

Big Problem Statement

Undernourishment affects 795,000,000 people around the world, and ultimately leads to the loss of productivity and well-being of communities and nations.

Good nutrition is an essential element to be able to lead a healthy and productive life. Yet poor nutrition remains a critical global problem. Each year, more children die as a result of undernutrition than of AIDS, malaria and tuberculosis combined.

Research confirms that the 1,000-day period from conception to a child's second birthday offers a critical window of opportunity to prevent the largely irreversible damage done by early childhood undernutrition. Not only do pregnant women and nursing mothers have special nutritional needs themselves, but children whose mothers are malnourished before and during pregnancy are likely to be born already malnourished, creating an intergenerational cycle of undernutrition.

What do people currently do to combat this?

- [Food Cloud](#) is a company in Ireland that is working with Tesco, a large grocery store chain, to redistribute excess food to local charities.
- [City Harvest](#) is a NYC-based company that rescues and delivers food to food insecure communities.
- [GrowNYC](#) is a sustainability resource for New Yorkers: providing free tools and services anyone can use in order to improve the city and environment.
- [Move for Hunger](#)

Specific Problem Statement:

How might we streamline data access for food redistribution agencies within food insecure communities between regions to reduce overall waste and improve nutrition?

After talking to different individuals in the food supply chain, we learned about the following issues:

1. Adoption of new contributors is a challenge
2. Nutritional information isn't always tracked

Data that supplements the above points

- 2 billion suffer from micronutrient deficiencies

- One-third of all food produced is wasted
 - 1.3 billion tons globally (45% of all fruit and vegetables, 35% of fish and seafood, 30% of cereals, 20% of dairy products and 20% of meat)
 - In high and medium income countries, more food is wasted at the consumption level (Per capita food waste in Europe and North-America is roughly 100kg/year)
 - In low-income countries, food is lost during the early and middle stages of the food supply chain (Per capita food waste in sub-Saharan Africa and South/Southeast Asia is roughly 10kg/year)

Solution Idea:

An open ledger of excess food within a region which food organizations (grocery stores, farms, restaurants, etc.) contribute to and charities have access to.

Process:

1. Contributors (Grow NYC, grocery stores, farms, restaurants) will contribute to the ledger from a mobile app (or SMS messaging depending on location) by listing food excess in the app.
2. Nutritional information is tracked within each ledger submission. For example. What type of food (example: grain, vegetable, protein, etc)
3. Receivers (charities, soup kitchens, City Harvest) will have access to this ledger, and update it when they pick up the excess food.

What do contributors receive from this process?

- Data on how to reduce waste in stores and organizations

What do redistributors receive from this process?

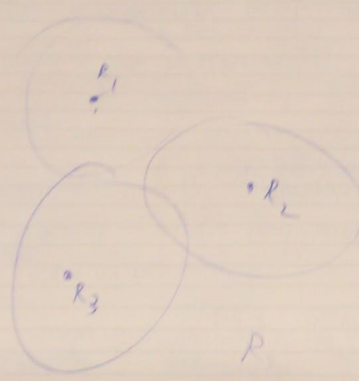
- Data to help incentivise other contributors to get involved in the ledger

What do charities receive from this process?

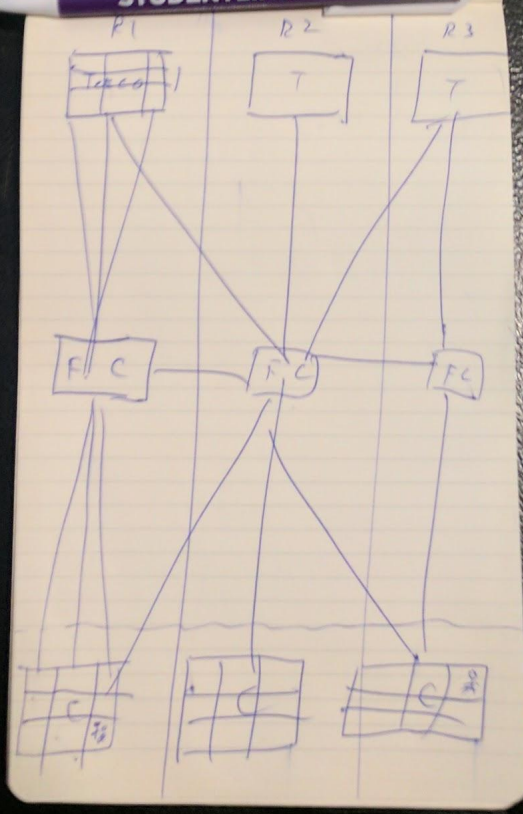
- Nutritional data on what they're receiving
- Food access from other regions

Plans for Future:

Zero — Average



STUDENTLINK



Additional Relevant Stats:

- Each year, more children die as a result of undernutrition than of AIDS, malaria and tuberculosis combined.
- Research confirms that the 1,000-day period from conception to a child's second birthday offers a critical window of opportunity to prevent the largely irreversible damage done by early childhood undernutrition.
- 45 percent of deaths among children under 5 have malnutrition as an underlying cause

Notes from Chris

"Farmazoober"

Look into:

- Amazon inside out - Logistics, dynamic load balancing, physical balancing, papers about how they do it
- Ted talk about how DHL tweaked their process by observing ants
- How are food deserts served? Some parts of the US are similar to Burundi

What if everyone's house became an Amazon warehouse?

Read about the Juicero fiasco

Build 3 different user stories:

1. Person with specific dietary needs
2. Starving grad student who needs food?
3. Vendor story (based on the above two points)