**Project 2**

# Food System

## Introduction

In this project you will work with a team to explore the challenges of sharing information within a food distribution network consisting of 3 nodes: a food producer, distributor and wholesale buyer. The first task for your team will be to develop an understanding of the entire system and how information moves or does not move between the three nodes. Then you will focus on designing a tool that will enable the distributor node to become a better conduit for information between the producer and retailer nodes to increase the efficiency of the entire system.

Here is a concise summary of the system and the challenges that you will be exploring:

Whether the incentive is freshness, economic development, food safety, food resilience, healthy ecosystems, minimization of carbon footprint, or simply the desire for stronger community, the demand for regional foods is booming.

The increase in demand, however, is not being met. Obstacles to efficient regional distribution are numerous and incredibly complex, with dysfunctional and inefficient logistics, policies, and business operations all along the vertical.

While there are individual success stories along the supply chain, businesses, nonprofits and government agencies are still searching for ways to turn isolated achievements into replicable models of high‐volume, regional food systems.

*[excerpted from FarmsReach white paper: ‘Building Regional Produce Supply Chains,’ http://bit.ly/w2aQre]*

You will begin this project with exposure to actual individuals working in this supply chain. You will use this research to develop a model of the system. You will analyze this system for points of leverage and opportunities for efficiency and finally transform this understanding into the design of an application targeted specifically at the distributor node.

## Assignment

This project will be done in teams of 3 or 4; you will be assigned to a team.

The design challenge for this project:

**Develop a software application that improves the efficiency of the Produce Distribution Supply Chain by helping the Distributor node serve as a conduit for the flow of produce *AND* information between the Producer and Retailer nodes in the chain.**

While the deliverables for this project will follow the theory and practice we have developed in the system class, getting them done will require that you integrate the learnings and tools from your design research and story courses.

For the research portion at least one member of your team will need to participate in each of the three arranged visits at Green Gulch Farm, Earl’s Organics Wholesaler and Rainbow Grocery. **Note that the visits to Earl’s and Rainbow will happen Monday, April 2, from 9 to 10:30am.** Scheduling these visits outside of your normal class time could not be avoided.

Including the research portion, there will be 3 required interim team submissions that are intended to help you and your team produce an exceptional final team submission.

The details and schedule for these submissions is given below.

## Learning Objectives

The strategic learning objective for this project is to gain experience with two of the most difficult and most common systems design challenges:

1. Dealing with a wicked problem, that is, a problem with so much complexity that it cannot ever be solved, only be improved
2. Working as part of a team.

On a more tactical level, the purpose of the assignment is to practice these tools and techniques:

* site visits, interviews
* persona>user story>scenario>workflow translation
* construction and expression of mental models and flow diagrams
* interactive prototyping.

## Submissions

There will be both team and individual submissions for this project.

### Team Submissions

#### 1. Research Report

A slide deck with two communication goals:

1. Summary of the team’s key findings from the site visits
2. Definition of specific needs, and design opportunities, for the distributor node in the system

This deck will be due and presented in 10 minutes on 6 April in the morning.

#### 2. Design Strategy

A slide presentation consisting of

1. System Model
2. Application Concept
   1. Name
   2. User Mental Model
   3. Flow & Feedback Diagram (including inputs & outputs)
   4. Information Architecture
   5. Schematics for three screens

This deck will be due and presented in 15 minutes on 13 April in the morning.

#### 3. Preliminary Design

A slide presentation consisting of

1. Clear description of application purpose and value
2. Information Architecture and primary navigation
3. Schematics for 3 workflows
   1. example of monitoring the system
   2. example of processing feedback
   3. example of managing users and/or permissions
4. Comps for 3 possible visual directions

This deck will be due and presented in 15 minutes on 20 April in the morning.

#### 4. Final Design

1. A slide presentation consisting of
2. Strategy
   1. Summary
   2. Research Methods
   3. Persona
   4. Needs
   5. Design Challenge
3. Concept
   1. Statement of Solution
   2. Flow & Feedback Diagram
   3. Information Architecture:
      1. Labels and Organization
      2. Data Model
4. Wireframes communicating workflow
   1. example of monitoring the system
   2. example of processing feedback
   3. example of managing users and/or permissions
5. An HTML Prototype consisting of
   1. Functional Navigation & Page Layout reflecting information architecture.
   2. Representative Screens showing visual design
   3. Linked pages representing flows
      1. These should be same flows as shown in the wireframes
         1. example of monitoring the system
         2. example of processing feedback
         3. example of managing users and/or permissions
      2. At least one page in one flow demonstrates proposed interactivity using jQuery and/or jQuery Plugins

Submit the deck, wireframes & prototype to Coursekit by 10 am 27 April in the morning. Be prepared to present an edited version of this material at 10 am 27 April in East 1. You will have 20 minutes total for your presentation, and you need to leave time for questions.

### Individual Submissions

#### Assessment of Team Members

A numeric score of 0 to 4 for each of your team members giving your assessment of the effort each contributed to the team. A score of 4 means you believe the individual contributed the best he was capable of, regardless of the final quality of his effort. A score of zero means the individual made no meaningful contribution to the team final deliverable. This report will be submitted directly to the instructor and will be kept confidential.

