Of almost a billion people who need food security, 200 million live in urban slums. Poor slum dwellers struggle to get safe, sufficient, affordable and easily accessible food. Food security in slums is not a priority for governments, the private sector and NGOs. Social enterprises may be the best option to address this issue. However, building successful social enterprises in slums will be difficult.

Can we build sustainable, scalable and fast-growing social enterprises to reduce food insecurity in slums by 2018?
Dear Friends:

Our interdependent world promises more opportunities for advancement than ever before. Innovative breakthroughs are constantly expanding the horizons of what we think is possible, and new technologies allow us to instantly share information and ideas with people half a world away.

But while our interdependence allows us to share in one another’s progress, it also means we cannot ignore one another’s challenges. At this moment, one of mankind’s oldest and most debilitating threats—hunger—is preventing one out of every seven people on Earth from enjoying the opportunity and prosperity so many of us take for granted. Access to nutritious, safe, and affordable food is necessary for healthy living and should be a human right, not a luxury, yet almost one billion people face hunger and food insecurity every day. The situation will only worsen as urban populations expand, climate change intensifies, the amount of viable farmland shrinks, and markets become increasingly unstable.

With most NGOs and governments focused on hunger and food insecurity in rural areas, there are few solutions being developed for those in urban and peri-urban areas. However, the involvement of social enterprises—hybrid NGO and business entities—can transform the dire situation in these regions. For this year’s Hult Prize competition, I ask you to address this global challenge by finding sustainable social enterprise solutions that will increase food security, specifically for the nearly 200 million people living without it in or near the world’s cities.

The Hult Prize is a wonderful example of the creative cooperation needed to build a world with shared opportunity, shared responsibility, and shared prosperity, and each year I look forward to seeing the many outstanding ideas the competition produces. I encourage you to take this opportunity to learn from other companies and organizations that have made strides in creating effective and sustainable solutions to food insecurity. I commend all of you who choose to answer this important challenge, and wish you much success in your efforts.

Sincerely,

[Signature]

Hult International Business School Publishing 2
Contents

Of almost a billion people who need food security, 200 million live in urban slums ............ 4
Food security should be a basic right for all human beings 4
Food security increases productivity and provides opportunity to do other activities 4
Almost 200 million people in urban slums lack food security, and there may be many more in the future 4

Poor slum dwellers struggle to get safe, sufficient, affordable and easily accessible food ........ 6
People need knowledge to make the right food choices 7
People need food that is consumable 8
People need calories and nutrients to be healthy 8
People need food that is accessible 9

Trends suggest a worsening scenario in the future ................................................................. 9
Climate change and volatility will create uncertainty in food production 9
Growing population means an ever increasing demand for more food production 10
Increasing land degradation and demand for cash crops will reduce arable land for food production 11
Large fluctuations in food prices amplify problems for poor people living in poor regions 11
Industrial farming is reaching its limit 11

Food security in slums is not a priority for governments, the private sector and NGOs ............ 12
Governments see slums as illegal habitats 12
The private sector finds slums unattractive for business 12
NGOs have not made enough progress upgrading slums 12

Social enterprises may be the best option to address this issue ............................................ 12

However, building successful social enterprises in slums will be difficult .............................. 13
Consumers who have limited and fluctuating incomes are difficult to serve 13
Partners across the food value chain are difficult to work with dependably 14
Social enterprise operations are difficult to manage 14
Limited infrastructure is difficult to manage 15

Can we build sustainable, scalable and fast-growing social enterprises to increase food security in slums? .................................................................................................................................. 16

What's next? .................................................................................................................................. 17

Addendum .................................................................................................................................... 18
Considerations for developing a complete solution 18
Authors 24
Research Team 24
Acknowledgements 24

Selected Reference Sites and Sources ........................................................................................ 25

Figures

Figure 1. Over 870 MM people are hungry with most in Asia, Africa and Latin America .......... 4
Figure 2. The number of hungry people living in slums is significant ........................................ 4
Figure 3. In the future, the majority of the world’s population will be urban .............................. 5
Figure 4. The largest cities by population are moving to the developing world ....................... 5
Figure 5. The Cycle of Poverty is difficult to end ...................................................................... 6
Figure 6. Consumers have several needs to ensure food security .............................................. 6
Figure 7. Adults require many vitamins and nutrients for daily nutrition ............................... 8
Figure 8. Percentage spent on food by country ......................................................................... 9
Figure 9. Global population will grow rapidly through 2050 .................................................... 10
Figure 10. The Food Value Chain must be leveraged to improve food security ....................... 13
Figure 11. Metrics and guiding questions to help develop a winning business solution ........... 16
Figure 12. Use the Innovation Value Chain for complete solutions ........................................ 18
Figure 13. There are 4 billion customers at the BOP .................................................................. 18
The Human Side of Hunger, Repeated Daily

Anne Reuben moved from a rural area in Kenya to Nairobi in search of a better life. She only has enough money, though, to live in the slums of Kibera with her three children and sick husband. She washes clothes to try to make ends meet. Most days she doesn’t. The high costs of rent and public transportation that she needs to get to work are making her income, which would seem high to her rural cousins, disappear. Food is a priority, but so is having a place to live. When she can’t get mush or wilted vegetables, her children ask, “Mama, today aren’t we cooking food?” or, “Mama, isn’t there even charcoal?” She does not reply.

Food security should be a basic right for all human beings

Over 870 million people world-wide are hungry today because they do not get sufficient, safe and nutritious food to meet their daily needs (Figure 1).2 This is unacceptable. All human beings should have secure access to food.

According to the Food and Agriculture Organization (FAO) of the United Nations, food security exists when, “Every human being everywhere [has] the ability to produce or purchase safe, sufficient and nutritious food that is culturally acceptable, for an active, healthy and dignified life.” In other words, food security can be described as, “the right to food.”

