solutions currently available are inappropriate. We are working with vendors and developers to create an optimum solution for the environments in which Village Phones operate.

When considering a solar solution, be sure to address the following questions:

- How many hours a day is the sun available in your area (consider the rainy season)?
- Does the system track the sun as the sun moves across the sky? Typical systems degrade in efficiency by 15 percent for every hour the sun moves from noon, so optimum charging efficiency is only available for a few hours in the middle of the day if the solar panel is fixed.
- Is the system weather proof? Village Phone Operators may choose to leave the panel on the roof of their establishment, where it will be rained on.
- How can the device be secured, and how can it be tethered to the phone?
- What is the length of the connecting cable, and can the phone be operated if it is connected?
- Does the solar solution have an internal battery, or is there only a direct connection between the solar panel and the phone? Direct connect systems typically do not work with the NiMH batteries commonly found in mobile phones, which require buffering and a charge controller interface.

AA Battery Solution

A promising solution, which we have not tested yet, is the use of an AA battery-based cellular-phone recharger. The solution becomes quite appealing when used with rechargeable batteries that can be rotated (one set of AA batteries is sent for recharging, while the other set is used by the Village Phone Operator to recharge the phone).

Some thorough research regarding the following would obviously need to be done to validate this solution:

- cost of the batteries
- longevity of the batteries
- time necessary to recharge the phone
- time necessary to recharge the AA battery
- availability of AA battery recharging solution in proximity of the Village Phone Operator
- environmental impact

For more information, see the fact sheet from Energizer: <http://www.energizercanada.ca/english/pdf/FactSheet.pdf>

Crank Power

Many solutions in the market place offer a hand crank charger. Information Grameen has received indicates that a crank solution is not suitable for Village Phones, because a great deal of cranking is required for a full charge on the phone, and the durability of the crank can be an issue. However, we do not have much experience with these devices and would welcome any further insight that people can offer.

Part Two: Village Phone Direct Step-by-Step

Village Phone Direct is more than just a collection of communications equipment. It also defines a process by which people acting as catalysts for their communities and organizations can create successful Village Phone businesses. The basic steps described here are not exhaustive or definitive. And, although they are presented as separate efforts, there is a high degree of parallel action and coordination required.

An increasing level of commitment is required from the microfinance institution as it progresses from one phase to the next. Institutions must be prepared for the resulting increase in demands on resources.

[Step 1: Get Institutional Commitment](#)

[Step 2: Assess Demand and Survey](#)

[Step 3: Create a Business and Financial Model](#)

[Step 4: Select equipment and define sourcing](#)

[Step 5: Select Operators](#)

[Step 6: Develop a Training Curriculum](#)

[Step 7: Run a Pilot Program](#)

[Step 8: Market the New Loan Product](#)

[Step 9: Become an Airtime Distributor \(this step is optional\)](#)

[Step 10: Demand Management](#)

[Step 11: Deployment](#)

[Step 12: Ongoing Operations](#)

Step 1: Get Institutional Commitment

Mapping out a vision for this product will greatly assist you in planning for and progressing along the product development path. It will also help you understand the scope of work that may be involved in assessing the various issues and opportunities. Such a plan should include a preliminary assessment of the following.

- What are we hoping to achieve/what challenges are we hoping to address in the following areas:
 - ◇ Product or income/revenue diversification
 - ◇ Incentive for member retention
 - ◇ Social impact and information inequity in rural communities
 - ◇ Expanded outreach
 - ◇ Market access for members
 - ◇ Microfinance institution staff access to members in the rural areas
 - ◇ Competitive advantage for microfinance institution
 - ◇ ICT sensitization in rural communities
 - ◇ Platform for other product offerings such as m-commerce linkage, management information systems (MIS), and health/education/commerce applications
- Do we wish to offer Village Phone Direct as:
 - ◇ A business opportunity for members wanting to offer public access telecommunications services?
 - ◇ A means for members to own a personal mobile phone?
 - ◇ Both – or does it matter?
- Who is our target market for Village Phone Direct?
- What institutional obstacles shall we take into consideration? Can these obstacles be overcome?
- Are there any regulatory factors or other external factors that would impact the implementation of this product?
 - ◇ How do we wish to collaborate with the local telecommunications operator:
 - Do we wish to become a dealer of pre-paid airtime (revenue diversification)?
 - Do we wish to purchase retail pre-paid airtime and not engage the telecommunications operator at all?
 - Do we wish to engage multiple telecommunications operators and see which offers the best deal?
- What level and type of risk are we prepared to take? This will dictate the design of the financial product and will impact the resources required to implement.
- Does Village Phone Direct have to be a profitable product in its own right, or does it provide an underpinning to the sustainability of other products in the institution itself?
 - ◇ Do any areas of the institution need to be strengthened to ensure successful provision of the product?

You should then very clearly prioritize and document what it believes the critical measures of success will be. This will become important to look at when elaborating the details of the projected budget and resource allocation. It will also be critical to refer back to when you evaluate the success of the pilot program and periodically review the product and its impact on you and the communities you serve.

Once this assessment is made, senior management needs to make a commitment to provide the necessary human and financial resources to the program (as far as it is allowed to progress). This could include allocation of a specific point person or liaison, development of a draft budget, and identification of appropriate and accessible funding sources. Microfinance institutions often have their own particular process for product development and Village Phone Direct can be evaluated using those same processes.

Step 2: Assess Demand and Survey the Environment

Assessing demand includes three essential tasks:

- A legal and business assessment
- A geographical compatibility assessment mapping the microfinance institution's geographical presence to the telecommunication operator's network outreach
- An evaluation of clients' needs and interests in a Village Phone business

Legal and business assessment

Some of the questions to be answered include:

- Are specific licenses needed to enter this type of business?
- What are the organization's procedures (board approval, etc.)?
- What types of taxes would this business be subject to?
- Are there laws and regulations we should be aware of?

The ministry in charge of telecommunications will have most of the answers related to these questions. Another good resource is the International Telecommunications Union (www.itu.int/home), particularly its regulatory section (<http://www.itu.int/ITU-D/ICTEYE/Regulators/Regulators.aspx>)

You can also open dialog with the telecommunications operators with whom you would work. The telecommunications operators understand the sector well and can offer valuable advice, and it is in their interest to create additional phone businesses. In many cases, the urban areas are getting saturated and the telecommunications industry is looking to the rural areas as a way to increase their client base. It is a difficult task for them, and in many cases they will be happy to help out, and possibly form some type of partnership.

Geographical compatibility assessment

The first step in the geographical assessment is to know what system(s) is/are available in your coverage area (GSM, CDMA or TDMA). This information is available by contacting the local telecommunications operators or the telecommunications regulatory agency, or on websites such as www.gsmworld.com or www.cdg.org. GSM is the most common system, used in 80 percent of the world.

The next step is to map this coverage to the geographical location of your clients. In order for a Village Phone project to be successful, the telecommunications operators' coverage must overlap significantly with the microfinance coverage. Remember that areas along the outer perimeters of the telecommunications operators' coverage may still be available for connection, using the antenna in the business kit to boost reception. Network coverage maps available from telecommunications operators are often conservative and out-of-date, because many operators in the developing world are rolling out infrastructure very rapidly.

A geographical assessment might require on-the-ground testing, where a field officer roams through villages with a phone and an antenna to test the reception of the signal from the telecommunications operator.

Village Phone Operator interest assessment

Because microfinance is client-driven, it is essential to understand client, i.e., Village Phone Operator, demand for a product such as Village Phone. A need for telecommunication services may already be apparent, considering the distances clients are currently traveling for access. A formal market survey can provide more detailed information. An informal survey of microfinance clients can also yield good insights into important variables and can perhaps highlight the need for additional products.

To ensure success, clients should actively participate in each step of the process. You need to be able to answer the following questions, which should guide the overall process:

- What are the clients' needs?
- How can Village Phone Direct meet these needs?

Methodologies

Feedback helps to understand any socio-cultural apprehensions about Village Phone Direct or technology. You can solicit feedback from existing and prospective clients via loan officers, field officers, focus groups, one-on-one interviews or questionnaires. Microfinance institutions, such as BRI in Indonesia, have used other social channels such as churches, community groups and trade associations to obtain more in-depth client feedback¹⁰.

The loan officer–client relationship is a valuable source for relaying client needs. Training loan officers to understand the intricacies of Village Phone Direct is indispensable for its success. Step 6 offers in-depth details on the training process.

Small focus groups comprising current and potential clients can be used to focus on specific questions regarding client needs. However, this is more time consuming and there is a potential for “group think,” where respondents answer in a way they anticipate others in the group will respond.

Surveys are also a time consuming method, and depend on the ability to read and understand the questions, although they could be administered by loan officers for illiterate clients.

Developing survey questions

Important topics to cover in a survey are:

- **Affordability:** How much do rural individuals currently pay to place a call? If telecommunications services are available, it is very likely that someone will be selling the use of a personal mobile phone. However, while services may be available, access may not be reliable and the rates are usually extremely high. In Uganda, we found individuals charging up to three times the going retail rate for a phone call. Although affordability is relative (one phone call might mean 20 percent of a poor person’s daily income), what we really need to look at is the cost of the alternative. A Canadian International Development Agency (CIDA) commissioned study¹¹ concluded that the consumer surplus for a single phone call ranges from 2.64 percent to 9.8 percent of the mean monthly household income. The cost of a trip to the city ranges from two to eight times the cost of a single phone call. Telecommunications, like health and education, can increase a person’s ability to participate in economic activity and therefore increase their income¹².
- **Accessibility:** How far do people need to travel in order to reach a location where they can place (and receive) a phone call? If a Village Phone Direct business can be placed in a location that saves many people from walking 5km, there will likely be strong demand for that business.

¹⁰Marguerite Robinson, “Savings Mobilization and Microenterprise Finance: The Indonesian Experience,” in *The New World of Microenterprise Finance: Building Healthy Financial Institutions for the Poor*, edited by Maria Otero and Elisabeth Rhyne, (West Hartford, Conn.: Kumarian Press, 1994), 31.

¹¹Grameen Telecom’s Village Phone Programme in Rural Bangladesh: a Multi Media Case Study. Canadian International Development Agency, March 2000

¹²3/2006 New Horizons, pg. 11.

- **Current teledensity:** How many individuals have telecommunications service? And more precisely, how many have service in the area where the Village Phone Direct business would be implemented? Often, teledensity statistics (the number of telephones per 100 persons) are quoted without distinguishing between urban and rural. A low teledensity in a rural area is a positive indicator for Village Phone potential. Specific statistics are often available by contacting the national telecommunications ministry. An informal poll of microfinance groups can also reveal useful data about mobile phone ownership.
- **Nature of competitive services:** Are other organizations or individuals offering rural telecommunications services? What services are offered and at what price? How many potential competitors exist? Are there any barriers to entry?
- **Current Alternatives:** What do people do now to communicate? What is the opportunity cost of this alternative, which may include a public access phone booth, public transportation, messengers, letters, email or many other traditional means of communicating.

In general, urban areas are not the best location for Village Phones. There tends to be a great deal of competition for telecommunications services (often built on fixed-wire infrastructure), making it difficult for a Village Phone Operator to generate enough income. That said, if there are no services available, Village Phone can be an opportunity in urban or peri-urban environments.

Other factors that influence the potential and success of Village Phone Direct are:

- **Telecommunications policy,** which may dictate network interconnect rates, independence of the regulating body, residual competitive advantages of pre-privatization monopoly operator, and tariff structures (legality of charging for terminating as well as originating calls, mandated rural/urban pricing equity, tariff change and approval process).
- **Access to Universal Access Fund** (telecommunications services are increasingly considered by governments around the world as a basic necessity of citizens), which may be a booster for the creation of a Village Phone initiative or cause distortions in the competitive environment.
- **Collective social and cultural factors,** which may include social cohesion, the culture of payment, trust between organizations, pre- and post-paid models (multiple levels), prior collective experience with microfinance (best practice, government intervention, loan forgiveness, etc.), entrepreneurial spirit, literacy and numeracy.
- **Expatriate population.** International calls typically have a higher margin and are more expensive than domestic calls. They assist in sustainability at all levels.
- **Other microfinance institutions or entrants.** This product is available to all microfinance institutions, thus increasing the potential of competition. With the cost of the mobile phone continuing to decrease, enterprising entrepreneurs could also enter the market.

This is neither a complete nor exhaustive list, but is intended to provide a starting point for analysis of the suitability of offering a Village Phone product.

The survey should be administered in several diverse areas in order to get a representative result. After analyzing the results, you'll need to determine whether to move forward in creating a Village Phone Direct product and testing it with a pilot. A sample survey is included in [Appendix A: Sample Surveys](#).

Step 3: Create a Business and Financial Model

When considering what business and financial models to adopt, you should realize that it is possible to implement a Village Phone Direct program with varying degrees of engagement, ranging from simply providing a Village Phone loan to clients, who then find the rest of the equipment themselves, to providing all necessary financing, equipment, training and marketing material that constitute a Village Phone business.

Some of these options like the Antenna and Power source are dictated by the environment. Figure 7 shows the four kit permutations possible.

		Access to power source readily available?	
		Yes	No
Call possible without antenna?	Yes		Battery is needed
	No	Antenna/Coupler/Cable is needed	Battery and Antenna/Coupler/Cable is needed

Figure 7: Business kit permutations

You'll need to determine the level of engagement you wish to have in the following areas:

- **Provider of marketing material.** Although a Village Phone Operator will be able to run a phone business without readily available marketing material, we highly recommend providing this material to the client. It will increase awareness for the business and will instill a sense of trust in it. Overall, it will increase the phone usage. The [marketing collateral section](#) in Step 4 has detailed information on the subject.
- **Airtime distributor.** This can be a useful service to the Village Phone Operator, who will be able to recharge her airtime using a channel she is already familiar with. You can generate income by earning a commission on the airtime sold. Consider your ability to negotiate with the telecommunications operator, whether there are other distributors already within the proximity of the Village Phone Operator, and the operational add-on. See [Step 9: Become an Airtime Distributor](#) for more information on the subject.
- **Acquisition of the kit elements.** You can decide to acquire the kit yourself, through the source, or you can find a distributor in country who would be willing to do that for you. The advantage of ordering directly is that you eliminate the commission of the middleman, and therefore get lower prices for the equipment. If you manage the inventory successfully, you reduce delays and the risk of not having the appropriate components. The disadvantage is the additional burden of importing and storing equipment and managing inventory. See [Step 10: Demand Management](#) for more information on this subject.

You will need to make decisions regarding these different models initially, before the pilot phase. The pilot phase will provide some context and help redefine and fine-tune the options. In order to create the business model, consider the variables listed in Figure 8. You should create spreadsheets from this data, including income, expenses, and net revenue that model the elements of the business for all of the parties involved in the Village Phone program.

Business Analysis Variables	
Cost of the Village Phone business kit	Pricing ranges from \$50 - \$300 USD depending on the kit elements chosen, as well as shipment/customs/VAT. Details on this can be found in Step 4: Select equipment and define sourcing
Financing costs	Are all of the institution's costs covered?
Average number of minutes per day sold	The population density of the area served will help determine the number of potential customers and therefore the average number of minutes per day a Village Phone Operator can sell. In densely populated Bangladesh, the average Village Phone Operator sells 50 minutes of incoming and outgoing calls (see http://www.grameen-info.org/grameen/gtelecom). In Uganda, 14 min/day is average, where only outgoing calls are charged.
Estimated number of Village Phone businesses to be created	Does the target market offer the potential for significant expansion? You should consider the expansion rate of creating new VPO businesses, as well as the percent of existing clients who could become VPOs. See Figure 10 for an example.
Village Phone business creation rate (number of businesses established per month)	This is a function of the number of microfinance clients and the staff availability to deploy Village Phone businesses, as well as the institution's liquidity. (Cash flow management becomes critical for a business such as this and, while a profitable business may have been modelled, it will struggle month-to-month if there is not sufficient cash flow to pay creditors.)
Operational expenses for the microfinance institution	The number of staff and marginal support required over and above costs already being incurred.
Wholesale and retail tariffs and margins for partners	These numbers are the basis for revenue and sustainability projections.
Taxes, such as in-country tax, Value Added Tax (VAT), excise tax, or other externally-imposed outgoing cash flows	

Figure 8: Business analysis variables

On the financial model front, consider the following, which are discussed later in this section:

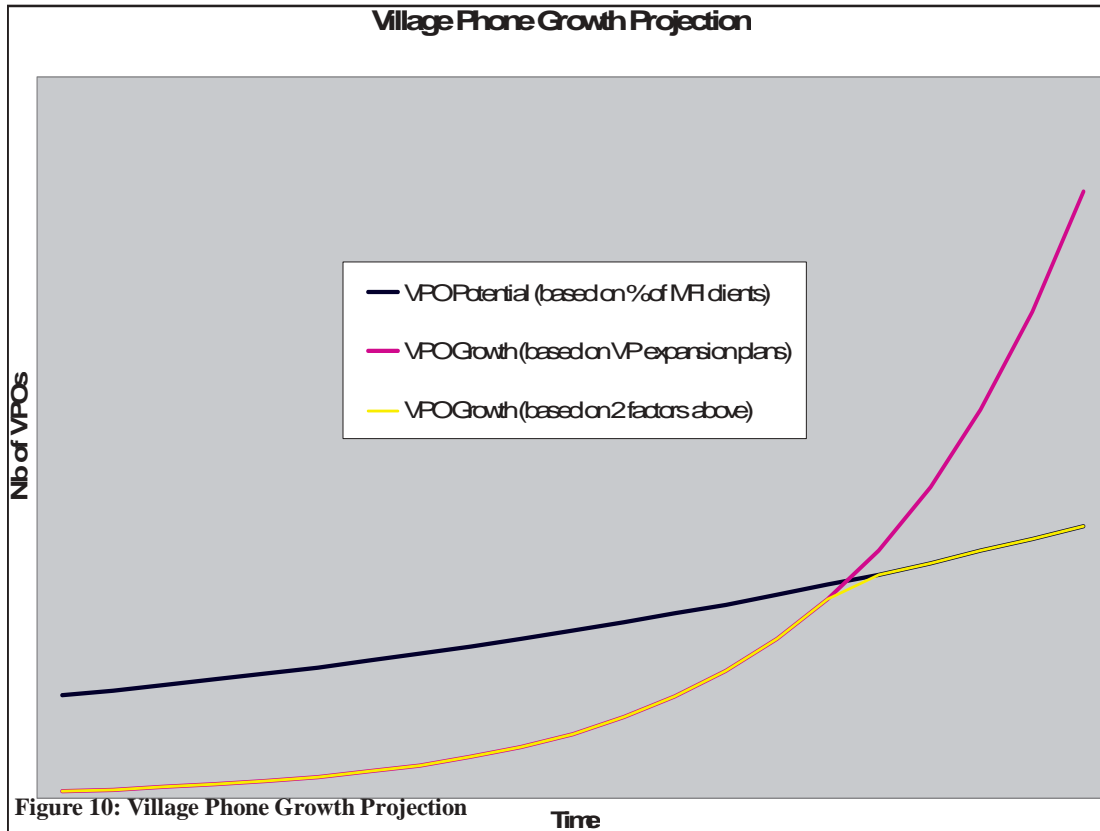
- The business model for the Village Phone Operator
- The loan interest, fees and commissions for your institution
- The expenses and costs associated with the Village Phone program for your institution
- The commissions on airtime if the airtime distribution option is chosen

The business must be sustainable at the Village Phone Operator level. Long-term sustainability should also be the aim at the microfinance institution level, as described in the table in Figure 9.

