



Built for Change:

INCLUSIVE BUSINESS SOLUTIONS FOR THE BASE OF THE PYRAMID

IN PARTNERSHIP WITH





ABOUT IFC

IFC, a member of the World Bank Group, is the largest global development institution focused exclusively on leveraging the power of the private sector to create jobs and tackle the world's most pressing development challenges. Working with private enterprises in more than 100 countries, IFC uses its capital, expertise, and influence to help eliminate extreme poverty and promote shared prosperity.

WRITTEN BY

The writing team included Piya Baptista, Kathleen Mignano, Madeleine Holland, and Anne Elizabeth Johnson, with guidance from Eriko Ishikawa and Toshiya Masuoka. Groff Creative provided the design and Matthew Benjamin provided copywriting support.

ACKNOWLEDGEMENTS

The authors extend their deepest appreciation to the five inclusive businesses profiled in this report: bKash, Bridge International Academies, MicroEnsure, Nephroplus, and Probiotech.

The authors would also like to extend their thanks to the following IFC colleagues who provided valuable input: Nandini Bhatnagar, Martin Reto Buehler, Alejandro Caballero, Silven Chikengezha, Charles William Dalton, Akira Dhakwa, Nazila Fathi, Carlos Numen Ferro, Alexis Geaneotes, Rena Hinoshita, Sumeet Kaur, Pravan Malhotra, Biju Mohandas, Anupa Pant, Shino Saruta, Karthik Tiruvarur, Harsh Vivek, and Shinya Yoshino.

RIGHTS AND PERMISSIONS

© International Finance Corporation 2016. All rights reserved.

The material in this work is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law. IFC does not guarantee the accuracy, reliability or completeness of the content included in this work, or for the conclusions or judgments described herein, and accepts no responsibility or liability for any omissions or errors (including, without limitation, typographical errors and technical errors) in the content whatsoever or for reliance thereon.

Foreword

In the fight to end poverty, there are no easy answers.

But one thing is clear: By creating innovative business models, businesses both large and small, can benefit their communities while boosting their bottom lines.

Over the past decade, IFC has committed over \$14 billion to companies that work directly with people who live at the base of the economic pyramid—those who lack access to basic goods and services or who live on \$8 or less per day. These inclusive businesses have integrated the poor into the fabric of their business models—creating new markets, enabling people to build their own livelihoods, and providing them with access to goods and services, often for the first time.

Through the five cases featured in this report, IFC seeks to share knowledge gained from working with these successful, driven entrepreneurs. To inspire others to innovate. And to demonstrate that doing good is not only possible—it's also good business.

The stories outlined here are unique, but there are common threads in each company's success. Each has sought to create a scalable business model and focused on minimizing costs. Each has invested in training and educated their customers. And each has recognized the value of partnerships.

Sixty years ago, IFC was created to combine development impact with profitability. The companies described in this report embody that concept. They have been built to create change in their communities and around the world. One by one, they are doing just that.

Philippe Le Houérou

Executive Vice President & CEO



Built for Change:

INCLUSIVE BUSINESS SOLUTIONS FOR THE BASE OF THE PYRAMID



ইনস্ট্যান্ট ক্যাশব্যাক©

প্রতিদিন মাত্র ৫ টাকার কথা বললেই পাবে বোন

sh

ক প্রতিষ্ঠান

b ash

ব্র্যাক ব্যাংক প্রতিষ্ঠান

এখানে

বাং

বাং

Contents

BUILT FOR CHANGE: INCLUSIVE BUSINESS SOLUTIONS FOR THE BASE OF THE PYRAMID

COMPANY CONTRIBUTORS

IFC extends its thanks to the following individuals for sharing their time to provide insights on the establishment and growth of their companies. This report would not have been possible without their input.

Anand Bagaria, Managing Director,
Probiotech

Lucy Bradlow, Director of Public Relations,
Bridge International Academies

Dr. Dinesh Gautam, Executive Director,
Probiotech

Peter Gross, Marketing Director,
MicroEnsure

Steve Knight, Global Marketing and
Communications Manager, MicroEnsure

Richard Leftley, Chief Executive Officer,
MicroEnsure

Shannon May, Co-Founder and Chief
Strategy and Development Officer, Bridge
International Academies

Kamal Quadir, Chief Executive Officer,
bKash

Philippe Sachs, Global Head of Corporate
Affairs and Public Sector, Bridge
International Academies

Kamal Shah, Co-Founder and Director of
Patient Services, NephroPlus

Vikram Vuppala, Founder and Chief
Executive Officer, NephroPlus

INTRODUCTION 5

KEY LESSONS 7

CASE STUDIES

bKash 11
Financial services, Bangladesh

Bridge International Academies 21
Education, Africa and India

MicroEnsure 33
Financial services, Africa and Asia

NephroPlus 43
Health, India

Probiotech 53
Agribusiness, Nepal

CONCLUSION 65

Introduction

| “It always seems
impossible until
it is done.”

— Nelson Mandela



Imagine a different kind of business.

An agribusiness that facilitates market access for small poultry farmers in the rural mountain areas of Nepal. Or a company whose business model centers on providing mobile banking services or affordable insurance to poor people in Africa and Asia. How about a school that puts quality private education within the reach of the poorest African families? Or a specialized healthcare company that provides quality, affordable dialysis treatments to thousands of patients in India who might otherwise go untreated?

These businesses already exist. And they are doing all of these things and more.

They are inclusive businesses—companies that do business with people who live at the “base of the economic pyramid” (BOP) as suppliers, distributors, retailers, and customers.

Some source crops from small-scale farmers who lack resources. Others work with distributors and retailers who cope with poor infrastructure. And many target risk-averse customers who have minimal individual purchasing power.

For the first time, IFC presents in-depth inclusive business case studies of companies that have been built over the past 15 years. Developed through interviews and input from the companies’ founders, chief executives, and senior managers, the cases demonstrate how these companies have evolved and adapted their business as they encountered obstacles, entered new areas of work, and expanded into new markets.

The five IFC clients featured in this report work in four different sectors: agriculture, education, financial services, and healthcare. They are:



bKash, a mobile financial services company founded in 2010 in Bangladesh that brings the unbanked into the formal financial system. It enables 23 million people who once dealt only in cash to send remittances, save, and pay for products and services using their mobile phones.



Bridge International Academies, an education organization founded in 2008 in Kenya that improves learning outcomes for primary school children in Africa and India through affordable, low-cost schools. It serves almost 100,000 students.



MicroEnsure, a microinsurance solutions provider founded in 2008 that creates affordable life, health, accident, and other types of insurance for the poor—a market most insurers consider too difficult to serve. The company reaches more than 40 million customers in 15 countries in Africa and Asia.



NephroPlus, a healthcare services company founded in 2010 that provides high quality kidney dialysis care in underserved cities in 15 states in India at prices up to 40 percent below their competitors. It serves more than 6,000 patients and provides approximately 50,000 monthly dialysis treatments each month.



Probiotech, an agribusiness founded in 2000 which produces animal feed for small-scale farmers in Nepal, among other lines of work. The company improves the productivity of its 12,000 feed customers by offering training on farm management and by leveraging its extensive distribution network to provide high quality inputs.

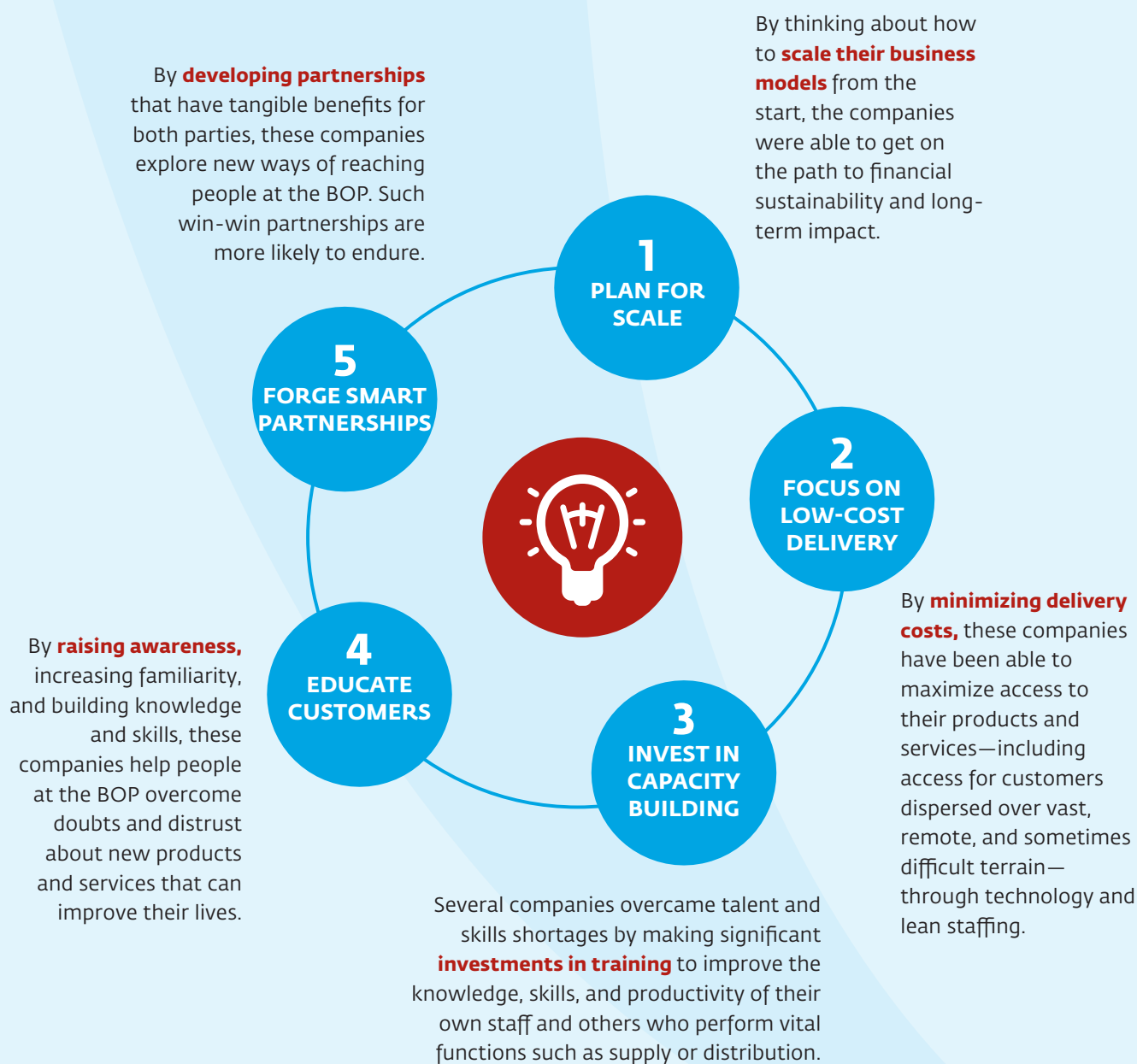
bKash, Bridge, MicroEnsure, NephroPlus, and Probiotech were founded by business-minded entrepreneurs who are passionate about making a positive impact on society. Each of these founders built upon their deep industry experience to identify opportunities and develop a viable business solution that would address a pain point among those living at the base of the pyramid. It is these leaders' deep commitment to their vision that has helped them to navigate complex and dynamic environments and build successful inclusive businesses.

Taking an idea and turning it into a tangible product or service is a journey that requires patience, creative thinking, and the capacity to learn and adapt. The five case studies that follow explore these journeys through the different stages of the companies' development, from discovering a challenge and seeding the initial idea to piloting, early implementation, scale-up, and replication. The cases examine the challenges that emerged along the way across the business value chain: procurement, product and service development, distribution, marketing and sales, and customer service.

In curating the experiences of these leaders and their companies, IFC aims to build the global knowledge and evidence base on inclusive business. Ongoing learning and dialogue is key to accelerating the field. IFC for its part will continue to analyze and share the experiences of its inclusive business clients, who now number more than 500 across 100 countries worldwide.

5 Key lessons

Each company's path is unique, yet the cases identify common strategies that cut across sectors and geographies. These shared strategies provide essential insights that can spark innovation among future inclusive business entrepreneurs.





1. PLAN FOR SCALE

bKash built partnerships with multiple mobile network operators rather than a single company in order to make mobile financial services available to millions of Bangladeshis.

Bridge developed a management structure and lesson delivery system that could be easily replicated at a low cost as it expanded; it also leveraged technology to streamline administrative and managerial functions.

MicroEnsure worked with multiple partners to build a large enough risk pool of low-income customers, thus reducing the cost of insuring people who can only afford small premiums.



2. FOCUS ON LOW-COST DELIVERY

bKash leverages a network of existing commercial distributors rather than build a costly distribution network from scratch.

Bridge uses computer tablets to regularly disseminate electronic lessons to teachers, cutting production and physical delivery costs.

MicroEnsure uses mobile phones to deliver insurance to poor customers rather than using insurance sales agents who need to be paid a commission.

NephroPlus reduces personnel costs for kidney dialysis centers through a lean staffing model, enabling it to build more centers in hospitals and as standalone facilities.

Probiotech uses regional depots and a network of dealers for efficient physical distribution of animal feed to customers across remote terrain.



3. INVEST IN CAPACITY BUILDING

bKash trains micro entrepreneurs to register and support customers, equipping these entrepreneurs with anti-money laundering, fraud management and other financial protection knowledge.

Bridge hires and trains local teachers through its own teacher training institute because it is difficult to attract teachers from cities to move to rural and semi-urban schools.

NephroPlus created an independent training institute to develop certified kidney dialysis technicians to fill an industry-wide shortage in India and to support its own expansion.

Probiotech welcomes all farmers—regardless of whether they are currently part of the Probiotech supply chain—to gain expertise through the company's extension services, veterinary helpline and farm management trainings.



4. EDUCATE CUSTOMERS

bKash educates customers about mobile financial services, helping to slowly raise awareness about the benefits of shifting from cash to electronic money. This, in turn, increases bKash's market penetration.

Bridge engages local leaders, parents, and teachers through open houses to solicit input on the need for a school in the community, helping to build buy-in before entering a new location.

NephroPlus raises awareness about chronic kidney disease as well as treatment options through community events, enabling it to attract new patients.

Probiotech educates poultry producers on farm management, helping producers lower production costs and improve livelihoods while building brand loyalty for its products.



5. FORGE SMART PARTNERSHIPS

bKash was established through a partnership with BRAC Bank, which enabled it to leverage BRAC's strong reputation of serving the poor to introduce them to mobile financial services.

Bridge is beginning to partner with governments to bring its teaching and management methodologies to public schools in order to continue to improve learning outcomes for children.

MicroEnsure partners with telecom firms and other companies that already reach the poor. It adds value to its partners' products, for example mobile phone airtime, by bundling them with insurance.

NephroPlus partners with public and private hospitals to introduce kidney dialysis services in locations where they were not previously provided; it also assumes management responsibilities to improve existing dialysis services at hospitals.





bKash

Country: Bangladesh

Sector: Financial Services

IFC Investment: \$10 million

Access to finance is a challenge in Bangladesh, where only 40 percent of the adult population holds a bank account at a formal financial institution.¹ This is a major problem for the working poor, many of whom migrate from villages to towns, cities, and even overseas in search of work, and who have no choice but to use informal options to send money home. Some find an acquaintance willing to carry cash on the journey to their home village; others work with middlemen who charge high fees.

But today around 23 million people rely on bKash, a leading mobile financial services company, to safely send money over their mobile phones—and even to save money and to pay for products and services. bKash transactions are not only secure but are also simple to conduct and accounted for in the formal financial system. The company was started by two Bangladeshi-American tech entrepreneurs and a local bank. They wanted to leverage mobile phones—which are ubiquitous in Bangladesh—to provide a broad array of financial services to millions of unbanked Bangladeshis, including those in rural areas.

bKash is now used by all types of businesses from the self-employed rickshaw pullers sending money to their families, to small business owners paying workers' wages directly rather than through intermediaries, to mom-and-pop shops paying bills remotely and eliminating the need to travel to pay their suppliers in person. The average transaction size is \$16.

bKash was established in 2010 as a joint venture between Money in Motion LLC—an American company that invests in start-ups that advance financial inclusion—and BRAC Bank, a commercial bank in Bangladesh focused on small



and medium enterprises. It has played a major role in building Bangladesh's mobile financial services industry from scratch and is the country's leading player, accounting for 75 percent of the market.² bKash operates as a BRAC Bank subsidiary and now counts the International Finance Corporation (IFC) and the Bill and Melinda Gates Foundation as minority shareholders.

110 million transactions
are conducted through
bKash every month

JOINING FORCES

bKash was launched by two brothers, Kamal and Iqbal Quadir. Mobile financial services had taken off in the Philippines, Kenya, and other emerging markets when the two Quadirs brothers decided to bring it to Bangladesh.

In need of a local partner, the Quadir brothers began to engage BRAC's founder, Fazle Hasan Abed, in 2008. Abed had a 40-year track record serving the poor with BRAC, one of the largest nongovernmental organizations worldwide. BRAC's strong presence in Bangladesh and its well-recognized and trusted brand made it attractive as a potential partner. Discussions between the Quadirs and Abed continued over a two-year period. In 2010 they committed to establish a joint venture between Money in Motion and BRAC Bank.

A HISTORY OF ENTREPRENEURSHIP

The Quadir brothers grew up in Bangladesh and moved to the United States in the 1970s. Prior to founding bKash they had already started a number of tech-related ventures.

In 2005 bKash's CEO Kamal Quadir created CellBazaar, a first-of-its-kind online classifieds company in Bangladesh that connects buyers and sellers through mobile phones. Within a few years CellBazaar gained four million users and was acquired by the global telecom company Telenor. Iqbal Quadir, Kamal's older brother, had worked in investment banking before co-founding the mobile telephone company Grameenphone in the late 1990s, together with Telenor and Grameen Bank. He later launched Emergence Energy to support small-scale neighborhood plants for electricity generation.

