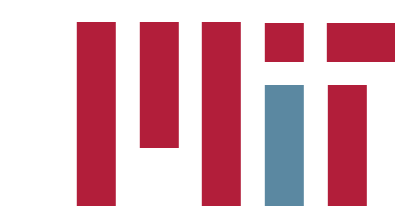




MIT Supply Chain

Student: Priyanka Singh, SCM 2018
Student: Afsaruzzaman Noor, SCM 2018
Advisor: Tim Russell
Sponsor: Akshaya Patra

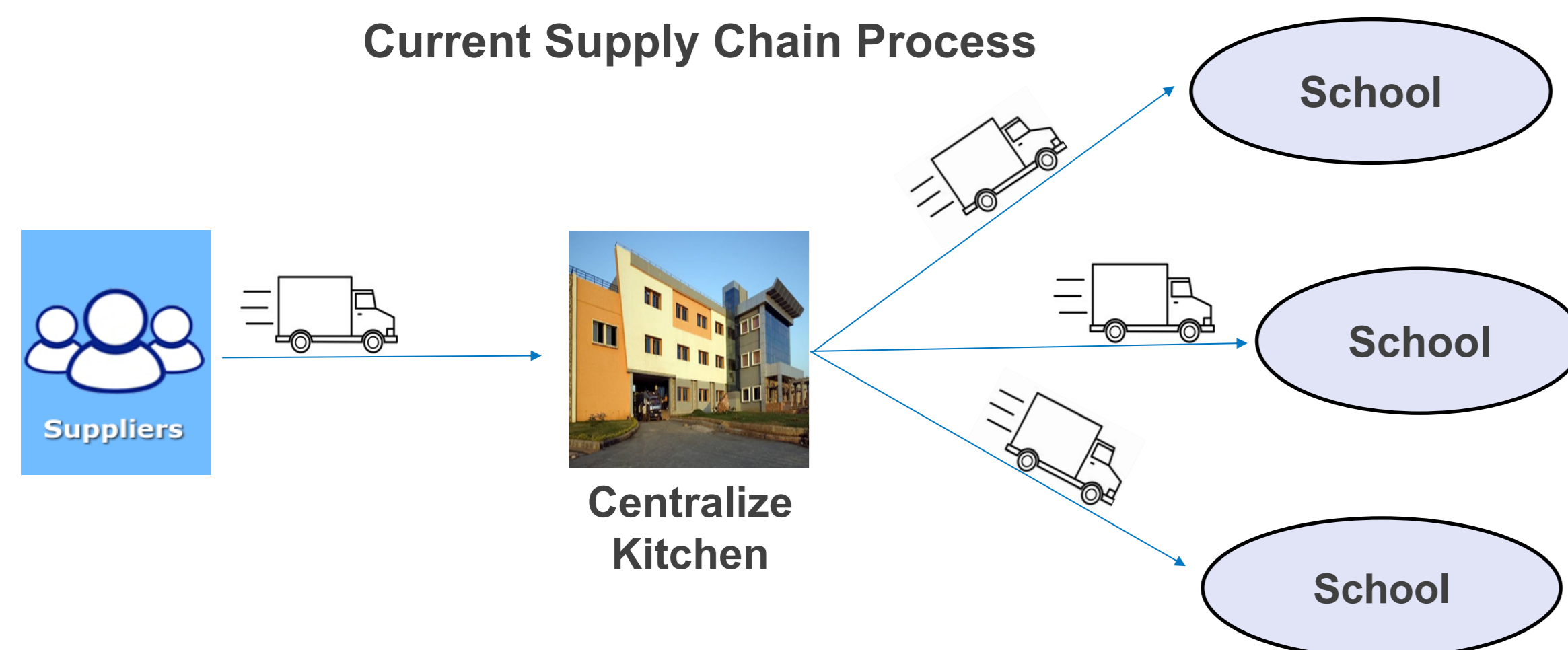
Network Design For Mid-day Meal Programme



January 2018 Poster Session

Motivation / Background

- Increase the utilization of centralized kitchens' capacity.
- Minimize transportation cost and number of centralized kitchens.
- Reach out to more schools by resource optimization.



Key Question

What network design of centralized kitchens maximizes the number of children served with mid-day meal in 2020.