## Project Schedule

The schedule and deliverables are as follows:

1. **03/30/12 Project Kickoff: Site Visit: Green Gulch Farm**
   1. *Tour*
   2. *Discussion*
      1. Introduce Project
      2. Assigned Reading
2. **\*\*\*04/02/12 Site Visits 9-10:30am\*\*\*** 
   1. *Rainbow Grocery - Retailer*
      1. Contact: Kim
      2. Address: 1745 Folsom Street, San Francisco CA, 94103
   2. *Earl’s Organics - Wholesaler*
      1. Contact: Earl
      2. Address: 101 Jerrold Ave., Suite 100, San Francisco, CA 94124
3. **04/06/12 Research**
   1. *Morning*
      1. Presentation - 10 minutes - Each Team
      2. Guest: Melanie Cheng, FarmsReach
         1. Understanding Distributor Persona
         2. Defining the System
      3. Discussion of Assigned Reading
   2. *Afternoon: Prototyping*
      1. Data Modelling
      2. Types of Prototypes
      3. Image Maps + Absolute Positioning = Simple Clickable Prototype
4. **04/13/12 Strategy**
   1. *Morning: Presentations & Studio*
   2. *Afternoon: Prototyping*
      1. Sketching Your Data Model
      2. Review of Image Maps
      3. Lab
5. **04/20/12 Preliminary Design**
   1. *Morning: Presentation & Studio*
   2. *Afternoon: Prototyping*
      1. Lab
6. **04/27/12 Final Design**
   1. *Presentations, 20 minutes each team*
   2. *30 Minute Booth Time*
      1. instructors and invited guests circulate to team booths
      2. ad hoc Q&A at booths

To receive a grade for this assignment team’s must submit your final presentation as a PDF to Coursekit by 9 am on 27 April 2012.

## Grading

Each team will receive a grade for the final submission. Individual final grades will be calculated as follows:

* Participation (50%)
  + Interim Team Milestones
    - Research
    - Strategy
    - Preliminary Design
  + Design Log
  + Team Assessment
* Final Submission (50%)

### Grading Rubrics

#### Interim Milestones & Design Logs

| **Quality** | **Poor (1)** | **Good (2 - 3)** | **Excellent (4)** | **Weight (%)** |
| --- | --- | --- | --- | --- |
| Completion | Submission is not completed with care or does not contain all the required pieces. Presentation is sloppy, disorganized or otherwise unconsidered. | Submission is well-executed, contains all the required pieces, and demonstrates clear intent to resolve the given challenge. Presentation is organized, thoughtful and rehearsed. | Submission demonstrates exceptional attention to detail and communication value. There is evidence of significant work beyond what was requested. Presentation is well-rehearsed and entertaining. | 100% |

#### Final Submission

| **Quality** | **Poor (1)** | **Good (2 - 3)** | **Excellent (4)** | **Weight (%)** |
| --- | --- | --- | --- | --- |
| Observation | Cursory inclusion of research into concept. Questionable or poorly supported assumptions. Lack of time and care devoted to research portion of project. | Good alignment between the observational reports and conceptual model. Evidence of thoroughness in investigating the problem space and identifying the relevant elements and relationships. Support for the choice of perspective used for viewing the problem space. | Evidence of significant self-directed research. Clear and explicit description of how observations led to insights and decisions. Understanding of the limitations of the observations, clarity regarding assumptions and their risks. | 30% |
| Synthesis | The concept and structure presented do not follow from the presented research, pieces of the concept do not support one another, little or no representation of flow and feedback, lack of clarity about entity relationships and influence. | Representation of the problem space in a coherent and consistent model. Good alignment between the implications of the several diagrams used to explain the design concept. Clarity about entities and relationships, flows and feedback. | The conceptual presentation is insightful, the identified elements and relationships teach meaning that exists in the system but is not at all obvious to a casual observer, system complexity is rendered manageable via a simple, parsimonious and actionable model. | 30% |
| Communication | The presentation is not completed with care or does not contain all the required pieces. Presentation is sloppy, disorganized or otherwise unconsidered. Lack of preparation or coordination make it hard to understand the concepts, assumptions and structure of the design. | The presentation is easy to understand and the connection between the expression and the underlying model is at all times clear. Information architecture is manifest in labeling and structure. Workflows are consistent with use cases and the system model. Visual design is attractive and appropriate. Communication was taken seriously, materials prepared with care and delivery was rehearsed. | The presentation is exceptional in terms of elegance, clarity and emotional resonance. There is near perfect alignment between the shared needs, the mental model and the expression of these concepts in the visual design, layout and flow of the design. Evidence of significant preparation to ensure that design intent is fully represented in the presentational experience through a clear narrative. | 40% |

## Teams

### Arugula

* Kelly
* William
* Tanya

### Butterleaf

* Bo
* Wilson
* Casey
* Katy

### Radicchio

* Laurel
* Evan
* Cara

### Endive

* Elizabeth
* Justin
* Guy