In 2009, Iqbal and Kamal Quadir together started Money in Motion. They founded the company with Nick Hughes who led the launch of Africa's first major mobile financial services venture, M-PESA, in Kenya and Arun Gore, managing director of venture capital firm Grey Ghost Capital.





bKash's Value Chain

An Overview of Challenges and Solutions



Value Chain



Challenges in Providing Mobile Financial Services



bKash's Solutions

Product Development	Distribution	Marketing & Sales	Customer Service
<ul style="list-style-type: none"> Customers are averse to trying new services 	<ul style="list-style-type: none"> Building a distribution network is costly, but essential Customers are geographically dispersed 	<ul style="list-style-type: none"> People lack confidence in using new technology Old habits are hard to change Low literacy levels Limited purchasing power 	<ul style="list-style-type: none"> People fear making mistakes during transactions and losing money Customers lose faith if they cannot deposit or withdraw cash
<ul style="list-style-type: none"> Sequences introduction of mobile financial services from simple to more complex Offers services that low-income customers are most likely to use 	<ul style="list-style-type: none"> Builds multiple distribution partnerships for dense coverage Uses existing distribution infrastructure 	<ul style="list-style-type: none"> Addresses existing pain points which helps customers recognize the value of mobile financial services Simplifies the process to set-up a bKash account Educates customers about mobile financial services Offers low-cost transaction fees 	<ul style="list-style-type: none"> Provides in-person guidance on transactions through agents Makes mini account statements available through mobile phones Sends virtual receipts after transactions have been completed Works with distribution partners to maintain liquidity in system

Their timing was favorable, as a government initiative in Bangladesh to encourage the poor to set up bank accounts with as little as \$0.12 had been facing challenges due to the cost of conventional banking, unavailability of banks where the poor lived, and the formality of bank transactions. The government was looking for alternatives to expand financial services to the low-income segment and mobile financial services emerged as a viable option.

In 2010 Bangladesh's government began to develop regulations to guide the mobile financial services industry and decided that banks, with the oversight of the central bank, should be the lead partner in any mobile financial services venture. To comply with this regulation, Bangladesh Bank, the country's central bank, recommended that BRAC Bank establish bKash as a subsidiary, which would allow it to receive a mobile financial services license. BRAC Bank and bKash would jointly manage bKash's compliance with mobile financial regulations: "know your customer" (KYC) and anti-money laundering and combating the financing of terrorism (AML/CFT).

DIVERSE INVESTORS

To get bKash's operations off the ground, Money in Motion provided \$5 million in seed capital and Kamal Quadir became chief executive officer, building the business from scratch. The company also benefited from grant support: Under a financial inclusion initiative, the Bill and Melinda

Gates Foundation granted \$10 million in 2010 to consulting firm Shore Bank International to support bKash's development. The grant covered strategic and operational planning, distribution, and marketing.

As bKash refined its business model and expanded rapidly, it attracted equity to support further growth. In 2013 IFC took a minority stake in the company through a \$10 million equity injection. IFC aimed to advance financial inclusion in Bangladesh by investing in a business with growth potential and a strong team. The key factors for IFC's investment decision were:

- The Quadir brothers' extensive entrepreneurship experience in technology and their execution capabilities.
- The partnership with BRAC Bank.
- Bangladesh's defined regulatory guidelines for mobile financial services.

In addition to equity, IFC assisted bKash with its corporate governance, which would be critical for the company to attract private sector investors in the future. IFC also helped bKash expand its network of merchants—a variety of service locations and stores including mom-and-pop shops that accept bKash payments. In the following year, 2014, the Bill and Melinda Gates Foundation also took an equity stake in bKash.



TRANSACTIONING THROUGH bKASH

To open a bKash account, new customers need only visit a bKash agent who checks their identity papers and sets up an electronic wallet (e-wallet)³ (Figure 1). This is a virtual account linked to the customer's mobile phone number for unique identification. Customers add electronic money (e-money) to their e-wallets through remittances and salary payments.⁴ They can also give bKash agents physical cash to convert into e-money, called 'cash-in.' Remittances and cash-in are the most common ways for the unbanked to fund their e-wallets.

Per regulation, bKash initially deposited the full value of a customer's e-wallet balance in a BRAC Bank account monitored by the central bank. Because of the enormous banking support required in cash management, together with the need to diversify customer deposits, beginning in 2015 the central bank required bKash to deposit customers' money with multiple banks. To access their bKash accounts, customers dial a code on their mobile phones which generates a text menu. Customers then enter a unique personal identification number (PIN) to access their e-wallets and make transactions. They can withdraw physical cash or 'cash out' from their e-wallets at any time by going to a bKash agent's store.

For many customers, a bKash agent is the familiar face of the owner of the local grocery store. An agent's role in providing actual 'cash-in and cash-out' services was critical from the beginning, as Bangladeshis live in a predominantly cash-based economy and would lose confidence in mobile financial services if they couldn't get cash from their e-wallets on demand. Agents educate customers and provide step-by-step guidance to making transactions. In return, becoming a bKash agent is an opportunity for small entrepreneurs to earn additional revenue and increase traffic to their stores.

As per regulations for mobile financial services, bKash regularly trains agents on topics such as "know your customer", anti-money laundering and combating the financing of terrorism, and fraud management. This helps agents to keep abreast with the latest information on financial protection.

Figure 1: Steps to Opening a bKash Account

- 1 Customer visits bKash Agent
- 2 Customer fills out *Know Your Customer* form prescribed by Bangladesh's central bank, presents a photo ID and passport photos
- 3 Agent registers customer
- 4 Customer receives a text message confirming account opening information
- 5 Customer activates account by dialing *247# and then a unique 4/5-digit pin to access the e-wallet
- 6 Customer can add money to e-wallet and receive money
- 7 After 3-5 days, customer receives a text message to start using all bKash services

PATHWAY TO SCALE

bKash focused on scaling rapidly from the outset. It launched operations in July 2011 and quickly grew from two million customers in 2012 to 10 million by the end of 2013. The company made four early strategic decisions to enable its rapid growth:



DELIVER FINANCIAL SERVICES THROUGH BASIC PHONES.

The low-income customers bKash targeted had basic phones and so the company built a user interface that would work on any type of phone, including the basic \$15 handsets widely used by the working poor.⁵



PARTNER WITH MOBILE NETWORK

OPERATORS. bKash sought partnerships with mobile network operators in order to reach a large number of customers quickly.

Moreover, multiple partnerships would facilitate seamless transactions between customers regardless of their network. So bKash set up revenue-sharing agreements with four providers—Robi, Grameen Phone, Banglalink,



OFFER LOW-COST TRANSACTIONS.

bKash's business model was based on low fees and high volume—it charged very low transaction fees and relied on billions of small-size transactions to generate revenue. Affordable fees helped drive the adoption of mobile financial services among low-income customers (Table 1). Unlike some other providers, bKash didn't charge customers a fee to add money to their e-wallets. Nor did it set a minimum fee for withdrawing physical cash from an e-wallet. Instead, bKash charged customers who received a money transfer a flat fee on the amount withdrawn. Transactions fees to institutions including businesses and merchants were other sources of revenue for the company.⁸



LEVERAGE COMMERCIAL DISTRIBUTORS.

bKash built a vast agent distribution network (Figure 2) to serve customers who were geographically dispersed in urban, semi-urban, and rural locations. Its agents are typically small retailers such as the owners of mom-and-pop shops. They enroll customers, educate them about mobile financial services, and convert cash or other payments into e-money and vice versa as customers require.

The company began building its agent network in 2011 with the support of BRAC and Shore Bank International, selecting 5,400 bKash agents from a pool of small retailers who were BRAC micro finance customers. However, after this pilot bKash realized that it would need to explore other types of partnerships to expand its agent network.

bKash began to work with commercial distribution companies that supplied consumer goods, mobile phone airtime, and household products to the thousands of small stores that had the potential to be bKash agents.

Table 1: bKash's Fees

TYPE OF TRANSACTION	FEE
Account opening	Free
Cash-in at an agent	Free
Cash-out from an agent	1.85% flat fee
Person-to-person money transfer	BDT 5 (\$0.06)
Bill and merchant payments (fee to customer)	Free
Merchant payments (cost to merchants)	1.3% to 1.8%
Business-to-person disbursement (fee to business)	0.5% (negotiable)

It developed a commission structure that made it profitable for distributors to recruit and manage owners of small stores as bKash agents. Over time, bKash would come to work with 140 distribution companies. It would also bring on other types of partners to expand its agent network, such as the country's largest courier service that had 5,000 service locations in Bangladesh.

As confidence in bKash's services grew, the company introduced more diverse services for low-income customers

SEQUENCING SERVICES

As the first major mobile financial services provider in Bangladesh, bKash played a significant role in driving adoption of those services among low-income customers. One way bKash achieved this was by sequencing its services. This was critical because most Bangladeshis were unfamiliar with mobile finance. To get people to switch from cash to e-money, bKash would have to build public trust one service at a time.

Since there was no single recipe for introducing mobile financial services in a new market, bKash had to identify which services people needed most and then decide on the order of roll-out. The company started with the most basic service possible: person-to-person money transfer. This would help migrant workers in cities and towns in Bangladesh to send money to their families back in the villages. bKash also introduced a savings product for customers to save money in their e-wallets, paying interest rates of between 1.5 and 4 percent on account balances. This proved to be particularly attractive for unbanked and

Figure 2: bKash's Distribution Network

COMMERCIAL DISTRIBUTORS*

(Master Agents/Aggregators)

Footprint: 140 in bKash's network

Role:

- Find suitable bKash agents in their territory
- Manage agent liquidity by maintaining float**
- Deposit cash received from agents into bank account (BRAC or other banks)

Revenue Source: Earn commissions (% of customer transaction value)



RUNNERS

(Staff of Distributors)

Footprint: ~30 per distributor

Role:

- Visit agents to provide e-float/cash
- Collect cash from agents and send back to distributor

Revenue Source: Salaried employees of distributors



AGENTS

(Small Shop Owners)

Footprint: 120,000 in bKash's network

Role:

- Register customers
- Initiate opening e-wallets
- Educate customers
- Collect cash from and provide cash to customers***

Revenue Source: Earn commissions (% of customer transaction value)

*Serve several different companies in the FMCG and telecoms industries

** See footnote 8 for definition of float

*** If agents run out of e-float, they cannot take any cash deposits from customers. Similarly, agents need cash on hand so customers can withdraw from their e-wallets

low-income customers, as for many it was their first formal opportunity to save and earn interest. The company then expanded into more advanced types of services (Figure 3).

After low-income customers gained confidence in bKash's money transfer service, the company introduced mobile phone airtime purchases, which save people a trip to a store to buy an airtime card.⁹ Within a year of that service's introduction, over 10 percent of all mobile phone airtime purchases in Bangladesh were made through bKash e-wallets.

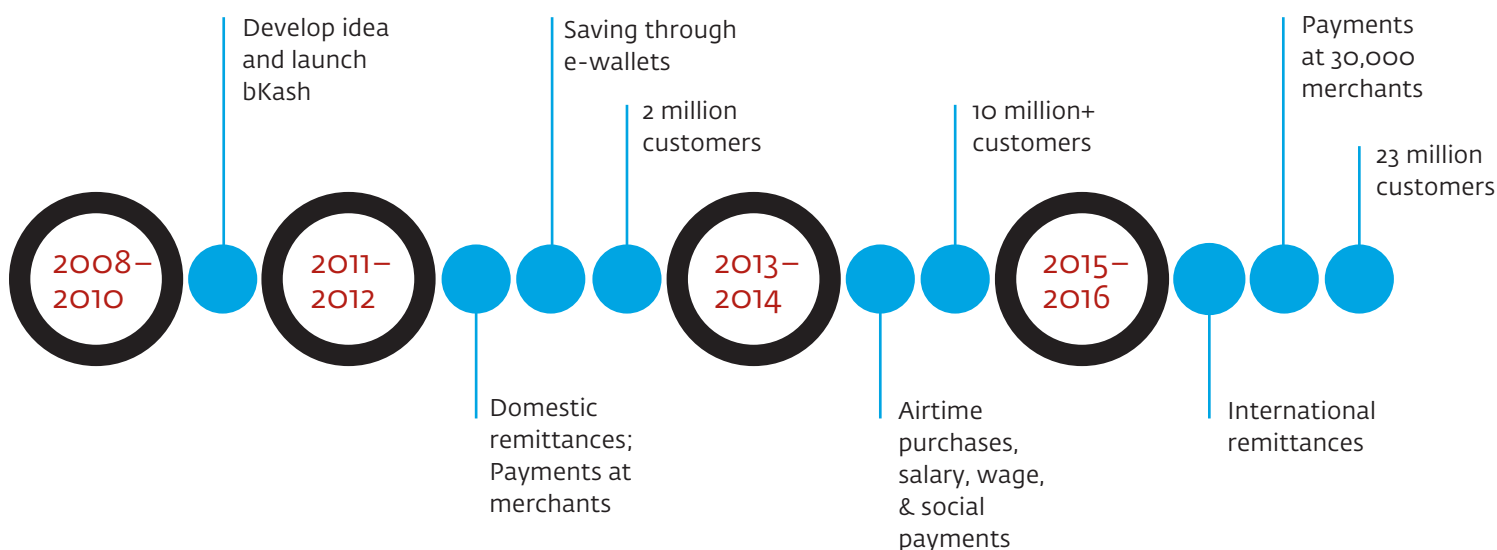
By its third year in operation, bKash introduced international remittances through BRAC Bank's partner banks in the United Kingdom and the United Arab Emirates. Bangladeshi migrants in these countries could use banks to send money to family and friends back home who would be able to receive the money in their bKash e-wallets. The following year, bKash expanded the reach of its international remittance service, partnering with MasterCard and Western Union, which had a presence in 200 countries. Now the large Bangladeshi expatriate market, estimated at 10 million people worldwide, can

send money instantly to their family members' bKash accounts in Bangladesh.

As confidence in bKash's services grew, the company introduced more diverse services targeted at low-income customers. These included collection of deposits for savings accounts with microfinance institutions, payment of micro loans, and disbursement of aid from donor agencies.

By 2014 bKash had set its sights on making mobile payments the norm for purchases of products and services in Bangladesh. This involved getting merchants such as restaurants, supermarkets, hotels, hospitals, and retail stores—including the smallest mom-and-pop shops—to accept bKash payments in lieu of cash or credit cards. As of 2016 people could use bKash at 30,000 merchants in major cities, approximately three times the number of shops that accept credit cards in the country. Small shops found bKash helpful because it allowed them to avoid holding large amounts of cash which made them vulnerable to robberies. Over time, bKash believes the number of merchants that accept bKash payments in small towns and villages will grow.

Figure 3: Key Milestones in bKash's History



SOCIAL PAYMENTS

bKash facilitates disbursement of various types of financial grants to targeted recipients on behalf of nongovernmental organizations and other institutions. This reduces the time between disbursement and receipt of aid money. This service has been especially helpful during emergencies and natural disasters. For example, Help Age International Bangladesh used bKash to transfer money to senior citizens who used the organization's health, emergency, and financial services. Another organization, Plan Bangladesh, transferred cash-for-work and livelihood grants to nearly 15,000 households using bKash. Similarly, Oxfam transferred money via bKash to over 3,300 households in Dhaka for humanitarian relief after a flood. The DFID and AusAID-funded Char Livelihood Program used bKash to reach 26,000 people in extreme poverty in remote islands with a \$6 stipend per month for over four years.

BUILDING CUSTOMER CONFIDENCE

Sequencing the introduction of services and pricing them affordably were critical to getting unbanked individuals in Bangladesh to adopt mobile financial services. Just as important was building the confidence of the unbanked in conducting financial transactions through mobile phones. This entailed helping people to cultivate new habits. The unbanked would need to stop storing money at home or paying middlemen high fees to transfer their money, and instead learn to save and use e-money in a secure digital system.

bKash knew such new habits would take time to develop, but could be encouraged through education and hand-holding. So the company rolled out a large-scale awareness campaign about mobile financial services. Mass advertising along with street plays, short documentaries, and interactive games educated potential customers about the benefits of such services and how to conduct transactions. These broad-based efforts were supplemented with in-person, step-by-step transaction guidance by bKash's network of 120,000 agents.

The company also added features to its user interface to make the process of conducting an electronic transaction as easy and reassuring as possible since the unbanked were afraid of making a mistake during a transaction and losing money. Customers could select a service by entering a number instead of typing a text message. This eased concerns among those with low literacy levels and no or limited knowledge of English which was the language of bKash's user interface. Since many customers missed the security of a physical receipt, bKash provided receipts via text messages after transactions were completed. It also made mini-account statements available through the main menu so customers could check their e-wallet balance at any time. All of these efforts reassured customers and helped them progress in their ability to use mobile financial services.



MOVING TOWARD GREATER PROSPERITY

Today, the name bKash is synonymous with mobile financial services in Bangladesh. bKash has made great strides in enabling the unbanked to access financial services and the company continues to work toward this goal. In 2015 over \$16 billion worth of e-money moved through the bKash system which, at the very least, has increased the efficiency of Bangladesh's \$200 billion economy. Most importantly, bKash has enabled the unbanked to gain a foothold on the ladder to financial inclusion and, ultimately, to *bikash*—the Bengali word for prosperity and the inspiration for bKash's name.

For more information on inclusive business at IFC, visit www.ifc.org/inclusivebusiness



ENDNOTES

- 1 Parvez, Jaheed, Islam, Ariful, and Woodard, Josh. 2015. *Mobile Services in Bangladesh: A Survey of Current Services, Regulations, and Usage in Select USAID Projects*. USAID, mSTAR and FHI360.
- 2 As reported by bKash.
- 3 bKash e-wallets operate on a FUNDAMO VISA technology platform and are fully encrypted to ensure secure transactions.
- 4 E-Money is stored value held in the accounts of users, agents, and the provider of the mobile money service. Typically, the total value of e-money is mirrored in a bank account so that, even if the provider of the mobile money service were to fail, users could recover 100 percent of the value stored in their accounts. Bank deposits can earn interest, while e-money cannot. Source: GSMA Mobile Money for the Unbanked. 2010. "Mobile Money Definitions."
- 5 This interface utilized a global data channel called Unstructured Supplementary Service Data (USSD) which was the popular choice for mobile financial services since it was compatible with any type of mobile phone. USSD is a data channel on the Global Systems for Mobiles network, with a menu form of SMS through which customers receive a text menu on their phones instead of a string of words. USSD transports short messages between mobile phones and the network. It provides interactive dialog between the user and a certain set of applications. Source: FinMark Trust. 2007. "Mobile Banking Technology Options." http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/06/finmark_mbt_aug_07.pdf.
- 6 bKash shares 7 percent of the revenue it earns through transactions fees with mobile network operators.
- 7 bKash works with all mobile network operators that use the Global System for Mobiles, i.e. GSM network.
- 8 bKash also earns revenue through interest on the float account, which is the balance of e-money, or physical cash, or money in a bank account that an agent can immediately access to meet customer demands to purchase (cash in) or sell (cash out) electronic money. Source: GSMA Mobile Money for the Unbanked. 2010. "Mobile Money Definitions."
- 9 As shown in Figure 3, people in some cities could use bKash to pay for their purchases at select retail stores starting in 2011, but these payments became a major focus for the company in 2014.

