**Project Members** 

Sharon Helmer Poggenpohl (Instructor) Young Ae Hahn (Teaching Assistant)

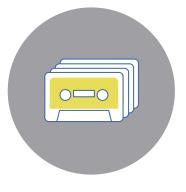
Nivedita Basu Nathaniel Block Lenka Cechova Geoff Colbath Rahul Dronamraju Alexis Dulinskas Rinku Gajera Joseph Hart Griva Patel Carmelina Piedra

Stacie Sabady Hannah Schubert Papinya Thongsomjit Douglas VanderMolen

# Research

We conducted 48 passenger interviews and 16 PACE bus driver interviews. These interviews provided insights into the motivation of riders, and service improvements as desired by passengers and drivers.

## 1. Interviews and Coding



48 Passenger Interviews 16 Operator Interviews



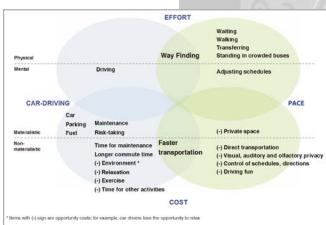
**Interview Transcription** 



**Coding based on Grounded Theory** 

Interviews were taped, literally transcribed, coded for content, synthesized by post-it assembly.

# 2. Analysis: Idea Mapping



SERVICE

Frequency:
Increase
Increase
Increase

Dream:
door to door
delivery

Routes:
Maintenance:
cleanilness

Age:
relative to
time &
route

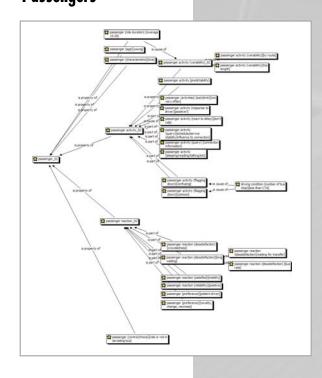
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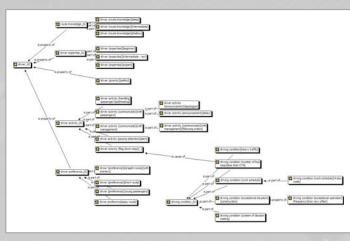
Post-it assemblies led to idea mapping of issue areas.

# 3. Analysis: Causal Network Diagrams

#### **Passengers**



#### **Operators**



Passengers' use of Pace service was analysed by their activities, and level of satisfaction. Dissatisfaction related to long waits, unreliable schedule, crowded buses, and bad connections. Operators' role was analysed by their route knowledge, expertise, activities, preferences, and driving conditions.

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# Concepts

The concept sample presented here demonstrates ideas related to clarity and easy access to information, passenger loyalty, recognition for service expansion, and large system considerations that improve competition with the car.

### Communication



LED displays would be located on the bus as well as at major bus stations. Pace passengers would benefit from these displays by receiving time, date, location, current and next stops and landmarks closely located to a particular route.



To support better communication between Pace and passengers, Pace should use numbers with name descriptions on buses. Clearly stated route names can eliminate current confusion among passengers.

### **Rewards & Service**



Pace could introduce a "fortune cookie" on the bus. A machine is placed at the back exit where passengers could pull a piece of paper in order to receive either their fortune or even a free ride.

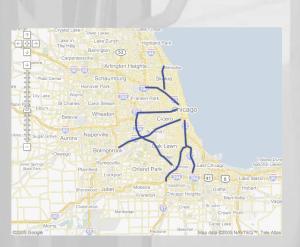


Rewarding their riders while reinforcing their presence every 1,000th customer using the Pace Bus System could receive a free ride, a hat or a tote with the Pace brand.

# **Large System**



Bus-only lanes are designed to give exclusive priority to buses, which improves service, creating a more efficient trip.

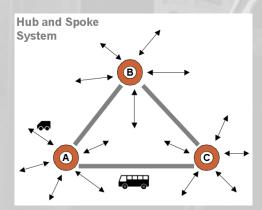


Simplified routes with fewer stops and higher capacity vehicles with on board technology that allows the vehicles to travel faster and reduce waiting time provides another advantage in competing with the car.



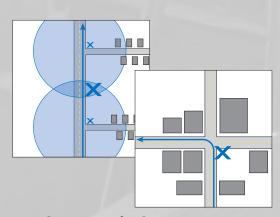


Kiosks, located at major transfer points, would be designed to help the Pace passenger gather needed information about Pace services quickly and efficiently.



Consider more personalized service during the night, even door-to-door service and consider a hub and spoke system.





In order to satisfy the passengers' demand for more shelters and to reinforce Pace's presence with a coherent identity, the strategic implementation of bus shelters and new ideas that integrate them into the community are suggested.



## **Next Steps**

All developed concepts should be reviewed based on time, difficulty, expense, and feasibility. The ones that are considered a success during this process can be taken to the next level when prototypes should to be developed and tests with users conducted. A thorough analysis of implementation strategies is the last action before the actual execution. Finally the design concepts can be integrated to reinforce the Pace bus system.