“I came to Sproxil because it was a simple to understand business concept, a relatively easy concept to defend with clear economic value, but also clear social value, and feasibility for scale. The model is relatively agnostic to geography. It also has the potential to apply to other sectors.”

—Alden Zecha, Chief Financial Officer and Strategist

**Characteristics**

**Country**
- Ghana
- Kenya
- Nigeria
- India
- United States of America

**Target Population**
General population

**Geographical Reach**
Multinational

**Organization Type**
Private for-profit

**Form of Care**
Supply chain management
Mobile health (mHealth)
Medication adherence support

**Innovation Type**
Use proven technologies disruptively
Leverage others’ networks and assets

**Website**
www.sproxil.com
Description of Innovation

Sproxil is a brand protection technology solutions enterprise that empowers consumers to avoid counterfeit drugs and reduces these dangerous fakes in the market. Sproxil’s award-winning solution enables brand owners (clients) in emerging markets to optimize sales and protect the integrity of their products through a Mobile Product Authentication (MPA) system. The MPA system also supports medication adherence, and gives clients access to communication tools that allow them to provide more value to their consumers. In addition to these solutions, Sproxil also offers mobile marketing and loyalty programs, customized advisory services, and comprehensive local market analytics.

Sproxil’s primary innovation in healthcare delivery is their award winning mobile-based verification tool, Mobile Product Authentication (MPA)™, focused on identifying counterfeit medications. The MPA system enables product verification at various points along the supply chain, including the end consumer. Customers text unique PINs located under scratch-off or peel-off labels on products and receive feedback about the product's authenticity within minutes. Sproxil’s secure PIN generation and validation technique via SMS text message has proven highly effective. The MPA system is a low-cost solution that increases access to authenticity services for low-technology (smart phone not required) consumers. In addition to the original text-based solution, Sproxil also offers consumers the option to verify products by phone, mobile app, and through their website. Consumers can also access a 24/7 consumer support hotline to get assistance during the verification process, submit anonymous reports on suspicious counterfeiting activity, and ask product-specific questions.

Sproxil’s MPA system and services provide clients with a personalized brand protection solution according to the unique supply chain of any product or organization. The MPA system also provides opportunities for engagement with the consumer via SMS or mobile app to promote medication adherence and communicate important product information such as recalls. Sproxil’s advisory services provide clients with sales performance monitoring and insight into purchasing patterns from online reports generated via the proprietary web portal. Using this information and local market knowledge Sproxil helps clients create a marketing plan based on local market intelligence and the demands of the customers.

“The genesis of Sproxil is much more with Ashifi (Sproxil’s CEO and founder) than me. His big question was: How do people know that organic food is actually organic? His logic was that we should be able to scan something on the item that tells us where it came from. This worked really well, everyone loved it, but no one would pay for it. So he started asking: Who will pay for a product that can track the supply chain and origin of a product? He came to pharmaceuticals because it had been in the news in West Africa. He saw a demand and people were very upset about the issue. He did some market research and discovered there was a market and clients would be willing to pay.”

Alden Zecha, CFO and Strategist
Founded in 2009, Sproxil currently operates in 5 countries with MPA systems in Kenya, Nigeria, Ghana and India. The company can also execute projects on six major continents through their Sproxil Global service. As of April 2014, Sproxil’s MPA solution has been used over 8.5 million times by consumers across varied industries including pharmaceutical products, mattresses, personal care and beauty products, automotive parts, and electric cables.

“The Iron Triangle of Health Care

Sproxil increases **access** to genuine medicines for the general population.

Sproxil increases the **quality** of healthcare by reducing the number of casualties due to ingesting counterfeit drugs.

Sproxil decreases healthcare **costs** by preventing treatment due to complications from counterfeit drugs and reducing diversion and/or theft of drugs, which saves money for health systems.

Providing Value to the Patient, Community, and Health System

Counterfeit pharmaceuticals pose a risk to consumers and global economies. Patients around the world are at risk of serious complications and death as a result of using counterfeit pharmaceuticals. Approximately 700,000 people die each year from using fake malaria and tuberculosis drugs alone. In one instance, 50,000 patients at the Punjab Institute of Cardiology (PIC) were unintentionally
given counterfeit cardiac medication, resulting in hundreds of deaths and numerous complications that strained health care facility resources and placed immeasurable burdens on thousands of families.

Pharmaceutical companies producing authentic drugs also suffer from the activities of the counterfeit drug industry and stand to benefit from increased protection from supply chain challenges such as theft, diversion, counterfeit products and fraud. Additionally, when using the Sproxil system, companies can identify where supply chain problems are occurring and fix them more easily.

