

# The entrepreneurial way to integrate social responsibility and economic profitability into agri-business in East Africa

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## Exploring new markets

Pushing the boundaries for both products and production in agriculture is necessary in an increasingly competitive European market. Innovation in plant science and agriculture, however, has a potential that reaches far beyond the borders of Europe, namely that of feeding the hungry mouths of the increasing world population. In Africa there will be a rising demand for resistant, nutritious and high-yielding crops. But even if a technology meets all these demands and thus shows humanitarian as well as commercial potential, you still have to develop the right business model around your technology to actually be successful.

This article shows how systematic entrepreneurial tools can be used to develop a business model around an existing technology in a new and unknown market. We share our working process and the most important insights from a two-month student project commissioned by a Dutch seed company called Solynta. In the project we acted as consultants and used entrepreneurial tools to investigate how they could enter the African market in a socially and economically responsible way.

## Solynta

Solynta has accomplished to develop a hybrid breeding technology for potatoes and to deliver potato germplasm as true potato seeds rather than conventional seed tubers. The hybrid technology allows a quicker and more targeted breeding of superior varieties, with for example a higher yield, resistance to diseases such as late blight, and improved quality traits. Further, the delivery



*A bag of Solynta's true potato seeds. It contains 183 gr of seeds, equivalent to 25 tonnes of seed tubers.*

of varieties as true potato seeds represents a considerable logistic advantage as the equivalent of 25 tonnes can be shipped in an envelope. In short, a great technology was already in place but more entrepreneurial ingenuity was needed to develop the right business model for the growing African market, and that was our job.

## The project methodology

In the project, we used a methodology from the book "The Lean Startup" by Eric Ries. According to Ries, entrepreneurship does not have to be the chaotic process we tend to imagine. Instead entrepreneurs should manage and measure innovation and learning in order to develop superior solutions. This is done in three steps. In the first step, you explicitly find the most crucial assumption that you are currently making and state that as a hypothesis. In the second step, you find the smartest way to test that hypothesis. Finally, the third step is to add your test results to your progress accounting and develop new hypotheses to test. We chose to focus on the Rwandan market after having carried out a meta-analysis of 20 African countries based on climatic, economic and business-related parameters. Also, it is worth to mention that we were not able to actually go to Rwanda during the two months, which obviously made the process quite a bit more challenging.

## Market investigation

Often in startups the product is developed with a specific customer segment or application in mind and the customer development goes hand in hand with product development. However, for plant technology that is not always the case, as some technology emerges from research where no specific application is defined yet. That was also the situation for Solynta, so the first fundamental hypothesis to test was: *There is a customer that needs the product.*

To test this hypothesis we needed to get to know our potential customer: the Rwandan farmer. Unfortunately it was not possible for us to reach actual Rwandan farmers so we had to figure out



*Example of a business model canvas from the project.*

a different way to get to know our customer. We used all available contacts in our network as well as many 'cold' leads. Surprisingly, social media proved to be exceptionally powerful and allowed us to connect with a vibrant community of Rwandan students in the Netherlands as well as people and organisations in Rwanda. It was a struggle to establish the initial bonds across a 9000 km distance but as soon as we got the ball rolling it became easy and the efforts proved to be well spent. Through several interviews and reports we got to know our customer and we were able to distinguish two different segments of farmers. The overwhelming majority is composed of smallholder farmers living in poverty while only a very small group of farmers are producing more industrially. Both groups did indeed show a demand for good quality potato seeds and improved varieties.

After having confirmed our first hypothesis and having distinguished two potential customer segments, we went on to test the next hypothesis: *We can make the product both affordable and accessible for the customer.* When looking deeper into the two customer segments, it became clear that the kind of business model needed to serve these two segments would be very different. Serving the smallholder farmers requires a strong social and cultural engagement, extensive infrastructure to make the seeds accessible in remote areas, and potentially a micro-financing scheme to make the seeds affordable. In sum, the smallholder farmers proved to be too complex and costly to serve as customers. On the other hand, making the industrial farmers the customer, did also not make much sense as they were too few to base a market entrance on. Essentially that meant that we had to dismiss the

second hypothesis and therefore either discard the ambitions of making a business model or rethink the premises of the second hypothesis.