Project Partner	Business Model
The Microfinance Institution	<p>Uses its core business of making loans to Village Phone Operators. Revenue is generated from these financing activities. The financial product offered and terms of agreements are already all in place for the microfinance institution. Village Phone is an additional product offering in the portfolio of the microfinance institution and brings a degree of portfolio diversification.</p> <p>The program can also be used to attract new customers and reward long-standing clients. Client retention increases and the cost of acquiring new clients drops.</p> <p>Additionally, the institution can act as a distribution channel to market and receives ongoing revenue from a share of airtime sales (see Step 9: Become an Airtime Distributor (Optional)).</p>
Village Phone Operator	<p>Sells phone airtime for calls to people in their community. Also generates revenue from non-airtime sources such as message delivery, charger utilization, etc.</p> <p>The micro-entrepreneurs' other business activities benefit from the Village Phone business. Innovative entrepreneurs have created additional adjunct businesses to maximize this internal synergy. One Bangladeshi created a tea house alongside her phone station, and then took it one step further and created a "resting place" (for people to use when waiting for incoming calls) which then evolved into a small hotel. This system of Village Phone Operator activities forms a sustainable livelihood.</p>

Figure 9: Long-term sustainability

Figure 10 projects the expansion of the client base of the Microfinance Institution along with the potential growth rate of the number of Village Phone Operators. Once the lines cross, the business model needs to be revisited.



Village Phone Operator business model

The Village Phone Operators are the base of the Village Phone business pyramid. The sustainability of their livelihood and their system of businesses is critical to the success of each organization that has a stake in the Village Phone operation. The amount and term of the loan for the Village Phone Operators must be appropriate to the scale and economic activity of the clients' business. To minimize transaction costs, the business kit is sold at cost without any mark-up.

It is important to help your Village Phone Operators understand how to monitor the health of their business to attain sustainability. Each Village Phone Operator should know how many minutes per day their phone needs to be used for their business to break even (including meeting your financial obligations). This number will change based on the size of the loan, payment details and, of course, tariff margins. The business becomes unsustainable when the operator can no longer meet financial obligations to the microfinance institution. The basis for this analysis is shown below and each parameter can be changed to address the particulars of the financial product developed by your organization

The example in Figure 11 is illustrative only and will need to be tailored to include the model variants appropriate for your environment.

VPO Daily Revenue		ANALYSIS	
	USD		USD
Average VPO margin per minute	\$0.10	Average VPO Daily Income	\$1.00
Average minutes sold per day	10	VPO Daily Financial Obligations	\$0.75
Total Daily Revenue Net	\$1.00	(Surplus after loan repayment)	\$0.25

Example MFI Financing		Breakeven (During Loan)	
Equipment Pricing (Loan principal)	\$200.00	VPO Breakeven Minutes/Day	7.47
Loan Term (weeks)	52		
Loan Periodicity (weeks)	1		
Interest Rate (Flat, Monthly)	3%		
TOTAL DAILY OBLIGATION	\$0.75		

Figure 11: Village Phone business model

The business model is based on the average number of minutes sold per day by each Village Phone Operator – some will sell hours, some just a few minutes. The sustainability model also represents an average. The example breakeven analysis above shows that if a Village Phone Operator is selling less than 8 minutes per day, then they are operating at a deficit during their 52-week loan repayment period. Because we are dealing with averages, there will be Village Phone Operators operating below this utilization, and there will be those who far exceed this average. Obviously, the ideal goal is to have all Village Phone businesses operating profitably.

Village Phone businesses operating below the breakeven utilization should not necessarily be considered non-sustainable or a business failure, nor should they be viewed as a burden, driving the poor entrepreneur further into poverty. Most often a synergistic relationship exists between the Village Phone Operator's phone business and their primary business. For example, an operator who runs a small shop selling drinks will sell drinks to people who come to use the phone. This increase in revenue for the primary business can make the overall business profitable even for those operating below breakeven utilization. We are working with a system that holistically provides for a sustainable livelihood for the Village Phone Operator and their family. Village Phone Operators are selected by their communities and by their member microfinance institutions as upstanding and respected citizens who have proven their entrepreneurial skills and have established a record of success in their micro-entrepreneurial activities. Their ongoing relationship with you is based upon a solid credit record. The basis of success of the Village Phone Operator business must be considered as a part of the whole, internally synergistic livelihood. In this context, it is important to note that after the loan is repaid, the Village Phone Operator's gross revenue is money straight to their pocket.

Additional revenues can also be taken into consideration, based on the local environment. The Village Phone Operator can charge clients for incoming calls; and Village Phone Operators can rent their batteries for their clients to run or charge appliances. We have also seen instances of clients coming to the Village Phone Operator with their own SIM cards. The client rents the Village Phone Operator handset, places their SIM card in the phone and makes a call. In this case, the Village Phone Operator earns a profit on the rental of the equipment, but not on the placement of a call or on the airtime used.

Financial modalities

The Village Phone program is needed because not every person can afford their own phone, nor do they necessarily have access to electricity or a reliable network signal, and the existing infrastructure of fixed public pay phones is insufficient. The shared access model works because it allows an individual to purchase a set of

equipment that enables them to become a communications focal point for their community. The enabling funding comes from you.

The previous section outlined some key parameters associated with the business model for the Village Phone Operator. This analysis draws upon usage modelling and factors in margins for the Village Phone Operator. In designing your financial loan product you will need to take these inputs into account.

Aspects of the product you have to consider:

- Loan duration
- Loan principal
- Effective interest rate
- Actual weekly/bi-weekly/monthly repayment
- Effect of inflation
- Loan periodicity and repayment schedule
- Provision for expected loan losses
- Lending methodology (group, individual, other)
- Compulsory savings linkage (may not be necessary as the business kit is the collateral)
- Different loan principal amounts depending upon kit composition and equipment configuration

An agreement between your organization and the Village Phone Operator should be made as part of the deployment process to affirm shared goals between the Village Phone Operator and your organization. For example, a Village Phone Operator Agreement (see sample in [Appendix B: Pilot Phase Plan and Agreement](#)) could elaborate the responsibilities of the Village Phone Operator vis-à-vis their commitment to operate the business as a community resource – if that is a part of your organization’s goals for the Village Phone Direct product (again reflecting back to the outcomes of Step One of the process).

Below is a short summary of what we have learned from experience:

- Estimates of airtime usage start at 10 minutes per day.
- The Village Phone business kit itself is the collateral – no additional collateral should be required.
- Microfinance institutions in Uganda offer loan periods of 4-12 months, though we have found a four month loan is often too aggressive a repayment schedule.
- The peer lending framework also provides a basis for loyal customer support of the business of the Village Phone Operator, as they in fact have a financial stake in the success of the business.
- The equipment should not be marked up by the microfinance institution – it should be passed on to the Village Phone Operator at cost.

Loan revenues, fees and commissions

Village Phone provides an opportunity for efficient use of your institution’s loan portfolio while offering a valuable service to the community. Financial risk is also minimized, as the business kit is the collateral. You can retain ownership of all phone passwords and can, if necessary, have the phone company block the SIM from accessing the network.

Village Phone loans are historically repaid at over 98 percent repayment rates, consequently preserving or improving the institution’s portfolio. High rates of repayment mean the institution can make new loans, ensuring a constant revenue stream. These clients will continue to demand repeat loans for working capital needs, such as additional airtime. Repeat loans have lower credit risk and lower costs for evaluation and processing.

In countries with mandated interest rate caps, fee and commission income can make up the difference. As mentioned previously, the Village Phone model is designed to offer the business kit at cost. The kit is the core of the Village Phone initiative. Making a profit on the kit would send the wrong message to the client and entice them to get their equipment from somewhere else. You would also risk losing some credibility with your clients. So we recommend that neither fees nor commissions be collected on the kit itself. However, if you decide to be an airtime distributor, you will earn a percentage on the airtime being used. See [Step 9: Become an Airtime Distributor](#) for details on how to become an airtime distributor.

Your institution is also able to lower transaction costs by utilizing the Village Phone network. Instead of a physical site visit or having a client travel to the branch only to find their loan is not yet ready, you can call the Village Phone Operator to ask questions or change appointment dates.

In addition, you can become a trainer and charge fees to train other institutions, or their clientele, on how to become a Village Phone Operator.

Other financing options

At the microfinance institution level, rental can be an alternative to loans. With a rental model, the ownership of the business kit is in your hands and can be negotiated for any period of time. Independent rentals can be useful for agricultural clients, during the harvest season, when they need frequent quotes to negotiate the best prices for their harvests, but do not need a mobile phone year round.

At the Village Phone Operator level, an alternative to generating revenue through minute use is to generate revenue through the loan of the phone. In the Philippines, for example, a client owns a SIM card and goes to the Village Phone Operator for the use of the handset. The client rents the handset for a set fee and places their SIM card into the phone to make a call. With this model, the Village Phone Operator earns a profit on the rental of the equipment, but not on the airtime used. There are challenges associated with this approach in that the SIM card and the SIM receptacle in the phone are not designed for repetitive use in this manner. Equipment failure is much more likely.

Costs and cash flow

Your institution should follow a methodical process that consists of analyzing your institutional capacity in regards to finances, staff, delivery methods, MIS, and training. Additional areas to consider are the implications of the current stage of growth, the market, the methodologies in place, and the fit within the current product mix and staff skills.

In the initial stages, Village Phone can be implemented within your existing organizational structures. Additional staff or additional capital equipment are not necessarily required. The workloads of people involved will be affected, but since these people are already on payroll, costs could be incorporated within your current operational expenditure.

As the program grows, it may be necessary to dedicate resources to Village Phone Direct as a stand-alone product. Such costs should be offset against the revenues described in the preceding section on commissions. As with all other aspects of your institution, all activities regarding Village Phone Direct lead to cash inflows and outflows which affect the liquidity position.

It must be very clear how the money flows. Figure 12 illustrates one model, which could be adapted to fit your proposed operating model.

Incentive program

For most microfinance institutions, the revenue generated from selling the Village Phone product will be booked by the head office and will not flow through the individuals best positioned to ensure the success of the Village Phone program. These are the individuals at the grassroots level, such as branch and field staff. In order to ensure the success of the Village Phone program, you should create an incentive scheme that rewards exceptional performance on the part of their branch and field staff.

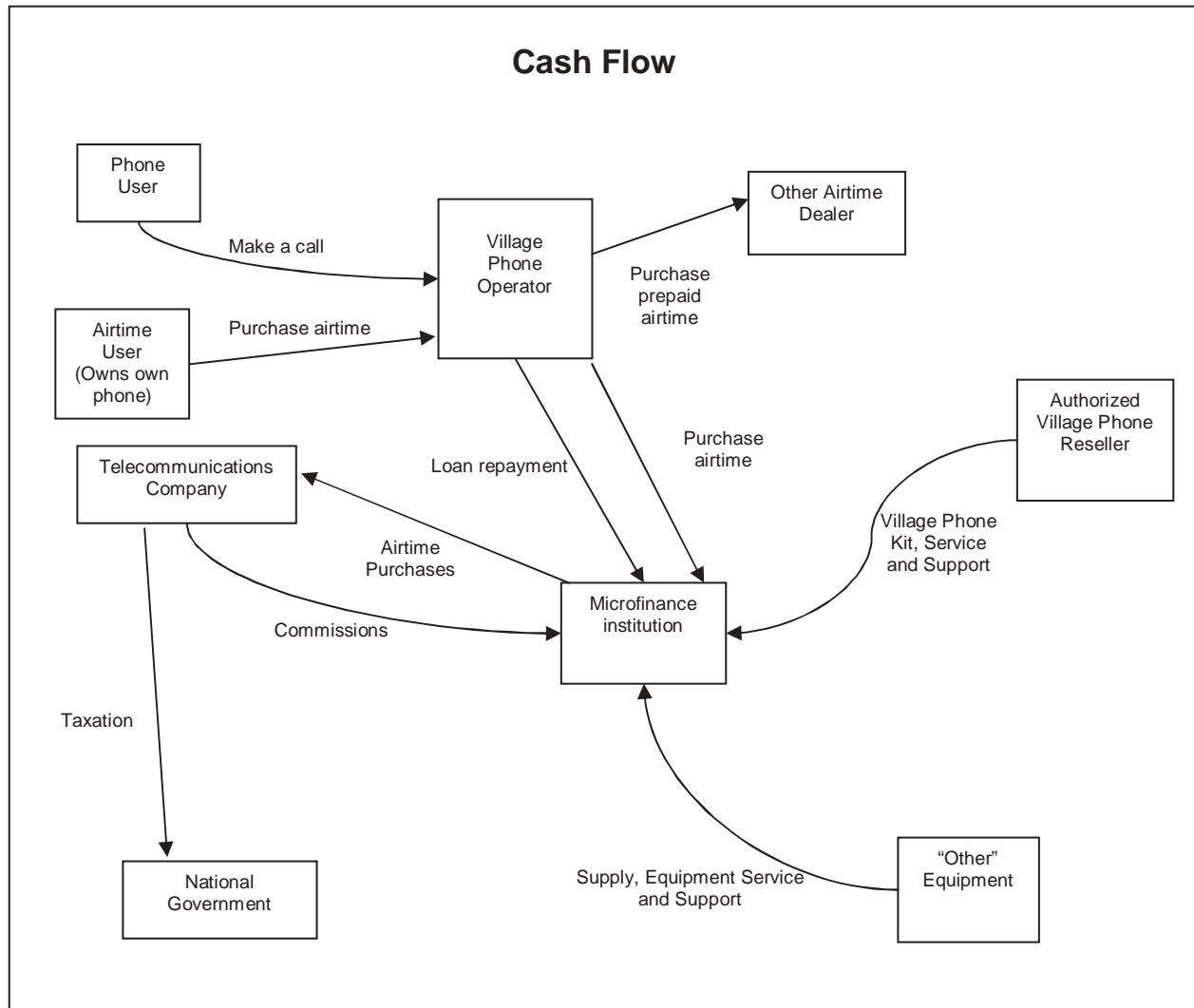


Figure 12: Cash flow model

Many microfinance institutions already offer incentives based upon any number of operational performance parameters such as:

- Number of members managed
- Outstanding portfolio
- Portfolio at risk
- New members attracted to the microfinance institution

Village Phone incentives can be very similar. Incentives for loan officers or branch staff could be based upon:

- Number of Village Phone Operators under management
- Revenues generated through airtime sales
- Portfolios at risk for Village Phone Operators
- Average number of minutes sold by Village Phone Operators

An incentive scheme must be culturally appropriate for a microfinance institution – you will have your own standards and practices vis-à-vis incentives offered to branch and field staff.

Call tariffs

One of the more challenging areas in the creation of a business model is the formulation of a tariff structure for Village Phone, if it is not already fixed by the telecommunications operator. You may choose not to become involved in setting retail tariffs for Village Phone Operators, but, in any case, you should have an understanding of the sustainability equation for Village Phone Operators.

There are multiple facets to creating tariffs, including the following:

- The Village Phone Operator financial analysis should provide an idea of the net revenue required by a Village Phone Operator in order to sustain their business. Usage assumptions must be created to provide a margin per minute (or unit) figure. This is the starting point – if the Village Phone Operator cannot run a business around their breakeven point then it will be challenging to make the Village Phone model work as a whole. However, as discussed earlier, there are other elements in the Village Phone Operator financial model that may allow her to operate sustainably, such as other revenue from non-call related services (message delivery, battery charging, commissions on bulk airtime sales to other phone owners and, most importantly, the increased traffic for the primary business).
- We recommend that the structure of the tariff plan be as simple as possible, with as few variables as possible. In Uganda, we use six tariffs, and the only variable is destination (network or geographic). The rates charged to customers by Village Phone Operators do not change based on time of day. In Indonesia, the Village Phone Operator checks the airtime balance on their phone prior to the client making a call. They check the balance again after the call. The client pays 1.5 times the difference. That said, simplicity is not a requirement. The Bangladeshi Village Phone program provided a manual, distributed to all Village Phone Operators, containing four pages of detailed tariff variations.
- The business model will consider all tariff variations and may use a weighted average (blended) tariff to simplify planning, budgeting and analysis. This weighted average tariff (and its breakdown into component costs and allocations) is usually based upon historic usage patterns for subscribers. It is important to note that Village Phone subscribers and their community of customers will not necessarily be represented well by referencing historic calling patterns of a predominantly urban subscriber base. Upon commencement, however, these ‘typical’ subscribers may be the only reference point and will suffice for planning until the Village Phone business has established enough of a historical record of its own. For example, in Bangladesh there is a large expatriate community (Bangladeshi people who choose to work out of the country) largely drawn from rural communities. Village Phone Operators’ calling patterns show a higher percentage of international calls than do Grameen Phone subscribers found in Dhaka, a major city.
- The telecommunications operator may not wish to create anomalies in the positioning and structure of their products as seen by the distribution network. It may be that the tariff structure is defined by existing products – even though those products may serve different market niches, constituencies, or even geographic areas.
- The tariff plans of any competition will have a large part to play in the determination of an appropriate Village Phone tariff structure.
- Government regulation and oversight:
 - ◇ Regulated interconnect rates between local networks and international gateways
 - ◇ Regulated wholesale tariffs
 - ◇ Excise taxes
 - ◇ Universal Access Fund fees/taxes/surcharges

- Unitization and the party benefiting from the unitization. For example, if the telecommunications operator sells wholesale in units of six seconds, and the Village Phone Operator sells retail in units of one minute, the Village Phone Operator has the potential to benefit greatly – on average, earning an additional five units of retail revenue for each call made.

With Village Phone Direct being a product driven by the microfinance institution and potentially operating independently from the telecommunications operator, there may be no opportunity to negotiate with telecommunications operators for access to special wholesale tariffs that would enable Village Phone Operators to operate at a higher profit. Because of this, Village Phone Operator retail tariffs may be more expensive than typical pre-paid subscribers are able to get. The Village Phone Operator may have to add their margin on top of the usual pre-paid subscriber rates and sell at this retail tariff. This may result in a comparatively expensive call tariff. If the cost benefit to making a call at this local Village Phone business is still cheaper than the cost of pursuing an alternative approach, the viability of the business is there.

After going through all these exercises, and once a level of engagement is determined, it is important to reflect back on the initial institutional goals for Village Phone.

Hypothetical Tariff Plan					
	Note	Qty		Variable	Calculation
Village Phone Subscriber minutes per day			10	k	
Periodic Service / Connection Fee	1		\$0.00		
Unit allocation of Tariff	2		1 min		
Retail	3		\$0.20	a	
Wholesale (Incl VAT)			\$0.13	b	
VAT (Value Added Tax)		15%	\$0.02	c	$b / (1 + 15\%)$
Distribution Channel Commission (MFI)	4	5%	\$0.01	d	$(b - c) \times 5\%$
Wholesale (Excluding VAT)			\$0.11	e	$b - c - d$
Village Phone Operator Margin			\$0.07	f	$a - b$
Telecom Operator	1,5		\$0.11	g	e
Average Revenue Per User			\$60.00		$g \times k \times 30$
Note 1: A periodic service fee may be required for all subscribers to maintain connection to the network and to avoid phone number being recycled when the phone remains unused for a period of time. In Uganda, this was waived for Village Phone					
Note 2: This example assumes a unit is 60 seconds					
Note 3: This tariff plan is for a single call type (or the weighted average / blended). Variants include allowances for peak, off-peak, discount, other networks, etc...					
Note 4: This will apply if the MFI decides to be a sub-distributor of minutes. This percentage allocation is paid to the MFI for their function as the Distribution Channel - This percentage is negotiated with the Telecom Operator and should be consistent with usual distribution channel commissions					
Note 5: Excise taxation, Universal Access Fund, Interconnect fees, Amortization of infrastructure investment, profit, and other incidental 'external' 'charges' are paid from this amount					

Figure 13: Hypothetical tariff plan

Step 4: Select equipment and define sourcing

Element	Required or Optional?	Details
Mobile Phone	Required	
Earpiece	Required	Village Phone Operators often like to keep control over their handset during a client phone call for security. They ask the client to use the earpiece. They plug the earpiece to the phone. The user wears the earpiece and does not need to touch or hold the phone. Especially when the phone is connected to antenna, using an earpiece avoids possible damage to the phone or the cables.
SIM card or telecommunications access card	Required	The SIM card allows access to the network (GSM only)
Airtime	Required	A set amount of minutes, (prepaid airtime card or Electronic Voucher Distribution (EVD) time) so that the Village Phone Operator can start up her business immediately.
Antenna, cables and coupler	Optional, depending on location	An external booster antenna and its connecting cables. This is necessary in areas where the call does not go through, because of low signal. More details on the need of an antenna can be found in section Communications Technology below.
Phone battery solution	Optional	For recharging the phone battery, in areas where electricity is not readily available.
Marketing signage and branding	Optional, but highly recommended	See sample of business increase based on use of Marketing material in the Marketing Collateral section (later in Step 4)

Figure 14: Business kit items

The Village Phone business kit delivered to Village Phone Operators should contain everything necessary to begin operating a Village Phone business.

In mobile telecommunications, two competing technologies, GSM and CDMA, can co-exist within a region. These two technologies are not compatible. It is important to know what system(s) is available in your coverage area, as well as what frequency is being used. Equipment not compatible with the system and frequency used in your region will result in the equipment not working. This information is available by contacting the local telecommunications operator or the telecommunications regulatory agency or by visiting websites such as www.gsmworld.com or www.cdg.org.

Details on a suggested list of elements for the kit and how to procure them can be found in [Appendix K: How to Procure Kits Elements](#).

The phone handset with earpiece

This is a mobile phone with earpiece/microphone for hands-free operation of the mobile phone. (Village Phone Operators prefer to have control over the handset and ask the client to use the earpiece.)

Although many substitutes such as refurbished phones are available, we recommend utilizing the same phone for all operators from one distribution centre, in order to offer better support and service. It is important to work with only authorized distributors to avoid copies or refurbished phones.

It has been our experience that grey market equipment is vastly inferior, in the following ways, to anything purchased through an authorized distributor:

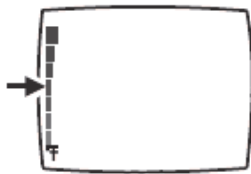
- Phone batteries are often after-market, or used and do not hold a charge.
- Keypads are often not original and fail readily.
- The environmental integrity of the phone is compromised and humidity often causes failures to screen and internal electronics.
- There is no warranty on such phones.

Such failures in equipment puts the very success of the program at risk as Village Phone Operators and community members lose confidence in the availability of the service, leading customers to find other ways to make calls. Failed equipment also puts the business at jeopardy for the Village Phone Operator, affecting their ability to repay their obligation to you.

External antenna, coupler and cables

In order for Village Phones to operate reliably more than 15km from a GSM base station¹³, an external antenna is required. An external antenna allows a GSM handset to operate up to 35km away from a base station, depending upon the terrain.

To test if an antenna is needed in a specific area, turn on a sample mobile phone and count the number of signal bars showing on the phone, as shown below:



- 0-2: An antenna is needed.
 - 3-4: An antenna might be needed. The phone should be tested by placing actual calls.
 - 4-5: No antenna is needed.
- Note: Bars may display differently on different handsets.

Figure 15: Mobile phone signal bars

To the extent that antennas are not widely utilized by others in the community, the Village Phone Operator will have a technically competitive advantage and will be able to bring telecommunications services to areas not previously accessible.

The antenna must have Line Of Sight (LOS) to the base station in order to function properly. The antenna must be high enough to “see” the base station. It is not uncommon to see the antenna attached to the top of a 10-meter pole for this very reason.

The directional booster antenna connects to the phone through a coaxial cable (usually 10 meter) and a phone adapter called a coupler. For more details, see [Step 4: Select equipment and define sourcing](#).

Recharging solution – Automobile Battery

Many recharging solutions are possible in areas where reliable electricity is not available. Many of these options have been discussed in the [Power technologies section](#) in Part One. A lead-acid automobile battery has been the most common rechargeable solution to date.

¹³Approximately, and contingent upon base station power, transceiver orientation, weather, terrain, foliage coverage, handset power, line of sight, reflections, etc....

An automobile battery solution contains 3 pieces.

- A standard mobile charger cable (LCH-12), commonly used to recharge a cellular phone from an automobile. This adapter is available in all urban and semi-urban areas, and can be sourced through the cellular phone supplier. It will connect the phone to the battery connector.
- A battery connector. This cable connects the battery to the standard mobile charger cable (LCH-12). Note that we recommend using screws rather than clams to connect to the battery. Our experience with clams has been that they are too easy to remove from the battery, increasing the possibilities of inverting them. (connecting the “+” of the automobile battery to the “-“ of the phone battery). When connected the wrong way, the phone battery gets discharged rather than charged.
- An automobile battery.

Airtime

Pre-paid airtime sold by the telecommunications operator is a generic commodity and is not specifically created for Village Phone Operators. We recommend that you provide a prepaid airtime card or an Electronic Voucher Distribution (EVD), and load the airtime with the Village Phone Operator when they receive the kit. The Village Phone Operator will need airtime in order to start the business.

You should look into how your Village Phone Operators will be able to top up their prepaid airtime account once their initial airtime has been used. Different options are available:

- The Village Phone Operator buys their airtime from an independent reseller. If you choose not to act as an airtime distributor, you should ensure that resellers are easily accessible to the Village Phone Operators and that their rates are acceptable/competitive. Distribution networks are becoming widespread in some areas and the ability to buy additional airtime is not an issue.
- You act as an airtime distributor and purchase prepaid airtime cards, which you sell to the Village Phone Operators. This is a good, and perhaps indispensable, option if airtime is not easily accessible to the Village Phone Operator. To do so, you need to enter into a distribution agreement with the telecommunications operator. This option is discussed in detail in [Step 9: Become an Airtime Distributor \(Optional\)](#).

As new technologies come into play, such as Electronic Voucher Distribution (EVD), distribution of airtime will become easier for remote operators. EVD provides for the distribution of airtime via an electronic system, such as a Point-of-Sale terminal, a mobile phone or the Internet, and the system caters to both PIN-based and PIN-less airtime distribution.

Depending on the telecommunications operator, village phone operators may send SMS messages to refill their phones with small amounts. For example, one microfinance institution in Uganda initiated a program to allow their Village Phone Operators to purchase airtime remotely. The Village Phone Operator places a phone call to her loan officer, who reads the Village Phone Operator the authorization number from the prepaid airtime card and deducts the purchase price from the Operator’s working capital loan. This has reduced the microfinance institution’s cost of delivering prepaid airtime vouchers to their Village Phone Operators and eliminated the need for the loan officers to carry prepaid airtime cards to the field.

See the diagram in [Appendix F: Airtime Access](#) for a better understanding of the options for accessing airtime.

Airtime could also become a de-facto currency, and goods and services could be transferred between virtual accounts, paving the way for a distributed payment system.

Marketing collateral

Local marketing is a very important tool and signage is the key to Village Phone market sensitization. The telecommunications operator could provide some collateral to promote its own brand awareness. Our experience shows that a sign greatly increases business for the Village Phone Operator. Figure 16 illustrates the impact of signage on minutes of telephone usage.

We strongly recommend that you include your own Village Phone signage or that you train the Village Phone Operators to create their own individual marketing signage. The increase in business is almost certain to pay for the marketing collateral cost. Marketing also helps the Village Phone operator to be quickly identified as a community resource, where one can place and receive calls and messages. [Appendix G: Signage Solutions](#) offers suggestions for signage.

Business cards might also be used to increase the call-in pattern. They can be used by people when they leave the village and want to call back to family or community members.

Documentation

A simple reference guide can be created for the operator. A sample is provided in [Appendix I: Phone Reference Guide](#). This guide summarizes how to perform the most basic tasks (making a call, checking airtime balance, loading airtime, checking call duration, reading and sending messages), as well as important things to remember (tips for recharging the phone, how to contact customer support). This guide can be laminated for durability.

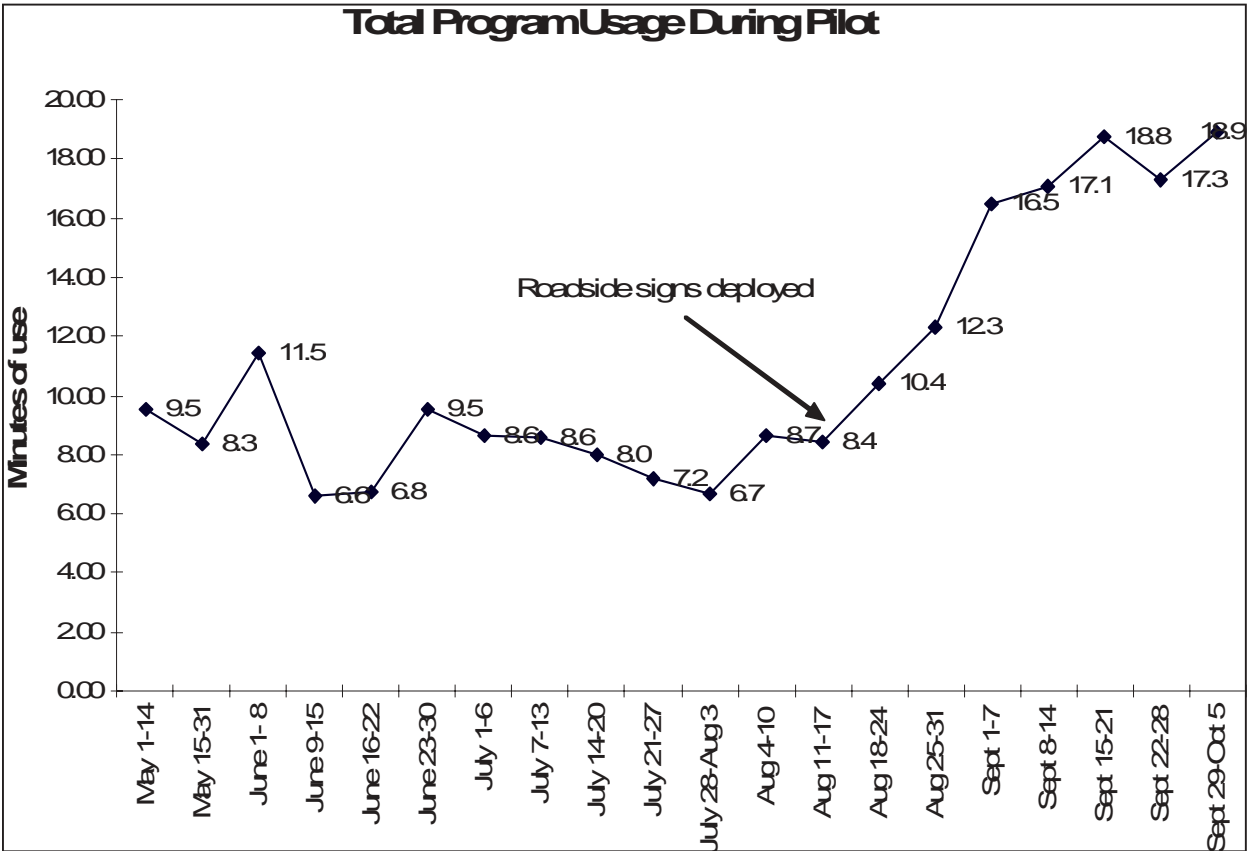


Figure 16: Impact of marketing collateral during pilot program

Other items in the business kit, such as the handset and the antenna, also comes with documentation and set-up instructions. This information can be summarized to assist the village phone operators, keeping in mind language barriers or literacy levels. Often a literate community member can assist the Village Phone Operator on an ongoing basis with documentation understanding and translation. See [Appendix J: Reference Manual Template](#) for a sample.

Equipment warranty and repair

Ongoing maintenance and equipment repair is the responsibility of the Village Phone Operator.

Equipment purchased through our suggested sources are under warranty agreements, and can be replaced by these parties, in case of manufacturer malfunctioning.

These warranties are “carry in” warranties, meaning that you or the Village Phone Operator needs to bring the equipment to the reseller for a replacement.

See [Appendix K: How to Procure Kits Elements](#) for details.

Step 5: Select Operators

Selecting the Village Phone Operator is critical

The business performance of the Village Phone Operators is a key element in the success of the program. The appropriate selection of these operators is important in terms of risk mitigation for you and also in terms of the program's success, that is, the program's ability to provide communications to a wide community of rural poor.

For Grameen Foundation, the purpose of Village Phone is to create a business opportunity for the Village Phone Operator and to create a service for the community. Therefore, it is important that the Village Phone Operator shares their service, and that the phone is not solely used for personal calls. Also, if the Village Phone Operator is not actively marketing their services, the business may not reach sustainability. If the Village Phone Operator is not adequately steeped in the social obligations of being a member of a peer lending community, there are a myriad of risks for the community and the microfinance institution. This is why Village Phone Operator selection is critical.

The latitude and flexibility that you have in determining how the Village Phone Direct model will operate is fundamental: you create the loan product and determine the best way to select Village Phone Operators. It is interesting to note the different approaches of the different microfinance institutions. In Uganda, for example, one institution uses the Village Phone product to attract new entrepreneurs – they use it as a marketing product to differentiate themselves from other microfinance institutions and banking alternatives. Other microfinance institutions – in fact, the majority of them – use Village Phone to ‘reward’ loyal and outstanding clients/members for their continued association. In this context, Village Phone Operators are chosen from those members who have been with the microfinance institution the longest and have the best record of repayment. Village Phone Operators can also be self-selected, where a lending group steps forward and chooses one of their members as a suitable Village Phone Operator.

Village Phone Operator Story:

Josephine Namala owns a small retail shop in the remote village of Lukonda in the Kayunga district in Uganda. Before she began operating her Village Phone business, people in her community had to walk over 5km to make a phone call. In the evenings, large groups of people gather in front of her store with their FM radios to listen to call-in radio shows. Inside her shop, a large pink sign is posted with the phone numbers for all of the radio stations. The villagers regularly use her village phone to call the radio stations and make their opinions heard nationally.

Selection criteria

Based upon our experience, we suggest that you document a set of selection criteria for Village Phone Operators and also define a process for selection. The following can be used as a guideline:

- Regular attendance at peer lending meetings
- High status within the group
- Microfinance institution member for at least one year
- 100 percent repayment history

- Respected as a community member
- Central location for business operations
- Established ‘primary’ business
- Able to receive telecommunications signal with external antenna
- Overall gender representation consistent with microfinance institution client base
- Strong business management skills
- Ability to actively market their business
- Language skills representative of the community in which they intend to operate the business
- Literate, or at least numerate
- An ability to understand messages on the phone menu, as most phones are not in the local language. (This may also be achieved through prompt sheets showing the phone message and the local language equivalent as a part of the training materials. This translation could also be presented pictorially.)

