

GLOBAL HEALTH

Innovation Insight Series



Image provided by KickStart International

KickStart's Super MoneyMaker pump

KICKSTART INTERNATIONAL I: Delivering Enduring Solutions

NAIROBI, KENYA

ESTABLISHED 2005

MARTIN FISHER AND
NICK MOON, COFOUNDERS

THE PROBLEM/SOLUTION SPACE

The relationship between poverty and poor health is well documented. According to a recent World Bank report, “Poverty around the world creates ill-health because it forces people to live in environments that make them sick, without decent shelter, clean water or adequate sanitation. Poverty creates hunger, which in turn leaves people vulnerable to disease. Poverty denies people access to reliable health services and affordable medicines and causes children to miss out on routine vaccinations. Poverty creates illiteracy, leaving people poorly informed about health risks and forced into dangerous jobs that harm their health.”¹

Unfortunately, more than 1 billion people around the world remain trapped in poverty (i.e., living on less than \$1.25 per day).² Alleviating poverty is especially difficult in

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Africa, where approximately 80 percent of the poor are rural, subsistence farmers. Most have only a small plot of land, depend on inconsistent rain to grow their crops, and enjoy at most two harvests per year. The majority of crops are consumed to sustain the farmer's family, leaving little or no remaining surplus for sale or trade. Some of these farmers have an entrepreneurial spirit, but with limited education and access to information, it can be difficult for them to devise new business ideas. When individuals become aware of a promising business opportunity, they are often unable to afford the tools and equipment needed to make the new business viable. Accordingly, farmers in rural Africa have limited means to increase their income and climb out of poverty so they remain at greater risk for disease and ill health.

ABOUT KICKSTART INTERNATIONAL

Martin Fisher and Nick Moon founded KickStart in 2005 to help address the challenges of poverty in Africa. Fisher developed his passion for addressing global poverty after earning his Ph.D. in mechanical design and applied mechanics from Stanford in 1985 and studying the relationship between poverty and technology in Kenya on a Fulbright scholarship. He had planned to study in Kenya for 10 months but ended up staying for 17 years.

After Fisher's Fulbright studies he worked for the nonprofit ActionAid where he met Nick Moon. Moon had arrived in Kenya as a member of the British Peace Corps (also known as VSO). He had volunteered to apply his skills in carpentry, construction, and entrepreneurship towards community and social development. Before joining ActionAid, Moon had established and operated a technical training school for rural farmers.

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ONE CHALLENGE: DELIVERING ENDURING SOLUTIONS

Fisher and Moon's experience at ActionAid laid the vision and philosophy that defined KickStart. At ActionAid, they helped to run many types of development interventions to aid the poor. These

included building schools, housing, and irrigation systems and mass producing low-cost farm equipment for poor farmers. However, after five years, Fisher and Moon realized that these efforts were not sustainable. Each project, though appearing successful at first, failed soon after ActionAid departed. "You put a water system in a village and the pump works and everyone is happy. You walk away from it and two or three years later it breaks down and nobody fixes it. The tragedy that is common throughout Africa is that it is littered with broken-down water systems and farm equipment."³ Fisher and Moon believed that the root problem was lack of ownership and accountability.⁴ They came to strongly believe in individual ownership as the most promising strategy to address poverty. According to Fisher in an article he authored on the subject, "Group ownership—devoid of accountability for those who don't contribute and reward for those who do—fails...The mantra of 'give it away' creates completely inappropriate incentives, leading to patronage and dependency, instead of self-sufficiency and entrepreneurship."⁵

A KickStart billboard promoting family, life, and success



Image provided by KickStart International

THE SOLUTION: DESIGNING AND IMPLEMENTING FOR SUSTAINABILITY

Fisher's years of work in Africa led him to a simple conclusion: "The number one problem for poor people is that they need a way to make more money. The reality is poor people everywhere in the world live in a cash economy. They need money to buy absolutely everything from food, to education, and health care."⁶ Moreover, he believed that the poor were hard working and entrepreneurial individuals who were not looking for handouts, but rather opportunities to get ahead.⁷

Acting on these ideals, Fisher and Moon founded ApproTec (Appropriate Technologies for Enterprise Creation) in 1991 to sell "money making technologies" to poor entrepreneurs using a market-based model. ApproTec became KickStart in 2005. The organization's mission was to "help millions out of poverty" by developing and marketing "technologies that can be used by dynamic entrepreneurs to establish and run profitably small-scale enterprises."⁸

After extensive field research and prototyping, Fisher and KickStart developed a line of manually operated irrigation pumps for small-scale farmers branded "MoneyMaker Pumps." The original Super MoneyMaker Pressure Pump was launched in 1998. It operated like a small StairMaster machine, consisting of two treadles powering a pressurized irrigation pump. This was followed in 2006 by the MoneyMaker Hip Pump, which resembled a bicycle pump. This model featured a pump attached to a pivot hinge that allowed users to operate the pump using their legs, hands, or body weight. Both pumps were designed to be portable and versatile. They draw water—uphill if necessary—from a variety of sources including wells, ponds, rivers, and lakes. From there, a pressurized hose specially designed for MoneyMaker pumps could be used to irrigate over two acres of land.