Food security increases productivity and provides opportunity to do other activities

Solving food security means so much more than ensuring a steady supply of safe, nutritious food. People won’t just live longer lives; they’ll live better lives. Families will suffer from less disease, less illness and less of the gnawing pain that keeps children awake at night. Fewer families will lose infants and children who waste away to nothingness. There will be more opportunities for education, employment, and social activities. People will be more productive, have more time, and be able to end the vicious cycle of poverty.

Almost 200 million people in urban slums lack food security, and there may be many more in the future

Over 200 million people in urban slums are living without food security (Figure 2).4 These slums are inside of or on the outskirts of major cities in poor and emerging nations. They are called favelas in Brazil, bustees in India, barrios in Mexico, and shanty towns in Zambia. People’s homes are made of waste materials and corrugated iron roofs. They have limited access to clean water, electricity and education. Migrants from rural areas find themselves without a network in the midst of a complicated system. Families don’t know how to get legal documentation, which means they often earn informal and irregular income.5 Every day, these families struggle to find food and survive. Although life in these slums appears unattractive, close to a billion people live in here because they offer more opportunity to improve quality of life than rural areas.6 Unfortunately, those struggling with hunger are unable to take advantage of these opportunities.7

Of almost a billion people who need food security, 200 million live in urban slums

Food Security in Urban Slums by 2018

A hungry man cannot think of anything else other than food. Work, education, relationships - these all suffer as a consequence until that need is satisfied!”

Charles Kane, Director, One Laptop per Child Association

Figure 1. Over 870 MM people are hungry with most in Asia, Africa and Latin America2

Figure 2. The number of hungry people living in slums is significant4
Without new solutions, food security issues in urban slums are likely to get worse. The global population is expected to continue shifting to more urban areas. Many people who are dispersed across broad areas of land are moving to cities where they can pool their resources and assets to gain easier access to a wide variety of employment and education options. By 2050, over seventy percent (70%) of the population is expected to be urban (Figure 3). Cities and their surrounding areas are expected to grow dramatically in developing countries within Africa, Asia and Latin America. The table in Figure 4 indicates the top 10 largest cities in 1950, 2000 and in 2050. If food security in the long term is to be addressed, focus must be on emerging urban population centers like these around the globe.

**Figure 3.** In the future, the majority of the world’s population will be urban.

**Figure 4.** The largest cities by population are moving to the developing world.
Poor slum dwellers struggle to get safe, sufficient, affordable and easily accessible food

“...I was teaching in one of the universities while the country was suffering from a severe famine. People were dying of hunger, and I felt very helpless. As an economist, I had no tool in my tool box to fix that kind of situation.” Dr. Muhammad Yunus, Founder, Grameen Bank & Nobel Laureate

For the poor slum dweller, things can go from bad to worse very quickly. Not enough money can mean not enough good food, which creates health problems and makes people susceptible to disease. Being ill creates lost productivity, which prevents a person from making money. It is difficult to break this cycle of poverty (Figure 5). Food security is a daily struggle to acquire the right amount and type of affordable food that is easy to prepare and safe to eat (Figure 6). In addition to this daily grind, medical emergencies, loss of employment and price fluctuations can wipe out a family’s savings.
People need knowledge to make the right food choices

Building food security, in part, means building knowledge about food choices. People need to understand food quality standards, appropriate preparation methods, and the elements of a nutritious diet. In the developed and developing world, in rural towns and megacities, consumers don’t have enough knowledge or information about how to create a diverse and nutritious diet on a limited income. Beyond knowledge about food itself, people need to know how to navigate the retail food system. People need to know where to get healthy food and what fair prices are.

Consumer behavior does not always yield the “best” decision available. People often choose to buy food that is filling over food that is nutritious or not tasty. Just like wealthy consumers, poor people make choices for a variety of reasons that can detract from the long term best interests of an individual and family. From “keeping up with the neighbors” to spending large amounts on entertainment, tobacco and alcohol, families are choosing to sacrifice portions of their income. For instance, it is estimated that families in Udaipur in India could spend up to 30 percent more income on food if they were to cut back on alcohol, tobacco, and entertainment.
People need food that is consumable

Food needs to be easy to eat. Food needs to be convenient to eat. This means it must be prepared, or people must have the proper tools and know-how to prepare it. Raw rice is not food unless it can be cooked. Serving vegetable soup and a fork where people are accustomed to chopsticks would not lead to a successful meal.

People also need food that conforms to their cultural tastes and preferences. Creating an ultra-nutritious food that is too greasy or too crunchy or too sticky for a certain culture will not be accepted by local people and will therefore not improve food security.

Finally, consumers will refuse to buy or eat food if it tastes bad, smells strange, looks odd, or has an unusual texture, even if it is nutritious. Parents struggle to get their children to eat vegetables because children dislike the taste. Even as adults, we are not significantly different. We are more likely to eat foods that we enjoy.

People need calories and nutrients to be healthy

In order to improve food security, people need healthy food. This means several things. First, there must be enough food. Without enough food production, food will not be available to those with the lowest income. Second, even if there is enough food, food may not meet necessary quality standards. High-quality food is nutritious, which means that the available food has a diverse mix of acceptable levels of calories, vitamins, protein, and other essentials (Figure 7).

**Table 7.** Adults require many vitamins and nutrients for daily nutrition

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Daily Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td>2100</td>
</tr>
<tr>
<td>Protein (g)</td>
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<tr>
<td>Fat (g)</td>
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<td>Iron (mg)</td>
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<td>Thiamine (mg)</td>
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</tr>
<tr>
<td>Vitamine C (mg)</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Vitamine B9* (μg)</td>
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</tr>
<tr>
<td>Vitamine B12 (μg)</td>
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</tr>
<tr>
<td>Zinc (mg)</td>
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</tr>
<tr>
<td>Water (l)</td>
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</tr>
</tbody>
</table>

Not Within Our Culture

Every night Jun Santos comes home to his family and he sees dinner prepared by his wife. It’s noodles again. Rice is usually ubiquitous in the Filipino diet for breakfast, lunch and dinner, not noodles. The Santos family, though, can’t eat the rice they’d prefer. Because there are more mouths to feed and rice is a more expensive staple, they are going for the cheaper alternative.