Developed nations have largely proven successful in limiting the problem of counterfeit pharmaceuticals through regulatory enforcement and technological advancement, although dangerous counterfeit medicines continue to surface in these markets. However, similar successes have not been realized in developing nations and emerging markets due to resource shortages, limited governmental oversight and control, unreliable infrastructure, and high prevalence of diseases.

Prior to launching, Sproxil conducted interviews and survey research with Nigerian consumers to verify the need and inform design of an innovative solution. Interview results confirmed that consumers wanted a cost effective, easy solution to help them avoid counterfeit drug consumption. Acting on this data, Sproxil formed a partnership with Nigeria’s National Agency for Food and Drug Administration and Control, which was already working to combat counterfeit drugs. Sproxil’s innovation provided them with a viable mechanism to achieve this goal. Sproxil continues to conduct in-depth market research before entering a new area and partners with stakeholders and clients to increase awareness of their solution.

Although Sproxil focuses their technological services on countries and emerging markets with a high incidence of counterfeit drugs, the solution can provide increased protection in developed markets where vulnerabilities to drug counterfeiting still exist. Where weak regulatory systems are unable to prevent counterfeit drugs, Sproxil provides consumers with a point of purchase product validation mechanism using SMS technology and authentic drug companies with a means of supply chain regulation. Sproxil also offers authenticity verification by voice (phone call), mobile app, and through their website.

Drug companies can increase their revenue by using Sproxil’s technological innovations to increase protection from counterfeit products,

“We are catching an industry wave right now around awareness and willingness to discuss counterfeit medication. There is more willingness to discuss these problems outside of closed doors. We are also able to benefit from the fact that telecom companies around the world are shifting how they do business. Revenue from voice services (percentage of total) is declining and revenue from non-voice services (SMS) is growing.”

Alden Zecha, CFO and Strategist
prevent diversion along the supply chain, and use market data collected through the solution to support medication adherence efforts and communicate important product-specific information to relevant customer segments. Overall, reducing counterfeit threats and increasing revenue potential can increase pharmaceutical investment in markets that are currently unattractive. Governments also benefit from an increased ability to protect consumers by controlling the incidence of counterfeit drugs on their markets and by providing a way for consumers to inform themselves about a drug at the point of purchase.

**Health System and Policy Context**

Poverty and lack of access to essential medications in emerging markets give counterfeiters the opportunity to introduce cheaper, substandard pharmaceuticals with low prices and availability that appeal to consumers. This problem is compounded by the lack of regulatory mechanisms and resources in place to limit the counterfeit drug industry. Sproxil works directly with pharmaceutical companies to provide their verification service for free to consumers. They have been able to rapidly increase their client base while maintaining 100% client retention. In fact, most pharmaceutical clients have expanded their portfolio of products protected though Sproxil’s solution, thus protecting a wider range of patients in emerging markets.

To ensure a successful rollout into each new country, Sproxil also develops critical partnerships with organizations and governments. Sproxil is endorsed by Nigeria’s National Agency for Food and Drug Administration and Control and Kenya’s Pharmacy and Poison’s Board. The United States Patent and Trademark Office and The White House have recognized Sproxil’s impact on global healthcare through the prestigious Patents for Humanity Award and the Champions of Change Award. Partnerships in emerging markets have provided support for Sproxil to scale and expand their services in those countries. Sproxil adjusts their model to fit each market in which they work, while also applying best practices and learnings from their experiences elsewhere.

**Operating Model**

While Sproxil’s headquarters are located in the US, they have primarily concentrated on emerging markets in India, Ghana (serving West Africa), Kenya (serving East Africa) and Nigeria. They have also introduced a
global service that can tailor to markets on six continents. Sproxil customizes their operating model and services to the client organization or context of operation, providing personalized solutions according to the unique supply chain of any product or organization. Currently, Sproxil offers five distinct services: consumer verification using the MPA system, comprehensive track and trace (based off of the MPA system), mobile marketing and loyalty services, advisory services and local market analytics.

Sproxil’s SMS verification technology leverages high mobile phone use in developing nations and emerging markets, where 80% of all new mobile subscriptions occur. Additionally, Sproxil leverages technology to deliver industry-grade security and high-speed service delivery. This program works with low-technology mobile phones and provides verification to consumers making point-of-purchase decisions. Upon purchasing a product, consumers will find a label on the package that they can scratch-off to reveal a one-time-use item-specific code. Then, consumers text the code to Sproxil’s secure toll-free number using their mobile phone and receive a reply confirming that the product is genuine or warning that it may be counterfeit. Consumers can also verify by voice (phone call), mobile app, or through Sproxil’s website.