Fisher and Moon never set out to design or sell irrigation pumps specifically; they were open-minded to any innovation that might help rural farmers to increase their incomes. However, they realized that for any new product to be sustainable in the marketplace, KickStart had to develop a deep understanding of what farmers in rural Africa actually needed and then tailor the new technology to meet those needs. “If you are going to run a social enterprise to try to help people in developing countries, you have to go to those developing countries. You have to spend time there. You have to understand the people. You have to understand the problem. You have to understand the marketplace. If you don’t do that, if you don’t take the time to do that, you will simply be coming with some outside solution, which really has no chance of being sustainable, no chance of really helping people,” said Fisher.⁹

KickStart observed that most farmers in Africa relied on outdated tools and technologies—some that had been in use for hundreds of years such as machetes and hand-held hoes. If these farmers would embrace new equipment, then they could increase their agricultural yields. Unreliable rainfall was another factor that negatively affected farmers. If farmers could provide year-round irrigation for their crops, then they could transition from low-value subsistence farming to commercial agriculture and transform their farms into profitable family businesses. Farmers could grow more valuable crops, reap multiple harvests each year (instead of only one or two), remain productive during drought seasons, and increase their incomes substantially. Irrigation’s impact on health could also be significant. Increased crop yields provide a more stable food supply for

families while higher income could finance medical care, which still remained unaffordable for many. Irrigation could also provide clean drinking water and enable improved sanitation.

According to KickStart, farmers increased their net farm income by an average \$1,000 in the first year when they made the purchase and started irrigating.

The KickStart team believed that to be sustainable their products had to be affordable and enable farmers to realize return on their investment within a relatively short period. “They’re used to putting their seeds in the ground, and their labor in the ground for three to six months and then they get their harvest. If you start talking to them

about one year or two years, they’re not very interested,” explained Fisher.¹⁰ The Super MoneyMaker Pump retailed for approximately \$100 in Africa—significantly less than a petrol-powered pump. According to KickStart, farmers increased their net farm income by an average \$1,000 in the first year when they made the purchase and started irrigating.¹¹ As Fisher described, “\$1,000 a year profit is a huge amount of money because these families are typically living on something like \$400 to \$500 per year, before they buy a pump. All of a sudden, now they’re living on \$1,400 to \$1,500 a year. This literally takes them from below the poverty line into the middle class.”¹²

In order to provide an enduring solution, Fisher and Moon realized that other stakeholders involved in selling and distributing the pumps also needed to generate profits. Accordingly, KickStart set up private sector supply chains in its target markets by establishing partnerships with existing local wholesalers, distributors, and retailers. Because KickStart defined its business model such that every participant profited from each pump sale, all parties were self-motivated to not only maintain but also grow the business. KickStart was thus able to build a self-sustaining supply chain. In total, KickStart had more than 450 retailers, with the majority operating in Kenya, Tanzania, and

Two local residents try the treadle pump at a promotional event



Image provided by KickStart International

Mali. Most were small agricultural-veterinary stores that sold farm supplies in major cities and villages. These partners usually had existing relationships with local consumers, which they leveraged to sell MoneyMaker Pumps.

KickStart believed that maintenance was another key aspect of sustainability. MoneyMaker pumps were designed so that routine maintenance and repairs would not require any tools and so that parts could be cheaply replaced. “The average African farmer doesn’t have a screwdriver or a hammer. With our pumps, you can take them apart and put them back together simply by using just your hands. It’s got to be pretty intuitive and easy to operate without any training because training is very expensive for people in remote areas.”¹³ Because replacement parts were available through the organization’s private-sector supply chain and were sold profitably through this channel, KickStart was confident that its customers would have ongoing access to the parts needed to keep existing pumps in operation.

Finally, KickStart believed that its own sustainability was essential. As described on the organization’s website: “When a new product is first introduced into any new market, sales are few and the costs per sale are high. In fact, as the market is building, items are sold at a loss until the market reaches a ‘tipping point.’”¹⁴ In the near term, KickStart subsidized these losses through donations. However, it intended to reach its tipping point and sell each pump at a profit by 2014 in Africa—when pump sales reached 15 to 20 percent of the total market potential.¹⁵ As a profitable entity, no longer dependent on donor contributions for its survival, KickStart would be able to deliver its solutions indefinitely.

In early 2012, KickStart had sold more than 180,042 MoneyMaker pumps. It estimated that these pumps helped to create 17,700 new businesses, 24,100 new jobs, and \$15.3 million in additional wages while helping 88,300 individuals out of poverty.¹⁶ Perhaps most importantly, Fisher and Moon had developed a solution for poverty that had staying power. By tailoring the design of MoneyMaker Pumps to the unique needs of

farmers, harnessing market forces throughout their business model, and allowing every participant to realize ownership, profit, and the potential for economic growth, they were able to create a self-sustaining business with the potential to outlast more traditional charitable approaches to helping the poor. ♦

NOTES

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