Group Exercise 2: Data + Incentives

1. When you were asked combine the technical roles of data collection and consumer incentives, what was the most difficult obstacle you faced? How were you able to overcome it?

a. Participation. For various reasons, not all choose to participate, e.g., concerns about privacy, no smartphone.

b. Determining response to incentives.   Difficult to understand intent.

c. To overcome (model-test-model): Start with limited scale road segment or corridor implementation, collect data, then adjust and scale to multiple corridors.

d. Design of experiment is tricky. While we can sequentially scale our approach, we should consider longitudinal studies and careful selection of control group.

e. Did the incentive cause the desired action?

Group Exercise 2 *CONT'D*

2 . Successful modeling of outcomes is a key accomplishment of StarRoute. What were the most important features of these models that facilitated your team's approach to Data and Incentives?

a. *Real-time* choice modeling

    a. Start by segmenting the traveling population e.g., "soccer moms who travel to Walmart", freight

    b. Real time property enables us to enact controls

b. Ability to precisely determine the "tipping point" such that a relatively small population that changes travel behavior would have large system effects

b. Building realistic models of how intervention works

c. Acquiring large data set from vehicle: minute-by-minute calculation of fuel economy and emissions performance.

Group Exercise 2 *CONT'D*

3. It has been difficult to quantify the impact of StarRoute on congestion. How do you determine the impact of proposed improvements in Data and Incentives, in light of this difficulty.

   a. Ensure that experiment is longitudinal to accurately measure impacts that endure.

   b. Consider collaborating with insurance companies.