



an SMS-Based Marketplace for the Developing World

Problem and Context

While smartphones and e-commerce have become nearly ubiquitous in the developed world, many societies lack the necessary wealth to enjoy such high-technology hardware and online business models, let alone build the foundations of Internet infrastructure required to enable such technologies. This reality exacerbates global wealth inequality. Connected devices and online commerce enable the developed world to save time and money through convenient and transparent marketplaces. Meanwhile, many developing nations must rely on foreign procurement of their natural resources and philanthropic aid for economic stimulus. Furthermore, the economic development of many nations, including Tanzania, is hindered by cases of corruption that cost their societies hundreds of millions of Dollars, a factor that de-incentivizes donors from sending aid.

Over the past two decades, the Tanzanian government has reduced its involvement in the economy, resulting in increased free trade and steady GDP growth. At the same time, the Tanzanian financial sector, albeit small, increasingly supports entrepreneurial ventures.¹ Beyond capital influx a sharp rise in communications technology usage also spurs the Tanzanian economy. Indeed, the country has reached over 75% mobile phone penetration with 1200% growth over the last 10 years. This shift marks the proliferation of information transfer, which enables economic growth and an increasingly connected populace.

Although Tanzanians are increasingly connected through cellular phones, they still largely lack Internet and its accompanying benefits. Accordingly, the growth of e-commerce is limited by 8% smartphone and 11% Internet penetration. This presents an incredibly impactful opportunity for our product, Soko.

Introducing SoKo

Solution

Soko facilitates local marketplaces in Tanzania through an SMS-to-Internet e-commerce platform, rather than a web-based platform, like those used in developed world e-commerce, such as Ebay Local. Through Soko's system commercial business owners will be able to conduct buying and selling activities both business-to-business and business-to-consumer in a more transparent, fair, and efficient manner than through traditional trade venues.

Anyone with access to SMS will be able to buy, sell, and review goods offered in their local economy, simply by sending a text message. For instance, if Adam wants a solar panel, he can type "buy solar panel" and receive a list of the closest and highest rated solar panel vendors registered nearby. Once he finds a vendor of interest, he messages the vendor directly. While Tanzanian Internet users

¹ <http://www.heritage.org/index/country/tanzania>

already use e-commerce platforms (ex. Kaymu and Kivuko), Soko opens up e-commerce access to *all* mobile phone owners in Tanzania. Not only, will small-business owners and entrepreneurs be able to leverage this more efficient system to grow their businesses, but the average person will also reap the benefits of lower search costs for consumer goods. We hope for all Tanzanians to eventually use Soko's platform. Beyond the direct benefits to Tanzanians from democratizing e-commerce access, we believe the fairness and transparency added through this digital system has the potential to promote foreign investment in Tanzania.

Technological implementation will not be problematic, since the software for such technology is openly available. Open source libraries for connecting non-smart phones to the Internet are fully functional and readily available for free (ex. The Offline Internet). Open source deep learning libraries for natural language processing (NLP) also already exist, and have already been commercially actualized (ex. Facebook Messenger's text-to-Uber and text-to-Calendar integration). For this venture to be realizable and worthwhile, our team intends to achieve the milestones below within the timeline described:

3 months (May 2017)	8 months (October 2017)	15 months (May 2018)	3 years (Feb 2020)
<ul style="list-style-type: none"> - Prototype our SMS-to-Internet system with an automated sample conversation - Develop go-to-market strategy for introducing Soko to Tanzanian vendors and consumers - Gain Finalist or Semi-Finalist status in the third global Ideas for Action competition 	<ul style="list-style-type: none"> - Recruit native Swahili speaker to the team - Visit Dar Es Salaam: meet local business leaders; conduct market research - Complete version 1 of automated marketplace system and begin testing - Start fundraising for seed round (goal: \$500,000) - Present Soko at the meeting of the IMF and the World Bank 	<ul style="list-style-type: none"> - Complete seed round fundraising, with a minimum of \$250,000 - Set up headquarters in Dar Es Salaam city and release Soko throughout Dar Es Salaam region - Establish brand ambassador system for introducing our platform to vendors and consumers - Connect with politicians / administrators 	<ul style="list-style-type: none"> - Release nationally throughout Tanzania - Set up data science unit - Offer free Soko Analytics service to all vendors for 6 months; transition to offering only to paying customers - Surpass 1 million users and 2.5 million buyer to vendor connections - Raise Series A funding (goal: \$6-10M)

On top of the free Soko service, we would offer Soko Analytics to paying vendors, a service that would provide analytics and statistical advice on the supply of goods, behavior of the vendor's customers, competitive landscape of that industry, and relevant market impact of current events, such as new legislation and natural disasters. In order to maximize the number of Soko Analytics users, while still keeping barriers to marketplace entry at a minimum, we will offer a 6 month free trial of Soko Analytics. After the trial period, we will have a better sense of profit margins in the market, as well as the value that Soko Analytics adds, and will choose an affordable pricing option that will make it accessible even to smaller vendors.

Search SoKo

Buy Solar Panel

We've Identified 8 vendors that are: within 5km, rated 3/5 or better.

Top rated: SolarDen (4.8)

Lowest Prices: SunMonkey (starting at \$550)

Closest: PanelHub (1.7km)

What is SolarDen's price range?

\$700 - \$3,400

Can you connect me?


+255 923 82 2923

Click here to message SolarDen

SolarDen

5m x 2m Instant Install Solar Panel

We are out of 5x2s, but here is a 3x2 that we are selling at half off



Okay great, I'd like to check it out. Where and when are you available?