The process of identifying Village Phone Operators can begin at the community level and should be driven by demand. It could involve an education component, where you advertise that such a business opportunity exists, outline the selection criteria, and open the discussion for nominations from within the community. A nomination would be approved at the appropriate level within your institution. Alternatively, the selection process could begin with you suggesting an appropriate person to the peer lending community. Either way, the selection criteria must be understood; the buy-in and support of the peer community must be gained.

Village Phone Operator Story: Philomene "Miracle" Mukarusanga is a Vision Finance client who operates a Village Phone business in the Rilawgoro district of Gikongoro province. She is married with five children, and she used her first loan from Vision Finance to invest in a boutique that she operates, selling flour, drinks, and day old chicks. Her second loan cycle with Vision Finance was used to purchase the Village Phone kit, and she operates the Village Phone at her boutique. Over the life of her Village Phone business she has consistently outperformed most Village Phone operators in Rwanda, selling an average of 22.52 minutes per day.

Geographic distribution

The business viability of each Village Phone Operator is a key element of success of the Village Phone model. You play a critical role in this model by working with prospective Village Phone Operators to evaluate the location of their business with respect to competition and traffic of potential customers:

- Are other Village Phone Operators or public access services located nearby?
- Are there fixed-line options? (Fixed line is often much cheaper than wireless and so the competitive position for a prospective Village Phone Operator will be weak.)
- Is the ‘catchment area’ large enough to support a Village Phone business?
- Are there enough people who come by the proposed business location?
- Is there enough economic activity in the area to support a Village Phone business?

Village Phone operates most profitably when the Village Phone Operator is able to provide communications services where no such viable, affordable, accessible alternatives exist. This is typically in the rural areas where the average villager travels many kilometres to make a call and can pay many times the usual retail tariff per minute. A Village Phone business is usually an adjunct business for an entrepreneur. In general, the location should be fixed so that the local community has a predictable location to find and use the phone. This builds confidence that if someone sets out on a journey to make a call, they can be assured that the Village Phone Operator will be there and they can actually make the call. If confidence is lost, that customer will not come back. While most Village Phone Operators' businesses will operate in this fixed-operations modality, some Village Phone Operators may choose to travel from marketplace to marketplace and serve those people and communities on market day.

Village Phones could potentially be deployed in urban or peri-urban areas. In some peri-urban areas of the Philippines, where several providers are available, some Village Phone Operators carry a phone for each mobile telecommunications operator. This provides the cheapest service, based on whom the client needs to call. Urban and peri-urban Village Phone operation should be considered very carefully, as in these settings various operators and alternatives on the streets are available, like calling booths. In this case, a Village Phone business may not prove financially viable.

There can be no Village Phone business where there is no mobile phone signal. External antennas for the mobile phones may be used to acquire (i.e. boost) an existing signal in more remote areas. To validate that a location has coverage, it is important to actually place a call with a mobile phone. Just because the phone shows coverage (e.g., one or two bars of signal strength) does not mean that the phone will work in the location. A phone must show at least 2 bars (out of 6) to be effective and reliable, and be within a 35km line of sight from the telecommunications operator's tower/base station.

Step 6: Develop an Operating Manual and Training Curriculum

Prior to beginning the pilot program, a training program needs to be established in order to assist the Village Phone Operators in creating a strong, viable business. Individual or group training sessions should be conducted by the microfinance loan officers, who have a relationship with the borrowers and who themselves will be trained prior to starting the pilot. We strongly encourage group training sessions to maximize staff resources.

When you deliver the Village Phone business kit to a new Village Phone Operator, we recommend an in-depth training session that covers the business elements shown in the following template curriculum.

Village Phone Operator training outline

At deployment and establishment of a NEW Village Phone business

Introduction

- Welcome and congratulations
- Why you have been selected to be a Village Phone Operator
- What it means to be a Village Phone Operator (important community resource)
- The obligations of a Village Phone Operator (roles and responsibilities)
- The Village Phone Operating manual (business agreement and training material for the Village Phone Operator)

Understanding the Loan

- Loan amount, duration, principal, periodicity, and repayment schedule
- Grace period (if such structure is appropriate for the microfinance institution)
- Effective interest rate
- Lending methodology (group, individual, other)
- Insurance
- Equipment as collateral
- SIM card connection is the property of the telecommunications operator

Equipment

- The phone (basic operations, care, charging, warranty)
- The SIM card
- Recharging the batteries (solar or car battery)
- The antenna (positioning, orientation)

Business Operations

- Financial basis of the Village Phone business
- Tariffs and services
- Margins for Village Phone Operator
- Break-even point (a discussion in concert with the loan product)
- Airtime purchases
- Purchasing sources
- Process for loading airtime onto Village Phone account

- Monitoring and maintaining airtime balance
- Cash flow management
- Record keeping (phone log)

Marketing

- Creating signage
- Telecommunications operator collateral (if such a partnership is created)
- Business cards
- Posters
- Word of mouth
- Village Phone market niche
- Radio
- Developing a client base
- Competition

What Happens if.....

- Something happens to the phone or equipment
- The operator sells the business

Operational Tips

- Airtime buffer
- Using the phone
- Passwords
- Timing calls
- Calculating call charges
- Unitization of calls

Step 7: Run a Pilot Program

A pilot program is an excellent way to test assumptions and gauge the potential for success. Results from the pilot can then be measured against the program values as defined by management. The pilot can be used to assess whether your staff can market and manage the product, whether the systems function as planned, and whether there is a demand for Village Phone Direct. Because the results of the pilot program are used to determine if launching Village Phone Direct makes sense for you, it is important to be clear from the beginning about what the scope, the duration, and the goals and criteria for success of the pilot will be.

Introducing Village Phone on a limited scale (10 to 50 Village Phone Operators) will test the market research and allow for refinement of the product. The pilot should run at least three months, to allow for all operational issues to be addressed, and should be considered a learning laboratory where adjustments can be made to the operational or financial model proposed. Poor results do not necessarily mean that the initiative will not work. It may be necessary only to make adjustments or alter assumptions.

The pilot program puts into place all of the pieces that are necessary to operate a Village Phone program on an ongoing basis. It also allows for the collection of “real world” data to validate financial and operational assumptions about the program in order to determine if it should be taken to a larger scale.

Elements of the entire Village Phone product development process, documented in the steps provided in this manual, are tested during the pilot phase. For example, prior to launching the pilot, the following areas need to be addressed:

- Procurement
- Financial model
- Creating tariffs/pricing
- Branding
- Operational logistics
- Internal capacity building and sensitization
- Training Village Phone Operators
- Marketing (at Village Phone Operators level, by Village Phone Operators)

In addition, prior to launching the pilot, careful consideration should be given to:

- Pilot plan modalities
- Budget for pilot
- Roles and responsibilities of people involved
- Resource strategy and assignment of staff
- ‘Realism’ of pilot
- Geographic strategy
- Strategy for targeting and selecting Village Phone Operators for the pilot
- Communications strategy regarding new product offering
- Evaluation metrics and success measurements

In general, the pilot should mirror the operational and environmental parameters expected in a wide-scale launch of the product, which is the only way in which it will be representative and yield meaningful outcomes.

While the pilot is experimental by its very nature and potentially risky for microfinance clients, we do not recommend providing Village Phone Operators with concession loans or handing out equipment to participate in the pilot. Such an intervention would distort pilot outcomes. Risk mitigation could be achieved in some other manner so as not to impact the elements that are under scrutiny. For example, you could set aside funds to repurchase equipment from Village Phone Operators who are not able to maintain a viable business. The Village Phone Operators should probably not be told that such a “safety net” exists, to insure that they are putting the necessary resources or efforts into making their business succeed.

A sample pilot phase plan and agreement template is shown in [Appendix B: Pilot Phase Plan and Agreement](#). There will, of course, be significant customizations to this plan for each unique environment and partnership structure.

If possible, it is advisable to run the pilot at several branches, so that the marginal effects on operations and financial results can be monitored and a more diverse pool of Village Phone Operators studied. Senior staff should visit the pilot branches and the field, so that the intricacy of the business is understood by the organization at all levels and so that corrective action can be taken whenever necessary. This will also allow for first-hand knowledge when it comes to evaluating the results of the pilot.

In Uganda, the field testing was split into two distinct efforts. The first was a “trial phase,” where a very small number of phones (twenty) were deployed. These businesses were used to identify and resolve any issues with the phone equipment and to establish the early operational processes for the program. The second was a “pilot phase,” where the focus was shifted to maximizing Village Phone Operator performance in order to gauge how well the business could perform. It is not necessary to implement a trial phase prior to the pilot phase.

Monitoring phone usage can be done by asking the operator how many villagers are using the phone, by enquiring about remaining airtime, or by asking the Village Phone Operator to record the calls in a log book. This process of logging call details should be a part of Village Phone Operator training, as it helps them to understand their business.

A sample template that can be used by a Village Phone Operator to record calls is located in the Call Log section in [Appendix H: Operating Manual](#).

The potential outcomes of the pilot test phase will trigger one of three decisions:

1. **Go:** The results of the pilot were satisfactory. Management believes that the offering is competitive and Village Phone Operators are able to repay their loans and make a profit out of their businesses. Minimum changes need to be made to the model. The infrastructure is in place to support a large scale outreach, and the organization will proceed to full commercialization and deployment.
2. **Wait:** Results show that the overall concept is feasible, but some key aspects need to be changed. Another pilot (or more) might be necessary once these changes have been made.
3. **No Go:** The results of the pilot are not satisfactory, and a decision is made not to proceed.

Step 8: Market Village Phone

Once the pilot project is deemed successful, the model is fine tuned and a proven and detailed service is available, marketing the Village Phone product is essential to attracting clients who want to be Village Phone Operators. Before starting a marketing campaign, consider your goals, which could include the following:

- To attract new clients to be Village Phone Operators (driving deployments)
- To advertise the benefits of telecommunications and information access in their local community (social outcome)
- To reward and highlight outstanding members and to hold them up as an example to the members
- To drive more community members to use the services offered by Village Phone Operators (addresses sustainability and profitability for Village Phone Operators and drives microfinance institution revenues)
- To highlight the competitive advantage of your institution

Budget, target market, and method for communicating core messages will also be important when defining the marketing strategy.

The promotional campaign requires a different focus for each stage of the Village Phone life cycle. In the early stages, it is important to educate and inform potential clients of the characteristics and benefits to the Village Phone Operator. During the growth stage, the focus is on increasing the number of operators and expanding the program into new areas. If the field is competitive, promotions can create loyalty to your institution.

General marketing around the use of Village Phone has the double advantage of boosting the search for new operators as well as promoting the existing businesses. This marketing should be educational in nature, so that people know what the product is, how they would use it, and what benefits they would gain from using it.

Marketing efforts can be broken into four broad categories, as described in the following paragraphs.

Personal contact

This marketing method entails your loan officers interacting directly with potential Village Phone clients. This is the most effective way to recruit, as a trusting and professional relationship is established. The loan officer has some knowledge of the client and whether they would be suited for a Village Phone business. He/she is able to answer questions about Village Phone, give a demonstration of the product, and elucidate the benefits for Village Phone Operators. Potential clients become much more interested in the product than they would otherwise be, just by seeing a sign. Some examples of personal sales include:

- Training field officers talking about Village Phone to their clients. They could take a phone and a business kit around to their clients to show the advantages of being a Village Phone Operator or provide helpful insight on client needs.
- Staff speaking at religious ceremonies, sporting events, schools, healthcare centers, agricultural cooperatives, army barracks, police stations, markets, public places, etc.

Advertising

This marketing method consists of visual or audio forms of promoting the Village Phone product such as flyers and radio advertisements. This is often the cheapest form of marketing, requiring comparatively little staff time. Advertising goals can range from reaching a broad audience to giving detailed information via brochures. Some examples of advertising include:

- Advertisement on popular radio stations
- Signs or banners in prominent areas, such as on roadways or next to wells
- Flyers at credit windows in the offices of other institutions
- Signs or posters at your existing branch offices, new branches or satellite offices
- Ads in local newspapers
- Loudspeakers from the field officer vehicle
- Business cards
- T-shirts and hats
- Branding or co-branding with your institutions' distributors, suppliers, or telecommunications operators
- Campaign with local Handsest dealer
- Passing out handouts at microfinance institution or group meetings
- Small parades

Special promotions

This marketing method consists of offering short-term incentives that encourage a variety of parties to promote, purchase, or use the Village Phone product. Such incentives include rewards for loan officers that disburse a certain number of Village Phone loans or special prizes for clients who take out a Village Phone loan.

Special promotions are a very effective way to kick-start a Village Phone marketing campaign, reinvigorate a market, or attract new clients to your institution. Some examples of sales promotions include:

- Offer awards for taking out a loan to purchase a Village Phone business kit.
- Offer awards to existing operators who refer a new client to the institution.
- Offer promotional incentives to staff and clients.
- Offer free airtime to Village Phone Operators who sell a certain number of minutes in a day, week, or month.
- Offer goods to loan officers or Village Phone Operators who meet certain goals.

Sponsorships

This marketing method consists of sponsoring popular events or activities in communities that you want to target for Village Phone distribution. These events could include such things as football games or scholarships. While this method could be somewhat expensive and staff-intensive, it has the benefit of possibly endearing a community to your institution and cultivating both name recognition and customer loyalty. Some examples include:

- Sponsoring popular sporting events
- Sponsoring scholarships in local communities, for example, the children of Village Phone Operators who make high enough marks get a certain amount of scholarship money.
- Sponsoring cultural events such as festivals

When marketing the Village Phone product, you should take the following into consideration:

- How many people does the advertising reach in comparison to the cost?
- How literate is the target population?
- Which advertising methods have worked for your institution in the past?
- Which locations have the highest visibility for an advertisement?
- Which culturally relevant factors need to be considered?

Co-branding the Village Phone product with the local handset dealer or telecommunications operator can be a valuable way to tap into the brand recognition of another company in order to benefit from an existing consumer base. In Uganda, we found that co-branding Village Phone with the well-known MTN brand aided substantially in increasing the name recognition of Village Phone.

The marketing of the business at the Village Phone Operator level is detailed in [Marketing collateral \(under Step 4 : Select equipment and define sourcing\)](#)

Step 9: Become an Airtime Distributor (Optional)

Although it is an optional step, becoming an airtime distributor offers many benefits, not only to your institution but to the Village Phone Operator as well. First, it provides another revenue stream for you. Second, it ensures a consistent supply of airtime to Village Phone Operators, which is especially important in remote areas. Third, if you can negotiate a deal with the telecommunications operator, you can give Village Phone Operators access to wholesale tariffs, which provides more affordable airtime to the Village Phone Operator and their community.

A number of factors need to be taken into consideration when you are considering becoming an airtime distributor. These include, but are not limited to the following:

- Will you sell the physical airtime cards? Cards are the same as cash, so having a secure place to hold the cards, as well as a way to transport them should be considered.
- How will the airtime be distributed from the main and branch offices? Some options include:
 - ◊ Through group meetings
 - ◊ Hold the cards at the branch and have the Village Phone Operators call the branch for a recharge. The prepaid card authorization number is sent by the branch (by voice or SMS) to the operator. The cost is debited to the operator's working capital loan account balance. There are two main advantages to this option: the cost of delivering the prepaid card is reduced and the risk in carrying virtual money (the prepaid card) by the loan officer is also lowered.
 - ◊ The loan officer is paid by the client for the card and calls the branch to get the card number. The person at the branch sends the card number by SMS or calls to read the number to the VPO.
- You also need to be aware of the regulatory environment in which you operate. Does selling airtime affect the regulatory or tax status of your institution? The ministry in charge of telecommunications, the telecommunications operator, and other airtime resellers can be contacted for help in finding this information. Your board will most likely have input in this decision as well.

Airtime options

A mobile operator sells airtime in large blocks to distributors, who in turn sell it to sub-distributors, who may target the end-user and may have yet another dealer network 'below' them. There are multiple methods used, from scratch cards and vouchers to virtual top-up programs and electronic vouchers (e-vouchers). Sales commissions can be negotiated with distributors and are generally calculated as a percentage of the face value of the airtime purchase.

Physical airtime vouchers are sold with a face amount already set. The cards are the same as cash but a minimum level of inventory, which needs to be maintained and tracked, is required. There is a risk of fraud or theft. Sometimes a fixed number of cards must be purchased in advance.

Virtual airtime top-up programs are more cost-effective, offering increased flexibility and eliminating the security risks. Overall cost is lowered, as no inventory is needed. You can order additional airtime in any amount and receive it minutes later.

Electronic vouchers are also becoming more common, and might be available in your region. With e-vouchers delivered through Electronic Voucher Distribution (EVD) channels, Village Phone Operators pay for exactly the amount they want, which is then electronically loaded to their account in real time. To reload an account, the dealer (which could be the microfinance institution) browses through the SIM menu, selects the "Recharge" option and

then chooses the amount. Once done, the operator enters her phone number and PIN code. The requested airtime is sent electronically to the customer's number and an SMS is sent to confirm the successful reload and to indicate the new amount of credit.

Distributor or Sub-Distributor

There are at least two possibilities for selling airtime to your Village Phone Operators: as a distributor, contracted directly to the telecommunications operator; and as a sub-distributor, contracted to an existing distributor. Commissions are, of course, higher the closer to the telecommunications operator that you contract, as there are fewer intermediaries to share the commission offered by the telecommunications operator.

You can also sell airtime to the community beyond Village Phone Operators. Telecommunications operators may see this as a major advantage, because developing distribution channels into deep rural areas is often challenging and the partnership with you may be appealing to them. Becoming a distributor may be constrained by existing franchise agreements with current distributors, but these can also be renegotiated to allow you to sell into areas where airtime is difficult to come by.

You could also become an electronic voucher distributor. This could offer significant revenue for your institution, with little overhead. Margins can be significantly higher and operational costs significantly lower.

When negotiating with a telecommunications operator, we recommend asking for 30 day terms, but, in general, cash is the most common form of payment in the distribution channel. Should you be approved to purchase on credit, your billing account will still be charged but the effective date (i.e., collection date) will be set to the number of days negotiated in the future, and you may be charged finance charges unless negotiated otherwise. Sometimes monthly limits are placed on financed airtime sales. The limits and financing options must be arranged in advance with the distributor.