Not Tasty

Anpanwadi centers in Mumbai, India are places intended to combat hunger and malnutrition. On the menu is only Khichdi (prepared rice and lentils) or boiled chana and laapsi (wheat mush with beans). By noontime, the food has gone cold, soggy and lacks taste. Children usually do not mind eating the same food every day, but they wish it tasted a little better. They complain, but their requests are often met with disappointment.

Not Enough Food

Sapta Mega Pratiwi brought her 15-month old son Ahmad to a regional hospital a few weeks ago. When doctors first saw him, he was a little over 15 pounds - far too light for a child that age. He had a big belly, skinny legs, and brittle hair. “Sometimes there’s food, sometimes there’s not. We don’t earn enough money to always afford food,” Sapta says. After a few weeks enrolled in a supplemental feeding program, Ahmad now weighs over 17 pounds. Other children aren’t so lucky. One out of every four Indonesian children don’t reach even 70 percent of the daily recommended levels of nutrients.

Not Enough Nutrients

In Eldorado, a favela in São Paulo, Brazil, eight-year-old boys are playing soccer on a patch of ground. It is a holiday. At school they would usually get a full meal, but today they haven’t eaten lunch or breakfast. They look healthy. They aren’t. Although you can’t see it, they suffer from malnutrition. They rush to take bananas brought by a local charity. It is filling and cheap but not enough to cover three full nutritious meals that children should get.
Finally, high-quality food must be safe. It should be clean, well-preserved, and free of disease. Common pathogens like Salmonella and norovirus make hundreds of millions of people sick each year.23

**People need food that is accessible**

Food needs to be close to people. It must be within a reasonable proximity to homes in order for people to reach it. Travelling long distances or spending time shopping around can be costly for families struggling to find food.

Food needs to be available over time. If a family has the ability to get food one day, but not the next day, or the next week, they will never achieve food security. Ultimately, food needs to be available when and where people need it.

Finally, food needs to be affordable. If food costs too much, it is not available to the people who need it most. Too many people spend too much of their limited budgets trying to pay for adequate food. The average family in the United States spends about 7% (Figure 8) of its income on food annually. For a family earning US$50,000 a year, that’s spending just under USD$300 per month. While a price increase in food would undoubtedly put a strain on a family’s budget, at 7% of total budget, most families are able to juggle other items around to meet the increases. The average family in Indonesia, however, spends about 44% of its income on food. For a family earning a moderate US$5,000 a year, that’s about USD$185 a month being spent on food. Even though their income is ten times less, Indonesians are still spending about 62% of what Americans pay for food.25

**Not Affordable**

Trephine Ambimo is a 35-year-old single mother of five. She lives in Korogocho, an informal settlement outside of Nairobi, Kenya. Every day she has to walk to a nearby estate to earn some money doing menial jobs. She earns US$2.40 a day, which is not enough to feed her five children and pay rent. She is afraid to be kicked out by the landlord so she pays rent and she teaches her kids to skip meals to save money.22

**Not Available**

Manal Omar, a 40 year-old housewife, raises chickens to sell eggs. Her husband earns about US$1.50 a day but rent is almost US$63 a month. There is little left for food, especially with the price increases. Those, like Manal, who live in ashwa’iyat (informal settlement) frequently pay more for food than those who live in Cairo, Egypt’s most prosperous neighbourhoods. Manal has to travel a considerable distance to get nutritious food at more affordable prices.24

**Trends suggest a worsening scenario in the future**

Climate change and volatility will create uncertainty in food production

The global climate is changing. As time passes, it is becoming clearer that traditional food production methods will not be enough to sustain global food requirements for the future. Severe weather events can wipe out an entire year of agricultural livelihood. Droughts and other disasters are becoming more frequent. Food producers have to rethink the way they harvest; a single annual harvest of a single crop is becoming too risky.27 Changing realities in our climate mean that food production disasters will happen more frequently.

Additionally, as temperatures rise, the need for better preservation mechanisms is growing.28 In order to distribute food within countries and around the world, perishable food will need to be packaged, refrigerated and stored correctly. Particularly in the case of protein-rich food like milk, eggs, fish, and meat, storing food safely is critical to keeping people healthy and preventing waste.29
Growing population means an ever increasing demand for more food production

By 2050, the global population is expected to reach 9 billion people. Most of this growth will be in developing regions in Asia, Africa and Latin America (Figure 9). Although the economic gains in these regions are expected to continue to lift hundreds of millions of people into the middle class and bring people out of complete poverty, because of increasing food prices and population growth, the number of people who can’t afford food is expected to continue growing. This growth continues to put a strain on resources and food production capacity, but it also puts huge demands on the post-consumption waste management and sustainability of the food industry.

Increasing land degradation and demand for cash crops will reduce arable land for food production

In conjunction with a larger population needing to be fed, the amount of land to farm on is decreasing. Under the pressure of not having enough to eat, hungry people may resort to practices that damage land over time. These activities range from using harsh chemicals to boost short term yield to destroying resources like trees or natural water sources in order to gain immediate income at the cost of long term degradation of farming land. It is understandable why individuals do these things, but these actions have dangerous long-term implications.

Land is also being siphoned away from food production for the purpose of producing cash crops; namely, ethanol. Corn, sugar cane, and other staples are being grown and turned into ethanol or other biofuels to power cars and other machinery. The World Bank attests that biofuel production, along with market speculation, contributed to almost 75% of increase in food prices during the 2008 food crisis. Biofuel production is not only sanctioned but subsidized in two of the largest net-exporting food countries in the world: the United States and Brazil. Excess production being sold to other countries for food is now being fought over by biofuel manufacturers who often have more capital and bargaining power than food producers.