Bridge International Academies

Region: Africa, South Asia

Sector: Education

IFC Investment: \$10 million

From the creation of the United Nations Millennium Development Goals of 2000 to the 2015 Sustainable Development Goals there has been a notable shift in focus on the all-important issue of education. The previous set of goals focused on increasing enrollment. Today the emphasis is on providing an inclusive and quality education.

And for good reason: Rising enrollment must be accompanied by better quality education, and often it has not been. In Sub-Saharan Africa, for example, there was a 20 percent increase in the net enrollment rate from 2000 to 2015, yet while more children attended school, too often they were not progressing.¹ As of 2011, only three out of ten third year school children in Kenya could do second-year work.² Public schools were also associated with unofficial payments, including desk, homework, and other fees.³

It is not surprising, then, that parental dissatisfaction with the quality and cost of public primary schools pushed many families to look for other options. In many places

parents and entrepreneurs opened small schools to serve the needs of children in their communities. In informal settlements in Nairobi, it was estimated that 60 percent of children attended schools that were privately-run.⁴ Such schools charged fees, but those were often lower than or on par with public school fees. These schools took steps to improve quality, but most lacked the resources to invest heavily in new teaching materials, teaching methods, or school management.

Bridge International Academies was established to change the quality of education available to children in underserved, low-income communities. It is the first



educational organization to address the problem of quality at scale, allowing it to invest heavily in research and technology and to focus relentlessly on learning. Bridge has asked—and tried to answer—a fundamental question about education in low-income countries: How can learning outcomes for children in these regions be radically improved at a very low cost to parents, donors and governments?

Bridge has grown from two academies in Kenya with 300 students in 2009 to almost 100,000 students in over 470 locations in Kenya, Uganda, Nigeria, and India. It is also starting a pilot program with the Government of Liberia to run up to 50 schools.

The organization has developed unique systems that tackle some of the most challenging issues in education. And so far Bridge's plan seems to be working. Its first graduating class in Kenya had a 40% higher chance of passing the national primary exit exam than the national average. The organization's own studies show that its students outperform their peers in public schools in basic literacy and reading; further independent studies of learning outcomes are currently underway.

DEVELOPING AN IDEA

From 2005 to 2006, Shannon May was a resident anthropologist on a development project in China and an English teacher at the local village school there. May, who would go on to co-found Bridge International Academies, witnessed firsthand how a lack of resources and rampant teacher absenteeism contributed to an environment in which children were present in school but were not learning. She found that only 2-to-4 percent of children passed the examinations needed to move on to secondary school.⁵ Parents in these communities often made the economically rational decision to send children to work rather than to schools that were not improving their future prospects. Unfortunately, with no alternatives to state-provided education, parents were faced with the painful realization that their children were likely to grow up with less opportunity than they themselves had.



May and her future husband Jay Kimmelman began to explore ideas about how to provide children from the most marginalized, lowest-income families with a primary education that would give them the literacy, numeracy, and other skills necessary for secondary school and for life. Critical to their approach was that parents should be able to make their own decisions regarding their children's education.

With a background in computer science and electrical engineering, Kimmelman had co-founded and run Edusoft, an educational software company in the U.S. which he scaled to serve three million students. Kimmelman and May outlined the business model for Bridge based on research they conducted in informal urban settlements and villages across Sub-Saharan Africa. Kimmelman then invited Phil Frei, a former roommate, to join the team. Frei had a consulting background in commercializing new technologies and had moved to Malawi to apply his background to a social impact project with smallholder farmers.⁶

Committed to making data-based decisions, the three friends considered potential countries where they could launch their idea and ranked Kenya the highest. Core considerations in their assessment were:

- **Poverty Rate:** Countries where more than 50 percent of the population lived in poverty were ranked higher, as they demonstrated a greater need for affordable and improved diversity of education.



Bridge's Value Chain

An Overview of Challenges and Solutions



Value Chain



Challenges in Providing Low-Cost Education



Bridge's Solutions

Product Development	Distribution	Marketing & Sales	Customer Service
<ul style="list-style-type: none"> Limited availability of teachers Disparate implementation of national curriculum Traditional modes of learning Language barriers when scaling 	<ul style="list-style-type: none"> Ensure consistent quality at all locations Efficient communication with staff Manage geographically dispersed locations Need to scale quickly and cost-effectively 	<ul style="list-style-type: none"> Families have limited money to spend on school Need for schools to be a part of the local community 	<ul style="list-style-type: none"> Teacher absenteeism Lack of feedback loops to engage parents
<ul style="list-style-type: none"> Trains and supports teachers to deliver student-centric learning Develops custom teacher and learner resources, including teacher guides Prioritizes countries where English is already the language of instruction 	<ul style="list-style-type: none"> Uses technology to track and monitor classroom learning Delivers and adapts lesson plans via tablets Decentralizes academy management with strong central support Embeds quality control functions in academy management structure Standardizes expansion process for new academies 	<ul style="list-style-type: none"> Engages with parents and community to raise awareness Hires teachers from the local community Sets price point on par with public school costs 	<ul style="list-style-type: none"> Transparent fee payment through mobile platforms Emphasizes relationship-management with parents (e.g. parent satisfaction surveys) Ensures teacher oversight by managers and tablet feedback



- **Population:** To help ensure adequate demand and class size, the population density had to be at least 125 persons per square kilometer and total minimum population had to be at least 30 million.
- **Language:** English had to be one of the official national languages, enabling the founding team to more easily engage in all aspects of developing the academic, technological, and business aspects of the model.
- **Exam Pass Rate:** The co-founders looked at countries where a significant majority of poor children failed national or international exams even after completing primary school.
- **Private School Experience:** Where parents had already opted to take their children to small, community run, low-fee private schools, it was clear that there was demand for improved, affordable education and that a market existed.

In 2008 the three friends moved to Nairobi and launched Bridge International Academies. Their goal was to address a single yet seemingly intractable problem: How to create a school or system of schools that ensures children learn but that is still affordable and accessible to all?

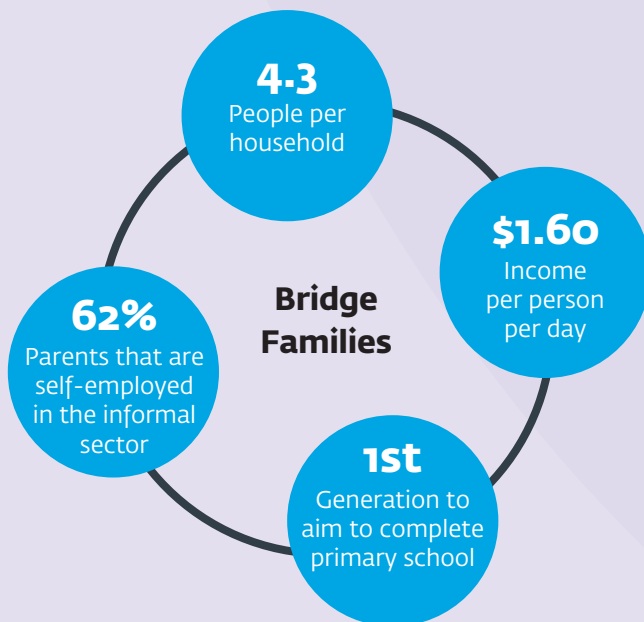
BUILDING THE MODEL

The co-founders knew that the success and sustainability of Bridge International Academies would rely on their ability to deliver a world-competitive nursery school and primary education at a cost that a parent living in poverty could afford. To do this, they would need to invest large sums in research, curriculum development, and technology. And to pay for that, they would need to base the model on scale. Through self-funding, they began the research and development phase, asking questions such as: What support does a teacher need to improve learning? What does a child need to feel engaged in the classroom? How can we lower costs? Bridge aimed to deliver higher results at a cost that was lower than or equal to government spending per child, and thus spur innovation across the entire system.

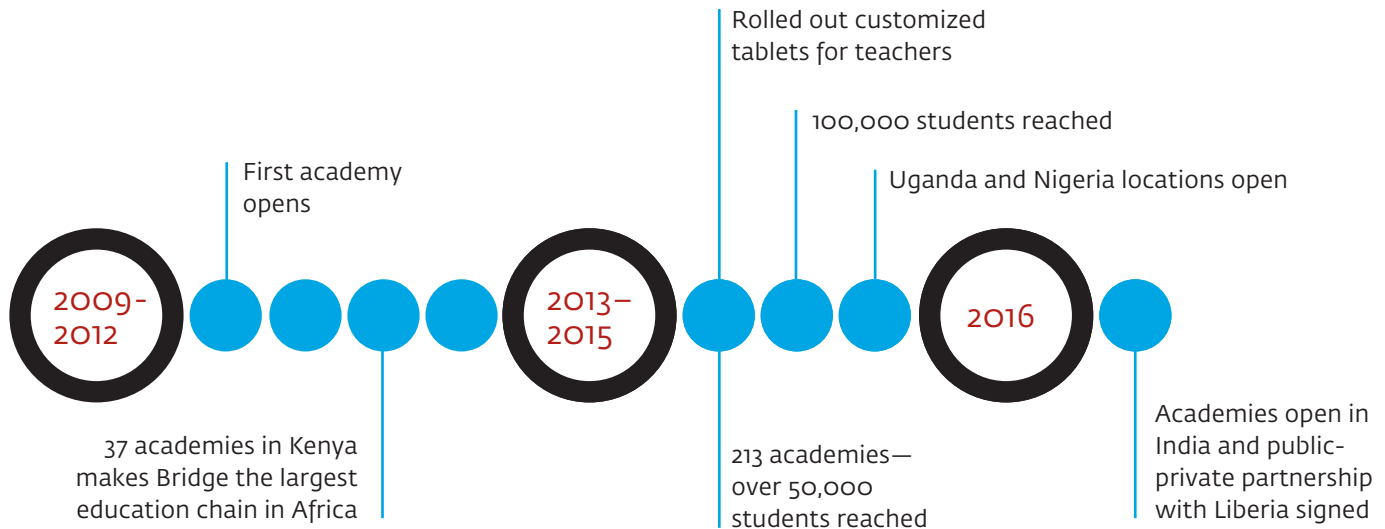
A Typical Bridge Family

Sabbir and Taban live with their four children in a one-roomed mud house. Sabbir sells fried bread and Taban runs their small business selling plants that they grow in their yard. Some 62 percent of primary earners in Bridge families run informal businesses like Taban's and like most Bridge families, they are working hard for a better life for themselves and their children.

Two years ago Sabbir and Taban decided to enroll their two younger children into Bridge. As Taban explained, "The little education I got has helped me get several jobs. I know that if my children can get more than I did then it would really change their lives and that of the whole family."



"We did not have much education, but we want that to be different for our children."

Figure 4: Key Milestones in Bridge International Academies' History

The first Bridge International Academy opened in Nairobi's Mukuru slum in 2009, offering kindergarten and two years of primary school. Bridge decided to only engage with neighborhoods where per capita income levels were \$2 per day or less. From the beginning, Bridge knew that close coordination with community leaders was vital. It worked with them to educate families about Bridge and invited members of the community to visit an academy. Bridge built new schools on leased sites using low-cost materials and standardized designs, ensuring cost-effective volume procurement and rigorous quality control.



GOING BEYOND TRADITIONAL METHODS

Learning from a technique it saw in the U.S., Bridge developed teacher guides that provided detailed, step-by-step instructions for teachers to use in every subject and learning period. The idea was to empower teachers to be fully equipped to focus on student engagement and comprehension—and free them from worrying about content by providing factually correct, engaging, and well-paced lessons.

Core to Bridge's approach was to train teachers to move away from the blackboard, using the teacher guide to provide in-class work according to the student's level of learning, and prompt teachers to walk around the room, check students' work for understanding, and ask questions to encourage inquiry.

Bridge developed its courses based on Kenya's national curriculum and government standards, with additional emphasis on reading and critical thinking skills. Bridge students would spend more "time on task"—a total of 47.5 hours from Monday to Friday and an option of five hours on Saturday.

To support early childhood development, Bridge used low-cost but effective learning tools—repurposed egg cartons, colored plastic rings, and mini chalkboards, for example—to reinforce colors, counting, and basic math with custom-designed educational toys and workbooks to develop students' motor skills and reinforce classroom content. At the primary level, students had access to workbooks for phonics, comprehension, and problem-solving, geoboards to practice math, science kits to learn by doing, and maps to learn about their community and the world beyond.

All of these tools were designed to help children learn in more constructive ways than traditional rote methods. At the same time, Bridge also prepared students for national exams and conducted monthly assessments to ensure that students stayed on track and to assess the efficacy of their pedagogy.



SETTING AN AFFORDABLE PRICE POINT

As of 2016, the typical household income of a Bridge target student was about \$1.60 per person per day.⁷ That income level makes the price point for Bridge tuition an extremely important factor. To set its fees, Bridge conducted extensive surveys to understand how much parents living in Nairobi's informal settlements earned and how much they were spending each month to educate their children, at both public and private schools.

Using an affordability limit of 20 percent of income, Bridge calibrated its fees to be competitive with existing suppliers in order to be cost competitive for parents. Because incomes and education costs vary by area, Bridge fees also vary depending on a student's grade and the location of the school. On average, a Bridge student in East Africa pays \$6.60 per month, which is inclusive of textbooks, homework books, and all learning materials. Parents also pay a one-time registration fee.



IDENTIFYING AND DEVELOPING TALENT

To identify potential teachers, Bridge engaged community leaders and held open houses. From the beginning, the organization was committed to recruiting from the local community for three key reasons:

- Bridge wanted its teachers to be able to empathize with students' circumstances and wanted students to be able to identify with teachers.
- Bridge operates in marginalized and under served communities, areas in which outside teachers are often

THE BRIDGE INTERNATIONAL TRAINING INSTITUTE

The goal of the Bridge International Training Institute (BITI) was to uncover local talent, identifying individuals with the potential to become Bridge teachers and developing their teaching skills. The institute's 235-hour intensive training course focuses on how to manage a classroom and ensure each child is learning, as well as how to use the teachers' guides.

In order to maintain its affordable fee structure, Bridge aims for a teacher-to-student ratio of 45:1, so the institute puts a great deal of focus on classroom management, leadership, and technology.



unwilling to relocate. Recruiting within the community means that Bridge schools are always staffed and open.

- Bridge knew it would be vital that its academies be community schools, run by members of the community and creating much needed local employment.

To develop potential teachers Bridge established the Bridge International Training Institute. The qualifications to apply to the institute would be the same as for the government

teacher training college. Beyond these requirements, Bridge looked for individuals with leadership experience in church or other community organizations, good communication skills, and a passion for teaching and children. Many were previously underemployed, working primarily in the informal sector without wage security or benefits.

ENSURING QUALITY AND EFFICIENCY

Bridge wanted a management structure that would allow for local-level decision making while providing consistent support and quality in the classroom. It developed a structure that operated at three geographic levels: local, area, and regional (*Figure 2*). The structure ensures that everything from logistics to relationship management is covered.

To make certain that teachers were supported academically, Bridge set up a travelling academic field team to engage with teachers and monitor them in classrooms. The organization's central academic research and development team improved lessons based on feedback from teachers and from the academic field

team while incorporating the latest developments in teaching methods. Other teams were created to facilitate improvements by filming lessons, identifying and testing new learning methods and programs, and performing quality audits.



TECHNOLOGY AND ANALYTICS

In 2011 Bridge deployed smartphones loaded with a custom-developed application that connects managers to a central cloud-based

server. The app tracks student admissions and billing in real-time and serves as a financial management tool for the overall academy, including fee payments, expense management, and payroll. Two years later Bridge rolled out tablets for teachers, enabling dynamic publishing of teacher guides and real-time data collection to and from the classroom (*Figure 3*). Through the use of mobile and other technologies, Bridge has been able to:

Simplify Operations. Academy Managers are able to focus on teacher support and parent engagement instead of administration. For example, to eliminate fraud and security risks inherent in collecting cash, Bridge decided to use the popular M-PESA mobile phone application available in Kenya to go cashless. Parents pay school fees either via mobile or by bank deposit and Bridge parents can see their payment status update in real time. In the other countries where it operates, Bridge uses similar cashless payment systems either through mobile payments or bank vendors.

Ensure Engagement. Bridge knew that their academies would only be as strong as the teachers in the classroom. Ensuring teacher attendance was a key part of that. The teacher tablet rolled out in 2013 allowed Bridge's central team to monitor when the teacher checks in and the pace at which the teacher progresses through lessons, helping to ensure that teachers are active in the classroom throughout the day. If a teacher fails to check in, Bridge can send a substitute teacher to ensure minimal loss to lesson time.