The following are key negotiating points that will encourage better terms of trade in your discussions with telecommunications operators about becoming a top level distributor:

- They are gaining access to a new market, as rural areas are untapped.
- Revenue from Village Phone is a brand new revenue stream and is not cannibalized from other market segments.
- There is little to no impact to other distributors, as competition in the rural market is usually sparse.
- The Average Revenue Per User (ARPU) from Village Phone is usually six times that of a regular subscriber, and wholesale/reseller rates are appropriate. A reseller base of 300 to 400 minutes per month, per Village Phone Operator, is usually appropriate, as the Village Phone Operator on average sells around this threshold.
- Village Phone is building brand awareness in a new market segment. When current users of Village Phone 'graduate' to individual ownership, they are more likely to become subscribers with the telecommunications operator with whom they are familiar through the Village Phone program.
- The telecommunications operator is gaining access to a new channel to market in deeper rural areas for airtime cards or Electronic Voucher Distribution (EVD).

In addition to directly approaching a telecommunications operator, you can approach an existing airtime distributor to become a sub-distributor. This may make the process easier, as the existing distributor has already gone through the negotiation process with the telecommunications operator. However, this route would most likely decrease the amount of revenue that you will generate from selling airtime to their Village Phone Operators (and possibly the broader community).

Village Phone Operators can also become sub-distributors and sell bulk airtime to mobile phone users in their village, thus generating an additional revenue stream for themselves and your institution, if that is where they buy their airtime.

As a distributor or sub-distributor, it is possible to sell airtime not only for its original intention — for calls — but as an alternate form of cash (proxy-currency). The Village Phone Operators and local clients could send loan payments to the branch without having to travel or face the security risk of transporting funds.

Financing the buying of airtime

Airtime sales vouchers can usually be purchased only from the supplier (telecommunications operator or distributor/sub-distributor) on an advanced payment basis or on account. Sometimes the airtime must be purchased in bulk, assuming that you have the capital to purchase these vouchers. It also requires that you handle inventory. Should Electronic Vouchers Distribution (EVD) be available, you can purchase in any increment at any time without any minimum purchase.

Commissions

MFI level (with the telecommunications operator)

When negotiating an airtime deal with the telecommunications operator, you should take into consideration the indicative percentage of revenue that your institution will receive from airtime sales and the terms of trade. See the chart below for possible indicative revenue for your institution.

Typical ranges for airtime commissions for the entire distribution channel are 5-12 percent. The actual commission negotiated depends on where you are in the distribution channel, the method of distribution (prepaid airtime cards, EVD) and the deal you have negotiated with the telecommunications operator.

In negotiating, you should understand the impacts of possible VAT where this is extracted and who pays) and any excise taxes.

Indicative Revenue for MFI (USD)					
Monthly					
Number of minutes per day					
# of phones		10	15	30	50
	50	\$152	\$228	\$456	\$760
	100	\$304	\$456	\$913	\$1,521
	500	\$1,521	\$2,281	\$4,563	\$7,604
Annual					
Number of minutes per day					
# of phones		10	15	30	50
	50	\$1,825	\$2,738	\$6,390	\$10,650
	100	\$3,650	\$5,475	\$10,950	\$18,250
	500	\$18,250	\$27,375	\$54,750	\$91,250
** Note : Airtime income only. Loan income is additional					
** Note : Assuming 5% commission on retail price of of \$0.20/min					

Figure 17: Indicative revenue for MFI

Step 10: Demand Management

In order to guarantee the on-going success of a Village Phone program, it is essential to understand client demand and to establish processes for forecasting the program's rate of expansion, for efficiently processing orders, and for streamlining the delivery of equipment. Some of the questions you should think about ahead of time are:

- How long will the procurement of equipment typically take?
- How much supply do we want to have in stock? (usually, a three-month supply is appropriate, contingent on the procurement cycle time)
- What is the supplier's threshold and would it make sense to order a larger quantity for a smaller price?
- Will cash on hand be available to place the order?

Forecasting

Forecasting involves the process of determining how many business kits are needed, and when and where they need to be delivered. Every organization uses forecasting to help organize and plan its activities. Forecasting plays a key role in operational decisions, market planning, budgeting and financial analysis. For Village Phone specifically, forecasting is necessary to ensure that an inventory of business kits is available when a client takes out a loan.

Accurately forecasting the need for each element of the business kit enables the implementation of a Village Phone business as soon as the operator is ready and reduces unnecessary inventory investment. Ultimately, proper forecasting ensures the most efficient use of capital.

Growth planning is critical for supply side management and procurement, and to ensure a consistent flow of product to the microfinance clients who wish to become Village Phone Operators. An intermittent or unpredictable supply can lead to frustration and the loss of prospective Village Phone Operators. Growth planning results in a clear plan for the number of kits to purchase, at what intervals, and the resulting cash flow requirements.

At the outset, because your institution has no history of selling Village Phone business kits, estimates of the number of kits needed will be a work in progress. The accuracy of your forecasts will improve with time, as demand becomes more predictable. In general, you should keep in mind the potential seasonal and cyclical demand for a kit (for example, few businesses get started during the major holidays, or kit sales may peak after the growing and harvest season, due to greater cash availability in the villages). Also note steady increases or decreases of the client base, and other external forces. Other considerations include the actions or reactions of competing microfinance institutions. Suggestions for forecasting more accurately include relying on past experiences with other loan products within the institution or surveying existing clients to understand their interest in Village Phone, which may not be reliable if the clients do not understand all of the information. The methodology can be improved over time by monitoring and comparing the forecast with the actual demand.

A stock forecasting template is included in [Appendix C: Stock Forecasting](#)

A geographical forecasting template is included in [Appendix D: Geographical Forecasting](#)

Importance of cash flow

Inventory management must be forward looking, as it plays a role in the liquidity position. Projecting the need for cash reduces idle funds or cash shortages. If there is too little cash on hand, Village Phone clients' loans, as well as the ordering and delivery of the business kits, will be delayed.

Bottlenecks/constraints

It is important for you to understand all the events that must happen before the deployment of the Village Phone business kits and to understand the dependency of some events on others. For example, you need to order the antennas, cables, and couplers. The shipment of these items takes time, and the Village Phone Operator will not be able to start their business until they have the full kit, including these accessories. Laying out a detailed project plan with all dependencies might be very useful in understanding the distribution logistics details and to avoid delaying the project. Common bottlenecks and delays are caused by not allocating enough time for shipment of the equipment or by an inability to order equipment because of cash flow issues. Other events, like manufacturing delay or hold-ups in customs, are outside of the institution's control. Creating a buffer in the schedule associated with risks that are beyond the institution's control is a good way to have some control over the unpredictable.

Sample flowcharts are presented in [Appendix K: How to Procure Kits Elements](#)

Equipment order and acquisition process for microfinance institutions

Once a new Village Phone Operator business has been proposed and the process for the establishment of that micro enterprise has been initiated, you must order the equipment.

You need to decide whether you will store Village Phone kits, and, if so, where they will be stored, and how the kits will get to the Village Phone Operator:

- Will the kits be stored at the main office and dispatched at the branches as needed?
- Will each branch have a stock of kits?
- Will the kits only be stored at a partner distributor?
- How accessible and secure are the storage areas?
- Will the field office bring the kit to the client?
- Will the Village Phone Operator fetch the kit at a set location?

Creating a flowchart showing how the different components of the project will fit together will help you in thinking about all the details that are required for a robust business plan and project. See [Appendix K: How to Procure Kits Elements](#) for a sample flowchart.

You might want to create an inventory tracking system, to understand when and where more kits will be needed. It would also help for issues such as lost orders, backorders and other challenges.

See [Appendix C: Stock Forecasting](#) for a sample order tracking sheet.

Demand management for Village Phone Operators

Because the Village Phone Operator uses prepaid airtime, operators must be trained to manage their cash flow so that they have enough funds on hand to purchase subsequent airtime before exhausting their current supply. This can be emphasized during the training process because without airtime, the operator's business cannot function.

Alternatively, you can provide working capital loans to the Village Phone Operator, to provide the cash the business needs in order to buy sufficient airtime and keep growing the business. If your institution is a distributor of airtime, that sale can be built into a loan. You can also decide to proactively contact operators at risk to verify airtime balances.

Step 11: Deployment

Once you have researched the potential of a Village Phone initiative and conducted a pilot successfully, it is time to operationalize and deploy Village Phone. This is the “go out there and make it happen” stage in which you present this new opportunity to a wider audience, increasing the rate of Village Phone adoption. More staff may need to be hired and trained. Processes are followed and improved; forecasts are compared to what is happening in the field and updated.

Staffing

For the first two to three steps of the process (including getting institutional commitment, assessing demand, and the initial stage of creating a business and financial model), the existing management team, with the support of the existing field officers, could handle the work.

As your institution gears up towards a pilot project, we would suggest appointing a village phone coordinator/manager who handles procurement and works directly with the existing field officers.

Once the business plan is reviewed and village phones are deployed on a larger scale, additional staff (field officers, and possibly support for the Village Phone manager) should be hired. The business plan dictates when these additional hires are needed.

Growth planning

A process for planning for the growth of the network of Village Phone Operators should be devised. Signal coverage maps from the telecommunications operator can be very helpful in developing deployment strategies.

Operationalizing Village Phone is an iterative process. As with any product, continual refinement is required as you respond to the various factors affecting the business, such as consumer demand, supply-chain management, and equipment and staffing requirements. After the initial stage of deployment of Village Phone, the project moves into the “ongoing operations” phase. You can also provide your clients with further training in product diversification and entrepreneurial techniques, so that they can think ahead in terms of new applications or uses for the current product.

Step 12: Ongoing Operations

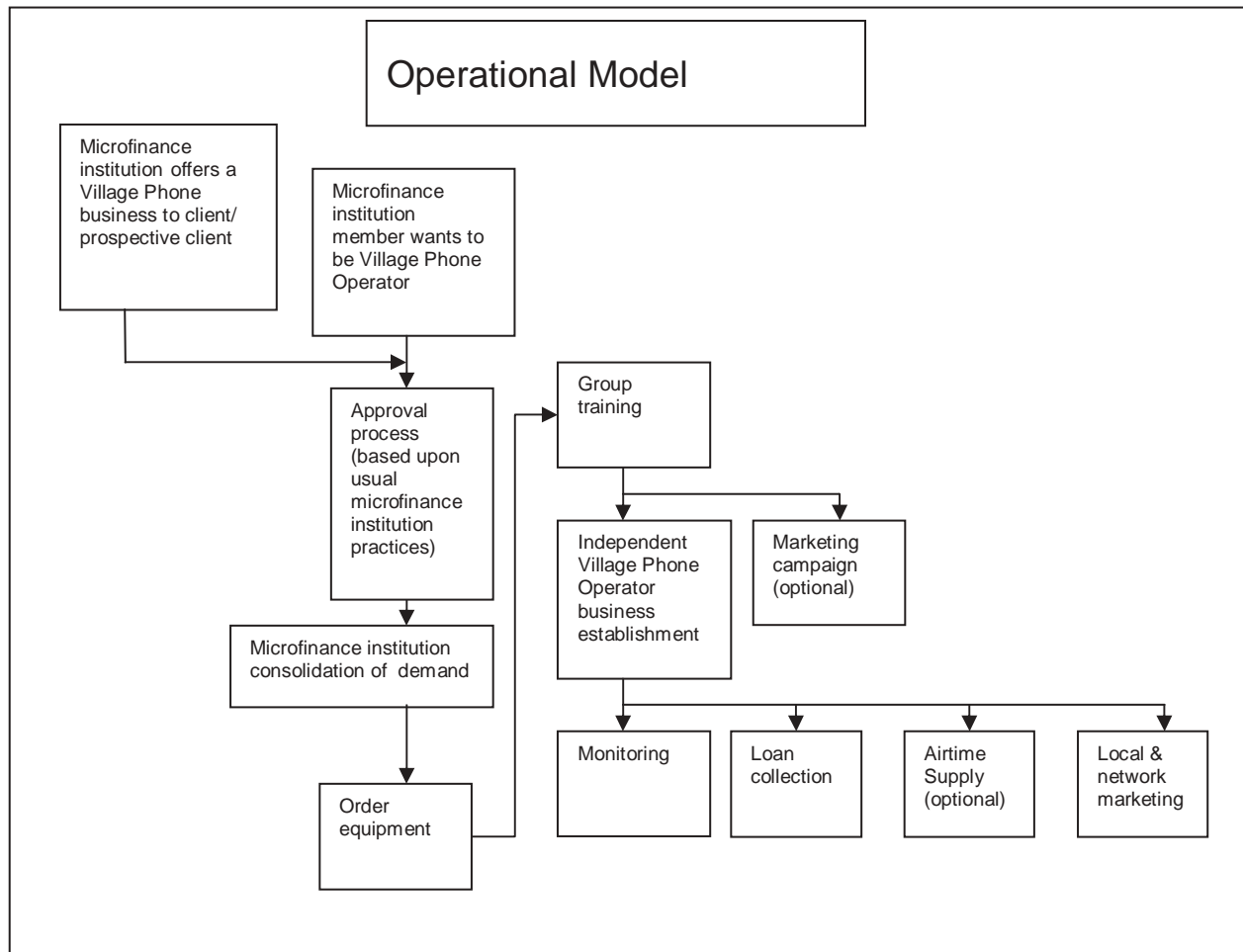


Figure 18: Operational model

Every effort should be made to regularly improve the operational efficiency of the Village Phone Direct program. Improvements can be made in a wide range of processes, from procurement of the business kits to distribution of phones to loan product design to lending methodology.

Identify and resolve problems

An ongoing effort should be made to identify and resolve any problems that the Village Phone Operators are regularly encountering. The loan officers who will have the most knowledge about these challenges should compare problems and solutions, incorporating them into the operations manual and the training program. Competitors will enter the market and improve on the current practices, so it is essential to continually improve the product and the process.

Ongoing strategic planning process

The initial business planning is probably the most comprehensive strategic planning process that your organization will ever do for their Village Phone product. However, ongoing strategic planning is important for the business as it strives to remain relevant and profitable over time in an environment that is ever changing in regard to competi-

tion, regulations, maturity, infrastructure updates, changes in technology and so many other elements. Periodic evaluations and forward planning are necessary. Such activity should be planned for and proactive reflective assessment and correction should be a part of the culture of the organization.

Document business processes

As the Village Phone Direct program continues and business practices evolve, the operations manual you created during the pilot phase should be regularly updated to reflect new and modified business practices. At some point, there will be staff turnover, and current documentation is an essential tool for training new employees.

[Appendix H: Operating Manual](#) shows a template for an operations manual, that you can modify to address specifically your market.

Product evaluation may be a part of the process involved in determining ongoing support for the original goals established for this product. Evaluation may include a social impact assessment at the Village Phone Operator level and possibly community levels, or it may simply be a financial analysis of the performance of the product.

As the program matures and a body of knowledge is developed about ‘best practices’ for Village Phone Operators, you should convene a series of workshops. These should be ongoing forums for continual learning in a changing environment. Such a forum brings together as many Village Phone Operators as can be convened in one place. Preparation consists of gathering usage data from the Village Phone Operators who will be in attendance, and asking Village Phone Operators themselves to share this data with the forum and describe their business – how it works, who comes, what marketing they do – and any number of subjects about their Village Phone business. Such sharing allows other Village Phone Operators to learn about what works and what does not from other operators. Microfinance institution staff and loan officers learn alongside Village Phone Operators and the dissemination of best practices becomes propagated actively through future new Village Phone Operator trainings and through meetings with other Village Phone Operators. Such workshop forums have proven extremely valuable in Uganda. Funding such forums is a challenge and should be budgeted as an operational expense for your institution.

Conclusion

Our intent with this manual is to share information and propose models for implementing Village Phone Direct based on our experience at Grameen Foundation. We hope this document provides you, as microfinance institutions, with the information and tools necessary to initiate a Village Phone program in a form that is appropriate for you and your clients.

This manual essentially provides you with a “how-to” for developing and launching a microfranchise product. Although we have described the steps necessary to start a Village Phone Direct program, this framework could be applied to many microfranchise products, and is not applicable only to Village Phone or Village Phone Direct.

As we continue to learn and discover in the field, Grameen Foundation is excited about sharing knowledge with the community. We encourage organizations and individuals involved in such initiatives to join in this information sharing. Tell us about issues that you have faced, and the solutions that you have applied. Please visit www.villagephonedirect.org and write to us at vpd@gfusa.org

We wish you all the best in launching a Village Phone Direct initiative. Dr Mohammad Yunus challenges us all to reduce the level of poverty by half, by 2015. Let’s do our part with Village Phone Direct!

Appendixes

The following sections provide hand-on material that you might find useful as you implement Village Phone.

These sections are available in editable format on our website at www.villagephonedirect.org.