However, with drought-resistant seeds that are making non-arable lands productive in Brazil, saline-resistant rice that make coastal regions productive in India or farming without soil using hydroponics in Swaziland, alternative locations are becoming real options to produce food around the world.
Large fluctuations in food prices amplify problems for poor people living in poor regions

Market mechanisms like speculation or global trade policies can lead to large fluctuations in the price of food. Similarly, food-aid from other countries can impact local food producers and potentially bankrupt them. While these peaks and valleys are interesting features on a graph, to individual families and poor food producers, those lines can represent the difference between life and death.

Because so many in the developing world pay upwards of 40% of income for food, even modest increases in the prices of staple food like rice or grain can plunge families in the developing world into food insecurity.

Industrial farming is reaching its limit

Innovation in agricultural machinery and farming methods, genetic technology, techniques for achieving economies of scale in production, the creation of new markets for consumption, and global trade have all created tremendous agricultural productivity in developed nations; these methods are also becoming increasingly prevalent worldwide.

Furthermore, the entire food value chain has become more efficient. Food producers, retailers, and other key contributors to the food value chain have found ways to pool their resources and capabilities to be more lucrative and more efficient. Processors and distributors, too, have found that leveraging economies of scale creates higher bargaining power and a more efficient use of resources for farmers.

The food value chain has also leveraged tested distribution models between each step that minimize the amount of production waste in the developed world. As preservation methods (e.g., refrigeration, storage) have become more cost effective, producers are able to get more food to the end consumer while producing less waste.

However, crop yields in industrialized nations are hitting their limits and will require more innovation to drive even greater yields. In addition, energy has become an increasing component of food production whether it is used for transporting materials, producing fertilizers, pesticides or herbicides, distributing water, harvesting crops or packaging. There are two issues with this usage of energy. First there is a direct impact on climate change due to the carbon released in the use of this often oil-based energy. Second, fluctuations in energy price affect food price directly. These prices mildly affect wealthy people but create significant stress as more share of a family’s budget is required to buy food for poor people.

Industrial food suppliers will need to look for new technologies as well as new sources of non-carbon based energy to meet the food demands of the future.
Food security in slums is not a priority for governments, the private sector and NGOs

Governments see slums as illegal habitats
Governments provide infrastructure and rule of law. Unfortunately, slums are in flux and often not recognized as legal places of habitat with legal protection and security. As a result, nominal efforts are made by governments in slums to provide roads, schools, electricity, water and security. Moreover, many governments see urbanization as a problem and put more effort in rural development to slow urbanization. Most government policies ignore slums or threaten eviction.

The private sector finds slums unattractive for business
Most private organizations’ offerings, like those from Unilever in India and Monde Nissin in the Philippines, are priced to target the middle and lower middle class, which is far above the affordable range of a poor slum dweller. However, in general, most private sector organizations see the food-insecure customers as an unattractive market segment to target. These private companies target the food-insecure instead through Corporate Social Responsibility (CSR) departments or through company-sponsored foundations. Much of this social support for alleviating hunger targets rural areas, where most (over 600 million) of the food-insecure reside. As a result, the food-insecure in slums do not get significant support from corporations.

NGOs have not made enough progress upgrading slums
Non-governmental organizations (NGOs) have become major contributors to social development in the recent decades. Some NGOs focus on rural areas and providing relief aid. Others work in urban areas and focus on development. However, NGOs have challenges in funding, program continuity and customer perception. As a result, their impact has been nominal and at times even negative.

The UN World Food Programme (WFP), the Red Cross, and other NGOs are attempting to solve both food emergency and food insecurity. They focus significant effort and resources on helping with food emergencies in war, drought or other natural disaster regions. The focus on food security primarily targets the 600 million people in rural areas. As a result, only a limited amount of resources are available to help the hungry in the slums.

Social enterprises may be the best option to address this issue
Social enterprises are hybrids – part NGO and part business. Their purpose is to deliver both social impact and business profit. Social enterprises deliver social impact by improving the health and well-being of poor people. Social enterprises also aim to make a profit, which reduces their dependence on donations and cash injections. Slums would benefit with the emergence of more social enterprises – particularly those focused on ensuring food security.
Social enterprises that address pain points along the food value chain (Figure 10) will increase food security. Bigger, better, bolder, faster and cheaper solutions are needed in all parts of this chain: from food production to distribution to processing to packaging to retailers. Solutions that integrate the participation of slum dwellers are considered even more interesting because they create employment, purpose and economic wealth for these individuals. In general, robust and scalable business solutions that create economic wealth across the value chain for all stakeholders are needed to increase food security in slums.

However, building successful social enterprises in slums will be difficult

All people face risk due to unexpected changes in the environment, accidents, illnesses, price increases or cash availability. Unfortunately, lower income individuals have limited safety nets, social networks or buffers to deal with unexpected change. Social enterprises that target these types of customers also have to work with value chain players who are also at higher risk. This is further exacerbated by nominal government infrastructure.

Consumers who have limited and fluctuating incomes are difficult to serve

Poor people in slums lack adequate education. This can have two consequences. First, those with less education typically make less money and lack access to higher paying jobs. Second, these people do not typically have enough knowledge about nutritional food choices.

The food-insecure people in slums typically have incomes between US$1 to US$5 a day. Social enterprises that target this segment will have to be prepared to provide solutions that are low-cost and less than 40% of income.

People in slums frequently have irregular employment and therefore have inconsistent income. Social enterprises will need to have business models that can accommodate fluctuations in consumer income.

Food-insecure people in slums spend the same amount of money when food prices go up but may end up purchasing foods that are more filling and perhaps less nutritious. Social enterprises will need to have offerings that are flexible to accommodate changing customer choices.
Partners across the food value chain are difficult to work with dependably
Food producers, food processors and food distributors must ensure safe, nutritious, and tasty food. However, most players in this food value chain are also poor, which makes the whole value chain fragile. Social enterprises will face significant challenges in building a consistent and predictable supply chain.