### ***Exploring the primary customer***

We started rethinking and soon we realised that our users, the farmers, were not necessarily our customers. So even though the farmers would eventually plant the seeds, we would have to sell to an intermediary actor. We completely changed our approach and started to study the whole Rwandan potato sector to find other actors that could be our customers. Eventually we found several actors in the potato sector whom would be able to distribute our potato seeds to farmers and whom could be our direct customers. The three most promising customers were the emerging potato processing industry that cooperates with a selection of farmers, the government that already produces and delivers a substantial amount of seed potatoes (tubers) and an NGO called One Acre Fund that sells all kinds of quality seeds, knowledge, and support with crop sales to smallholder farmers through a micro-financing scheme. To find out which of these three customers would be the best candidate, we used Alexander Osterwalder and Yves Pigneur's *Business Model Canvas* to generate and portray different business models. The business model canvas is a sheet showing nine fields with relevant labels such as: customer segment, value proposition, key resources, revenue streams etc., and it is used to comprehensively sketch and develop business models.

At this point the hypothesis testing process started to speed up as we were able to test hypotheses

simply by creating canvases with examples of business models and present these to experts and customers to get their immediate feedback. That was also where the well-established network became worthwhile as many of our contacts could help to validate or reject the different assumptions.

### ***Matching Solynta's vision with local circumstances***

During this process we cooperated closely with Solynta because it was no longer just a matter of which business model was the best, but just as much a matter of what kind of business Solynta envisioned and what motives they fundamentally had for entering the African market. A clear preference for Solynta was that any business model first and foremost should be profitable - not only for Solynta but also for all other concerned actors in the supply chain. This is the principle behind Solynta's economic and social responsibility and although it is an honourable intention, this principle proved to be at least as practical as it is moral. Our interviews and research consistently showed that when entering a market as complex and chaotic as the East African market, it is not enough to be better and faster. If you cannot make everyone around you happy, you will face tough resistance. Therefore, it became crucial to analyse the preferences of all chain actors as well as the potential economic and social impact of different business models. Furthermore, we soon realised that economic gains are not always the answer. Quality traits of the potatoes, such as cooking time, storability and colour as well as cooperation with government and farmers unions turned out to be very important for some actors.

Again, the business model canvas came in handy as we could use this to develop and illustrate different potential business scenarios that Solynta could respond to and develop further with us. Based on the feedback, we focused on striking the right balance between profit, social impact and minimising the risk for Solynta. In this light, the choice between the three potential business models became clearer.

Working with the government turned out to have many complications. Although it is the Rwandan government's policy to privatise, the relevant agencies seemed reluctant to hand off responsibilities to private companies and the increased exposure to bureaucracy in such a business model made it risky. Serving the NGO, One Acre Fund, as customer would ensure a strong social impact and a broad market.

However, in spite of the rapid expansion in East Africa, One Acre Fund's business is still not entirely self-sustained and Solynta would be betting on a dark horse if they chose to serve only this one customer. Eventually, we decided on the processing industry that is currently booming in East Africa and developed a detailed business model for that. On the surface this business model seemed to have little social impact but from investigating the sector, we realised that the processing companies are educating and supporting the farmers that supply potatoes. Additionally, the growing processing industry is increasing the domestic demand for potatoes. This raises the currently low market price and will hopefully secure a better income for the smallholder farmers in the end.

What we managed to do during the two months was only the very initial research and testing, necessary to start real activities towards establishing a business. So there are still years of hard work ahead for Solynta before they can start selling potato seeds in East Africa.

### ***Lessons learned***

The process taught us three important lessons that we would like to end with here. First of all, it became clear that even the best technology cannot be successful without the right business model in a market that is so fundamentally different from what we know. As second lesson, we experienced that social responsibility is not an option but a necessity for being able to establish a lasting enterprise in Africa. And social responsibility isn't just about doing good things. Rather it requires dedicated efforts to learn about the local culture and the actors in the sector to understand what it means to be responsible beyond following the law. Our third lesson was that although both the business model and social responsibility depend on the product, neither of them can be developed with a strictly technical approach. Instead, contemporary entrepreneurial tools, such as The Lean Startup and Business Model Canvas, can be highly effective for experimentally developing socially and economically responsible business models in the emerging African market. Innovations in plant science often hold great potential in the growing market in developing countries. But nothing is as we are used to in these markets and everything has to be learned from scratch. We hope that our experiences with using systematic entrepreneurial learning processes can inspire you to use them to enter a new emerging market or to systematically keep learning about your current business.