Appendix A: Sample Surveys

Appendix B: Pilot Phase Plan and Agreement

Appendix C: Stock Forecasting

Appendix D: Geographical Forecasting

Appendix E: Skymasts Antenna Specification

Appendix F: Airtime Access

Appendix G: Signage Solutions

Appendix H: Operating Manual for Village Phone Operators

Appendix I: Phone Reference Guide

Appendix J: Reference Manual Template addressed to Microfinance Field Officers

Appendix K: How to Procure Kits Elements

Appendix A: Sample Surveys

Sample survey¹³

Survey respondent's name: _____
 Survey administrator: _____
 Location: _____

Survey respondent's general information: _____

Are you married?	YES / NO
How many children do you have?	_____
Do you earn less than \$2/day?	YES / NO
Are you literate?	YES / NO
Do you own and operate your own business?	YES / NO
If so, what type of business is it?	_____
Do you have any family working abroad?	YES / NO
Do you receive money from family working in the city or abroad?	YES / NO
Does your household own a radio?	YES / NO
Does your household own a television?	YES / NO

Microfinance information: _____

¹³Adapted from <http://www.telecommons.com/>

Are you a member of a microfinance institution?	YES / NO
Which microfinance institution?	_____
How many loans have you taken out in the last 12 months?	_____
How much is the largest loan you have taken out in last 12 months?	_____
On average, how long does it take you to repay a loan?	_____

Telecommunications information: _____

Have you ever used a telephone? (if no, go to next section)	YES / NO
Do you have access to a phone?	YES / NO
How much does it cost you to make a phone call?	_____
How far do you have to travel to make a phone call?	_____
Is there a phone closer than the one you normally travel to? If yes, why?	_____
Who uses the telephone the most in your household?	_____
What is the average length of each telephone call that you make that you pay for?	_____
Who do you call? (Circle all that apply)	
	Friends Family Business Contacts Emergency Services Other: _____
On average, how much do you spend on telephone calls each month?	_____
What improvements would you like to see with the telephones that you use now?	_____
Why do you not use a telephone? (Circle all that apply)	
	No telephones available
	Telephone too far
	Telephone too expensive
	Nobody to call
	Don't know how to use
Does anyone else in your household use a telephone?	YES / NO
If you needed money from a relative living outside of the village, how far would you be willing to travel to make a telephone call?	_____ KM
If you did use a telephone, what would be your main purpose for using it?	_____
Do you prefer to use a phone business operated by a man or a woman?	_____

Would you be interested in owning a mobile phone business?	YES / NO
--	----------

Appendix B: Pilot Phase Plan and Agreement Template

PILOT PHASE PLAN¹⁴

SETUP

- Select size, location, and target sample
- Establish benchmarks for analysis and refinement
- Determine the optimal duration
- Evaluate the results

The key steps for setting up the test are as follows:

- Choose 1-2 test sites from a subset of the target market
- Determine sample size by weighing the benefits of accuracy against cost
- Establish a location, selecting a site that allows the institution's staff easy access to monitor, correct the problems and refine the product

INTERVENTION

The purpose of the pilot test is to gather information to determine the commercial viability of Village Phone Direct in your target market. Goals and objectives must be established for the pilot.

Suggested areas to monitor are as follows:

- Gather and assess information to refine the product
- Expand to a few additional areas
- Gather information for analysis

TEST DURATION

The length will vary dependent on the cost and the reliability of the test results. Fundamentally, the duration of the pilot test will be based on the terms and repayment structure of the loan. Although longer pilot tests establish a higher comfort level that the product will be commercially viable, they can impose financial and competitive costs.

EVALUATION

Once the information from the pilot test has been gathered, a determination must be made on whether commercializing Village Phone Direct is worth the investment. Key elements to consider:

- Financial viability, such as return on investment or loan volume
- Competitive considerations, such as market share or product mix
- Institutional factors, such as infrastructure, management, information systems, and human resources

To ensure that it has adequate capacity to undertake new product development, the microfinance institution must have a number of systems in place:

- Delivery Channels—physical infrastructure (such as branch offices) and channels of communication to market the product to the target customer groups
- MIS—accounting, loan monitoring, and other back office systems to track the disbursements and collections, as well as to monitor portfolio performance
- Human Resources—training facilities and incentive systems to implement new products

¹⁴adapted from New Product Development for Microfinance: Design, Testing, and Launch Technical Note Number 2 from DAI

VILLAGE PHONE OPERATOR AGREEMENT

NOTE TO MICROFINANCE INSTITUTION FIELD STAFF

THIS UNDERTAKING MUST BE COMPLETED AND SIGNED BY THE VPO AND ACCEPTED AND SIGNED BY AN AUTHORISED REPRESENTATIVE OF THE MICROFINANCE INSTITUTION PRIOR TO THE ISSUE OF EQUIPMENT AND A VILLAGE PHONE KIT TO THE VPO.

THE MICROFINANCE INSTITUTION FIELD OFFICER MUST: -

- 1) EXPLAIN ITS CONTENTS TO THE PROSPECTIVE VPO*
- 2) ENSURE THAT ALL FIELDS ARE ACCURATELY COMPLETED. ANY INCOMPLETE FIELDS WILL RESULT IN THE APPLICATION BEING REJECTED*
- 3) SEND A COPY OF THIS COMPLETED FORM TO < MICROFINANCE INSTITUTION >*

entered into between

("the Microfinance Institution")

of

(insert address)

and

FULL NAME ("the VPO")	
IDENTITY NUMBER	
PHYSICAL ADDRESS	
POSTAL ADDRESS	
PROPOSED BUSINESS LOCATION	
NEAREST TOWN	

INTRODUCTION

The Village Phone Operator's participation in this project is conditional upon its compliance with the conditions detailed herein. The Village Phone Operator gives the microfinance institution the undertakings set out below and agrees to the terms set out below.

DEFINITIONS

- 2.1 “**The business**” means the business of operating a phone as contemplated in the Village Phone Operator manual.
- 2.2 “**The loan agreement**” means the loan agreement concluded between the Village Phone Operator and the microfinance institution to record the terms of the loan extended to the Village Phone Operator by the microfinance institution to finance the purchase of the phone.
- 2.3 “**Telecommunications Operator**” means the telecommunications entity providing the airtime.
- 2.4 “**The telecommunications operator network**” means the telephony network operated under licence by the telecommunications operator in the region.
- 2.5 “**Airtime Distributor**” means the telecommunications operator organization providing the Airtime product.
- 2.6 “**Phone**” and “**Equipment**” means a GSM handset and related accessories, which may include a 12 volt charger and an external antenna as well as related cabling and connections.
- 2.7 “**SIM**” means a Subscriber Identity Module included in the Village Phone kit through which a connection is provided to the telecommunications operator network.
- 2.8 “**Village Phone kit**” means the equipment necessary for the Village Phone Operator to start her Village Phone Business.
- 2.9 “**The Village Phone Operator Manual**” means the manual published by Airtime Distributor from time to time, in its sole discretion, and disseminated to the VPO by the microfinance institution from time to time, which records methods of operation, procedures, contractual terms and other matters relevant to the business.

AGREEMENT

- 3.1 The Village Phone Operator's entitlement to remain connected to the telecommunications operator network through the SIM is subject to the VPO complying in all respects, and at all times, with the provisions of the Village Phone Operator Manual and this Agreement.
- 3.2 The microfinance institution retains the right to temporarily or permanently disconnect the SIM from the telecommunications operator network at any time if it determines, in its sole discretion, that the connection may be being used for purposes other than the operator's Airtime business, or that the Village Phone Operator is not complying with the terms of this Agreement, the terms of the Village Phone Operator Manual or the terms of the loan agreement.
- 3.3 In the event that the Village Phone Operator fails to comply with the terms of this Agreement and the Village Phone Operator Manual, the microfinance institution shall be entitled to immediately, without notice, terminate this Agreement.

- 3.4 This Agreement will, unless terminated in terms of clause 3.3, endure indefinitely until terminated by either party on no less than thirty (30) days written notice to the other party.
- 3.5 If this Agreement terminates, the microfinance institution shall be entitled to disconnect the SIM from the telecommunications operator network. The VPO shall also return any signs or marketing collateral containing a telecommunications operator or Airtime Distributor trademark to the microfinance institution. This obligation shall survive termination of this Agreement.
- 3.6 The Village Phone Operator shall not be entitled to cede or assign the right to use the SIM or carry on the business or any other rights recorded in this Agreement to any other person.
- 3.7 The Village Phone Operator acknowledges that all risk of loss, damage, wear and tear or destruction of the Village Phone business kit shall be born by the Village Phone Operator save to the extent that it is able to claim under a warranty provided by the manufacturer. Should any of the above events occur, it shall be the responsibility of the Village Phone Operator claim directly from the manufacturer under the warranty or replace the damaged, destroyed or worn out equipment at the Village Phone Operator's own cost and it shall be in the discretion of the microfinance institution as to whether it will be prepared to advance further loans to the Village Phone Operator for this purpose. The Village Phone Operator is responsible for proper care, maintenance and repair of the phone and the SIM at all times.
- 3.8 The Village Phone Operator undertakes to comply in all respects with the microfinance institution's directions, concerning the operation of the business and the use of the SIM.
- 3.9 The Village Phone Operator acknowledges that it is subject to the standard conditions of service of Airtime Distributor contained in the Village Phone kit. Airtime Distributor has instructed the microfinance institution to advise the Village Phone Operator, as it hereby does, that the special tariffs afforded to the Village Phone Operator pursuant to this Agreement will be published to the Village Phone Operator by Airtime Distributor from time to time by publication to the microfinance institution and that they shall be subject to variation from time to time by Airtime Distributor as set out in the standard conditions of service.
- 3.10 All notices in connection with this Agreement shall be sent to the respective addresses of the parties referred to above.

SIGNED AT _____ ON _____ 20_____

THE Village Phone Operator

SIGNED AT _____ ON _____ 20_____

Appendix C: Stock Forecasting

This is a simple sheet enabling the keeping track of inventory, forecasting and facilitating the ordering of new equipment.

Stock Forecasting							
ITEMS	Stock		Total	Average sales per month	Nb of months	Restocking level	Next order
	On hand	On order	Quantity ("Stock On hand" + "Stock On Order")	Quantity	Quantity ("Total"/"Average sales per month")	Quantity	Time
Double Sided Tariff Boards							
Stands for Tariff boards							
Car chargers							
Ear pieces							
Cables							
Batteries							
Antennas							
Handsets							
Caps							
Tshirts							

Appendix D: Geographical Forecasting

This sheet can help in the forecasting of the deployment of new village phone operators

TEL'IMBERE DEPLOYMENT PLAN														
MFI _____														
Authorized Officer: _____														
Plan Date (month zero): _____														
PROVINCE														
MONTH	Butare	Byumba	Cyangugu	Gisenyi	Gitarama	Kibungo	Kigali-Rural	Mutara	Ruhengeri	Kibuye	Gikongoro	Kigali	Other - please specify	TOTAL
Oct														
Nov														
Dec														
Jan														
Feb														
Mar														
Apr														
May														
Jun														
Jul														
Aug														
Sep														
GRAND TOTAL:														

Appendix E: Skymasts Antenna Specification



Village Phone Antenna Kit Guide

Skymasts Type 1 Kit Medium Gain 10dBd Antenna + 10m cable GSM900



Skymasts 7161.3 Medium Gain Antenna for GSM900

Gain 10dBd
Frequency 870-960MHz

- Factory terminated 10m Cable (RG58)
- Brackets Included

Size 675 x 160 x 30mm
Weight 0.9kg (including cable)

Skymasts Type 2 Kit Medium Gain 10dBd Antenna + 10m cable GSM1800



Skymasts 7161.4 Medium Gain Antenna for GSM1800

Gain 10dBd
Frequency 1710-1880MHz

- Factory terminated 10m Cable (RG58)
- Brackets Included

Size 390 x 80 x 30mm
Weight 0.7kg (including cable)

Skymasts Type 3 Kit High Gain 13dBd Antenna + 10m cable GSM900



Skymasts 7161.31 High Gain Antenna for GSM900

Gain 13dBd
Frequency 870-960MHz

- Factory terminated 10m Cable (RG58)
- Brackets Included

Size 1085 x 160 x 30mm
Weight 1.0kg (including cable)

Skymasts Type 4 Kit High Gain 13dBd Antenna + 10m cable GSM1800



Skymasts 7161.41 High Gain Antenna for GSM1800

Gain 13dBd
Frequency 1710-1880MHz

- Factory terminated 10m Cable (RG58)
- Brackets Included

Size 616 x 85 x 30mm
Weight 0.8kg (including cable)

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Village Phone Antenna Kit Guide

Skymasts Antenna Adaptor GSM900



Skymasts NOK/110ADP/900
Nokia 1110 Antenna Adaptor

Coupling Loss <5dB
Frequency 870-960MHz

- Factory terminated 150mm cable

Skymasts Antenna Adaptor GSM1800



Skymasts NOK/110ADP/1800
Nokia 1110 Antenna Adaptor

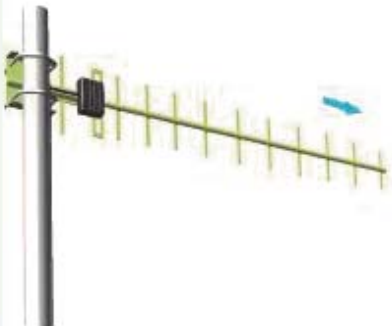
Coupling Loss <5dB
Frequency 1710-1880MHz

- Factory terminated 150mm cable

Installation Guidelines

1

Install the antenna on a vertical pole, ensuring the antenna elements are vertical as shown below. Point the antenna towards the nearest cellular base mast. Make sure that when the antenna is fitted, the cable supplied can reach the location of the phone.



3

Slide the adaptor over the back of the phone. Make sure the adaptor is pushed firmly home.



2

Route the antenna cable to the location of the phone. Connect the antenna cable to the adaptor cable as shown, ensuring the connectors are tightened well.



4

Slowly rotate the antenna while another person checks the signal strength to get best performance.

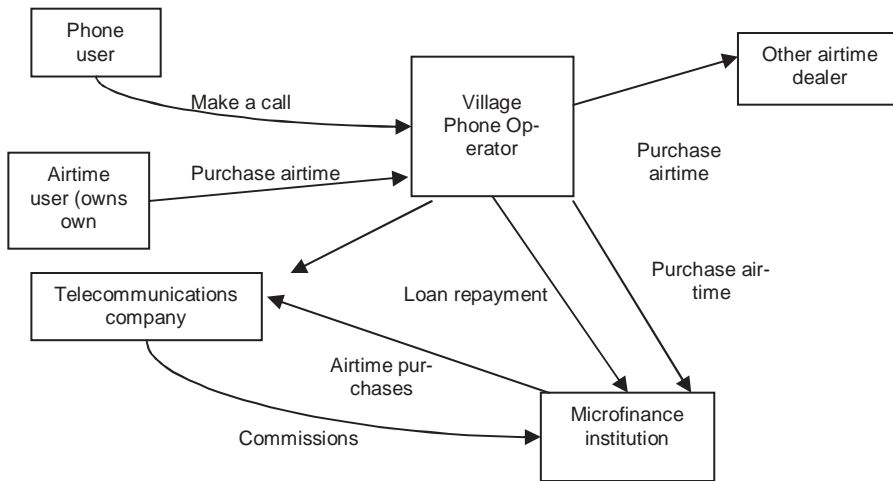


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Appendix F: Airtime Access

Airtime Options



The value of a Village Phone business could be construed to be in the equipment that is a part of the package. However, this is only part of the case. The piece that makes this business viable for the Village Phone Operator is the network connection and power solution, and optionally their ability to access wholesale airtime rates, which in turn enables them to resell airtime to their community at competitive rates. Without this value, the Village Phone Operator could just buy retail airtime and would then have to mark up the airtime, without the competitive edge over other entrepreneurs working independently outside the Village Phone framework.

Airtime is not specifically created for Village Phone Operators – this is a generic commodity. The benefit for the Village Phone Operator is in the SIM card which allows for a different rate to be applied per unit (minute) in the back-office prepaid billing platform. The prepaid account for a Village Phone Operator is debited for a wholesale rate per unit rather than a retail amount. The Village Phone Operator margin is the difference between these two.

Appendix G: Signage Solutions

Signage should be suitable for the environment: A simple specification for the roadside sign is shown by way of example. This does not include the mount for the sign and this is an additional consideration. Signs are usually moveable and are brought inside during the night to avoid theft. The mount shown above provides stability in high wind. It can also be moved around for security or visibility. In Uganda, the cost to the Village Phone Operator for this collateral, including the frame, was initially around US\$40. An alternate sourcing solution for the roadside sign was found and now costs around US\$20.

Roadside Sign Considerations (Excluding Mount)

Color	How many colors are required? The more colors, the more expensive the sign. <i>Note: Branding often requires strict adherence to company colors. A sample should be made and approved by the branding company.</i>
Sign Size	Should be large enough to be easily read from away. Dimensions could be 18" x 24".
Mounting Method	-How will the sign be mounted? On a frame? On spikes in the ground? Nailed to a wall? -Mounting holes in the sign board: For the design shown above, the following was specified: 13 7/8" between the holes (OD to OD); holes 3/8" down from top of sign to top of hole; left hole 1 13/16" from the left edge; also 1 13/16" for the hole on the right. Hole size is 1/4" (Holes are to be Top and Bottom) - Holes should be resistant to tearing and should have metal, rust proof grommets
Material requirements	UV resistant (Base material as well as printed artwork) Fade proof Water-proof Possibly corrugated plastic Mold-proof Lifetime expectation (outdoor, tropical locale) - 5 Years
Delivery and Shipping	The materials may or may not be produced locally. For Uganda, it proved cheaper to print the roadside sign in Iowa and ship it to Uganda. Delivery Date Quotation should include shipping
Artwork	Who will provide electronic images (creation of original artwork will cost extra)? Proof and Approval Process: specify if you would like to proof and approve the final artwork prior to printing. It is recommended that you see a proof, which should be free.
Quality Control	What is the minimum space permitted for color alignment? This is necessary to make sure multi-color signs have all components printed where they are supposed to be.



Appendix H: Operating Manual for Village Phone Operators

PROGRAM MANUAL FOR VILLAGE PHONE OPERATORS (Village Phone Direct)

[The Microfinance Institution should adapt this manual for its own environment and Village Phone Program. This manual is in addition to the standard loan agreement the microfinance institution will sign with the Village Phone Operator]

1.0 WELCOME

Congratulations on becoming a Village Phone Operator! This is a fantastic opportunity for you and your community.

You have been selected as a Village Phone Operator because your microfinance organization has recommended you based upon your relationship and history with them.

This document will help you understand how to operate your phone business and some of the most important requirements and responsibilities.

2.0 OBLIGATIONS OF A VILLAGE PHONE OPERATOR

2.1 Business Obligations

As a Village Phone Operator, you are a vital resource for your community, providing a service for everyone. Owning this business comes with certain responsibilities and obligations:

- 1) Your phone business must operate so that the members of your community always have access to the phone service. Although you may locate the phone business where you see the best business opportunity, this should be predictable and people should be able to rely upon your service.
- 2) The phone must be **available for use 24 hours per day, 7 days per week**. People will grow dependent on your services to access information and communicate with other people. If there is an emergency, someone should be able to use the phone no matter what time of day or night.
- 3) In your community, **everyone must have access** to the phone. You cannot deny use of the phone unless a person does not want to pay for the services.
- 4) A **sign must be posted** advertising the availability of the Village Phone. A sign is included as part of the business kit. You should never pay taxes on your signpost. Please contact your microfinance institution if you are asked to pay taxes by local authorities. *[This is obviously relevant when the microfinance institution has opted to making a marketing sign available as part of the kit.]*
- 5) You **cannot move the phone outside of your village for personal use**. If you travel for personal business, you cannot take the phone with you; if you travel to another new village, you must leave the phone behind.