Food producers may not provide sufficient and nutritious food
Food produced by many local farmers is aggregated for local consumption in slums. Increasing production of the right mix of foods to provide a balanced diet requires knowledge, tools and techniques that many of these food producers do not have. Additionally, food producers often do not have access to the other players in the value chain and lose time and money trying to enter the supply chain.

Food processors may not provide safe and easy to eat food
Consumers in slums sometimes lack access to tools used in cooking (like utensils, stoves, even serving dishes). Processing can help minimize the number of tools that a consumer needs to prepare meals. These small food processors cook, prepare and package food. This is why street food and street food vendors in slums and urban areas play such an important role in providing food security. However, food processors may still use inferior food or ingredients or lack the necessary resources such as clean water or sanitary environments to prepare safe, nutritious and tasty food.

Food distributors may not move food efficiently
There is insufficient infrastructure in slums, which makes following the developed-world model of production and distribution nearly impossible. Distribution without adequate infrastructure is more complex and less efficient, particularly in rural or slum areas. Across the value chain (Figure 10) in the developing world, food is lost in inefficiency. In slums, food is moved by hand, bicycles or carts. Storage is insecure from the environment and theft. Grain can be spoiled by insects, mold, or rain. The packaging that does exist is wasteful and damaging to the environment, if it holds up at all. More often than not, though, packaging is hard to find and preserving foods is difficult and expensive.

Social enterprise operations are difficult to manage
Finances must be efficient
Social enterprises need to operate with razor-thin margins in an environment of fluctuating demand and supply. In informal business (which dominate the economic landscape in urban slums), relationships with suppliers and customers are informal – the hierarchy of roles and work is flexible. There are few, if any, contracts. Contacts are irregular and hours of operation vary. Managing cash collection, inventory and supplier payments is key to ensuring a healthy cash position. To improve cost positions, social enterprises will need to grow significantly to enjoy economies of scale. Both working capital and scaling up could be managed through financing. Unfortunately, financing for companies working in the slums or targeting poor slum dwellers is limited to a few microfinancing institutions.

Assets must be able to bear risk
Social enterprises working in slums have higher risk due to product perishability, fire hazards, natural disasters, corruption and high crime rates. Most insurance organizations cannot assess the risk, claims and premiums accurately enough to build a viable business. Social enterprises have to manage their environment and assets to ensure business continuity in the face of risk that most enterprises in wealthy regions have insurance for.

Employee training must be flexible
Social enterprises should hire from slums to increase social impact; however, these potential employees may not have the appropriate skills and training for the job. Training and on-the-job skill development will put additional stress on management and operations. Social enterprises will have to be patient with employees and employee development in a business that requires operational efficiency to make small profit margins.
Limited infrastructure is difficult to manage
As mentioned above, while urban areas – in general – have better infrastructure and more access to basic services such as water, sanitation and electricity than rural areas, this infrastructure is usually difficult to access or unavailable to people in the slums. This is because governments are reluctant to operate and service slum areas as they are considered informal and illegal settlements.

Sanitary facilities are necessary for food processing and preparation
Access to water, sanitation and hygiene is severely lacking in slums because these areas are usually not considered by local governments during urban and investment planning. As a result, people either pay a high price to middlemen (or water “mafias”) for safe, clean water; or, they use unsafe water and sanitation facilities. This impacts food preparation and consumption because people get sick from eating food prepared with unsanitary water. Social enterprises will need to find ways to ensure clean water is always used in food preparation and processing.

Electricity is needed for refrigeration and preservation
Electricity is usually available in slums, but it is accessed illegally most of the time, which reduces the reliability of power sources. Additionally, studies have found that electricity is used foremost for lighting and television. Rarely do houses in slums have a refrigerator. Social enterprises have to consider that food must be consumed soon after purchase because of limited means to preserve food.

Physical logistics must be efficient for distribution and storage
Adequate physical infrastructure such as roads and permanent buildings do not typically exist in slums. Lands where migrants from rural areas settle are either illegal (on government or private property) or unsuited for building physical infrastructure. Slums are often garbage dumps, centers of industrial pollution, and prone to floods, landslides, mudslides or fire.
Can we build sustainable, scalable and fast-growing social enterprises to increase food security in slums by 2018?

The purpose of this challenge is to increase food security for hungry people in slums by 2018. The winning business solution should have a significant measurable impact.

A list of questions to help develop a good winning business solution is provided in Figure 11. It should have a sustainable business model. It should increase food security. It should have a stage implementation plan with clear milestones and funding required for each milestone. Overall, the winning solution should scale rapidly to serve an ever increasing number of people in a relatively short time.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Guiding Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better Availability</td>
<td>• Does your solution make food available anytime/anywhere?</td>
</tr>
<tr>
<td></td>
<td>• Are you reducing the distance from production to the end consumer?</td>
</tr>
<tr>
<td></td>
<td>• Does it increase distribution to a wider market?</td>
</tr>
<tr>
<td></td>
<td>• Is it replicable or scalable?</td>
</tr>
<tr>
<td></td>
<td>• Does it reduce the time a consumer spends to find or prepare food?</td>
</tr>
<tr>
<td>Improved Quality</td>
<td>• Does your solution improve food safety or hygiene?</td>
</tr>
<tr>
<td></td>
<td>• Will your solution provide a more nutritious or diverse mix of food?</td>
</tr>
<tr>
<td></td>
<td>• Is the food tasty and culturally accepted?</td>
</tr>
<tr>
<td>Reduced Cost</td>
<td>• Are inputs lower cost?</td>
</tr>
<tr>
<td></td>
<td>• Is food processing, packaging or distribution cheaper?</td>
</tr>
<tr>
<td></td>
<td>• Is there reuse of waste?</td>
</tr>
<tr>
<td>Increased Awareness</td>
<td>• Are consumers more educated about nutrition, health and safety?</td>
</tr>
<tr>
<td></td>
<td>• Do people have better information about market access and pricing?</td>
</tr>
<tr>
<td></td>
<td>• Are other pieces of the value chain more efficient because they have more useful information?</td>
</tr>
<tr>
<td>Reduced Waste</td>
<td>• Have you found a way to better utilize food packaging?</td>
</tr>
<tr>
<td></td>
<td>• Does your solution avoid or reduce spoilage?</td>
</tr>
<tr>
<td></td>
<td>• Is there a new way to reuse food-waste?</td>
</tr>
<tr>
<td>More Options and Empowerment</td>
<td>• Will your solution give people opportunities they didn’t have before?</td>
</tr>
<tr>
<td></td>
<td>• Does it create opportunity for women and children?</td>
</tr>
<tr>
<td></td>
<td>• Have you improved the ethical elements of the value chain?</td>
</tr>
<tr>
<td></td>
<td>• Does it create new sources of income?</td>
</tr>
</tbody>
</table>

