Interest in locally produced foods has increased sharply in recent years along with the idea of promoting more healthful eating and connecting farmers and consumers. The presence of food deserts and high obesity rates suggest that food assistance programs and entitlement programs have not fully addressed the nutritional needs of residents. A large number of food manufacturers are faced with limited shelf life of their products. Some products may never reach the customer because they expire before arriving, and simply go to waste. This poster examines the question, What would be a practical way to bring products to costumers in reasonable time and at lower cost.

Hubs are used in transportation, logistics, and telecommunication networks to serve as consolidation points, warehouses, and sorting centers allowing for direct shipment between supply and demand nodes with fewer connections between them. Hubs can result in lower network costs, but it can be challenging to determine where hubs should be located or how customers should be allocated to them. The success of a food hub will depend on the characteristics of the regional food system. The size and reach of each hub’s consumption demand in a region.

Distribution Hubs

Food Distribution Hubs

• Hubs are used in transportation, logistics, and telecommunication networks to serve as consolidation points, warehouses, and sorting centers allowing for direct shipment between supply and demand nodes with fewer connections between them. Hubs can result in lower network costs, but it can be challenging to determine where hubs should be located or how customers should be allocated to them.

• The success of a food hub will depend on:
  - The characteristics of the regional food system
  - The size of and reach appropriate for the hub’s context
  - Understanding of current and past attempts to create aggregation and distribution infrastructure in the region.

- The model can be improved by:
  - Considering the entire United States with more products and associated constraints,
  - More detailed locations of production and consumption.
  - Selecting the hub locations and their capacities based on future potential changes in consumption and production, both in terms of quantities and number of locations (for example, due to climate change).

- Consider the effects of seasonality on hubs.

References: