City of Milton’s

Walking School Bus

2019 Georgia Smart Communities Challenge
MIDTERM REPORT
March 26, 2020
Highlights

- Located 29 miles from downtown Atlanta
- Approximately 39,000 residents, 39 square miles
- Family oriented, highly educated and young
- 20% of population is 14 year or younger
- Significant equestrian communities with rural large lot residential developments
- Small downtown/commercial area
- Recognized nationally for high quality of life
Project Overview

To use technology to assist the coordination of groups of kids lead by parent volunteers to walk to school.

This is also known as a walking school bus where groups of 4 to 6 kids walk to school with a lead adult walker as the chaperone/driver of the group.

Study and develop an interactive app for smartphones that will provide real-time group communication for parents of kids who want to walk to school in a group – a technology assisted “Walking School Bus” to encourage more kids to walk to school.
Goals:
Encourage walking to school, alleviate traffic congestion due to queuing at the car pool line during morning drop offs and afternoon pick up. Develop a pilot technology to activate smarter commute to schools and promote health and wellness in community.

Smart objectives:
• Access current path conditions
• Study new favorable condition (map showing currently proposed improvements such as sidewalks)
• Develop smartphone Application for walking network and scheduling
• Deploy the app and access its impact
Project Team

City of Milton
- Parag Agrawal
- Michele McIntosh-Ross
- Shubhangi Jangam

GA-Tech
- Dr. Kari Watkins
- Dr. Angshuman Guin
- Reid Passmore

Fulton County schools
- Ms. Kibbey Crumbley (NW Superintendent)
- Tresa Cheatham
- Mr. Joel Peterson
- Mr. Brian Jones

Project Partners
Atlanta Regional Commission
Fulton County NW Area Superintendent
School Principals and Faculty
PTO members
Community volunteers
Crabapple Residents

AppZoro (IT)
Traffic Data services
September
- Site visit by Researchers
- 2 Project Team Meetings

October
- 3 Project Team meetings and 1 meeting with Fulton County Schools’ Leadership
- Walk to school day Oct 18 video data collection

November
- Contract with ARC Approved on November 4
- 3 Project Team meeting and 1 meeting with Fulton County Schools’ Leadership

December
- First community / parent meeting December 5 by Milton staff
- 2 Project Team meetings

January
- 3 Project team meetings
- Walk to school day January 17, site visit and public engagement by Milton staff

February
- 4 Project Team meetings and Macon onsite visit
- Survey for parents distributed on Survey Monkey

March
- Invitation to Bid for App developer and selection
- 3 Project Team meetings and 2 day video data collection
January 17, 2020
7am at
Crabapple Crossing Elementary at Milton
Challenges and Lessons Learned

**Lost time:**
- Milton lost valuable time in early stage complying with contracting requirements
- Team had to align its activates such as data collection with School’s calendar
- Team also had huge dependency on weather as it was not suitable for normal walk to school activities
- Milton used Bidding instead of RFP process to get application developer

**Limited Resources:**
- In the beginning team saw low response to its outreach to many established technology companies for smartphone app development
- Milton prioritized most important features for the app as many of them were costing beyond the budget of this project
January
February
March
April
• September
• October
• November
• October
• November
• December
• October
• November
• December
• January
• February
• March
• April

Literature
Mapping
Survey design & analysis
Video data analysis

Survey: 178+ responses
Video: 3 days
Public Health
- Only 9.6% aged 5-18 walk to school. (1)
- Childhood obesity at 18.5% and transportation makes up 29% of CO2 (2,3)
- WSB’s increase physical activity (4)

Social Health
- Bolsters communities and stimulates social interaction between both students and parents. (5,6)

Intellectual Health
- Physical activity associated with better cognitive performance. (7)
Mapping: Lack of Sidewalk Infrastructure drastically reduces target area.
We asked parents...

How do your kids normally get to/from school?
Most use car or bus

How far away do you live from school?
What benefits/barriers do you see?

Most (52%) of respondent lived within a mile of their school.
Perceived benefits of walking

- 26% Physical Activity/Healthy Habits
- 16% Fun/Different/Unique
- Other (Please Specify): 1%

- More attentive/alert at school (8%)
- Increases Confidence/Independence (14%)
- Environmentally Friendly/Sustainable (19%)
- Other (Please Specify): 1%

Perceived barriers to walking

- 17% No Sidewalks/Crosswalks
- 21% Distracted/Agressive Drivers
- 13% Distance is too far
- 22% Rain/Cold Weather

- No Sidewalks/Crosswalks (17%)
- Distracted/Agressive Drivers (21%)
- Distance is too far (13%)
- Rain/Cold Weather (22%)
- Worry about strangers/No adult supervision (15%)

- Disability/medical reasons (0%)
- No one else walks (8%)
- Other (Please Specify) (4%)
Pedestrian Count Data Collection
Future Plans

- Building of smartphone application: March - August
- Milton’s onsite event: April 27
- Mapping all routes and bus stops: May-June
- Releasing the app for testing: June-July
- Go live: August
- Build website
- More Data collection
- Promote the use of app
- Community engagement
- Walking path improvement plans
- Signs for Walking-bus-stops
- Three-year plan for continuation of Milton’s Walking School Bus app through prizes and incentives to users
- Website to promote the project
Proposed Walking School Bus App Features

• IOS and Android compatible
• Registration and Login for users with security
• Grouping and regrouping for users (WSB neighborhood groups)
• Scheduling of WSB & volunteer assignment
• GPS tracking of active WSB (for parents)
• Displaying maps with set routes and stops
• Notification of WSB arrival at school
• Participation Data Assessment and Reporting
Currently working with AppZoro
Selected App developer
Our upcoming City Wide Comprehensive Plan includes a component to engage the community to explore other smart city projects for Milton to pursue.