SciencesPo
ÉCOLE DU MANAGEMENT
ET DE L'INNOVATION

Letter of Intent

The Great Transition Final Project

Project name: Bottom's Up

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Problem

The problem that we are trying to face is the ambivalence of both food waste and undernutrition encountered in Sub-Saharan Africa. This geographical area is highly concerned by undernutrition, even though it has been reduced over the last 30 years, the situation is still critical with more than 22% of the population in situation of undernutrition.

In the meantime, we can observe that more than 169 kg/per capita of food is wasted every year; of which 95% happening during production and retailing. This food that could be used to fight undernutrition is actually wasted.

The problem that we are trying to answer is therefore the following : how can we help reduce food waste by implementing a low-cost system such that it may feed more people rather than be lost. What's at stake is thus quite essential because it is both a way to offer an alternative to the Sub-Saharan agricultural system - where less food would be wasted, allowing a more sustainable agricultural economy in an area where agriculture is often the primary source of wealth - ; but also reducing undernutrition which is a both a social and sustainability stake in the long run for the societies.

The constraints are multiple, mainly the fact that the economy is based on small scale farmers; which means that they are significantly fragile and often won't take the risks to put their production at stake. More importantly, in order to have a fully sustainable agrarian economy, the farmers would need more money to develop their businesses, buy all of the adequate material, and cultivate the soil in the most efficient way. Even though the United nations have implemented many programs to support Sub-Saharan countries towards food security; it is far from being enough to boost the region.

Our project is dedicated to contributing into the relieving of this problem, more specifically in Togo.

Concept

Our core concept aims to be extremely simple, so it does not change the countries' agrarian systems but rather enhance them. Indeed, it is neither our role, nor is it in the capacity of a small start-up like ours to transform systems. At Bottoms Up, we aim to create the fastest circuit possible between the producer and the consumer. How ? By proposing to some producers in a specific area (we've decided to start near the village of Adeta in Togo), a pick up of a portion of their daily production (between 10 and 20%) in our trucks, and then sell it

at a discount in the remote villages nearby, with poor access to food supply. The idea behind this is that nearly 15% of farmers' production is being lost to storage problems and food and finds itself wasted. Our proposition is to relieve the farmers from this portion of production they will probably lose, and sell it -at a discount- so (1) they can gain money on it and reduce/suppress their storage costs, but also so that (2) poorer communities nearby can improve their access to it as it the products will be sold much cheaper. On our side, we will be marking a percentage of the revenue made on these sales; which is 17%.

Another solution would have been to try to have a better storage process for perishable goods. However, the climate and the infrastructures are two factors that make this idea way more difficult to be implemented, with little guarantee of working or being actually better.

Our project is not original per se, because the concept of a truck selling food from a place to another is something that we can find in French rural areas for example; with bakery-trucks selling bread from villages to villages. However, our project is actually original for the area where we want to implement it, since it will allow to sell food in a short circuit while both the producer and the consumer won't have to move, nor wait for the market on Sunday, in a context where basic logistics is extremely weak.

Our idea is very simple and does not require significant investments. Moreover, the fact that it is on a very small scope allows to create direct relationships with the producers and consumers, which will make it the implementation both easier and stronger. Our POC definitely leads us to a GO ! why ? because there is both demand by the producers -more production sold and less storage costs mean more profit- and by consumer -cheaper and fresher food-. Our team composed of 3 native-Africans of which a student specialized in African studies is the best fit to conduct this initiative and we are convinced we can succeed.

Impact

We believe our main impact will rather be the reduction of food waste than undernutrition, although it will also facilitate access to food resources for people who initially had very little. Actually, our project could have a great impact on diminishing undernutrition in the short/medium-run; but if successful and replicated across the country and continent, it could have a tremendous impact in the long-run too. For now, we believe that it will be both a qualitative impact on the nutrition of the consumers and quantitative impact on the reduction of food waste. For quantitative results, we would need to implement the solution in areas

where undernutrition is highly critical and where our solution is applicable (producers near the area). If the solution is a success, we hope to be able to try this.

We truly believe that our solution is sustainable. Indeed, it's a way to ensure more income for the producers, less food waste and less undernutrition. We also believe that the pollution caused by the pickup/delivery system of the trucks is to be put in perspective with the pollution caused by stocking and transporting food elsewhere in much further areas. With this perspective in mind, our short circuit idea is not ideal in terms of ecological footprint, but significantly better than it was.