Figure 11. Metrics and guiding questions to help develop a winning business solution
Dear Participants,

In 2013, poverty is unacceptable. We are too connected to allow so many in our world to live in sub-human conditions. At the Hult Prize, we have made it our mission to find and fund business solutions to poverty.

In the last four years, we have seen some amazing things. We believe more than ever in the wisdom of the crowd. We believe in the viability of business solutions. We believe that social impact can come from anyone, anywhere – not just corporate social relations departments of Fortune 500 companies and non-profit organizations.

The Hult Prize has had the pleasure of working with global leaders of social change like Gary White, Charles Kane, Steve Andrews and Nobel Peace Prize Winner Muhammad Yunus. Now, we have the pleasure of working directly with former U.S. President Bill Clinton to tackle the challenge of food security.

We believe that NGOs are not the answer. It is time for a new generation of social enterprise to bring real change. We are excited to be working with you this year to bring food security to millions.

Best wishes,

Dr. Stephen Hodges  
Ahmad Ashkar  
Dr. Hitendra Patel
Addendum

Considerations for developing a complete solution

To develop a solution, lessons learned by other companies and organizations in other industries should be considered. IXL Center uses the innovation value chain to find growth and opportunity in new areas. There are the bright spots around each section of the innovation value chain – market, delivery, offering, production, and business model – that should be considered as inputs when developing solutions for the poor (Figure 12).

Customers in slums are able to pay for goods and services

Target profitable customers/segments

Not every customer has the ability to pay for goods and services, especially those at the Bottom of the Pyramid (BOP) and in urban slums. As we are looking for business solutions, we focus on customers who have the ability to purchase an offering (Figure 13). Companies increase profits by targeting segments that are accessible and have an ability to pay. This may offend some observers who object to companies choosing not to target the absolute bottom of the BOP who have perhaps the most need. Those needing quasi-emergency aid can best be targeted by NGOs, government, advocacy and community groups.

Who is your target customer? NGOs and social enterprises typically target those who earn more than US$2/day.

Figure 12. Use the Innovation Value Chain for complete solutions

Figure 13. There are 4 billion customers at the BOP
Know your customers’ needs and behaviors

Customers at the BOP are unique. They have specific needs driven by their unique conditions. Their buying behavior is different and driven by past experience, beliefs, culture, traditions and opinions of key influencers. Solutions that may apply in certain geographies, regions or segments may have to be altered to fit a target customer.

For example, yellow corn is available in many regions in Africa through food aid from the U.S. It is a healthy food staple rich in vitamins and carbohydrates. However, people in Kenya and Zimbabwe refuse to eat this type of corn because of its flavor, aroma and color. They would prefer eating the Kenyan local variety of white maize.

What are your customers’ needs and what is their purchasing behavior? For example, consider foods that are forbidden due to religious beliefs as well as local fares and tastes.

Free up people’s time

Far too many people in poor regions spend far too much time looking for water or food. If that time can be freed up, then these people can use this time to create economic value for themselves through doing other tasks.

For example, something as easy as a quick cell phone call can provide people with invaluable information that leads to time-saving and profit-generating decisions. With the onset of mobile phone coverage in 1997, fishermen in Kerala in the south of India saw their businesses thrive. Previously, they had thrown away 5 to 8 percent of their perishable catch when their home market was oversupplied and there was not enough demand for the day. But now with a cell phone in hand, in just a matter of minutes, fishermen can call several markets from their boats and head over to the one offering the highest prices. Eventually the varied price of fish, mainly sardines, along the coast settled down to a single price, creating a more efficient market that drove the fishermen’s profits up by about 8 percent and consumer prices down by about 4 percent. As development economist Robert Jensen of Harvard University remarked: “Information makes markets work, and markets improve welfare.”

What are some other ways to free up time? For example, if wasteful activities such as lining up to buy food, gather water or obtain public transportation could be eliminated, people would have more time to do something else.

Scalable channels already exist in slums

Tap existing channels

Infrastructure in the BOP is lacking and building new low-cost channels is challenging; however, there are many examples of companies who have been able to access the BOP. For example, telecommunications companies in every country are able to deliver and offer their products and services even in the most remote parts of the country. Coca-Cola and PEPSICO provide examples of companies with extensive distribution channels that get products to everyone everywhere.

Another illustration is the meal delivery system in India called Dabbawala or Tiffin Wallahs. It is a system that employs people on bicycles who pickup meals from customers’ homes or from a caterer and deliver them directly to the customer. While its performance rivals delivery companies such as FedEx or DHL that are efficient enough to meet six sigma standards, the efficiency and speed of Dabbawala is achieved with a minimal use of technology.