Sproxil offers several value added services in their brand protection solutions suite including a 24/7 Consumer Support Desk (CSD), a Proprietary Client Web Portal, Stolen Product Investigator (SPI) and Track and Trace. The 24/7 CSD supports local languages, helps consumers during the verification process and guides consumers in the instance of a potentially counterfeit product. The Proprietary Client Web Portal allows clients to harness valuable market data that can be used to customize marketing programs, better target consumers, and monitor counterfeiting. SPI identifies and provides immediate multi-tier response to product compromise and helps protect products against additional threats to the supply chain such as theft, redistribution and redirection. SPI has already helped clients identify and locate thieves who stole one of Nigeria’s most trusted anti-malarial drugs. Finally, Sproxil’s Track and Trace solutions help brand owners increase and optimize oversight of their products as they move along local and international supply chains, providing comprehensive protection for products from end to end.

Along with their MPA system and value added services, Sproxil offers mobile marketing and loyalty programs, advisory services and local market analytics. Through the MPA solution, the company gathers
anonymized consumer data that can be used to help pharmaceutical companies identify and place patients into meaningful segments. Through Sproxil, the companies create targeted campaigns to share important information, health tips, and recalls with relevant segments, act as adherence coaches to decrease costly medical non-adherence issues, and even create programs that can reward patients for taking charge of their health and wellbeing. Sproxil shares their unique expertise in supply chain management as well as local market knowledge with their clients in order to identify areas of improvement within their client’s supply chain and help them implement new strategies. Sproxil conducts in-depth market research in communities of interest to better understand cultural and social practices. Sproxil then leverages this local knowledge to help their clients create a marketing plan based on local market intelligence and the demands of the consumers.

Sproxil believes that human capital is critical to their operational success and invests heavily in building and retaining a highly skilled team. They also place high emphasis on developing strong partnerships to ensure their ability to deliver the best solution.

Impact Metrics
In addition to a number of proprietary metrics, Sproxil tracks the following impact metrics:

- Number of verifications using the MPA system
- Consumer (user) feedback
- Client feedback

Goals for Scaling and Replication
In order to stay ahead of counterfeiters, Sproxil does not publicly disclose specific plans for expansion.

External Support Required for Scaling and Replication
1. Networking with other innovators to share best practices and explore potential collaborations
2. Connect with businesses to develop mutually beneficial partnerships

“Being based in the US has helped us overall. We have the ability to tap into technical talent. I also think that large corporations tend to prefer to have suppliers in countries with well developed legal systems.”

Alden Zecha, CFO and Strategist
Media Attention and Awards

Press

*Entrepreneur magazine (March 7, 2014). 6 Problem Solvers Who Are Disrupting Entire Industries*
http://www.entrepreneur.com/article/230875

*The White House (2013) Champions of Change: Immigrant Innovators*
http://www.whitehouse.gov/champions/immigrant-innovators

*The United States Patent and Trademark Office (February 2013). 2013 Award Recipient*
http://www.uspto.gov/patents/init_events/patents_for_humauty/awards2013.jsp


http://www.fastcompany.com/most-innovative-companies/2013/sproxil

*Business Day (February 8, 2013). Sproxil GSK, honored for Nigeria’s mobile-based anti-counterfeit intervention.*

*Social Enterprise Buzz (October 24, 2012). Sproxil Uses Mobile Phones to Combat Counterfeit Drugs.*
http://www.socialentreprisebuzz.com/2012/10/24/sproxil-uses-mobile-phones-to-combat-counterfeit-drugs/


*CNN (September 9, 2011). How cell phones can expose counterfeit drugs.*
Awards


World Business and Development Award (2012).

Global Mobile Awards Nominee for Best Mobile Health Innovation (2012). GSMA.

SmartCamp Boston Winner, SmartCamp Global Finalist (2010). IBM.

Technology Awards Winner (2010). MITX

African Diaspora Marketplace Winner (2010). ADM.


Outstanding Commitment Award (2009). Clinton Global Initiative University.

IEEE GOLD Humanitarian Fellowship (2009). Institute of Electrical and Electronics Engineers, Graduates of the Last Decade.

Grant Winner (2007). National Collegiate Inventors and Innovators Alliance (NCIIA).

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Sproxil provided the source data for this document and is responsible for the accuracy of the content.