Figure 2: Field-based Structure

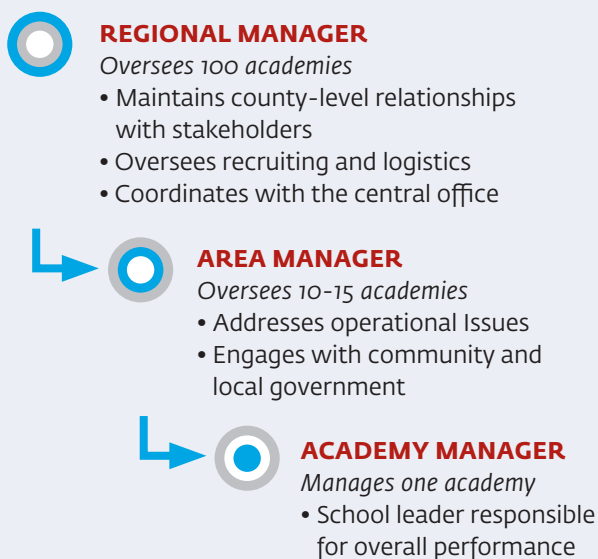
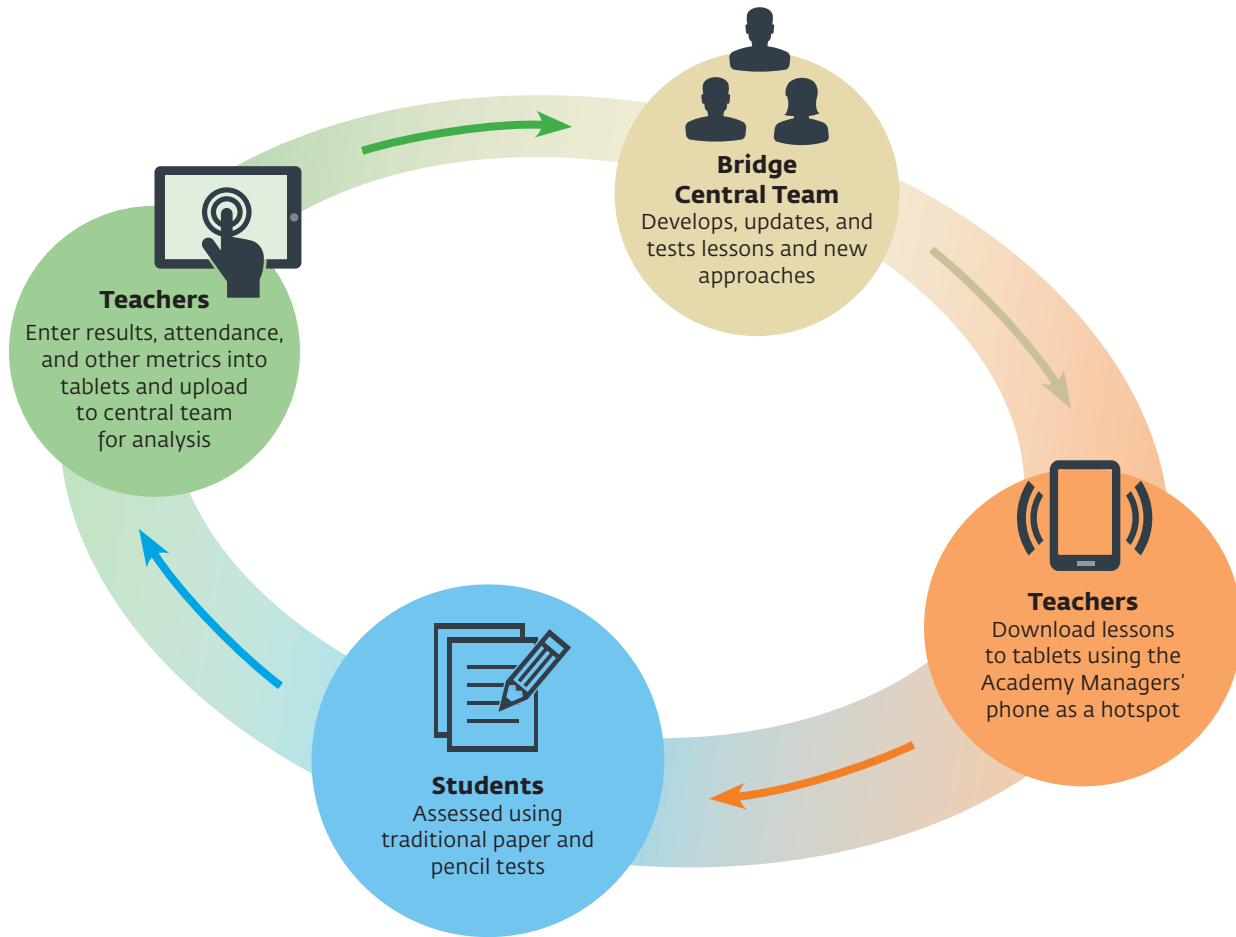


Figure 3: Bridge's Technology Cycle



Improve Learning Outcomes. The system created a direct link between Bridge’s academic specialists and teachers in the classroom. Uploaded data on the timing of lesson delivery and student comprehension enables continuous improvement to lesson guides and teaching methods. For example, if a majority of students across the network are struggling with a lesson, the academic team can revise content and integrate it into future sessions. When the data shows outlier classrooms either falling behind or excelling, the academic field team can visit the location to further train the struggling teacher or learn from a teacher whose students are outperforming other teachers’ students across the network.

EXPANDING BEYOND KENYA



ENGAGING NEW INVESTORS

By 2013 Bridge had opened 213 academies across Kenya, reached 57,000 students, recruited and trained over 2,000 people, and attracted investments from the Omidyar Network, Learn Capital and NEA. The organization knew it would need additional capital and investors if it wanted to continue to improve learning outcomes and expand beyond Kenya. So Bridge leadership sought investors that shared its goals.

A LEARNING LAB

As Bridge expanded it found that its growing number of academies, together with its real-time data collection capabilities, constituted an internal “learning lab.”

As the academic team identifies new methods or resources they believe can aid learning, they are able to test them within a small group of academies before replicating them academy-wide. In this way Bridge can determine how lesson pacing, format, or specific examples lead to more or less comprehension. This has important implications, not only for Bridge, but for wider pedagogy.



The next step for Bridge was to broaden its reach, creating more opportunities for children to learn.

Bridge approached IFC, a member of the World Bank Group, to become a lead investor with a \$10 million investment as part of an equity fundraising. Beyond seed financing, Bridge was also looking for advice in addressing the regulatory challenges that come with cross-border expansion. In addition to IFC, Bridge brought on other key investors such as the U.K.’s CDC, Novastar, PanAfrican Investment, Rethink Education, as well as high profile individuals like Bill Gates and Mark Zuckerberg.⁸ Bridge also got a loan from the U.S.’s Overseas Private Investment Corporation.



LOCAL ADAPTATION

As Bridge began to consider expansion outside of Kenya, it used many of the same factors it looked at originally—population density, English as the language of instruction, and government support. Bridge identified Uganda as the next logical country due to its many similarities with Kenya and shared border. In February 2015 Bridge opened its first academy in Uganda’s Busoga region.

Despite the similarities to Kenya, however, the new environment posed challenges for Bridge including:

- **Learning levels.** Numeracy and literacy levels were lower in Uganda, and levels in Busoga were among the lowest in the country. This had an effect on students and teacher candidates alike. Bridge’s remedy was a cross-age, homogeneous English learning program for two hours every day to enable students to rapidly acquire the level of English language comprehension needed to attend a Bridge school.
- **Payment system.** Over time, the M-PESA mobile payment system had become so widespread in Kenya that Bridge no longer had to educate parents on mobile money. In Uganda, Bridge had to again engage with parents on how to use a mobile-based payment system. Bridge also launched a partnership with the solar lighting company Fenix to provide loans for school fees to parents in Uganda who use Fenix’s solar systems.



DEVELOPING PARTNERSHIPS

Bridge continued to broaden its reach, both through its established model as well as through new modes of delivery. In September 2015, Bridge opened two nursery and primary academies in Lagos, Nigeria. Both schools had full enrollment and waiting lists within a week. Four additional schools opened across Lagos State in early 2016, with another 20 expected to open later in 2016.

Bridge's expansion to Nigeria was facilitated by a grant from U.K.'s Department for International Development (DFID). Through DFID's Innovation Fund for innovative business models and its Developing Effective Private Education Nigeria project, Bridge received a grant of approximately £3.45 million to share the risks associated with entry into the Lagos market.⁹

Also in 2015 Bridge entered into an agreement with the government of Andhra Pradesh in India. Bridge agreed to adapt its model in order to meet local needs by rebuilding and expanding decrepit, closed schools into model community schools. The first nursery and primary academies opened in June 2016 and include locally oriented activities, such as yoga, in the school routine.

Bridge's first engagement as a school management organization for public schools came in 2016 with the Liberian government. Bridge agreed to partner with the government in turning around 50 failing public nursery and primary schools in the 2016-2017 academic year. The program is part of a pilot initiative to see how such organizations can help improve education in the West African nation in partnership with the government. Bridge will work in existing schools, with existing teachers and pupils, but will use its own training and lesson delivery models. The schools will ultimately remain under government control and will remain free of charge to students. The government will continue to pay school staff salaries, while the intervention costs of the partnership are being funded by philanthropies, including the Mulago Foundation.

MEASURING RESULTS

To quantify its results, Bridge works with an external evaluator to conduct commonly used early grade reading assessments and early grade mathematics assessments. The results show learning improvements for children attending Bridge schools of over 32 percent in core reading skills and 13 percent in core math skills.

In 2015, Bridge graduates in Kenya took the nationwide exam for the first time. Approximately 60 percent of the 2,900 students sitting for the exam passed, demonstrating a 40 percent higher chance of passing the exam than the national average. The results showed that the longer students had been in the Bridge system the stronger their results. Moreover, Bridge students had a 65 percent higher chance of being accepted to national secondary schools in Kenya, and over 100 students were granted full four-year scholarships for secondary school.

A large independent impact evaluation of Bridge is currently underway, led by a team of World Bank research experts and independent academics. The evaluation will also look at—and deliver data about—the broader context of low-cost private schooling.



MOVING FORWARD

The Bridge International Academies of today may not necessarily be the Bridge of the future. Bridge plans to continue to innovate and expand and will continue to push toward its goal of reaching millions of children across the world. For example, Bridge sees the potential to sell resource materials to other schools, to use its teacher training methods for other organizations and governments, and to enter into additional public-private partnerships. Bridge is also focused on transitioning children to secondary school.

Bridge sees itself as one of many organizations that refuses to accept the status quo in education and one that is pushing the boundaries of how we teach and learn. Bridge will continue to innovate and strive for radical change in order to create the level of access and quality that all children deserve.

**For more information on
inclusive business at IFC, visit**
www.ifc.org/inclusivebusiness



ENDNOTES

- 1 UN, MDG Report 2015, [http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)
- 2 UWEZO, 2011, "Are Our Children Learning? Annual Learning Assessment Report." Available at: http://www.uwezo.net/wp-content/uploads/2012/08/KE_2011_AnnualAssessmentReport.pdf
- 3 The Economist, Classroom Divisions, 22 February 2014, <http://www.economist.com/news/middle-east-and-africa/21596981-paid-private-schools-are-better-value-money-free-sort-classroom>
- 4 African Population and Health Research Center, Quality and Access to Education in Urban Informal Settlements in Kenya, October 2013, <http://aphrc.org/wp-content/uploads/2013/11/ERP-III-Report.pdf>
- 5 Company data
- 6 Harvard Business School Case Study, 2010, "Bridge International Academies: A School in a Box". Available at: <http://www.bridgeinternationalacademies.com/wp-content/uploads/2013/01/2010-Harvard-Business-School.pdf>
- 7 Calculated using World Bank methodology, based on a sample size of 17,986 Bridge households across Kenya. Median income of Kshs 12,000 per month was equivalent to \$136 per month or \$4.53 per day at the time of calculation. From the same periodic data, Bridge families consists of 2.01 adults and 2.26 children. The OECD equivalence scale of (ES) = $1 + 0.7 (\text{Nadults} - 1) + 0.5 \text{Nchildren}$ = 2.837 family members the Daily Per capita=Daily Household income/ES = \$4.53/2.837 estimates that Bridge family members live on \$1.60 per day. See: <http://www.oecd.org/statistics/OECD-ICW-Framework-Chapter8.pdf>
Simple calculations used by James Tooley of the University of Newcastle find the daily household income to be more like \$1.25 per person, per day.
- 8 IFC, New Horizons in African Finance, 2016. Available at: <http://www.ifc.org/wps/wcm/connect/6c338c804c128a5e989abed8bd2c3114/New+Horizons-English-Web.pdf?MOD=AJPERES>
- 9 DFID, Developing Effective Private Education Nigeria Annual Review 2014. <https://devtracker.dfid.gov.uk/projects/GB-1-202678/documents>

Region: Africa and Asia**Sector:** Insurance**IFC Investment:** \$2.2 Million

MicroEnsure

The insurance industry has long been perplexed by the economic realities of insuring the world's poor. As a group they represent a \$40 billion market opportunity,¹ yet they also present greater risks than typical insurance customers and are able to afford only miniscule premium payments. How, then, can this group of four billion people become a viable business opportunity? One company, MicroEnsure, has found solutions.

MicroEnsure has developed pioneering insurance solutions for low-income people in Africa and Asia living on less than \$4 per day. The company is a microinsurance solutions provider and, in some countries, an insurance intermediary—an agent or broker that matches the needs of potential customers to appropriate insurance options and that receives a commission from insurers for each policy sold.²

MicroEnsure has introduced over 200 types of insurance including for life, health, and accidents (*Table 1*). Since low-income customers are often new to insurance, the company distributes its products through mobile network operators, microfinance institutions, and other organizations that low-income customers trust.

MicroEnsure bundles insurance with products that potential customers already use, including micro loans and mobile phone airtime.

The company currently operates in 15 countries, including 10 in Africa. Its customer base has grown from two million in 2008 to more than 40 million today, and to date it has paid more than \$20 million in claims. Its distribution network includes 17 mobile network operators, 90 microfinance institutions, and a wide array of other partners such as agricultural suppliers, health clinics, nongovernmental organizations, faith-based networks, and associations. The International Finance Corporation, global insurance company AXA Group, the impact investor



Omidyar Network, and Sanlam Emerging Markets are MicroEnsure's backers. The company is headquartered in the United Kingdom with offices in nine countries.

The idea for MicroEnsure originated in 2002 as a program within the microfinance institution Opportunity International; by 2005 it had grown large enough to become a separate nonprofit known as the Micro Insurance Agency (MIA); it was re-launched in 2008 as the for-profit company MicroEnsure.

THREE CRITICAL ROLES TO INSURE THE POOR

MicroEnsure works with partners across the insurance value chain to develop and deliver affordable insurance solutions. It tailors its role depending on the needs of its partners, but broadly plays three key roles.

First, MicroEnsure analyzes a country's market for microinsurance. It then identifies insurance and reinsurance companies and brings them on board to bear the risk of insuring customers.

Second, MicroEnsure mobilizes distribution partners—companies and organizations with high levels of trust among the poor—to get insurance into the hands of customers.

Third, MicroEnsure provides integrated back-office services to its insurance and distribution partners, including product design and marketing, risk selection, underwriting, and pricing. In most cases, MicroEnsure also collects premiums from customers and facilitates claims payments on behalf of insurers. It also collects and analyzes customer data, enabling it to develop new insurance products.

Table 1: A Selection of MicroEnsure's Products

INSURANCE TYPE	INDICATIVE COVERAGE OPTIONS
Life	<ul style="list-style-type: none"> • Payment of a borrower's outstanding loan amount plus interest • Fixed payment to cover funeral costs for a borrower/bank customer and his/her family • Basic coverage at no direct cost to customer, but linked to the amount of mobile airtime purchased each month or the amount of money held in a savings account at a bank or micro finance institution
Credit Health	<ul style="list-style-type: none"> • Covers the total or a part of the borrower's outstanding loan payment installments after hospitalization
Hospitalization	<ul style="list-style-type: none"> • Payment of a fixed amount to cover cost of hospital stay and/or for any type of expense per day of hospitalization based on monthly mobile airtime purchase
Disability	<ul style="list-style-type: none"> • Benefits for disability through illness or accidents, with simple and clear definitions
Redundancy	<ul style="list-style-type: none"> • Payment of an unemployed person's outstanding loan amount plus interest or a multiple of his/her bank deposit amount in the event of an employer downsizing or similar redundancy
Political Violence	<ul style="list-style-type: none"> • Payment of outstanding loan amount plus interest if a borrower's business is destroyed
Property	<ul style="list-style-type: none"> • Payment of a borrower's outstanding loan amount in the event of fire, flood, or damage from another catastrophic event³

Note: Insurance premiums are paid by different parties. They can be embedded within loans and paid by borrowers as an upfront fee. A microfinance institution, bank or mobile network operator may cover premiums for basic insurance to incentivize customers. For example, these companies may link basic insurance coverage to a certain amount of mobile airtime purchased or the amount deposited in a savings account.



MicroEnsure's Value Chain

An Overview of Challenges and Solutions



Value Chain

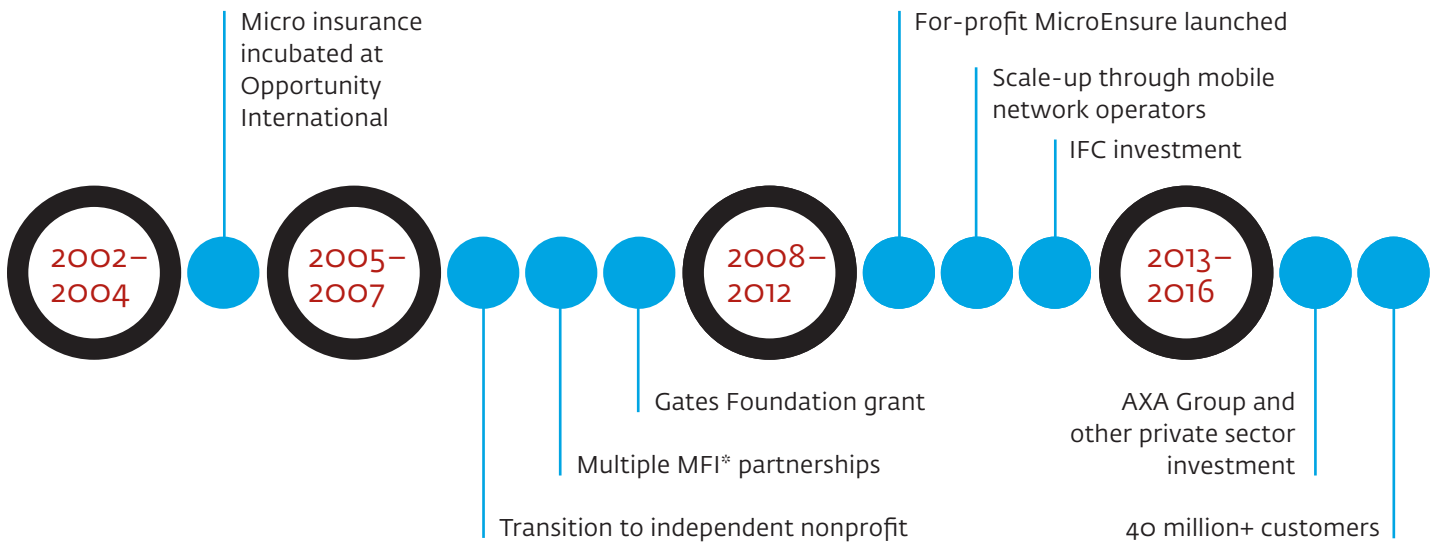


Challenges in Insuring Low-Income Customers



MicroEnsure's Solutions

Product Development	Distribution	Marketing & Sales	Customer Service
<ul style="list-style-type: none"> • Mainstream insurance does not address key needs • Complex terms and conditions are difficult to understand 	<ul style="list-style-type: none"> • Sales agents increase distribution costs • High distribution costs increase premiums 	<ul style="list-style-type: none"> • Limited understanding of insurance • Negative perception of insurance companies 	<ul style="list-style-type: none"> • Large number of documents needed for claims • Lengthy claims process • Discrimination against poor customers
<ul style="list-style-type: none"> • Tailors products to grassroots realities • Simplifies terms and conditions • Uses innovative approaches to design new products 	<ul style="list-style-type: none"> • Works with partners that already have large distribution networks • Selects distribution partners that have built trust and credibility • Uses mobile phones to enroll customers 	<ul style="list-style-type: none"> • Creates trust through word-of-mouth marketing and customer testimonials • Insures common events to build understanding of insurance • Enables customers to try basic insurance with airtime purchases or bank deposits 	<ul style="list-style-type: none"> • Simplifies documents required for a claim • Guides customers through the claims process • Accepts claims through mobile applications • Settles claims quickly • Uses mobile wallets to facilitate payments to unbanked customers

Figure 2: Key Milestones in MicroEnsure's History

*Micro finance institution

GETTING AN IDEA OFF THE GROUND

The seeds of MicroEnsure were planted in 2001 when Richard Leftley, a 29-year-old broker with reinsurance firm Benfield Greig in London, took a volunteer trip to Zambia.