Can we work with existing distribution channels of major corporations or local businesses? In addition to the examples above, NGOs, cooperatives, community groups and microfinance institutions have extensive networks that can also be utilized at the BOP level.
**Influencers from Self-Help Groups**

It is nearly impossible to describe how many people live in Kibera slum area of about 225 hectares. Everywhere you look there are people. People walking, people working, people selling food or tennis shoes, people sorting trash, people herding goats—people everywhere. And despite that people here lack water, sanitation services and land they are also thriving.

In between all this mess in Kibera there is a “self-help” group of women farmers, who are growing food in “vertical farms” for their families and selling the surplus. These groups are present all over Kenya and around 1,000 in Kibera neighbourhood—giving youth, women, and other groups the opportunity to organize, share information and skills, and ultimately improve their well-being. These small gardens can yield big benefits in terms of nutrition, food security, and income. All the women save money because they no longer had to buy vegetables at the store and they claimed they taste better because they were organically grown—but it also might come from the pride that comes from growing something themselves.}

**Use powerful influencers**

Projects at the BOP often fail without support from key influential people or groups within the local community and government. Gaining buy-in of these people who can be your voice to people at the BOP can be the key to acceptance and scaling at a faster pace.

SunnyMoney, a social enterprise that offers solar-powered lamps, approached school authorities on Mafia Island off the African coast with a proposal for a short-term sales promotion: head teachers could offer students the opportunity to buy a solar lamp at a discount if they were willing to place their orders within the next three days.

With trusted teachers demonstrating the solar lights’ value and eager students immediately experiencing their benefits, concerned parents were only too happy to make the purchase to help their children towards a better life. At a time when SunnyMoney was lucky to sell 1,500 lights a month elsewhere in Africa, they sold 3,500 in just 3.5 days.

**Offerings should be affordable and accessible**

**Right-size solutions**

The purchasing power of a poor person is not large enough to allow him to buy products that are sold in larger sizes. Increasing purchasing power is difficult; decreasing the offering is relatively easy.

Sachet packaging, which started in India and was made popular by Unilever and Procter & Gamble for products such as shampoo, toothpaste and detergent, is now being applied to other industries. Globe Telecom in the Philippines is making use of “sachet marketing” that empowers customers to purchase phone minutes in their own personalized allotments. Rather than restricting by standardized, pre-set values, the company employs a more flexible payment model: “you only buy what you need, when you need it.” As a result, customers can “package” their own service plans as they see fit and only pay for services that suit their particular needs and usage habits (e.g., a combination of voice and cheaper text messaging, only text messaging, etc.).

In the developing world, a simple rugged laptop can go a long way towards providing benefits for the BOP. One Laptop per Child’s laptop had to be sensitive to the needs of both the user and the purchaser – kids’ need for something fun and easy to use and developing countries’ requirement for an affordable, low-cost computer. Because reliable access to electricity is not often available in the developing world, the device also had to be able to run on little power. The solution was to deliver a laptop computer (the “XO”) that was priced less than US$200 with features quite different from Western standards—a rugged, low-power, bright-green laptop requiring less than two watts of power and able to run on human-generated and solar energy sources.

Can you make your offerings bite-size? Snacks, condiments, spices, and even basic food such as milk, rice, and meat can be bought at single-use sizes.
Share unused assets and resources
Assets are expensive and are not accessible to everyone at the BOP. If important assets could be shared, then the return on these assets could be significant. Today, what was previously thought to be “un-shareable” can now be divided or distributed amongst many users. The recent economic recession combined with the onset of social networks and mobile technology has changed people’s attitudes toward sharing; this has enabled companies such as Relayrides, Airbnb and Taskrabbit to be successful in sharing cars, rooms or your own skills and time.\(^7\)

The Grameen Foundation has been acting on the idea of phone sharing through its “Village Phone” initiative, which has already created 25,000 microfranchises in Asia and Africa (Village Phone Operators charge people a fee to use their mobile phones). Following a similar line of logic, a household’s water tap can be beneficial to others living outside of that household, thus creating a business opportunity for people to sell spare water to their neighbors who do not have water connections.

Can you find assets that can be shared? For example, a kitchen, eating utensils, packaging materials, a garden, or front yard aren’t always used and can be shared with others.

Hold people and organizations accountable
Frequently, goods and services delivered to the BOP do not satisfy the poor. This is partly because there is no accountability forcing companies to improve their offering; moreover, it can often be difficult for the poor to voice their concerns. With increasing worldwide use of the internet and social media sites such as Twitter and Facebook, informational transparency and accountability are on the rise.

Yelp, an online reviews site, provides information for people to find the right local business for their need, such as restaurants, dentists or mechanics. People are able to go on the site and review a business that they have used or a restaurant that they’ve gone to. Users can also read other people’s reviews to help them choose in the future. This pushes businesses to provide better service, because bad reviews can reduce future sales.

How can you ensure accountability? Reviewing and auditing exist in every industry. Can social media sites and other communication tools available to the BOP be used to ensure transparency and accountability?

Build with local parts and local knowledge

Use local parts
Using the most sophisticated and advanced innovation in the world is not necessarily the best solution for a particular problem. In fact, sometimes it may lead to an assured failure. Local parts readily available in the developing world should be considered in building offerings. By using local sourcing, these offerings forego the attraction of hi-tech parts to improve sustainability in the long-term.

“Incubator graveyards” in the developing world’s hospitals are an unfortunate example of well-meaning high-tech failures: thousands and thousands of generously donated state-of-the-art baby incubators sit idle, collecting dust. The combination of expensive technology (USD$40,000+ per incubator) and highly specialized parts drags them to their eventual doom. Nobody knows how to fix them and nobody can afford or access the required parts. Low-tech solutions that easily travel the world may be much more useful. One noticeable example is to build a “4Runner for Babies” incubator made from Toyota 4Runners, which can be easily found throughout the developing world. Cheap, “organic resourcing” uses the Toyota’s headlights for heat, its air filters for air purification, and its car alarm to warn of emergencies.\(^7\)

What builds your offering? What can be replaced with local parts or materials? For culinary needs, local cooking tools and resources should be considered: for example, coal or firewood can be used as heat sources, banana peels for plates and salt for food preservation.
Apply local know-how

Lacking knowledge on local perspectives can be a problem. Beyond understanding local needs and behaviors, though, local people should also be engaged. They are on the ground and understand their neighborhood issues much better than outsiders. Often, because they are a part of the community, local people can create better solutions and innovations stemming from their own needs.