We are at 30 Bagamoyo Rd, open until 5:30pm

Alright, I'll be there in 10m

See you soon!

Click here to message SolarDen

Expected Impact

We believe Soko will benefit Tanzanian small and medium-sized business owners in three ways. First, by providing a more universally accessible platform for advertising and searching goods, Soko will increase competition by decreasing the set costs of running a business and making product information and vendor rating easily accessible, as well as increase the demand by lowering expenses and minimizing purchase time and costs. Second, by employing a textual, digital interface, Soko may circumvent discriminatory practices based on gender, skin-color, clothing, and other physical features. Third, when we release Soko Analytics, it will provide data for entrepreneurs to leverage, spurring increased economic growth.

To measure the growth of our platform, it will be essential not only to track the number of total users and daily active users, but also sales and the total amount of data transmitted. Mobile Internet service in Tanzania costs about 2 TShillings / Mb. Not even accounting for savings in the cost of smartphone hardware, we will be about to quantify the economic savings to Soko users by measuring the amount of data transmitted through Soko. We would also incorporate the cost of sending and receiving the texts, so as to not overinflate our metric.

We can also measure the economic distribution of buyers and sellers on Soko. More impact will be achieved if independent individuals make substantial sales, so it is useful to note the strength of established merchants. Soko should be able to keep an eye out for the monopolization of goods as well as fluctuations in supply and demand. Understanding the health of the various customer segments will be essential in targeting marketing in a way that maximizes impact.

With our understanding of the economic distribution of Soko's users, we can quantify impact for two populations: current marketplace players and new marketplace entrants. For current citizens involved in economic activity, Soko will simplify the process and increase efficiency. Due to Soko's increased accessibility, we will also create added value for the economy, through new entrants who previously did not have access to marketplaces. Impact is measured in TShillings saved due to higher efficiency and TShillings created due to higher accessibility. Finally, network effects allow Soko's impact to increase exponentially: the more users we acquire, the greater the value of the platform to each additional user.

Future Outlook

After starting with automated domestic marketplaces, Soko has the potential to service international marketplaces with neighbouring countries, such as Kenya. We can also establish local, domestic markets in nations, besides Tanzania, with high mobile phone penetration and low Internet penetration. Similar socioeconomic and technological conditions also exist in South America and Southeast Asia, especially in Indonesia.

By the time these countries have increased Internet access, we will also provide a web-based e-commerce solution, further lubricating the transfer of vendor and user data, as well as improving the description and images of goods. Entrepreneurs will be able to continue using a system they trust, and we will continue to help them improve their supply chain management and new product development through Soko+.

Lastly, once the company has achieved sufficient profitability, we would establish transaction centers. These would be safe, relatively central locations for transfer of goods, which would also enable the Soko to track legitimate transfer and ensure user safety and non-discrimination. This final capacity provides international donors with information quantifying how their financial support has been utilized through transaction tracking.

Existing Alternatives

The current substitute for Soko is the traditional text messaging system (which includes individual and group texting). However, this does not provide any macro-level connectivity or analytics. Moreover, this solution inhibits certain players from engaging, due to their lack of a strong network. In addition, direct messaging also brings in biases and potential discriminatory practices based on age, gender, etc. This is because your identity is tied to the traditional text messaging platform: the other person you are communicating with is aware of your demographics.

Another substitute comes in the form of e-commerce sites. Although internet availability is still very limited, these sites can also pose competition. For example, Jumia is an app that allows people to interact with customers and send customers their latest offers and promotions. Another example is Facebook, which is also building out shops within Facebook Pages and Facebook Groups: the entire shopping experience will occur within the same platform, from product discovery to checkout. However, the e-commerce solution does not offer the mobility inherent in an SMS-based solution, like Soko.

Potential Challenges

There are 7 key challenges we have identified, and have provided countermeasures to:

1. **Economic:** the broader macroeconomic landscape of Tanzania could prove quite challenging. The Tanzanian economy is very donor-dependent, and 34% of the population lives below the poverty line. This could make it difficult to grow access to telecom. However, over three quarters of the population already has mobile phones, and the economy has slowly been transitioning from a command economy to a market economy since 1985. This provides an opportunity for the tech market.
2. **Marketplace Dynamics:** Marketplace ventures are tough to build, because they require demand from two different types of users: buyers and sellers. Accordingly, Soko will have to overcome the “cold start” chicken-and-egg problem and will need to strongly incentivize the initial Soko users. However, since our platform will enable an entire spectrum of users spanning both suppliers to end consumers, many Soko users will therefore be both buyers and sellers. Thus, we will avoid the hurdle of needing to market to two communities.
3. **Venture Financing:** Building the product is not our biggest challenge. We need to ensure that it reaches the target market, and that it succeeds in achieving widespread adoption. In order to do so we will need a feasible revenue model and the capital to execute. We believe our implementation plan is achievable and sustainable.
4. **Policy:** Our product will also depend on cooperation from the local government and international players like the World Bank. We believe our product fits into the World Bank's poverty reduction goals as well as the Sustainable Development Goals.
5. **Incentives:** Marketplace products require buy-in from both vendors and buyers. Our team will need to incentivize both sides to use our platform. To accomplish this, we will need a marketing effort and would need to prove significant benefits and novelty compared to existing alternatives.
6. **Government:** It is questionable how such a technology would function under a historically corrupt economy. For instance, people have a lower opportunity cost of time than in the developed world, so they may be bribed into giving fake reviews or artificially spiking demand / supply by requesting to buy / sell items that they don't actually want to buy / sell.
7. **Legal:** Lastly, there are questions of liability, when illegal events occur at the time of transactions enabled by Soko.