Leftley encountered a young mother who lost her child because she could not pay \$3 for hospital admission and another woman who had fallen into poverty after a death in her family. And while micro loans had helped many women start businesses, some borrowers were unable to repay the loans due to family deaths or illnesses, natural disasters, or other life events, and could be driven to debt and poverty as a result. Leftley believed insurance could provide many of these people with a safety net. The evidence was in India, the Philippines, and Uganda, where a handful of microinsurance products were already on the market. And he saw the gap between supply and demand for insurance in these poor communities as a significant untapped opportunity.

In 2002 Leftley, who would eventually go on to become chief executive officer of MicroEnsure, quit his job to join microlender Opportunity International. He set out to design insurance for people living on just a few dollars a day, convince them to purchase it, and then to find a cost-

Within four years, the initiative expanded from Zambia to the Philippines, Uganda, Malawi, and Ghana, reaching 300,000 customers.

effective model to distribute insurance on a large scale. To do so he launched a microinsurance initiative with an operational budget of \$100,000 for the first year.

Opportunity International selected Zambia for its pilot insurance program because of the country's dire health situation. In 2002 one of every four Zambians had HIV/AIDS, and the average life expectancy was 36. Working with ZSIC, a local insurance company, Opportunity International rolled out an insurance product called Credit Life that it could offer with its micro loans. A borrower paid one percent of the total amount of the loan upfront to get insurance coverage for the outstanding loan payment in the event of his/her death. The policy reduced the default risk for Opportunity International and gave borrowers reassurance that their death would not leave their families burdened with debt. Within a year, Opportunity International added funeral coverage, which could cost between three and six months of a family's income, to Credit Life.

The Zambia pilot was a success. Opportunity International reduced the workload and the costs for insurers to serve this relatively low-margin market by tapping into its own customer base and by collecting insurance premiums on behalf of insurers. Within four years, Opportunity International's microinsurance initiative expanded from Zambia to the Philippines, Uganda, Malawi, and Ghana, reaching 300,000 customers. At the same time, it began to offer coverage for disability and for property damage from fires and natural disasters.

To expand further, Opportunity International launched the Micro Insurance Agency (MIA) in 2005 as a nonprofit subsidiary, with Leftley as its CEO. MIA developed products for insurance companies in a comprehensive process that ranged from market assessments and product design to selecting distribution channels and providing back-office support. By 2007, MIA had partnered with more than 20 microfinance institutions in 11 countries. That same year a \$24.25 million grant from the Bill and Melinda Gates Foundation launched a period of rapid expansion for the company.

SETTING A GOAL: HOW TO SERVE FOUR BILLION PEOPLE

MIA faced a strategic choice in 2008: Stay small or expand to serve a potential multi-million customer base? The latter path would require access to debt and equity financing to provide the necessary operational flexibility, rather than relying on donors who tend to support clear-cut projects tied to specific outcomes. The choice was clear, and in 2008 MIA's board voted to establish MicroEnsure Holdings, Inc., a for-profit company which took over MIA's operations.

By 2009, MicroEnsure had reached four million people through partnerships with more than 30 microfinance institutions, rural banks, and savings and credit cooperatives in seven countries. Its groundbreaking work was having an effect on the broader market: More microlenders were linking with insurers and with other insurance intermediaries that had entered the market.

The roughly 130 million microfinance borrowers⁴ around the globe were the original target for MicroEnsure's products, yet the company was aware that reaching beyond that base to the four billion uninsured people living on less than \$4 day was essential to keeping its insurance products affordable in the long run.⁵ Without a large enough risk pool the costs of insurance products would cease to fall, an essential condition for the company to achieve financial sustainability. Also, it was clear that solid underwriting and operational discipline were necessary but not sufficient to the goal of reaching individuals without insurance or back accounts; finding the right distribution channel was also critical.

MicroEnsure needed a distribution partner with a large geographic footprint, a strong brand that low-income customers trusted, easily accessible points-of-sale, and the ability to facilitate cash transactions and payments when needed. It also needed a partner that wanted to leverage insurance to help grow its own business, which would align incentives and create a beneficial relationship for both parties.

SERVING THE MASS MARKET

Mobile network operators emerged as particularly promising partners for MicroEnsure for several reasons. Low-income customers were increasingly using mobile financial services to pay utility bills, send remittances to family members, and recharge airtime. Insurance products would be a natural addition to that list of mobile phone-delivered products.

Also, MicroEnsure believed that mobile operators could use insurance as a way to build loyalty among subscribers. Mobile phone subscribers in many emerging countries hold multiple (two to four) subscriber identity module (SIM) cards from various providers in order to save money using different airtime and messaging rates. A mobile operator could stand apart from its competitors by bundling basic insurance with airtime.

And with mobile phone technology widespread in developing countries, mobile network operators have

unique access to millions of customers, including many in remote rural areas. Those customers could be reached frequently and cost-effectively through mobile phones. That access could lower the costs associated with marketing insurance products, registering customers, collecting premiums, and paying claims. Mobile operators also had large agent networks for face-to-face interactions with customers and, perhaps most important, the poor often trust their mobile service providers more than other institutions.

In 2009, MicroEnsure created an innovative “freemium” product that would provide a certain amount of life or health insurance at no cost to a mobile phone subscriber. The insurance amount would be based on the total airtime the subscriber purchased each month and would be communicated to customers by text message. Coverage would apply to the subscriber and a designated family member. Mobile operators would pay a fee to MicroEnsure and the local underwriter for providing basic coverage, and

Design for the Local Context.



Low-income customers are not homogenous, so insurance products must be tailored to their particular needs. Rather than designing products in a boardroom, directly engage potential customers in interviews to understand what they need to cope with risk.

Cover Likely Events.



A low-income customer's first inclination is to go without insurance. So insurers need to focus on designing products those customers are likely to use, i.e., products with high potential for a claim such as those that cover accidents.

MicroEnsure's Product Design Principles

Create Simple Policies.

It is important to state clearly what is and is not included in an insurance policy and to have minimal exclusions and understandable terms and conditions. Also, waiting periods, age restrictions, and limits on the type and number of claim documents must be removed.



Think Outside the Box.

Insurers need creative solutions to address the broad range of risks that low-income customers often experience (see page 41, “Three for Free” Mobile Insurance).



customers could upgrade to premium coverage after six months for as little as \$1 per month.

MicroEnsure and Tigo Ghana, a subsidiary of the global telecom firm Millicom, launched the first “freemium” insurance product in 2010 and MicroEnsure played a pivotal role in bringing the product to life. It also tested options for paid insurance and learned that customers were willing to pay \$0.50 to \$1.50 per month in premiums to increase their coverage. The partnership with Tigo soon expanded to Tanzania and Senegal, reaching one million people within 14 months.

ATTRACTING COMMERCIAL INVESTORS

MicroEnsure benefited from the backing of a strong and diverse but changing group of investors at critical points in its development. The Gates Foundation grant fueled MIA’s rapid expansion into 10 countries and boosted its subscriber base from 2 million to 15 million between 2008 and 2012. It also enabled the company to reach the critical stage where it could attract commercial investors.

By mid-2012 MicroEnsure decided that equity financing would provide it with greater flexibility to rapidly test different approaches and products. Recognizing this need, Opportunity International—which had maintained a majority stake in the company since its founding—made a strategic decision to divest and retain only a minority stake in MicroEnsure. This allowed MicroEnsure to attract new investors. IFC, Omidyar Network, and select members of MicroEnsure’s management team became shareholders in 2013. IFC invested \$2.2 million in equity and debt to help MicroEnsure attract more commercially-minded investors and support the company’s transition to a financially sustainable, for-profit entity. This was IFC’s first direct investment in an insurance intermediary and presented an opportunity to support innovative approaches in the microinsurance space.

FREEMIUM PRODUCTS FOR HEALTH CARE AND SAVINGS

Medical Freemium: In Kenya, MicroEnsure worked with Airtel and Pan Africa Life Assurance to offer hospitalization coverage to Airtel customers. With monthly airtime usage of approximately \$2.40, customers received \$9.60 in hospitalization coverage and \$96 in life and accident coverage. The more customers spent on airtime, the greater their insurance coverage would become. Customers could earn up to \$48 in hospitalization coverage and \$960 in life and accident coverage based on their airtime usage.

Savings Freemium: MicroEnsure worked with banks such as Barclays and microfinance institutions such as Women’s World Banking to incentivize customers to open a savings account rather than keeping money under their mattresses. Financial institutions paid insurance premiums on behalf of their customers, which enabled them to earn a certain amount of life insurance based on the balance in their savings accounts. Mary Nkenshen, a food vendor in Ghana, was paid \$329 upon the death of her husband, who had saved \$114. Other products provided a fixed payout of five times the savings account balance in the case of a customer’s death or disability.



In addition to financial institutions, MicroEnsure sought mobile network operators as investors because of their large customer bases. The Norwegian multinational telecom firm Telenor Group became a strategic partner in 2013 and launched MicroEnsure Asia as a joint venture to serve over three million mobile phone subscribers. With the capital infusion, MicroEnsure expanded to 15 countries.

DRIVING DOWN DISTRIBUTION COSTS

With small insurance premiums, distribution costs had to be minimized in order to generate enough revenue for all parties. As it scaled up its mobile network partnerships, MicroEnsure opted for a low-cost model that allowed customers to self-enroll for insurance and pay premiums through a mobile phone instead of more costly models that required an agent. In the latter model, network operators would have paid commissions to agents to register customers which would have required agents to quickly register a large number of customers to be cost effective.

Moreover, the Tigo Ghana experience demonstrated that customers purchased insurance based on the perceived value of the insurance and its connection to the network operator's brand, regardless of an agent's presence to explain the product. And it became clear that the poor were all too aware of the potential for risks to devastate their lives. So the company decided to expand insurance benefits to address a wider variety of risks rather than spend money on agent-based customer education and enrollment. This strategy included the decision to offer "Three for Free," another "freemium" product that combined life, accident, and hospital coverage, and also helped mobile network operators attract and retain subscribers.

THE VALUE OF SIMPLICITY

MicroEnsure discovered that, while low-income customers experience risk in their daily lives, they are often unfamiliar with the potential benefits of insurance. To remedy this, the company used word-of-mouth to educate potential customers. It also paid claims at public events to increase awareness of and exposure to its products, circulated customer testimonials, and made rapid claim payments to alleviate commonly held concerns and doubts about insurance.

To simplify enrollment through mobile phones, MicroEnsure reduced its registration process to a few easy-to-follow steps. Mobile network customers automatically received insurance with airtime recharges, but could opt-in for additional coverage through a drop-down menu or a voice response system on their phones, or by contacting a call center.



GETTING THROUGH CRISES AND LOOKING AHEAD

In a crisis, poor customers need money right away to address immediate needs. So MicroEnsure established a 72-hour turnaround time for claim processing. The company found that customers who had a negative claims experience were more likely to drop coverage altogether. MicroEnsure took several steps to ensure this didn't happen:

- **Hand-holding.** Because claimants often had difficulty identifying the necessary documents to file a claim, causing delays, MicroEnsure realized it could create powerful visibility for its products by providing assistance. The company established call centers to contact customers who submitted claims. In doing so MicroEnsure simultaneously raised customer awareness about insurance and reduced fraud.
- **Accepting Simple Documentation.** In many remote areas in emerging countries it is difficult or even impossible to get formal documentation for insurance claims. In these cases, MicroEnsure created alternative means of identifying claimants. In Kenya, a life insurance claim typically required a government-issued death certificate. Since beneficiaries in remote areas often struggled to obtain that document, MicroEnsure was willing to accept a letter from an imam or pastor who officiated at the funeral.
- **Facilitating Claims Payments Through Mobile Wallets.** Mobile payments enabled customers who lacked bank accounts or proximity to a bank to receive claims payouts on their phones. These payments could then be cashed-out quickly through local mobile money agents.

As other insurance intermediaries engaged with mobile network operators and the early growth rates of "freemium" products slowed, MicroEnsure needed

"THREE FOR FREE" MOBILE INSURANCE

Funerals in Ghana are costly, and for Cornelius Tetteh's father, a pastor, there would be hundreds of guests traveling across the country to pay their respects. Tetteh had little money to pay for the event. Luckily, his father had enrolled in a life insurance policy over his mobile phone through MicroEnsure's partner Airtel, a giant in telecommunications services in Africa and Asia.

Airtel subscribers can qualify for life, disability and hospitalization insurance designed by MicroEnsure based on the amount of monthly airtime they use.

Tetteh learned about the policy through a text message sent to his father's phone. As next of kin, he received the equivalent of \$725, enough to properly celebrate his father's life. "Airtel Insurance comes in handy in Ghana where funerals are tremendously expensive," said Tetteh.

Source: MicroEnsure. "Cornelius Tetteh's Story." <http://www.microensure.com/clientimpact-stories.asp?id=309&start=0>.

additional capital to pursue new growth opportunities. Existing investors provided \$10.4 million in capital in 2014. And that same year French insurance giant AXA Group, which operates in 59 countries, became a shareholder. Sanlam Emerging Markets, a financial services group, also invested, and both companies brought critical capacity and skills to help MicroEnsure continue its expansion.

In early 2016, MicroEnsure raised an additional \$15 million from existing investors, including IFC, and AXA Group became its largest shareholder.

CONTINUOUS LEARNING

In less than a decade MicroEnsure grew from a small initiative housed in a microfinance institution into a for profit company serving millions of customers. Its “fail fast” mindset, which looked to constantly innovate and rapidly revise strategies that weren’t working, helped the company learn and adapt along the way so that it could remain responsive to the needs of the low-income customers it aimed to serve.

Since the poor largely didn’t value insurance and wouldn’t pay outright for premiums, MicroEnsure found ways to make insurance more palatable and attractive to them. Partners were critical to the endeavor. Microfinance institutions could use insurance to lower the risk of loan default by embedding insurance within a loan at a low fee to the borrower. Mobile network operators paid customers’ premiums for basic insurance coverage as an incentive to attract and build loyalty. MicroEnsure found that once the poor experienced the benefits of insurance at little or no cost, they quickly became willing to pay a small premium to expand their coverage.

MicroEnsure has made great strides in insuring the poor, but continues to strive to change perceptions of insurance. The company will maintain an iterative approach to refine its business model as it embarks on the next phase in its evolution.

For more information on inclusive business at IFC, visit

www.ifc.org/inclusivebusiness



ENDNOTES

- 1 Figures based on insurance premiums. Swiss Re. 2010. “Microinsurance—Risk Protection for 4 Billion People.” 2010.
- 2 Other sources of revenue are back office support and consultancy fees.
- 3 MicroEnsure provides property insurance to microfinance and small-business borrowers for their business premises. These borrowers include traders and vendors who operate small stalls or kiosks in markets, mom-and-pop shops that sell a variety of products, and service providers such as small auto repair shops.
- 4 IFC. 2015. Microfinance. http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Financial+Markets/MSME+Finance/Microfinance/.
- 5 Based on World Bank statistics, there are around 4 billion people living on less than \$4 per day, including 2.6 billion people living on under \$2 per day (in 2005 international dollars based on purchasing power parity). Source: Swiss Re. 2010. “Microinsurance—Risk Protection for 4 Billion People.” 2010.

Country: India**Sector:** Health Care**IFC Investment:** \$10 million

NephroPlus

Chronic kidney disease (CKD), which causes people to lose their kidney function over time, affects nearly 12 million Indians.¹ Once kidney failure occurs, affected individuals require a kidney transplant or weekly dialysis treatment to stay alive and will live only a few months at most without treatment.

Demand for dialysis is growing at a rate of 31 percent in India, compared to eight percent globally.² India's high rates of diabetes and hypertension, as well as increased awareness of CKD and treatment options, have contributed to rapid growth in demand for dialysis. Despite the importance of dialysis, more than 90 percent of the 230,000 Indians newly diagnosed with CKD each year die within months due to lack of treatment.³ Services are fragmented and largely concentrated in big cities. Also, high prices and the need for frequent treatments make dialysis a financial burden for many patients and unaffordable for others. A kidney transplant is a permanent solution, but availability is extremely limited due to

stringent regulation, low kidney donation rates, and poor infrastructure in the country. Moreover, kidney transplants can fail. This makes dialysis a critical alternative for people living with CKD.