Starbucks is known for creating a coffee drinking experience but has had difficulty penetrating the Chinese market. To reach more customers, the company’s management team in China has decided to cater to local tastes and culture by introducing new Chinese-inspired flavors such as red bean Frappuccinos and Hainan chicken and rice wraps as well as building larger and more comfortable coffee shops decorated by local graffiti artists.80

Was the knowledge of locals used in building the solution? For example, use the thoughts of local people, government officials and NGOs in the region during development.

Go beyond the traditional business model

Review traditional models

The low-price, low-margin, high-volume model has been followed by entrepreneurs for years in focusing on the BOP, which was largely inspired by the success of Hindustan Unilever in selling products such as shampoo sachets. However, this requires a rather large market penetration rate – 30 percent – to make profits. Another option would be to increase profit margins on each individual sale either by pushing down variable costs or by driving up the price by bundling products, offering an enabling service, or cultivating customer peer groups.82

Telecommunication companies offer examples of the latter strategy. More people in the world have access to cell phones than toilets. For example, companies like Reliance in India, Wizzit in South Africa, and Safari.com in Kenya are finding ways to profit from the BOP. By the end of August 2010, people in India had more than 670 million connections, growing at a rate of about 20 million new users per month.

What business model do you use to capture value? Alternative partners such as community groups, local food distributors, and village variety stores should be considered. Revenue models around microfinancing, should also be considered when building a business model.
Provide value exchanges and microfranchises to make the offering affordable

The BOP provides an untapped market with rapid growth for most companies. It is challenging for companies to generate profit when following traditional business models targeted at the BOP where customers demand very low-priced and high-quality products and services. Alternative business models such as value exchanges (exchanging labor and credits for food, water or money), microfinance and microfranchising can deliver this and still make profit for a company or social enterprise.

As mentioned previously, Taskrabbit is a company that shares people’s time and skill with others for a price. Workers can earn over US$5,000 exchanging their time and skill to do a task or temporary job.

A microfranchise is a new and evolving tool (similar to microfinance) that aims to alleviate poverty in small increments at a global scale. Like a traditional franchise, microfranchises are replicable and operate for profit to be self-reliant; however they also have a social impact component. Entrepreneurs by necessity in developing countries can become microfranchisees and earn income that helps move them above the poverty line. A microfranchise provides products and services, economies of scale, an efficient supply flow and a brand that an individual could not have accessed or created on his/her own. The franchisor provides the tools, training, quality control and supplies needed to be successful.

Because microfranchises replicate successful businesses, they substantially decrease the risks of entrepreneurship, leading to higher start-up and survival rates. A microfranchise business model should be simple, well-documented, easy to understand and easy to implement. When creating a microfranchise, entrepreneurs need to start small, do pilots, identify successes and have a system to quickly implement any changes required.

What is your solution for capturing value? For example, consider business models of Grameen Bank in India, Inglés Individual in Mexico, Pride in Africa and Yogurt Persa in Ecuador.

Use relationships and reputation to ensure reliability

The BOP is disproving the long-held belief that it is too risky to lend to the poor. On the contrary, the poor are willing and able to repay their loans (there are about 300 million individuals with US$12 billion of pent-up demand for water and sanitation loans between now and 2015). Water.org and Grameen Bank have both recorded about 97 percent repayment rates of their microloans. Moreover, the BOP is demonstrating that other means of collateral can be used beyond economic assets. In small group loans with family and friends, reputation becomes a powerful form of “social collateral” (i.e., the trust and respect of those closest to people who have taken out loans that would be at risk if they defaulted on the loan). Peer pressure helps ensure reliable repayment.

What are other ways to ensure reliability at the BOP? Beyond “peer pressure,” you could use the “freemium” model and give something away now for more return later.

Create intangible value beyond the offering

Some projects seem inappropriate for the BOP because they do not deliver enough tangible value. However, even if some benefits of an offering are not tangible, the value to the user may be much greater than what meets the eye.

For example, SolarAid aims to bring affordable, off-grid lighting solutions to people in Africa. While a better lighting solution obviously improves productivity and safety, it also enriches the life of people who use it. By effectively extending the hours of lighting available in a day, people have more time for interactions with friends and family, not just for learning and working.

What intangible value does your offering have? Does it free up time, increase self-esteem and dignity, or even increase security or happiness?

By considering lessons and best practices other companies and organizations have applied to the BOP, new solutions may finally break the cycle of hunger and poverty and contribute to ending some, if not all, of the problems of people in slums around the world.
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Selected Reference Sites and Sources

12. Interview with Dave Stangis, Campbell’s Soup Company, November 16, 2012.
34 Interview with Alfredo Lozano, General Director, Fundación Mexicana para el Desarrollo Rural A.C., November 14, 2012.


40 Food and Agriculture Organization of the United Nations 2006), http://www.fao.org/docrep/009/a0750e/a0750e00.htm, Rome


49 ibid.


54 ibid.


60 Food and Agriculture Organization of the United Nations, http://www.fao.org/docrep/009/a0750e/a0750e00.htm, Rome
Food Security in Urban Slums by 2018

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The Center for Innovation, Excellence and Leadership’s vision is to Make Innovation Management a critical business discipline in corporations and business schools around the world. Its mission is to help corporations and individuals develop world-class innovation management capability while driving significant business impact. IXL Center delivers this through Training, Coaching and Advisory services to create innovation breakthroughs and to build the innovation capabilities of individuals, teams and organizations.

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