Risks

The major risks our team will be facing are geographical risks:

- Inability to culturally integrate; it is a must to develop a spirit of dialog with local communities to achieve trust and acceptance of each other
- Lack of security risks: the region, especially the remote areas we are targeting, have low security levels; this is why it is essential to obtain authorities' cooperation
- Political instability: the country might be subject to political turmoil during elections as demonstrated in 2010 and 2015. We will not start operations before next elections take place (April 2020) and we are sure we can safely integrate the ecosystem.

Deployment strategy:

Bottom's Up's deployment strategy will focus on the central objective of approaching, gaining the trust, and building a viable relationship with the local parties involved:

- the farmers
- the communities to be served
- the local authorities

This is objective is to be implemented using a set of comprehensive approaches being:

1) Networking with local authorities to identify :
    a) which farmers are the most subject to the storage and food waste issue
    b) which communities are the hardest to reach and to supply food to
2) Meeting the farmers, discussing with them and understanding the entirety of the issues in terms of transportation/storage; building a trust relationship through empathy

3) Educating the farmers on the possibilities of avoiding excess storage and food waste
4) Communicating with both farmers and authorities on the alternative Bottom's Up is offering and the financial, environmental and social benefits it is set to provide
5) Obtaining their approval to operate; buying the appropriate trucks (2 to start, to be increased as operations increase and depending on the encountered success)

Financials

Our company will be selling the farmers' overproduction, unsold products or products that were meant to be thrown away. They will therefore be sold at a discount; the latter will be ranging between 25% and 60%, of which we will earn a margin of 15% for our transportation role and sales service role. As it is a social entrepreneurship initiative, our aim is not to achieve highest profits, but to achieve enough profits to continue operating.

In the first 2 years, we will start with 3 trucks. Taking the example of bananas, we will take the following hypotheses into account to project our returns:

- Bananas' average price of 489 XOF/kg in Togo (XOF being the local currency)
- Inflation rate of 0.4% per annum (as for 2018 and 2019)
- Average of 30,000 units of banana plantain per acre per year; 1kg = 7 bananas
- 15% of the production is unsold/meant to be stocked or thrown away
- We will start with 9 farmers cultivating fields of 1 acre (0.5 hectare) on average
- Applied discount rate on the price will be 45% on average
- We will make a margin of 17% on each banana sold by us
- 2 trucks purchased locally on great value second-hand deals: price of ~XOF 9m
- Fuel price is ~XOF 555 and an average truck uses 33L for each 100km
- Total distance a year estimated for each truck is (max of 100km/day for a total 100 days a year on the road (takes seasonality of the products into account))
- Median salary in Togo is ~XOF 600
- The following table will project the financials for the 3 first years of operations

	Y1		Y2		Y3	
Revenues	**in XOF**	**in EUR**	**in XOF**	**in EUR**	**in XOF**	**in EUR**
Produced bananas (in kg)	428,571	N/A	514,286	N/A	514,286	N/A
Sold production (in kg)	364,286	N/A	437,143	N/A	437,143	N/A
Unsold production (in kg)	64,286	N/A	77,143	N/A	77,143	N/A
Price of unsold production (in XOF)	318	0.48	331	0.50	344	0.52
Revenue from unsold products in (XOF)	20,433,214	31,108	25,500,651	38,824	26,520,677	40,377
Margin from unsold products (in XOF)	**3,473,646**	**5,288**	**4,335,111**	**6,600**	**4,508,515**	**6,864**
Revenue for Bottoms' Up	**3,473,646**	**5,288**	**4,335,111**	**6,600**	**4,508,515**	**6,864**
Costs						
Cost of transportation	1,831,500	2,788	1,904,760.00	2,900	1,980,950.40	3,016
Cost of personnel	14,400	22	14,976.00	23	15,575.04	24
Cost of unsold products						
Total costs	**1,845,900**	**2,810**	**1,919,736**	**2,923**	**1,996,525**	**3,040**
Profit	**1,627,746**	**2,478**	**2,415,375**	**3,677**	**2,511,990**	**3,824**
Investment						
Trucks (2)	18,068,448.00	27,494	0	0	0	0
Breakeven	**Estimated after 6 years of operations**					

Organisation

Our company will tie a partnership with Association Renaissance Afrique. This organization is committed to fight hunger in the region and to improve food supply to remote areas, which will fuel our relationship and increase synergies in the fulfillment of our common mission and objectives. The organization will facilitate the parking of our trucks when they are not on the road, at least until breakeven (estimated at 6.5 years). In return, we will be selling our farmers' products in priority to the remote areas Association Renaissance Afrique is serving. This will allow easier penetration for us as they already built strong trust ties with these communities and will help them improve their performance in their key areas.