Yet dialysis providers have shied away from expanding services as they struggle to make clinics profitable in a low-margin industry. Industry-wide operational inefficiencies, often related to equipment deployment and organizational structure, keep costs high. A shortage of trained nephrologists, nurses, and technical staff has also constrained the expansion of dialysis services. Reaching patients in lower income brackets presents a particular



challenge given the reluctance of providers to reduce prices in the face of tight profit margins. All of these challenges have deterred new entrants into the dialysis market, widening the gap between the supply and demand for services.

NephroCare Health Services Private Limited (NephroPlus), a provider network of dialysis services, entered the Indian dialysis market in 2010 with the goal of transforming the entire industry. The company provides the complete range of healthcare services that kidney failure patients need to lead productive lives, including hemodialysis, peritoneal dialysis, and kidney transplant services. To deliver these services NephroPlus designs, builds, and operates low-cost centers that provide high quality and affordable dialysis services. Centers are established through partnerships with hospitals or as standalone facilities.

At roughly \$25 per treatment, NephroPlus prices are 30 to 40 percent lower than large hospitals in India—and up to 50 percent lower in some cases. Today, NephroPlus is the largest provider network of dialysis services in India with 75 centers in 50 cities in 15 states across the country. Its centers are located in large metropolitan areas as well as underserved, small cities. Through its presence in smaller cities, NephroPlus reaches patients who would otherwise have to travel up to 100 kilometers for dialysis. The company served more than 6,000 patients in 2015 and now provides approximately 50,000 dialysis treatments each month.

A PERSONAL JOURNEY

In 1997, 21-year-old Kamal Shah, a software developer who co-founded a company that developed apps for Apple, was diagnosed with kidney disease and put on dialysis. After a year and a half, he experienced a failed kidney transplant and returned to dialysis. For many years, Shah was on peritoneal dialysis, which allowed him to work with minimal disruption.⁴ After being caught in the 2004 tsunami, however, he was badly infected and had to switch to daily nocturnal home hemodialysis. In the years that followed, Shah started a blog to encourage others with kidney disease to lead a full life.

HOW DOES DIALYSIS WORK?



The kidney performs the critical functions of removing waste and extra water from the body. Dialysis artificially conducts these functions by circulating blood outside the patient's body using an external filter called a dialyzer. Most NephroPlus patients are on hemodialysis which is highly time consuming. Hemodialysis patients visit a clinic two to three times a week with each session lasting around four hours. In the absence of an opportunity for a transplant, individuals afflicted by kidney failure require dialysis for the rest of their lives.

Vikram Vuppala, who worked as a healthcare services strategy consultant with McKinsey & Company in the United States and was looking for opportunities to improve the health sector in India, discovered Shah's blog. Vuppala contacted Shah and proposed the idea for a dialysis start-up. Shortly thereafter, Vuppala brought on board Sandeep Gudibanda, whose entrepreneurial experience with technology start-ups and social enterprises would make him a valuable asset to the team. The three of them founded NephroPlus in 2010.

Through their experiences speaking with nephrologists, dialysis staff, and scores of patients, the three co-founders identified several areas where NephroPlus could effect high-impact, fundamental changes to the sector. These included improving the quality of kidney dialysis, reducing the gap between the demand and supply of services, particularly in underserved regions, and designing a model for centers that would overcome the operational and financial challenges experienced by other providers.



NephroPlus's Value Chain

An Overview of Challenges and Solutions



Value Chain



Challenges in the Dialysis Industry



NephroPlus's Solutions

Procurement	Product & Service Development	Distribution	Marketing & Sales
<ul style="list-style-type: none"> • Expensive equipment and consumables • Inefficient deployment of equipment in public hospitals 	<ul style="list-style-type: none"> • Affordability of dialysis • Low quality of service delivery 	<ul style="list-style-type: none"> • Talent shortage constrains expansion of services • Inefficient use of nurses • Lack of dialysis services outside large cities 	<ul style="list-style-type: none"> • Lack of awareness of kidney disease and treatment options
<ul style="list-style-type: none"> • Uses demand-based approach for distribution of equipment at centers • Purchases in bulk 	<ul style="list-style-type: none"> • Reduces prices by lowering operational costs • Leverages public insurance • Implements strict clinical protocols • Uses patient-centric approach 	<ul style="list-style-type: none"> • Builds a skilled workforce for dialysis industry • Implements a streamlined staffing structure to enable expansion • Establishes centers in smaller cities 	<ul style="list-style-type: none"> • Focuses on preventative care • Hosts community events to raise awareness about kidney disease and treatments

MOVING THE NEEDLE ON QUALITY AND PATIENT EXPERIENCE

Dialysis services in India were generally of low quality when NephroPlus was first launched, due primarily to insufficient regulation and disorganized operations. Negligent clinical processes and infection protocols caused high rates of cross infection, with more than a third of dialysis recipients at risk of contracting a chronic viral disease such as Hepatitis C, Hepatitis B, or HIV.⁵ Cross infections occurred when the blood of an infected individual came into contact with the blood of an uninfected individual.

NephroPlus believed that it needed to become a role model in order to bring about the desired improvements in the industry. The company focused on identifying processes it could implement in its centers that would ultimately raise quality standards among all providers. The risks of cross infection, for example, could be drastically reduced through stringent clinical processes for hygiene. Yet service providers generally did not take necessary precautions and, in the absence of industry regulation, were not held accountable for negligence. NephroPlus engaged international nephrologists to introduce standardized clinical procedures across all their own centers to eliminate cross-infection.

India's dialysis industry also lagged in patient care, including consideration for patients' psychological well-being. Counseling and diet support services were used in many countries to address challenges such as stigma, depression, and the impact of dialysis on a patient's professional life. Most dialysis providers in India, however, had not introduced such considerations into their care mandates.

Having undergone lengthy treatment sessions, Shah knew that incremental changes to service delivery could go a long way toward making a dialysis patient's life feel more normal. NephroPlus developed a care philosophy in which all patients were treated as guests ('guest care'). Implementation of the idea entailed the creation of a comfortable dialysis experience with safe and painless treatment. The company also offered pick-up and drop-off transport service, to reduce dependence on family members, while dietary counseling and patient support groups promoted mental health.



56-step process

Identifies and eliminates potential sources of infection during dialysis. This patent-pending process is implemented by NephroPlus staff at all centers.



Zero infection point kit

Ensures that separate dialysis kits are used for each patient to reduce cross-infection risks.

NephroPlus's Measures to Reduce Cross Infections

NephroPlus Dialysis Index

Enables the company to track patient outcomes on a monthly basis and compare outcomes across patients and centers. It is modeled on the "Good Dialysis Index," which is used to measure dialysis performance in many countries, and is customized to suit India's dialysis market.



KEEPING COSTS DOWN

Another priority for NephroPlus was achieving and maintaining profitability, which has long been a challenge for Indian dialysis providers plagued by inefficient operations. From its inception NephroPlus kept operational costs low through several measures:



LEAN STAFFING. Many hospitals in India mostly used nurses to perform all tasks including lower-skilled, non-medical tasks such as data entry and machine operations.

NephroPlus opted to create new staffing categories such as a dialysis therapist for medium value-add tasks and a dialysis assistant for low value-add tasks. Nurses could then be used for very high value clinical care and tasks related to medical complications, reducing the number needed to manage a single clinic. At the same time, NephroPlus trimmed overall staffing costs through a differentiated pay scale commensurate with skill and training level.



VIRTUAL SUPERVISION. NephroPlus introduced a centralized patient monitoring system which enabled medical staff at its headquarters to monitor patients at service

centers through closed-circuit television. The company also created an online portal to collect patient data to support virtual supervision. Clinical data ranging from a patient's medical history to their weight and blood pressure was entered into the portal during each session. If an issue arose at a center—for example, whether a patient with low hemoglobin required medication—an on-site staff member could call experts who provided medical advice by instantly accessing this data.



BULK AND DEMAND-BASED

PROCUREMENT. NephroPlus purchased consumables and equipment in bulk, allowing the company to negotiate prices 15 to 20

percent lower than large corporate hospitals. In addition, a management information system helped staff share and monitor their use of consumables and equipment across



centers. This ensured optimal distribution of resources and avoided waste.

Together these measures became the critical building blocks for NephroPlus's low-cost service center model, one that it would replicate throughout India.

To begin operations, NephroPlus raised \$200,000 from angel investors along with personal savings from Vuppala. They established three centers in the first two years of operation. The first clinic—a small facility with five beds and ten employees—opened in Hyderabad in the state of Telangana in South India in 2010. An additional \$400,000 from investors funded a second clinic in Hyderabad the same year. A third clinic followed a year later, set-up in a medical college in a small city about 100 kilometers from Hyderabad.

MAKING DIALYSIS MORE AFFORDABLE

In order to serve more low-income people, NephroPlus needed to both increase the number of service centers and make dialysis services affordable. Market prices for dialysis were on average INR 20,000 (roughly \$310) per month, a steep price for the poor. NephroPlus's low-cost model enabled it to offer services at prices 30 to 40 percent below market prices. Yet despite this significant price decrease the poor found it difficult to afford treatment.

NephroPlus had to think of additional ways to make its services accessible to the poor. It began to register its centers with the government, which allowed patients to pay via public insurance plans. The Indian government offered two types of public insurance: Employees' State Insurance (ESI) for workers earning \$230 or less per month and a white-card plan for individuals below the poverty line.⁶ People using white-card insurance plans paid no out-of-pocket costs for treatment. This enabled NephroPlus to deliver dialysis to those least able to pay for services even at a reduced price point. As of 2015, approximately 25 percent of NephroPlus patients used public insurance to cover their treatment costs.⁷

But even with no out-of-pocket expenses for treatment many poor Indians faced transportation expenses and foregone income which prevented them from seeking treatment. So NephroPlus introduced other measures, including subsidized travel, to make treatment more accessible for public insurance patients.

SHIFTING TO HOSPITAL-BASED CENTERS

By the end of 2011 NephroPlus had grown to five centers, delivering roughly 10,000 kidney dialysis sessions per year, and securing \$4.25 million in equity from Bessemer Venture Partners, a venture capital firm which invests in enterprise, consumer, and healthcare technology start-ups worldwide.

ALIGNING INTERESTS OF PARTNERS



NephroPlus entered into revenue-sharing agreements with private hospitals for its captive centers. The company billed guests and split the revenue with the partner hospital. It also partnered with lead nephrologists at each of its centers, from whom it secured an upfront minority investment. These arrangements aligned stakeholder interests at each center and helped to ensure consistency in an expansion strategy that involved an increasingly diverse group of stakeholders.



NephroPlus's early centers had been set up as standalone facilities to shift their guests' association with dialysis away from being "sick" toward being a normal part of life. However, nephrologists and guests wanted proximity to a hospital in case anything went wrong during treatment. To accommodate this NephroPlus reoriented its distribution strategy to establish clinics within private hospitals called "captive centers." To do so, the company would either assume control of an existing dialysis ward or would build a new center within a hospital looking to expand into dialysis services.

To reach more low-income patients, NephroPlus also bid for government contracts to build dialysis centers in public hospitals. As of 2015, the company had four dialysis centers at public hospitals in South India. Roughly 500 patients received treatment at these centers with no out-of-pocket costs. A 2016 study found that 67% of NephroPlus's patients were considered to be living at the base of the pyramid. NephroPlus continued to establish standalone centers, but only as a secondary strategy.

ADDRESSING THE SKILLS SHORTAGE

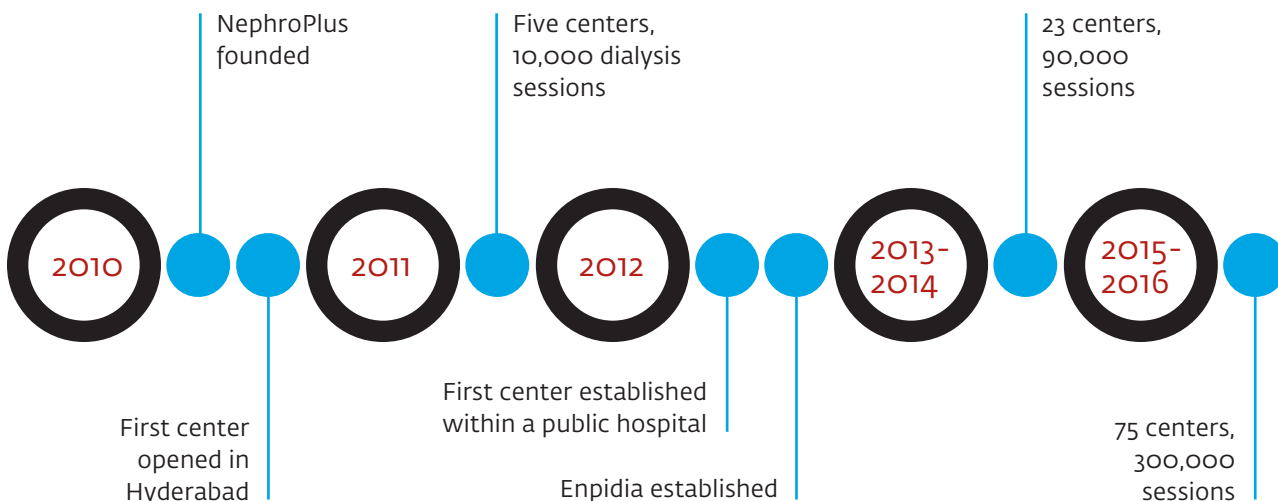
In 2012, NephroPlus created Enpidia, a dialysis training institute for technicians and nurses, in Hyderabad. The institute offered standardized training according to the company's best practices, ranging from clinical protocol and technical know-how to the firm's unique "guest care" philosophy. The company also trained employees of hospital centers it acquired so all staff were sufficiently equipped to implement its practices. The purpose was to

NephroPlus offers services at 30 to 40 percent below market prices; Two-thirds of its patients live at the base of the pyramid.

address the shortage of skilled technicians in India's dialysis industry before the company embarked on expansion.

Enpidia offers a two-year program covering technical training in dialysis, patient care etiquette, and spoken English. It is the only Indian institution registered with BONENT, the certification agency for dialysis personnel in the United States. Enpidia graduates can work at

Figure 2: Key Milestones in NephroPlus's History



COMMITMENT TO QUALITY AND PATIENT CARE

NephroPlus is committed to adapting its methods in order to remain current with evolving international best practices. A recently introduced audit mechanism, for example, will ensure that quality standards are met across all facilities.



Technology: Investments in cutting edge technology and equipment enable improvements in the company's patient monitoring capabilities and maintain its high standard of treatment. NephroPlus centers use a Reverse Osmosis Remote Monitoring System, for example, which enhances monitoring of water quality during dialysis. The centers also use the "button hole" technique in which blunt needles are inserted in the same spots every time a patient undergoes dialysis. This technique is estimated to reduce pain during treatment by 90 to 95 percent.



Patient Surveys: Another quality control area is guest care. To ensure excellence NephroPlus seeks regular patient feedback through surveys that identify "pain points." For example, NephroPlus has installed televisions and Internet access at centers in response to patients' complaints of boredom during treatment. Internet access allows professionals to work during treatment. Patients can also opt for nocturnal and daily short dialysis before or after work at select locations.

NephroPlus centers or elsewhere. As of 2015, 60 to 70 percent of BONENT certified dialysis staff in India worked with NephroPlus.

GOING NATIONAL

While NephroPlus began in South India, it aimed to expand its services to other parts of the country over time. This became a reality in 2013 when the company opened its first centers in the North and West, increasing the total number of facilities from 23 to 40 between 2013 and 2014. The company's success also led to the creation of several other dialysis companies, helping to create a healthy ecosystem.

NephroPlus's expansion also stirred interest among new investors. In 2014 the company raised \$10 million, including \$7 million from the International Finance Corporation (IFC), and an additional \$3 million from Bessemer Venture Partners. This was IFC's first healthcare venture capital investment in South Asia and the first from IFC's \$250 million Early Stage Investment Program. IFC was a long-term investor and had the ability to support NephroPlus through future stages of growth. IFC later invested an additional \$3 million in 2016. The investments in NephroPlus were part of IFC's broader healthcare sector strategy, both globally and in India, which aimed to overcome obstacles to the development of accessible and affordable healthcare facilities.

As it grew, NephroPlus further honed its approach to selecting cities for its national expansion. The company first assessed the level of need by examining dialysis demand and supply in various locations. It then identified key hospitals and nephrologists to approach for partnership in the selected cities.

Partner hospitals became key players in NephroPlus's national expansion. As of 2015, centers established through partnerships with hospitals accounted for 52 centers. Increasingly, NephroPlus leveraged these relationships to achieve efficiencies and better deliver on its mission. In

late 2015, for example, NephroPlus expanded its hospital-based services to include peritoneal dialysis and kidney transplants. It also hosted community events with partner hospitals in order to raise awareness among a broader population and potential patient base.

Raising Public Awareness

Building a happy community among patients has been a cornerstone of NephroPlus's holistic approach to "guest care." Given the low level of awareness of chronic kidney disease and treatment options among people in semi-urban and rural areas, NephroPlus has developed education programs and continues to host community events. Some events provide hands-on support. At NephroPlus Kidney Camps, for example, staff check kidneys and facilitate follow-up appointments. This event was designed to both identify kidney disease and raise awareness at the pre-diagnosis stage to encourage screening.

Other events were focused on having fun and promoting the idea that dialysis can become a normal part of life.

NephroPlus organized the world's first Dialysis Olympiad, for example, a game day attended by 500 patients from across India. Importantly, these events were offered free of charge in order to encourage active participation.

LEADING CHANGE IN THE INDUSTRY

Through its ambition to "change the way dialysis is done in India," NephroPlus's mission has transcended the walls of its own treatment centers. Unique standardized processes, patent-pending innovations to prevent cross-infection, and staff certification and expertise have all served as models for the dialysis sector. Enpidia has benefitted the broader industry by producing high-caliber and certified technicians.

By engaging in advocacy work, NephroPlus hopes to improve quality standards for dialysis services in India as well as regulation of the industry. The company is working with the Indian Society of Nephrology, for example, to introduce standardization and accreditation processes and



procedures in order to prevent the ad hoc establishment of dialysis centers that do not meet clinical quality requirements.

LOOKING AHEAD

Over the next five years, NephroPlus aims to reach over 40,000 patients and help create 10,000 skilled jobs, including doctors, nurses, and dialysis technicians. Almost a third of these jobs will be for women.

