

The Mottier Innovation Challenge in Systems Engineering

Submission 7

1. Project Title

DIBBS: Save Food, Do Good

2. Please list team members, denoting department and undergraduate/graduate student

Kathleen Hu, ISE Undergraduate Shutian Xu, ISE Undergraduate Sohinee Oswal, ACES Undergraduate Devaki Belwalkar, FSHN Undergraduate

3. Please list contact information for the team (email, phone number)

Kathleen Hu qianhu2@illinois.edu 630-880-8612

4. What are you trying to do? Articulate your objectives using absolutely no jargon.

Reduce food waste and provide more nutritious food to those facing food insecurity.

5. How is it done today, and what are the limits of current practice?

Currently, food agencies like soup kitchens and food pantries receive the majority of their food (mostly non-perishables) from food banks and donations. Grocery stores throw out a lot of perfectly healthy food for reasons such as being near shelf life and cosmetic blemishes. There is no current standardized solution to connect food agencies to grocery stores' excess food.

6. What's new in your approach and why do you think it will be successful?

Our approach leverages technology to provide a real-time platform for grocery stores to easily post the food that they'd otherwise throw away so that food agencies can be notified of what's available to call DIBBS, pick-up, and better serve their communities. We will be successful, because we've ran a proof of concept in our pilots this summer. Over the course of a week, we saved 100+ pounds of fresh food from Fresh International Market in Champaign to better serve the Champaign community through Wesley Food Pantry. We ran a similar pilot at CommonGround in Urbana over two weeks with 500+ pounds of fresh foods diverted to serve the community.

7. Who cares? If you're successful, what difference will it make? What are the risks and the payoffs?

In the United States, thirty-one percent of the available food supply at the retail and consumer level goes uneaten. This translates to 133 billion pounds of edible food wasted every year. We're starting our impact in our own community. Champaign County has the third-highest poverty rate in Illinois. One in six residents face food insecurity each month. If we're successful, we will be fighting hunger with nutritious food across the United States every day. Food waste is an issue that needs to be dealt with sooner than later for a sustainable future for all. And as the discrepancies in income continues to increase in America, our nutritious meals intend to make a difference to millions. Our risk is of creating a platform that is not used and adopted on the scale we envision. We intend to mitigate this risk with extensive market research and user interviews.

8. How much will it cost? How long will it take? What are the midterm and final "exams" to check for success?

The milestones we anticipate are: By October- "midterm exam": Have our process workflow refined, determined pricing model and business plan for long-term sustainability and scalability. By December- "final": Have our minimal viable product technology designed, simulation built, with user surveys, input, and feedback. By January: Roll out our minimal

viable product in a signed paid pilot. Costs: We project the final technology build costs will range from \$15k to \$100k depending on our demand for scale and features. Our MVP is estimated at \$2k.