Relevant Literature

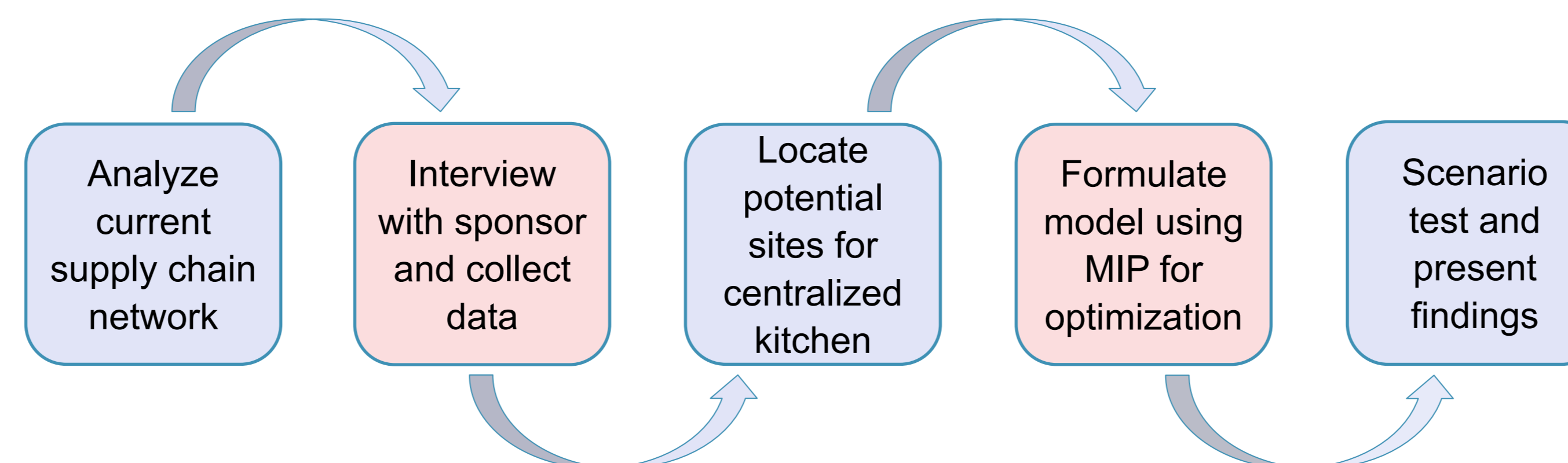
- Cyril Khamsi, and Veronica Steolear (2016). "Efficient supply chain design for highly perishable foods." MIT Thesis.
- Govindan et. al (2014). "Two echelon multiple-vehicle location routing problem with time windows for optimization of sustainable supply chain network of perishable food." International Journal of Production Economics 152: 9-28.
- D. Agustina et. al (2014). "Vehicle scheduling and routing at a crossdocking center for food supply chains." International Journal of Production Economics 152: 29-41.