NephroPlus is on track to continue its growth in India: The company is planning to establish one clinic in every district of the country by 2018. Also, half of its future centers will be located in smaller cities to make dialysis services more accessible to lower-income patients. Future clinics will continue to be a mix of hospital-based and stand-alone centers, with an emphasis on increasing the number of centers in public hospitals. Continuing to serve those on public insurance will be key to reaching low-income populations.

International expansion is also on the horizon for NephroPlus. The company has set a goal of expanding to five additional countries by 2020 and is planning to open clinics in Africa and elsewhere in Asia. As NephroPlus assesses whether it can apply its model in an international

context, it must consider other factors such as policy advocacy, talent acquisition, supply chain development, and the availability of public insurance programs—all of which have enabled the company to deliver affordable, high-quality dialysis in India. As it seeks to expand access to the underserved, NephroPlus is focused on countries that have the greatest need and that can accommodate affordable prices for dialysis.

**For more information on
inclusive business at IFC, visit**
www.ifc.org/inclusivebusiness



ENDNOTES

- 1 Pacific Bridge Medical. 2013. "India's Dialysis Market." <http://www.pacificbridgemedical.com/publication/high-rates-of-chronic-kidney-disease-lead-to-medtech-opportunities-in-india>.
- 2 IBID
- 3 Narayan, Adi. Bloomberg Businessweek. 2012 "The Big Market for Dialysis in India." <http://www.bloomberg.com/news/articles/2012-01-05/the-big-market-for-dialysis-in-india>.
- 4 In Peritoneal Dialysis, a plastic tube is placed in the stomach via surgery. Cleansing fluid enters and exits the body through this catheter, initiating a filtering process. This form of continuous dialysis allows the patient to control extra fluid more easily and poses fewer restrictions in terms of diet, daily activities, and ability to work.
- 5 NephroPlus. 2014. "Cross Infections in Dialysis Units." <http://www.nephroplus.com/cross-infections-in-dialysis-units>.
- 6 The Below Poverty Line benchmark is determined using various parameters which vary from state to state in India. In Andhra Pradesh, white cards are issued to individuals with a monthly income equal to or below INR 11,000 (\$US 166). More information at: http://www.archive.india.gov.in/howdo/service_detail.php?service=7. While public hospitals accept both insurance plans, private providers must attain government approval in order to accept either form of public insurance.
- 7 This figure is expected to grow to 30 percent by 2020.

Probiotech

Country: Nepal

Sector: Agriculture

IFC Investment: \$1.9 million

Agriculture is the economic backbone of Nepal. It contributes more than a third of the country's gross domestic product¹ and is the primary—and often the only—source of income for Nepalis who live in remote areas. These small farmers typically cultivate less than one acre of land and find it difficult to expand their farms and increase their incomes due to a lack of training, inputs, and finance.

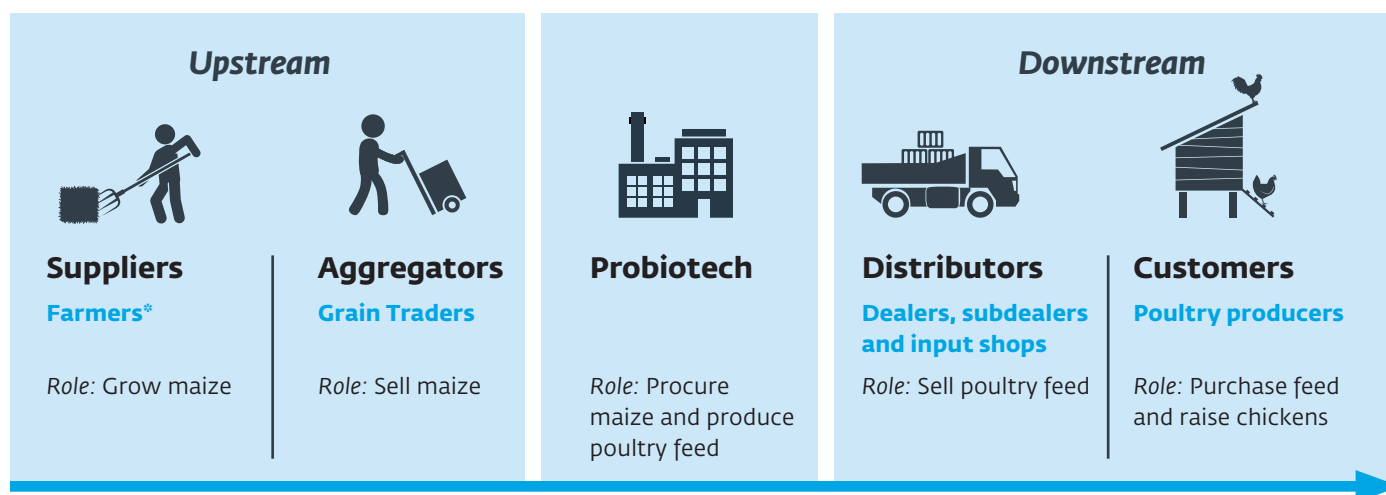
Agribusinesses like Probiotech, a leading processor and producer of animal health and nutrition products in Nepal, have a big stake in the success of small farmers. Probiotech works with these farmers at both ends of its value chain, both of which present unique opportunities and challenges (Figure 1).

Upstream, Probiotech sources ingredients for its animal feed products from grain farmers. A major input is maize, often grown by small farmers who lack the expertise and resources to develop thriving farms.² Downstream, Probiotech engages small enterprises to distribute its

animal feed products to poultry and livestock producers, with poultry farms accounting for 90 percent of the company's total feed sales. Many of Probiotech's poultry customers run small-scale operations under constant threat from high production costs and other inefficiencies.

Probiotech does more than buy grain from farmers and process it into feed to sell to poultry producers. By building capacity and facilitating access to input finance across its value chain, Probiotech is bringing about tangible improvements that can have a lasting impact on agriculture in Nepal.



Figure 1: The Role of Key Players in Probiotech's Poultry Value Chain

*Probiotech also procures rice and soya bean for poultry feed

The company grew out of NIMBUS Holdings Private Ltd., a diversified family-run business founded in Nepal in 1998.³ Today, Probiotech sells animal feed to over 12,000 customers annually, including an estimated 7,200 small-scale poultry producers. Its shareholders are the International Finance Corporation, the Global Agriculture and Food Security Program (GAFSP), and the founders of NIMBUS.

DISCOVERING AN OPPORTUNITY

Founded by J.P. Agarwal, NIMBUS Holdings' early business model centered on the distribution of imported consumer goods in Nepal. When Agarwal's son, Anand Bagaria, joined the business he brought entrepreneurial experience—he had previously launched several pilot projects including one focused on selling veterinary enzymes. Noting demand for quality products in the veterinary sector, Nimbus began to specialize in the import and distribution of animal health and nutrition products, including vitamins, vaccines, and veterinary medicines.

In 2000 Agarwal and Bagaria established Probiotech as a NIMBUS subsidiary to produce animal feed supplements

such as vitamins and minerals. As Bagaria learned more about the animal feed industry—and poultry in particular—he discovered several inefficiencies in the domestic production of poultry feed that affected the quality of chickens and ultimately the incomes of farmers.

First, high quality feed is critical to producing quality poultry, but the feed industry in Nepal consisted of many small companies that lacked the capacity to meet local demand and produced feed of variable quality. Also, shortages in the supply of raw materials (mostly maize) inhibited feed production and forced feed producers to rely on imports. And second, the absence of strong distribution networks meant that many rural poultry producers were unable to access high quality feed when they needed it and often used household food scraps and feed mixed by local, informal feed providers.

Bagaria set out to address these problems. With no large corporate players in Nepal's animal feed industry, organized feed companies contributed only about 35 percent of all feed. Bagaria saw this as an opportunity for Probiotech to expand from the production of poultry feed supplements to the production of poultry feed itself.⁴



Probiotech's Value Chain

An Overview of Challenges and Solutions



Value Chain

Procurement & Product Development

Distribution

Customer Service



Challenges in Providing Poultry Feed

- Low productivity and quality of locally-grown maize negatively impacts volume and quality of poultry feed
- Maize farmers lack access to training to improve production

- Small poultry producers are hard to reach in hilly regions
- Strikes and road closures disrupt distribution
- Limited credit and logistics resources constrain feed dealers

- Poor biosecurity and farm practices among poultry producers
- Difficult to train large numbers of scattered poultry producers
- Insufficient attention to training women poultry producers
- Poultry producers lack access to finance for inputs

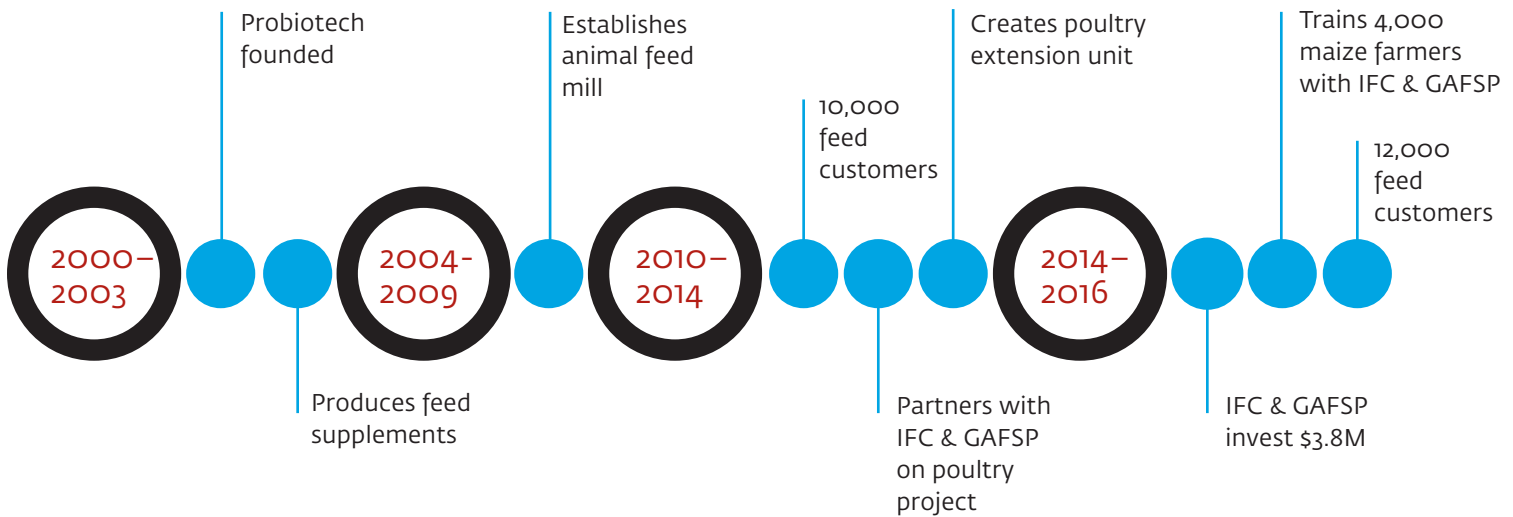


Probiotech's Solutions

- Increases long-term local maize supply by facilitating uptake of climate-smart practices among maize farmers
- Builds maize farmers' technical know-how through demo plots, text messaging, and a helpline

- Builds distribution network with national reach
- Uses regional depots to distribute feed to dealers
- Trains dealers and sub-dealers and provides working capital finance
- Reaches small poultry producers through sub-dealers

- Trains poultry producers through events, extension staff, and dealer network
- Employs women extensionists and veterinarians to train women poultry producers
- Facilitates poultry producers' access to inputs on credit through dealer network

Figure 2: Key Milestones in Probiotech's History

Transforming Nepal's Poultry Feed Industry

By 2003, Probiotech was actively exploring the idea of producing poultry feed in Nepal. After consulting with feed companies in neighboring India, Bagaria concluded that domestically produced feed would have several advantages over imported feed:

- **Lower costs:** High import duties on poultry feed are passed on to poultry producers, many of whom already struggle to break even. In addition, feed is a bulky commodity that costs less to transport locally.
- **Quality assurance:** Feed has a short shelf life—just 45 days, or eight days when opened. Local production minimizes deterioration in quality, especially in warm weather.
- **Timely supply:** Local production enables distributors to regularly procure and supply feed for small poultry producers who don't purchase in bulk and need frequent deliveries.

In 2004 Bagaria established Nepal's first pellet feed mill, Shakti Agro Mills, through a joint venture with Suguna,

a leading poultry company in India. A year later, Bagaria consolidated all of NIMBUS's and Probiotech's business lines for animal health, nutrition, and feed under Probiotech (Figure 2).

By producing pellet-based feed, Probiotech's mill did more than increase the supply of local feed—it also improved the quality. Whereas most domestic feed producers sold loose “mash” feed made of ground grain, Probiotech's mill produced pellet feed, which is easier to digest and promotes better growth among “broiler” chickens raised for their meat. This increases revenues and income for poultry producers.

Today, Probiotech produces more than 20 varieties of animal feed, led by Bagaria as Managing Director of NIMBUS and Probiotech.

BUILDING THE INFRASTRUCTURE FOR EFFICIENT FEED DELIVERY

With its mill up and running, the next challenge for Probiotech was to determine how to deliver its poultry feed products to customers. This was a challenge as many poultry producers are located in remote areas over



hilly terrain. Probiotech sells feed to both large and small poultry producers, but the average customer raises 500 to 2,000 chickens, and its smallest customers raise just 100 chickens at a time.

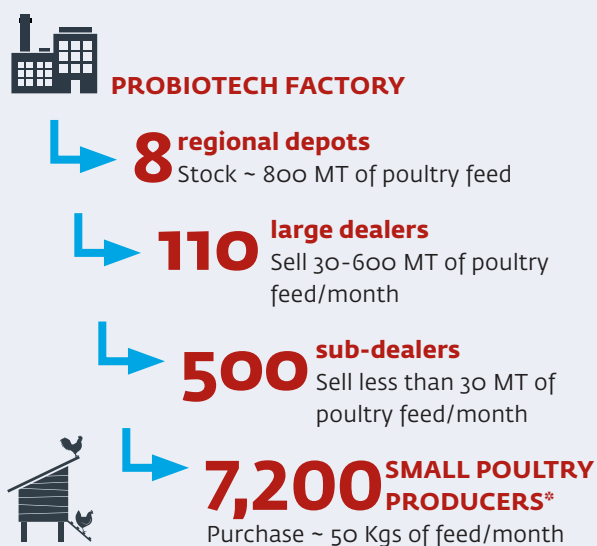
Leveraging the dealer network that NIMBUS had built for its import distribution business, Probiotech began to develop its own nationwide distribution network that would eventually cover 68 of Nepal's 75 districts (*Figure 3*). It found early on that selecting the right people as distributors was critical since they would serve as the face of Probiotech for customers. Certain selection criteria were particularly important: people who were trusted in the local communities, had a good reputation in business, and had a reasonable level of education. Today, Probiotech's distribution network includes:

Depots: Managed by Probiotech, depots are the first link in the distribution chain. Located throughout Nepal, depots help the company minimize disruption in feed distribution due to strikes and road closures. Probiotech supplies feed to dealers directly from its factory as well as through depots.

Dealer Network: The next link consists of dealers, 90 percent of whom work exclusively for Probiotech. Large dealers supply feed to sub-dealers as well as to large commercial poultry producers. Sub-dealers help extend the

network's reach to small poultry producers. Probiotech provides working capital credit on favorable terms to dealers who, in turn, offer credit to sub-dealers. The company also trains sub-dealers in financial management and assists them with logistics and product deliveries.

Figure 3: Probiotech's Distribution Network

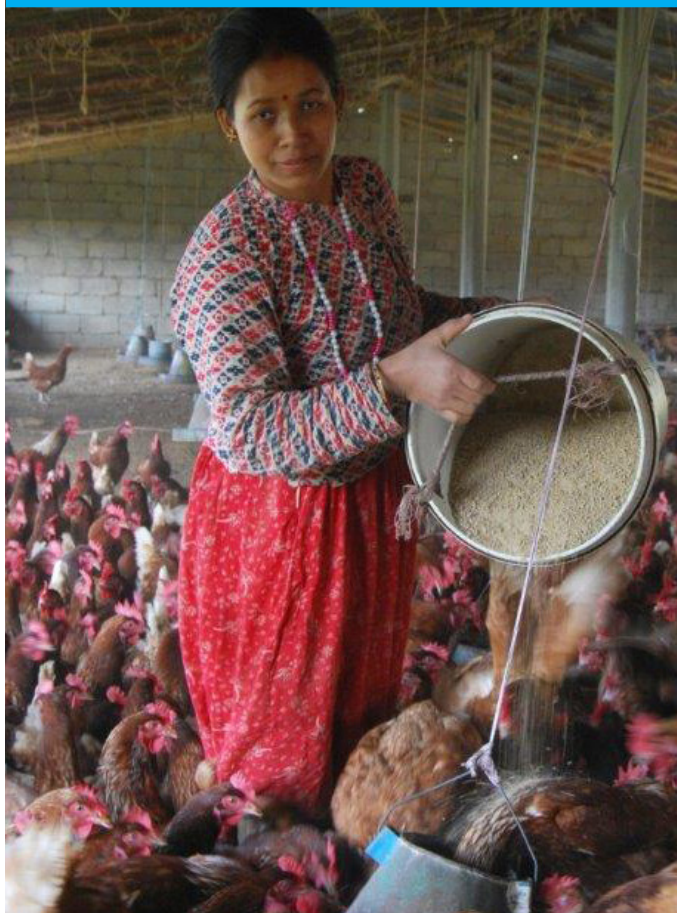


*Probiotech serves 12,000 large, medium, and small-scale producers of poultry, cattle, swine and fish through its dealer network. Of these, an estimated 7,200 are small poultry producers with 100-300 chickens on average

POULTRY PRODUCERS IN NEPAL

Poultry farming is common in Nepal where nearly half of all households raise chickens in small-scale backyard farms, largely in rural areas.⁵ Some households only produce enough for their own consumption while others are able to earn a livelihood or supplement income through poultry farming.

Nepali broiler farms, which raise chickens for their meat, are also small-scale in comparison to similar farms in other countries. About 95 percent of known broiler farms in Nepal have fewer than 2,000 chickens.⁶ Farms of this size are becoming rare in India, where most producers manage 5,000-50,000 birds.⁷



Input stores: Alongside its dealer network, Probiotech leverages NIMBUS's agri-input stores called NIMBUS Krishi Kendras to sell its feed products. Nine stores are currently in operation but that is expected to grow to 200 by 2020, increasing Probiotech's visibility among potential customers.