- 6) The **business and phone are not transferable**. If you no longer wish to operate a Village Phone business, you must return the phone, marketing materials (e.g. sign post and marketing cards) and/or SIM card to your microfinance institution.
- 7) The phone will be **operated only by you, as the Village Phone Operator, or by a family member**. The microfinance field officer should be given the names of the family members who will be assisting in running the business. *[Village Phone Operator businesses are often operated by an employee of the owner – Microfinance Institutions should determine their own policy on this]*
- 8) You **must charge the tariffs listed** on the tariff sheet for use of the phone. Additional services can be created and billed at your discretion.
- 9) You must maintain a **call log**, which must be made available to your microfinance institution liaison. A call log template can be found later in this program manual.
- 10) Until completion of the loan agreement, the **microfinance institution will retain ownership** of all equipment supplied under this agreement.
- 11) The **SIM card connection always remains the property of the microfinance institution** and can be disconnected by the telecommunications operator upon request from the microfinance institution. *[The microfinance institution needs to have a special agreement with the telecommunications operator to be able to enforce this point]*
- 12) You, as the **Village Phone Operator, are responsible for proper care**, maintenance and repair of the equipment at all times.
- 13) You, as the **Village Phone Operator, are responsible for any lost or stolen equipment**. All financial obligations will continue in such a situation.
- 14) If the equipment is stolen, you, as the Village Phone Operator, will be required to make a **report to the police** station and get the appropriate report from the police so that the necessary actions can be made by the telecommunications operator to block the phone.
- 15) In the event of your **death**, a family member has the option to join the microfinance institution and continue the business in your place. If this option is not exercised, the SIM and equipment must be returned to the microfinance institution. If ownership of the equipment has been transferred you, by virtue of completion of the financial obligation, then this is retained by the family (except the SIM card connection).
- 16) Throughout the course of business operation, you, as the **Village Phone Operator must remain a member of the microfinance institution** (maintain a loan or savings) and attend regular meetings. If this membership lapses, you forfeit the right to operate a Village Phone business and the SIM card shall be deactivated.
- 17) It is only possible for a Village Phone Operator to own one Village Phone. *[This policy may change – this will go back to the balance in the microfinance institution’s mission as to two complementary goals: 1. The creation of entrepreneur owned and operated Village Phone Operator businesses, and 2. Serving as many people as possible.]*
- 18) Airtime shall be **purchased only from the microfinance institution**. *[Microfinance Institutions should determine their own policy on this]*

2.2 Understanding the Loan

Your microfinance field officer will explain the details of your loan to you when you sign your loan agreement. In particular, you should be sure that you understand the following elements:

- Grace period for the loan (if any)
- Total loan amount and cost for all the equipment in the Village Phone business kit
- Loan duration
- Amount for each loan payment
- Loan period
- Frequency of repayments

There will be a summary of this information on the Village Phone Deployment Record document you sign when you receive your business kit.

The collateral for your loan is the phone and other equipment. If the phone is lost or stolen, you are responsible for replacing it. All non-warranty repair expenses are the responsibility of the Village Phone Operator.

The loan is for the equipment only, not the SIM card connection in the phone. The SIM card connection remains the property of the telecommunications operator.

If you have any questions or do not understand any of these items, be sure to talk to your microfinance field officer.

3.0 EQUIPMENT

3.1 Contents of the Village Phone Starter Kit

The Village Phone Starter Kit contains everything necessary to begin operating a Village Phone business. The kit contains:

- A Nokia mobile phone with battery.
- Owner's Manual for the phone. The manual gives detailed instructions about the use of the mobile phone.
- SIM card and airtime voucher (or pre-loaded airtime). The SIM card should already have been installed (it goes inside the phone and makes it operate). The airtime vouchers are like money. When you enter their numbers into the mobile phone, you increase the balance of the account on your phone. As long as you have a positive balance in the account on your phone, you can make and receive calls.
- Village Phone sign. You can put this sign up to show everybody that you have a mobile phone they can use to make phone calls. *[This is an option and may be left to the operator. However, it is in the microfinance institutions' best interests to be involved].*
- Marketing cards. These cards should include your name, location and phone number and should be distributed to friends and family so they can call you and share them with others to further distribute your phone number. *[This is an option and may be left to the operator. However it is in the microfinance institutions' best interests to be involved].*
- Optionally, an antenna with cable and coupler to connect it to the phone. The antenna improves the quality of the phone call and will let you hear other people's voices better.
- Optionally, there may also be equipment to recharge the battery in the phone.
- Village Phone Operator Manual (this document).

If any of the items are missing or broken, please contact your microfinance field officer.

3.2 Connecting the Equipment

Connecting the Antenna

The first thing you need to do is to connect the antenna to the mobile phone so that you can make the best quality phone calls. The steps to take are:

- 1) Connect the long, heavy cable to the antenna (if not already connected).
- 2) Connect the small coupler cable to the heavy cable.
- 3) On the back of the mobile phone, place the coupler. *Important: If you need to disconnect the phone, remove the coupler from the handset, leaving the adapter cable connected to the coupler.*

Aiming and Mounting the Antenna

It is important the antenna is pointed in the best direction to get the highest possible signal. To do this:

- 1) Turn on the phone by pressing the red power button.
- 2) Look at the signal strength indicator in the upper-left corner of the display. There can be up to six bars displayed.

- 3) Have someone hold the antenna vertically (with the short ends pointing towards the ground).
- 4) Aim the antenna in the direction of the nearest telecommunications operator base station or repeater. These are usually located in towns or trading centers.
- 5) Watch the signal strength indicator and determine which direction has the strongest signal (the most bars).
- 6) Attach the antenna on top of a tall object such as a pole. You want the antenna to be as high as possible, at least 10m from the ground, and not blocking the “line of sight” to the nearest base station.
- 7) Point the antenna in the direction that gives the best signal strength.
- 8) Secure antenna several places (e.g. in the ground, and in the middle to a building, or supporting post).

Specific instructions on connecting the Skymasts antenna/cable/coupler and Nokia phone can be found in [Appendix E: Skymasts Antenna specification](#)

3.3 Charging the Batteries

Reliable Power Source

The Nokia phone comes with a BL-5C Li-ion battery. A fully charged battery will allow between 3 hours 10 minutes and 5 hours 20 minutes of talk time, and between 245 hours and 310 hours of standby time.

When you open your starter kit, you should immediately start charging the phone. You can see how much energy is in the battery by looking at the battery meter on the right side of the display on the phone.

It is important to only charge your phone from a reliable power source. Gasoline powered generators are an inconsistent source of power and can destroy the battery or the phone. Some villages have consistent power fluctuations that can damage electrical appliances. If you know that your village has this problem, then you must always charge your phone from a power source supplied with your Village Phone business kit. If you fail to observe these guidelines you may risk destroying your phone or battery and will have to purchase a new one at your own expense.

Using an automobile battery

It is also possible to recharge the mobile phone by connecting it to a car battery. Connect the clamps of the adapter cable to the battery and plug in the car charger to the adapter. You will observe that the red light on the adapter cable is on when the cables are connected properly (“+” to red, “-” to black). You can then connect the car charger to your phone. You will observe that the phone is charging when the small battery in the upper right corner of the phone screen is moving. When this indicator stops moving your phone is fully charged and you should disconnect it from the battery. Your car battery needs to be recharged every two months to prevent it from becoming defective.

IMPORTANT: Be sure to match the symbols on the clips to the symbols on the battery. The “+” clip (RED) must connect to the “+” terminal and the “-” clip (BLACK) must connect to the “-” terminal.

A battery charging log is included at the end of this operating manual. It is a good idea to record the date you charge your car battery to ensure that you charge it before it is completely discharged.

3.4 Warranty Information

Nokia phone and battery

Your Nokia phone comes with *[To be determined with Nokia Distributor – the duration of the warranty might be negotiable and if you are purchasing in quantity, you may be able to get an extended warranty at no additional cost]* warranty. Details for this warranty can be found in the Nokia documentation in the starter kit and should be read carefully by the Village Phone Operator. In general the warranty will cover manufacturing problems with the phone, but it will *not* cover damage to the phone. For example, if you drop the phone and it breaks, repair would not be covered under the warranty. The battery is *not* covered by a warranty.

If you believe there to be a manufacturing defect, in order to return the phone and take advantage of the warranty you must have the box and all the original parts that came with the phone. Please take care to save the box in case you need to return the phone during the warranty period.

Any warranty repair for the phone must happen at the authorized service centre noted below, and as the owner of the phone you must take it to the service centre yourself. Any unauthorized repair voids the warranty. To repair the phone, contact:

Your local authorized repair dealer

Name

Address

Phone

Email

Solar panels

The solar panel comes with a warranty against manufacturing defects for one year. In the event of a problem with your solar panel, contact:

Your local authorized repair dealer

Name

Address

Phone

Email

Batteries

For warranty issues, take to the nearest authorized dealer with warranty card for service.

Your local authorized repair dealer

Name

Address

Phone

Email

Antennas and Patch Cords

If damage is a manufacturing defect, the item will be replaced. If damaged from negligence (knowingly breaking the equipment), the Village Phone Operator will be required to purchase a replacement item.

3.5 Using the Phone

The Nokia phone is a full-featured mobile phone. This section includes basic information to help you get started using the phone for your Village Phone business. Please refer to the Nokia documentation that accompanies your phone for explanations about the different features of the phone.

Making a Domestic Call

Dialing someone in-country is very simple. Simply enter the phone number and press the green call button. When you are finished, press the red button to end the call.

The first three numbers of the phone number indicate which system the phone you are calling is on. [*This may differ depending on your country*]. There are different charges for calls to each of these different systems. See the tariff sheet provided by the microfinance institution or telecommunications operator for rate details.

International calls

First enter a “+” before the number. Press and hold down the “0” key and the “+” will appear.

After the “+” you enter the “international dialing code” for the country you are calling and the phone number. For example, +1 12 345678 (1 is the international dialing code for the United States)

A detailed list of all international dialing codes is at the end of this guide. Refer to the Tariff Sheet for rate details.

Timing a call

[Customize – check with telecommunication operator/manual]

Purchasing and checking airtime

[Customize]

You cannot place any phone calls until you have loaded airtime into your phone. The Village Phone business kit comes with your first airtime card. To load this airtime, follow the instructions on the card

You should always purchase airtime from your microfinance institution. Be sure to always have enough airtime on your phone to be able to operate your business for at least two weeks. Call *XXX# to check how much airtime is remaining on your phone.

4.0 RUNNING YOUR VILLAGE PHONE BUSINESS

A Village Phone Operator earns money by selling the use of the mobile phone to members of the community. The price that the Village Phone Operator charges customers is higher than the price paid for the airtime.

A Village Phone Operator earns money in two ways:

- 1) The basic retail margin is *[Margin]* per minute *[or Unit]* for all domestic calls. So, for a five minute call to a *telecommunications operator* phone number, the Village Phone Operator makes at least *[Calculate]*.
- 2) A Village Phone Operator may also charge for additional services, such as traveling to tell an individual they have received a call. Pricing and definition of these services is at the discretion of the Village Phone Operator.

4.1 Charging for calls

The Village Phone Operator should charge the user of the phone by timing the length of the call and rounding up to the nearest minute. For example:

- 0:12 phone call to *[Other Operator 1]* number will be charged for 1 minutes *[Example]*
- 1:53 phone call to *[Other Operator 2]* number will be charged for 2 minutes *[Example]*
- 2:07 phone call to *[Other Operator 3]* number will be charged for 3 minutes *[Example]*

The Village Phone Operator will charge *[XYZ]* for incoming calls. *[The microfinance institution will need to determine if incoming call can be charged- it depends on local regulations].*

Beeping has been disabled for all Village Phones to avoid zero revenue calls for the Village Phone Operators. When you place a call, the recipient will not see your phone number. *[Local settings might differ]*.

All customers must pay for their calls with cash. Do not extend credit to any of your customers. You can say, “Yes, you are my friend, but to my business you are a customer”.

4.2 SMS Messages and Additional Services

In addition to using the mobile phone for voice phone calls, you can also use the phone to send and receive text information. This can be a very efficient way to send and receive short messages and is also an efficient way of retrieving important information such as commodity prices and foreign exchange rates. See the owner's manual for step-by-step instructions on how to send SMS messages to retrieve information.

Email messages can also be sent to your phone. Your email address is: *[Customize]* *[Note that this functionality might not be available in your network]*

4.3 Financial Analysis- Making a Profit

The rate charged by the telecommunications operator for each minute of airtime varies depending on the phone number that is called, day and the time. However, the rate you charge your customers does *not* change based on time or day of the week.

4.4 Keeping a Phone Log

You must keep a log of all of your business activity. The date of call, duration of call, system called, outgoing/incoming/service, and amount charged are all important pieces of information. Customer information is also useful.

You should acquire a call log book and create columns to keep a log like that shown at the end of this manual. Your microfinance institution loan officer will periodically come to your business and ask to review your log book.

4.5 Marketing your business

It is very important for people in your community to know about your business. There is a sign in the business kit *[Optional]*. Post the sign prominently to advertise your Village Phone business.

5.0 FREQUENTLY ASKED QUESTIONS AND ISSUES

5.1 What Happens If...

- **...the phone is lost or stolen:** Report the event to police and to the microfinance field officer at your microfinance institution so that the phone can be blocked. It is also best to file a police report, and provide your microfinance institution with copies.
- **...I move to another village:** You must check with your microfinance field officer to see if you can take the Village Phone business to the new village. If your new village is outside the telecommunications operator service area, you will need to forfeit the business.
- **...the phone stops working:** First, following the instructions in the "Solving Problems" section of the Nokia Owner's manual. If that does not work, you can try asking friends or your microfinance field officer. The final option is to take the phone to a Service Centre. Do **NOT** try to repair the phone yourself. Opening the phone voids the warranty.
- **...I want to sell or transfer the business.** The business can not be sold or transferred. If you would like to cease operations, notify your microfinance field officer.
- **...a Village Phone Operator dies:** The first option is to transfer the business to another family member who must join the microfinance group and be an active member. Alternatively, the business will be forfeited, and the SIM card and branded marketing materials (sign post and marketing cards) must be returned to the microfinance institution.

5.2 Operational Tips

Some useful suggestions for operating your Village Phone Business:

- **Maintain an airtime buffer, at least** *[Two week of expected usage – expressed in currency terms]*. If you run out of airtime, you cannot operate your business. Be sure to regularly monitor your airtime balance and purchase an airtime card from your microfinance field officer long before you run out. You can check your airtime balance by dialing *[Phone Number / short code]*.
- **Do not let other people dial the phone.** It is easy for someone to change the settings on your phone (either deliberately or accidentally). Since the phone is yours, insist that your customers simply use it to talk.
- **If the battery is low, leave the charger plugged in while talking.** As long as the phone is connected to a power source, it will continue to charge, even if it is being used.
- **Use the call timer built into the phone.** The Nokia phone automatically times each call. You can see the duration of the last call by doing the following :
 - Select **Menu** > *Call register* > *Call duration* to view the approximate duration of the last call, all received calls, all dialed calls, or the approximate duration of all calls
- **Never divert calls.** This would allow somebody else to receive your phone calls.
- **Voicemail is an option.** If the phone is in use when someone calls your number, they have the option of leaving a voicemail message. You can retrieve their message by dialing *[Phone Number]*. You may be charged for this call to retrieve your messages, so use this feature with caution.

5.3 Additional Questions and Answers

How do I load Airtime?

[Customize]

For example: “Simply scratch the silver panel of your Pay as you Go card to reveal the secret access number. Then dial [Phone Number] from your phone. When you’re welcomed to the service, press [Number]. Then enter your access number followed by #. The system will repeat the access number to you – if it is correct, press [Number]. You are now connected! “

How can I check my airtime balance?

Simply type *[Code Number]* onto your handset then press the calling button. The balance will appear on your screen.

How can I find my Handset's serial number?

Type *[Code Number]* onto your phone.

I have just received an SMS. How can I read it?

When you receive text messages, the number of new messages as well as an icon are shown on the display in the standby mode.

Select **Show** to view the messages immediately, or **Exit** to view it later in **Menu** > *Messages* > *Inbox*.

INTERNATIONAL DIALING CODES

Country	Intl dial code	Country	Intl dial code
Albania	355	Chile	56
Algeria	213	China	86
Andorra	376	Columbia	57
Angola	244	Comoros Island	269
Anguilla	264	Congo	242
Antigua and Barbuda	268	Cook Islands	682
Argentina	54	Costa Rica	506
Armenia	374	Croatia	385
Aruba	297	Cuba	53
Ascension Island	247	Cyprus	357
Australia	61	Czech Republic	420
Austria	43	Dem. Rep. of Congo (Zaire)	243
Azerbaijan	994	Denmark	45
Bahamas	242	Diego Garcia	246
Bahrain	973	Djibouti	253
Bangladesh	880	Dominica Islands	767
Barbados	246	Dominican Republic	809
Belarus	375	Ecuador	593
Belgium	32	Egypt	20
Belize	501	El Salvador	503
Benin	229	Equatorial Guinea	240
Bermuda	441	Eritrea	291
Bhutan	975	Estonia	372
Bolivia	591	Ethiopia	251
Bosnia	387	Faeroe Islands	298
Botswana	267	Falkland Islands	500
Brazil	55	Fiji Islands	679
Brunei	673	Finland	358
Bulgaria	359	France	33
Burkina Faso	226	French Guiana	594
Burundi	257	French Polynesia	689
Cambodia	855	Gabon	241
Cameroon	237	Georgia	995
Canada	1	Germany	49
Cape Verde Islands	238	Ghana	233
Cayman Islands	345	Gibraltar	350
Central Africa Republic	236	Greece	30
Chad	235	Greenland	299

Country	Intl dial code	Country	Intl dial code
Grenada	473	Luxembourg	352
Guadeloupe	590	Macao	853
Guam	671	Macedonia (Fyrom)	389
Guatemala	502	Madagascar	261
Guinea Bissau	245	Malawi	265
Guinea Republic	224	Malaysia	60
Guyana	592	Maldives Republic	960
Haiti	509	Mali	223
Honduras	503	Malta	356
Hong Kong	852	Mariana Islands	670
Hungary	36	Marshall Islands	692
Iceland	354	Martinique	596
India	91	Mauritius	230
Indonesia	62	Mayotte Islands	269
Iran	98	Mexico	52
Iraq	964	Micronesia	691
Ireland	353	Moldova	373
Israel	972	Monaco	377
Italy	39	Mongolia	976
Ivory Coast	225	Montserrat	664
Jamaica	876	Morocco	212
Japan	81	Mozambique	258
Jordan	962	Myanmar (Burma)	95
Kazakhstan	7	Namibia	264
Kenya	254	Nauru	674
Kiribati	686	Nepal	977
Korea, North	850	Netherlands	31
Korea, South	82	Netherlands Antilles	599
Kuwait	965	New Caledonia	687
Kyrgyzstan	996	New Zealand	64
Laos	856	Nicaragua	505
Latvia	371	Niger	227
Lebanon	961	Nigeria	234
Lesotho	266	Niue Island	683
Liberia	231	Norfolk Island	672
Libya	218	Norway	47
Liechtenstein	423	Oman	968
Lithuania	370	Pakistan	92

Country	Intl dial code	Country	Intl dial code
Palau	680	St Lucia	758
Palestine	970	Sudan	249
Panama	507	Surinam	597
Papua New Guinea	675	Swaziland	268
Paraguay	595	Sweden	46
Peru	51	Switzerland	41
Philippines	63	Syria	963
Poland	48	Taiwan	886
Portugal	351	Tajikistan	992
Puerto Rico	787	Tanzania	255
Qatar	974	Thailand	66
Reunion Island	262	The Gambia	220
Romania	40	Togo	228
Russia	7	Tonga	676
Rwanda	250	Trinidad & Tobago	868
Samoa (American)	684	Tunisia	216
Samoa (Western)	685	Turkey	90
San Marino	378	Turkmenistan	993
Sao Tome & Principe	239	Turks & Caicos Islands	649
Saudi Arabia	966	Tuvalu	688
Senegal	221	Uganda	256
Serbia	381	Ukraine	380
Seychelles	248	United Arab Emirates	971
Sierra Leone	232	United Kingdom	44
Singapore	65	Uruguay	598
Slovak Republic	421	USA	1
Slovenia	386	Uzbekistan	998
Solomon Islands	677	Vanuatu	678
Somalia	252	Venezuela	58
South Africa	27	Vietnam	84
Spain	34	Wallis & Futuna Islands	681
Sri Lanka	94	Yemen Arab Republic	967
St Helena	290	Zambia	260
St Kitts & Nevia	869	Zimbabwe	263

HOW TO USE ADDITIONAL MENU FEATURES

[Any network specific SIM programmed extra features should be discussed here]

POINTS TO REMEMBER

[One Page Summary of Key Points]

Appendix I: Phone Reference Guide

A very simple two-page reference guide can be developed that summarizes how to perform the most common tasks (making a call, checking airtime balance, loading airtime, checking call duration, reading and sending messages) as well as important things to remember (tips for recharging the phone, how to contact customer support). This guide can be printed double-sided on single sheet of paper and then laminated for durability. A suggestion is below:

REFERENCE GUIDE (*Sample from Rwanda*):

[Customize]

TO MAKE CALLS

To dial someone in country

1. Enter the phone number.
2. Press the green call button. When finished, press the red button to end the call.

To dial someone in an other country

1. Enter the calling prefix for the country you are calling
2. Enter the phone number.
3. Press the green call button. When finished, press the red button to end the call.

For example, to dial the number 8312345678 in Kenya you would enter “**071**8312345678” on the phone and then press the green button.

To dial all other international numbers

1. Press and hold down the “0” key until a “+” appears.
2. Enter the international dialling code for the country you are calling (see other side of this sheet).
3. Enter the phone number.
4. Press the green call button. When finished, press the red button to end the call.

To checking airtime balance

Select **Menu** > *Settings* > *Cost settings*, and *Prepaid tracker* (network service)

TO LOAD AIRTIME

1. Press *111*
2. Enter the number on the airtime card
3. Press #
4. Press green calling button

TO CHECK LAST CALL TIME

Select **Menu** > *Settings* > *Cost settings*, and; *In-call timer* to turn the call time display on or off; *Call summary* to turn the approximate call time report on or off.

TO READ MESSAGES

When you receive text messages, the number of new messages as well as an icon are shown on the display in the standby mode.

Select **Show** to view the messages immediately, or **Exit** to view it later in **Menu > Messages > Inbox**.

TO SEND A MESSAGE

1. In the standby mode, select **Menu > Messages > Create message**.
2. Write the message.
3. To send the message, select **Options > Send**, enter the recipient’s phone number, and select **OK**.

TO VIEW A MISSED CALL

TO STORE A NEW NUMBER

Type the number, for example, 039 123456, press Save, then type the name, name, for example, John, then press Save.

TO FIND PHONE NUMBER ALREADY IN THE PHONE

Scroll down in standby mode, and enter the first letters of the name. Scroll to the name that you want.

Call Tariffs

Destination (Service or Country)	Charge per unit*
To MTN	20
RwandaTel	25
East Africa (Kenya, Tanzania, Uganda, Burundi, DR Congo)	50
All other international	70
SMS	55
MTN Services	65

* Units are 8 seconds long. See the call tariffs chart to determine what to charge based on the length of the call.

East Africa calling prefixes

<i>Country</i>	<i>Calling prefix</i>
Kenya	071
Tanzania	074
Uganda	070
Burundi	072
D.R. Congo	073

Remember!

- Only charge your phone using the battery and cables supplied with the phone. Never hook your phone up to a generator – it will ruin the phone.
- The phone **MUST** always remain in a fixed location.

- The phone MUST be available to the public 24 hours, 7 days a week.
- You MUST only charge the tariff rates listed on the signpost.
- All airtime cards MUST be purchased from your microfinance institution.
- You MUST remain a member of the microfinance institution to retain the SIM card for your phone.
- You are responsible for all lost or stolen equipment.
- Always maintain a call log for all calls made through your phone.
- The sign post MUST be displayed outside your operating location.
- Market your business – give business cards to friends, family and colleagues; give them out at churches, mosques, trading centres, and other places.
- Maintain an airtime buffer, of at least 3,500 RWF.
- Do not let other people dial the phone.
- If the battery is low, leave the charger plugged in while talking.

Appendix J: Reference Manual Template addressed to the Microfinance Field Officers

[Note that this reference manual is provided as a sample, and needs to be updated, depending on your local implementation.]

REFERENCE MANUAL for Field Officers of Microfinance Institutions

THE HELPLINE REFERENCE MANUAL

This manual is designed as a training and reference tool for the microfinance institution's field officers who will serve the network of Village Phone Operators. It will help the field officers assist the Village Phone Operators to solve problems. This document is not intended for broad distribution with the Village Phone program and is not for Village Phone Operators.

Types of Challenges

Technical problems with equipment

During the training it is important to familiarize the future operators with the equipment and address the many possible problems that can occur when operating this equipment in rural areas.

Broken Equipment

As the environment in rural areas can be very demanding on phone equipment and many Village Phone Operators are not accustomed to caring for this type of equipment, failures occur. Anything may happen to the equipment, from cows stepping on solar panels to "fried batteries" resulting from electrical surges in villages. It is important that the Village Phone Operators understand how to contact the warranty and repair center, as the microfinance institution is not responsible for repairs.

Problems Loading Airtime

Many Village Phone Operators who have no previous experience with mobile phones will have problems loading their airtime cards. An important part of the training is to educate Village Phone Operators on how to use their equipment. This empowers them to solve their own problems in the future and reduces repeated calls for repeat problems. Consider also whether to train loan officers on loading airtime, as an operator might purchase airtime by calling the microfinance institution and having the loan officer read off the number.

Questions about Tariffs

If Village Phone Operators do not read English well, they may have trouble understanding the Village Phone Operator manual provided to them during training. This can lead to a variety of questions, including questions related to the tariffs they must charge with their business.

Battery Charging Problems

Village Phone Operators may experience problems charging their phones or their batteries may fail if they charge the phone from an inappropriate source. It is important to refer to the information provided below for both warranty information as well as solutions to common problems experienced when charging the phone.

Frequently Asked Questions, Common Problems & Solutions

Airtime

I have tried and failed to load an airtime card.

- Record the number of times the Village Phone Operator has attempted to load the airtime. Load the airtime for the Village Phone Operator and make sure they understand how to do it themselves.

Can I buy airtime cards in lower denominations?

- *the various airtime options available.*

How do I check my airtime?

- Code will display the airtime and service fee status on the phone.

Phone

The phone heats up when charging,

- This could mean that the phone is defective or that they have misused the phone. Refer to warranty.

The phone does not turn on.

- One must hold down the red button on the phone for a few seconds to turn it on. If this fails to work, it could be a battery problem or a defective phone. These problems are addressed in the following sections.

Why does my phone number not show up on the phone I call (beeping)? [Optional – to be enabled by the telecommunications operator]

- The caller identification feature has been disabled for Village Phones to give Village Phone Operators a business advantage. Village Phone Operators do not profit if people use their phone to beep friends and then have them call back. Explain to the Village Phone Operator that this is for the benefit of their Village Phone business.

My phone says it is locked. How do I unlock it?

- It is possible to accidentally enable the password / lock out feature on the phone. If this occurs, the password to get back on, if they haven't changed it, is 0000. They just type in 0000 and then press OK and the phone should be activated.

I broke my phone. What do I do?

- Village Phone Operators are told when they receive their phones that they are responsible for the proper care of their equipment. If something breaks due to their negligence, this is their responsibility.

Someone has stolen my phone.

- Tell them to report this to the police. Refer to the explanation provided previously.

How do I get a Village Phone for my sister, neighbor?

- Tell them to contact the microfinance institution and apply for a Village Phone.

I am unable to make international calls.

- Refer to the Village Phone Operator Manual for instructions on how to make international calls and how to use country codes.

How do I write an SMS?

- Refer to the Nokia phone manual for an explanation of how to write messages.

Car Battery

My car battery is no longer charging the phone.

- This could mean that they need to take the car battery to town for charging at a battery service centre. It is important for Village Phone Operators to charge the car battery before it is completely discharged; otherwise it may not work or may function ineffectively. We recommend that they charge the car battery every two months to prevent the problem. If they have any doubts about when they last charged the car battery, they should take it for charging.

I have spilled some of the battery acid out of the battery.

- The Village Phone Operator must take the battery to a local battery centre to make sure that it is still functioning properly and to have the battery acid refilled.

Antenna (Aerial)

How do I adjust my antenna?

- Refer to the Village Phone Operator Manual regarding antenna installation and adjustment.

My antenna fell over and broke.

- Village Phone operators are told when they receive their phones that they are responsible for the proper care of their equipment. If something breaks due to their negligence, this is their responsibility.

Village Phone Business

Do I charge people for phone calls if the network cuts out?

- Yes. This is at their discretion, but they must understand that they are paying for the customers call and if they do not charge for the call, then they will be losing money.

Someone has stolen my signpost.

- If any Village Phone equipment is lost or stolen it is the responsibility of the Village Phone Operator. Document and report this information.

How much do I charge for international calls, SMS ... ?

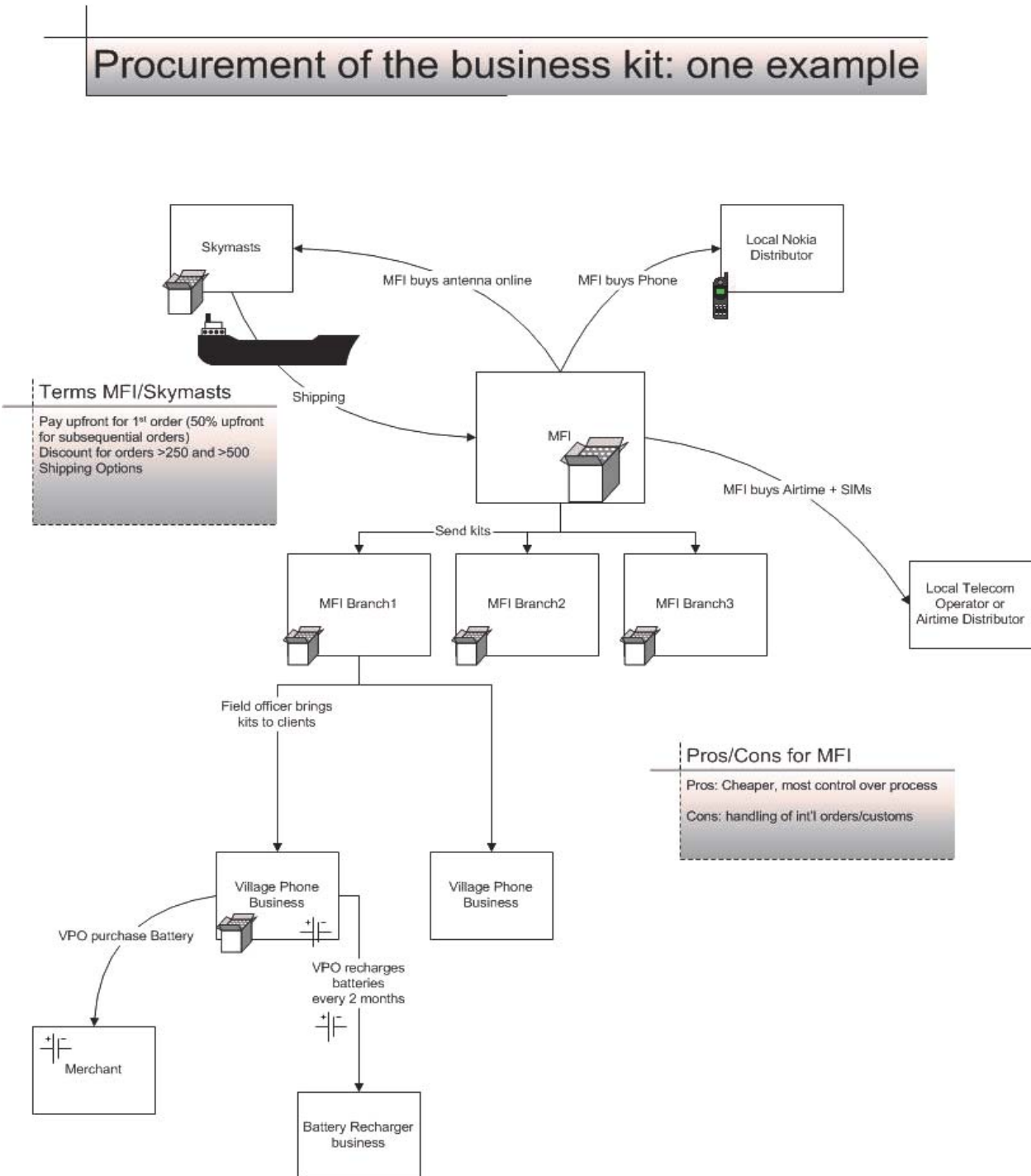
- Refer to the tariffs section in the *Village Phone Operator Manual*.

Appendix K: How to procure kits elements



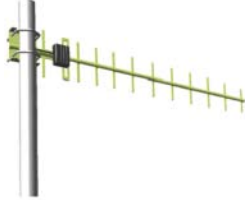
There are several ways for you to procure the different items in the business kit. Below is detailed a specific one, assuming the need for both an antenna and a battery recharging solution.





For the antenna solution, Grameen Foundation, Nokia and Skymasts have worked together to provide a handset, coupler (connecting the handset to the antenna) and antenna solution. It has been thoroughly tested, and we believe that the prices these antenna pieces are been offered at are competitive.

Below is a workflow of the procurement of the different kits elements.



Below are the procurement details of the different elements:

Equipment	Suggested option	Suggested sourcing	Visual
A phone handset with ear-piece	Nokia 1110 Handset - for GSM networks operating at 900/1800 MHz	Nokia Distributor. To find a Nokia distributor near you, go to their online country list at: http://www.nokia.com/countries . For the detailed specifications of the Nokia 1110, go to http://www.gsmarena.com/nokia_1110-1187.php	
The SIM or telecommunications network access card	The SIM card, placed in the phone, allows access to the network (GSM only)	Nokia distributor or telecommunications operator	
Airtime	A set amount of minutes, (prepaid airtime card or Electronic Voucher Distribution (EVD) time)	Telecommunications operator or airtime distributor	
An Antenna, cable and coupler	13dBd GSM Yagi antenna + 10m RG58 cable + Portable adaptor for Nokia 1110	Skymasts : Orders can be placed online at www.skymasts.com or by contacting karen.bailey@skymasts.com , tel: +44 1604 494132. Prices have specifically been negotiated for microfinance institutions, and depend on quantities (<250, <500, >500).	

A recharging solution for the phone battery	Cable connecting the battery to the mobile charger cable	Skymasts : Orders can be placed online at www.skymasts.com or by contacting karen.bailey@skymasts.com, tel: +44 1604 494132. Prices have specifically been negotiated for microfinance institutions, and depend on quantities (<250, <500, >500).	
	Standard mobile charger cable (LCH-12) connecting the battery cable to the phone	Locally	
	Car battery	Locally	
User Manual		Locally	
Marketing signage and branding		Locally	

The cost of the kit depends on several variables related to the environment and the business model, and can range from \$50 USD to \$300 USD.

You might find local providers and distributors for antennas, cables and couplers. We would advise caution in the choosing of such equipment. It is imperative to have the equipment tested thoroughly and to considering such factors as reliability, robustness, delivery guarantees and support.

For items coming from outside the country, the shipment need to be carefully thought through and planned, as it can be expensive, and can take time. You will also need to check what the process and cost is for the custom duties, VAT and other fees for the items you are buying.

In the case of a large deployment (annual VPO deployment larger than 1,000), you might want to approach a third party distributor on a possible partnership in sourcing and distributing the equipment. It would also be advantageous for several microfinance institutions planning on launching Village Phone in the same geographical area to join their efforts for sourcing and distribution of this equipment.



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