Week 6 Check-In

Icebreaker: What is a destination with no or little access to public transit that you would like to see have improved coverage? What is a place where you think transit would have high ridership due to density?

Chapter 10: Ridership or Coverage? The Challenge of Service Allocation

Summary:
This chapter analyzes the aims associated with service allocation. In total, 2 objectives are outlined: The Coverage Goal & The Ridership Goal. Transit often faces a contradictory mission:
1. Serve all parts of a community
2. Maximize ridership with a fixed service budget.

The first goal is a Coverage Goal. The transit agency must provide service to everyone in the area, regardless of usage. This goal is commonly the result of 2 political sources:
1. A reflection of concerns about equity (i.e. services for all taxpayers regardless of usage)
2. Social Service Objective service for people who are reliant on transit (e.g. people with disabilities, low-income, age)

The second is a Ridership Goal. The transit agency must deploy service with the aim of the highest possible ridership for a given service budget. In areas where demand is high this goal provides intense service, conversely, in areas where demand is low agencies would likely provide no service. Both goals are illustrated in Image 1.

The Equity Goal is mentioned as a possible compromise. Under this goal service is allocated proportional to population. In densely populated areas, service is more frequent. In sparsely populated areas service is less frequent.

Transit ridership rises with density for two main reasons. First, dense places have “more riders because it has more people, and more activities, in the fixed area within walking distance of any transit stop.” Walker illustrates this with the fictitious cities of Sparseville and Denseville.

Second, people living in dense places are more likely to use transit because of various factors such as car ownership and walkability patterns in dense areas.

Walker combines these two factors to produce the following formula to calculate ridership:

\[ \text{Ridership} = \text{Population} \times \text{Rate of Transit Use per Person} \]

Image 2 is a graph of intensity of service, trends in the three service allocation goals and density of development. Note, there is an associated increase in ridership as density increases due to the increase in persons per unit area and due to the higher rate of transit user per citizen in denser areas.

Service Allocation Policy is a split percentage of resources highlighting different goals. Using a March 2021 Transit Choices report produced by Walker’s team, MARTA's Service Allocation
Policy is focused on 60% ridership 35% coverage 5% duplicative service measures. You can access the full report at the following link: https://www.marta2040nextgenbus.com/discover

Questions -
What are the pros and cons of an all ridership or all coverage network? (You may refer to the first image)

Think of your neighborhood. Would you describe it as a Denseville, Sparseville or perhaps a mixture of both? What is your opinion of Walker’s take on service allocation to either region? How would you describe current service in your area?

How do you feel the pandemic has changed coverage and ridership? Can you provide examples from your transit experience where you’ve felt one goal is prioritized?

Given Walker’s feedback on MARTA’s ideal service allocation (65% ridership, 30% coverage, 5% duplicative), do you agree with these percentages? Which areas would you focus more or less on and why?
Here's a transit agency's service area. The lines are roads, and the small people indicate population density. The agency can deploy twelve buses.

**RIDERSHIP GOAL**

For ridership, concentrate all service in denser areas. Three lines, each have 4 vehicles, offering frequent service.

**COVERAGE GOAL**

For coverage, you need eight routes, so each will have only 1-2 vehicles, offering infrequent service.

![Image](74x336 to 327x711)

Figure 10-4: Extreme service allocation goals in a fictional city. Credit: David Jones
Additional Links:

Census' On the Map tool to look at jobs and workers' locations

https://onthemap.ces.census.gov/