Together these feed distribution channels have enabled Probiotech to increase market penetration. Today the company reaches 12,000 customers, including some 7,200 small poultry producers.

ENABLING SMALL POULTRY PRODUCERS TO SUCCEED

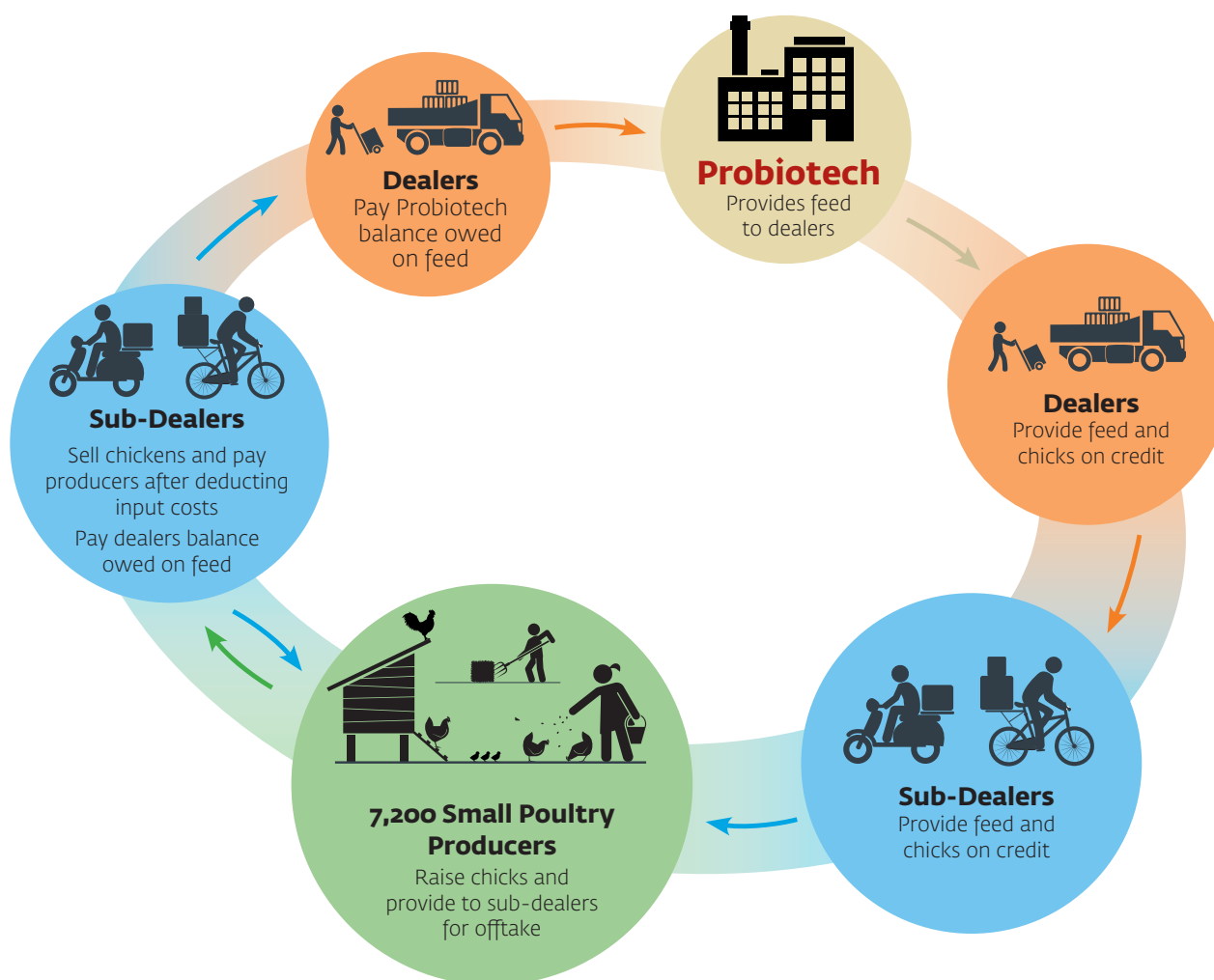
When Probiotech began marketing feed products it found that small poultry producers faced a number of challenges including low quality inputs, limited market linkages, limited access to finance, and insufficient technical knowledge. Addressing these issues was an opportunity for the company to build loyalty among producers and help them grow their operations—and also increase their use of Probiotech products. The company focused on three areas:



Provide High Quality Feed.

When Probiotech was founded, the Nepali feed market was dominated by low quality mash feed. The high feed conversion ratios associated with mash feed in Nepal indicates that poultry required a large quantity of feed to obtain sufficient nutrition to produce meat or eggs. With feed representing about 80 percent of production costs for small producers,⁸ those using mash feed weren't achieving optimal returns. Probiotech's pellet feed, by contrast, achieved improved conversion ratios that could increase producers' efficiency.⁹

To convince poultry producers of the benefits of its improved feed, Probiotech presented them with a no-lose challenge: Feed mash to half of their chickens and Probiotech's pellets to the other half. If the chickens that were fed Probiotech products performed poorly, the company would compensate the farmers. If instead the Probiotech feed helped improve profits, farmers were asked to share their experiences with others in their community.

Figure 4. An End-to-End Solution for Small Poultry Producers

Facilitate Access to Finance and Markets. Few small-scale poultry producers had access to the relationships and capital necessary to build or expand operations on their own. By advancing feed on credit to its dealers, Probiotech set the wheels in motion for many poultry producers to do so.

How does this work? At the start of a customer relationship, a sub-dealer typically extends credit to a small poultry producer in the form of chicks and feed. The producer then raises the chicks for a month and a half, and returns fully-grown broiler chickens to the sub-dealer. Sub-dealers sell these chickens on the open market and

pay producers the proceeds after deducting the balance owed for inputs (Figure 4).



Improve Technical Knowledge. Many of Probiotech's smaller customers do not have formal training in farm management and bio-security best practices; one study suggested that 95 percent of Nepal's small-scale poultry producers lacked technical training.¹⁰ Improper management of poultry sheds can cause disease and death among birds. As a result, small producers are often unable to cover their production costs and end up abandoning the poultry business.

Noting that incremental improvements could bring significant savings for its customers, but that the public sector provided insufficient extension resources, Probiotech began to educate poultry producers through events that often attracted hundreds of participants.

Poultry Partnership with IFC and GAFSP

In 2010, IFC began to engage with the poultry sector in Nepal given its importance for rural livelihoods and its role in improving food and nutritional security. Utilizing



SUPPORTING FOOD AND NUTRITIONAL SECURITY

Probiotech's work in the poultry sector not only benefits small-scale poultry producers but also the wider Nepali population. Nepal is among the poorest 15 percent of countries worldwide and over 14 percent of households lack sufficient food.¹¹ Poultry products provide the primary source of protein for many Nepali families, so improvements in the poultry sector are critical to improving food security. In addition, Probiotech is expanding operations to convert soya-based byproducts from its feed production into affordable, high quality soy-based nuggets which will provide an alternative source of non-animal protein for the local market.

funding provided in part through the Global Agriculture Food Security Program (GAFSP), a multilateral mechanism that aims to support agricultural investments in the world's poorest countries, IFC launched a poultry sector improvement project with several companies in Nepal, including Probiotech.

IFC worked with Probiotech in a number of areas:

1. **Improving the quality of poultry inputs.** IFC provided advisory services to Probiotech to further improve its feed production efficiency and quality. At the same time, IFC worked with hatcheries that supplied chicks to Probiotech's dealers to address disease management and other factors that could enhance the quality and lifespan of chicks.
2. **Training poultry producers.** IFC and GAFSP supported Probiotech to train 4,050 poultry producers in shed cleaning, poultry feeding, and record keeping, among other topics.

Since many poultry producers in Nepal are women, the project took steps to increase their participation. Childcare was provided at trainings which were scheduled at convenient times since family responsibilities often prevented women from attending events. Female veterinarians were trained to provide extension support. Special efforts were also made to link women poultry producers to Probiotech distributors for inputs and offtake. Ultimately, the trainings reached 1,000 women poultry producers, 85 percent of which adapted best practices from the training. Among women producers, the cost of production dropped by 18 percent.
3. **Institutionalizing support services for poultry producers.** The project helped Probiotech to systematize and deepen its approach to supporting poultry producers. Before the project, Probiotech had held basic educational events from time to time, but they were not institutionalized into the company's operations.



IFC'S ADVISORY SERVICES—PAVING THE WAY TO AN INVESTMENT

IFC and GAFSP observed Probiotech's growth potential through this initial engagement in the poultry sector. Building on the success of the advisory project, IFC and GAFSP invested \$3.8 million in equity financing in Probiotech in 2014. In addition to restructuring the company's equity base, the financing is being used to develop manufacturing units for value-added products that use Probiotech's feed byproducts, such as soy flour, nuggets, and oil.

During the project, Probiotech established a farm extension unit and later embedded it within the company. Probiotech also leveraged helplines, veterinarians, and distributors to further engage and support poultry producers. The company set up its helpline in 2011 to provide advice and assistance to farmers. Its vets follow up on these calls with farm visits to assess poultry producers' needs and provide emergency assistance. The extension unit also works with dealers and sub-dealers to disseminate information about the latest poultry management methods to small-scale producers across rural Nepal.

In the years since the project, Probiotech has developed other initiatives to support poultry producers. Shakti Helping Hand, for example, supports producers whose poultry flocks have been affected by avian flu. In the event that a producer has to slaughter an entire flock, the company provides a grant to help purchase chicks to start a new poultry rearing cycle. These efforts have enabled Probiotech to deepen its relationships and build brand loyalty among producers.



BUILDING-UP THE MAIZE SECTOR

Challenges in Supply

Like many other agribusinesses, Probiotech requires a steady and high quality supply of raw material to operate its feed mill at full capacity. Maize is the predominant grain used in poultry feeds worldwide due to its digestibility and energy content, constituting more than half of the raw material used in feed.¹²

Over the years it became increasingly clear to Probiotech that it faced three key issues in securing a reliable and steady supply of maize:

- **Insufficient Volume:** Local supply shortages meant that Probiotech had to purchase maize imported from India, as much as 50 percent in some years, incurring import duties and driving up procurement costs.

- **Low Quality:** Probiotech needed high quality maize to maintain the shelf life of its feed products and to optimize animal health. Poor quality seeds along with challenges in soil fertility, irrigation, pest management, and improper storage had resulted in inconsistent quality of locally grown maize.
- **Supply Aggregation:** Maize is harvested just before the onset of the monsoon season. As a result, many small farmers face pressure to sell their grain immediately at a low price since they lack access to grain storage facilities.

Without improvements in the local maize supply, Probiotech knew it wouldn't be able to significantly increase its local procurement in the long run. Probiotech faced a key question: How could the company effectively build the skills of thousands of small maize farmers spread over Nepal's plains and foothills?

SMALLHOLDER MAIZE FARMERS

Maize farmers in Nepal are located in the “terai,” or plains, as well as the foothills. They typically cultivate about half a hectare to three hectares of land.

The maize growing season lasts four to five months, culminating in June. As such, farmers typically grow maize along with other crops like rice and vegetables. Their limited access to inputs, finance, and training reduces the productivity of their farms and the quality of maize grown, resulting in lower incomes.

One commonly used solution is contract farming: In many countries, companies provide training and inputs to contract farmers and commit to purchase their produce at harvest time. Culturally, this arrangement was infeasible in Nepal. Farmers were accustomed to selling to traders rather than through exclusive contracts with companies, a system that Probiotech was reluctant to drastically disrupt. Moreover, there is no regulatory framework for contract farming in Nepal. A different solution was needed.

Climate-Smart Farming

In 2013 Probiotech and IFC joined forces to work on the Pilot Program on Climate Resilience (PPCR),¹³ a multi-donor initiative which helps national governments integrate climate resilience into their development plans and activities, including through the private sector. One component of the project promoted climate-smart practices among maize farmers. These practices improve the productivity and quality of maize—key issues that constrained Probiotech’s local procurement.

The PPCR project works with farmers in Bara, a major maize-growing district in the plains, and Parsa, which has a similar climate. The project collaborates with a local nonprofit to train farmers, though they are still free to sell on the open market. The project uses several methods to train maize farmers:



Demonstration Plots. Set up alongside maize farmers’ own plots, these plots enable farmers to test new practices, tools, and technologies for climate change adaptation before they implement them at their own farms. Awareness-building and training events are often held at these demonstration sites.



Face-to-Face Training. Probiotech developed training materials, including a climate-smart practices handbook for farmers. It also hired agricultural extension officers to train lead farmers who, in turn, shared lessons on climate change adaptation with other farmers. Training events are timed to align with the sowing, growing, and harvesting cycle to ensure farmers get the support they need at the right time.



Mobile Phones. The project uses mobile phones to keep farmers informed of market prices, weather forecasts, and farming practices.

The company expects that its work with these maize farmers will pay off in the long run as other farmers learn from their neighbors. Probiotech is already beginning to see results, with a 20 percent increase in the volume of local maize the company procures as of 2015. The project has trained approximately 4,000 maize farmers to date, with about 70 percent adopting new practices from the trainings. Probiotech has collected data on 2,000 maize farmers plot sizes, the inputs they use, and challenges they face, and the company continues to identify opportunities to support them.

NEW ROLES FOR THE PRIVATE SECTOR

Through a hands-on approach to productivity, quality, and efficiency in Nepal's agriculture ecosystem, Probiotech demonstrates how the private sector can embrace new roles in development. It was never simple. Probiotech had to work to identify and address the key obstacles that prevent its suppliers, distributors, and customers from maximizing their economic potential. In turn, the company has benefited from the strengthened capabilities of these key players in its value chain. Ultimately, the sustained involvement of businesses like Probiotech, along with government and civil society, is critical to promote sustainable agriculture. Probiotech shows companies how this can be done through their core operations as well as through multi-stakeholder partnerships.

For more information on inclusive business at IFC, visit

www.ifc.org/inclusivebusiness



ENDNOTES

- 1 USAID (United States Agency for International Development). 2016. "Agriculture and Food Security." <https://www.usaid.gov/nepal/agriculture-and-food-security>.
- 2 USAID (United States Agency for International Development). 2013. "Hill Maize Research Program Factsheet." <https://www.usaid.gov/nepal/fact-sheets/hill-maize-research-program-hmrp>.
- 3 Operations of the companies under Nimbus Holdings span agribusiness and animal nutrition, poly woven fabrics production, chemicals, and trading and distribution.
- 4 Probiotech also produces feed for livestock.
- 5 FAO. 2014. "Poultry Sector: Nepal." Animal Production and Health Series Livestock Country Reviews, pp: 20; Nepal Central Bureau of Statistics. 2015. "2014 Statistical Pocket Book of Nepal. National Planning Commission." pp: 139.
- 6 SMDE (Society for Management and Development). 2010. "Integrated Characterization of Four Cross-Border Areas of Nepal in the Border with India for the Risk Assessment of HPAI: A Socio-economic Perspective." FAO/ECTAD-RAP, Nepal.
- 7 FAO. 2003. "Project on Livestock Industrialization, Trade and Social-Health-Environment Impacts in Developing Countries." <http://www.fao.org/wairdocs/lead/x6170e/x6170e2k.htm#fn58>.
- 8 GAFSP Project Card. "Nepal: Boosting Poultry Productivity & Farmer Incomes." http://www.gafspfund.org/sites/gafspfund.org/files/Documents/GAFSP_ProjectCard_Probiotech.pdf
- 9 While existing poultry feed in Nepal provided a high average FCR of 2.2, Probiotech's standard poultry feed has an FCR of 2 and its premium offering has an FCR of 1.8.
- 10 Ryan, O., and A. Pant. 2011. "IFC Builds Farming Capacity in Nepal." Asian Poultry Magazine, November/ December 2011.
- 11 Nepal Food Security Monitoring System. Nepal Food Security Bulletin, Issue 43. Ministry of Agricultural Development, 2015. Kathmandu. <http://reliefweb.int/sites/reliefweb.int/files/resources/wfp273073.pdf>
- 12 Ravindran, Velmurugu. FAO. "Poultry feed availability and nutrition in developing countries." Poultry Development Review. <http://www.fao.org/3/a-al705e.pdf>.
- 13 PPCR is a project of Climate Investment Funds and also works with rice and sugarcane farmers in Nepal.

BUILT FOR CHANGE: INCLUSIVE BUSINESS SOLUTIONS FOR THE BASE OF THE PYRAMID

Conclusion

As the largest global investor in inclusive business—with more than \$14 billion invested in over 10 years—IFC is committed to helping these companies grow and continue to have a positive impact on people living at the base of the economic pyramid. After over a decade of partnership with inclusive businesses, IFC has learned that these clients generate financial returns that are similar to IFC's overall portfolio and that they push the envelope in a variety of sectors and geographies. Curating the knowledge of inclusive business leaders and sharing it with global businesses and the development community is of utmost importance to encourage more firms to replicate and build on these business models.

The IFC clients depicted in this report demonstrate the perseverance and innovation common to inclusive businesses worldwide. These five firms created new solutions in agriculture, where Probiotech works with small-scale farmers as both suppliers and customers; in education, where Bridge Academies provides affordable, high quality curricula; in financial services, where bKash expanded mobile banking services to the unbanked and MicroEnsure found a way to insure them; and in healthcare, where NephroPlus provides low-cost dialysis services to patients in India.

The business models and experiences of these five companies are quite different yet one element stands out in all of their stories: **The need to be dynamic.** Agile adaptation has been critical to each company's success.

The ultimate goal of this report is to use the experiences and stories of these five firms to provide global business leaders with a better understanding of what it takes to integrate individuals at the base of the pyramid into their business models—as suppliers, distributors, retailers, and customers—and grow their business.

In the future IFC will need more inclusive businesses to share their experiences—the inspirational stories of their founders, the challenges they faced and solutions they found through different stages of growth, the key decisions and pivot points in their expansions, and most of all the lessons they learned. Collectively these will provide a robust knowledge base from which other businesses can benefit.

Inclusive Business Models
International Finance Corporation

2121 Pennsylvania Ave, NW
Washington, DC 20433
inclusivebusiness@ifc.org
ifc.org/inclusivebusiness

September 2016