The Problem

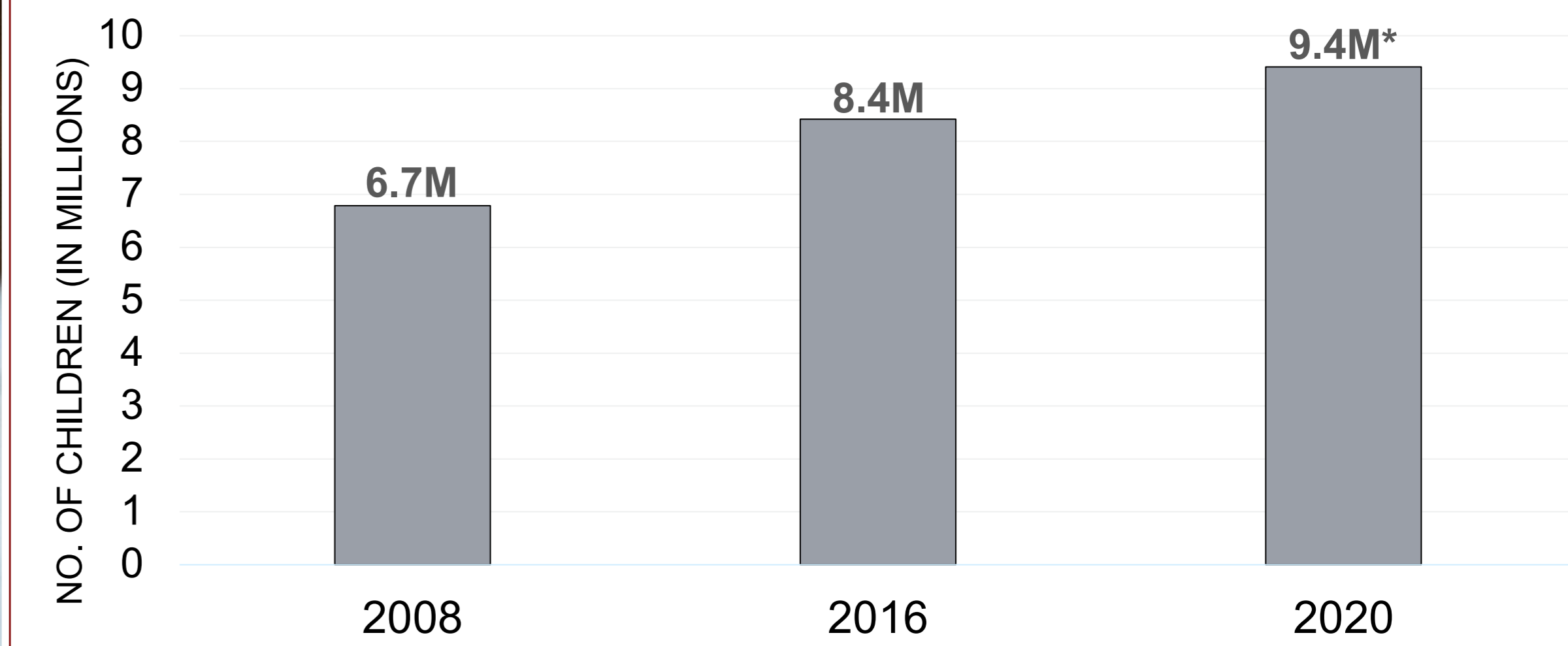
- High number of centralized kitchens due to delivery time constraint of cooked food.
- High transportation and kitchen running costs to serve small order size.

Methodology

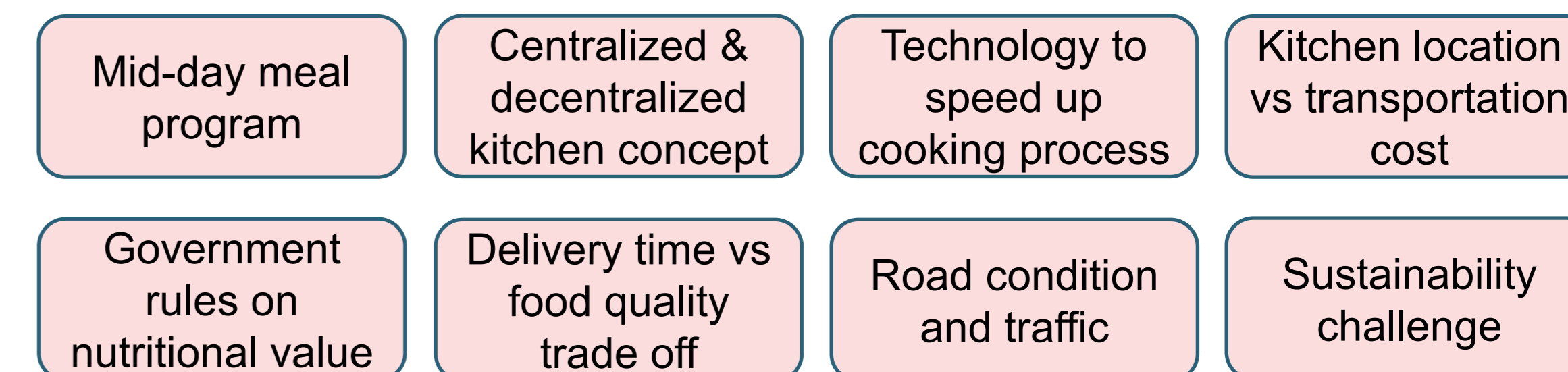


Initial Results

Growing demand of mid-day meal



Feedback from sponsor company during interview



Expected Contribution

- Network design to serve maximum number of children in a state
- Reduction in fixed cost of facility and transportation cost
- Optimal utilization of centralized kitchens' capacity

Priyanka Singh



Afsaruzzaman Noor

