

IMPROVING SMALL SYSTEM TRANSPORTATION
A FOCUS ON FOND DU LAC AREA TRANSIT

by

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A Field Project Submitted
In Partial Fulfillment of the Requirements
For the Degree of


Master of Public Administration

at

The University of Wisconsin Oshkosh
Oshkosh WI 54901-8621

December 2017

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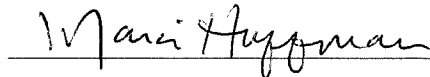
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PROVOST AND
VICE CHANCELLOR



1/19/18
Date Approved

FORMAT APPROVAL



1/16/18
Date Approved

TABLE OF CONTENTS

| | Page |
|--|------|
| CHAPTER I – TOPIC | 1 |
| CHAPTER II – OBJECTIVES | 4 |
| CHAPTER III – SCOPE..... | 5 |
| CHAPTER IV – METHODOLOGY | 7 |
| CHAPTER V – LITERATURE REVIEW | 9 |
| The Struggles of the Small Transportation System | 9 |
| CHAPTER VI – RECOMMENDATIONS | 13 |
| Approaches to Improving Small Transportation Systems | 13 |
| CHAPTER VII – REVIEW OF SURVEYS..... | 25 |
| Passenger Survey | 25 |
| Non-user Survey | 33 |
| CHAPTER VIII – CONSIDERATIONS AND IMPLICATIONS..... | 37 |
| APPENDICES | 42 |
| APPENDIX A: Passenger Survey 2017 | 42 |
| APPENDIX B: Non-user Survey..... | 73 |
| APPENDIX C: Educational Development Plan | 87 |
| REFERENCES | 93 |

Chapter I – Topic

Public Transportation can mean many different things; it all depends on the person you ask. It could mean a way to school, work, doctors' appointments, or lunch. However, to others it is a waste of federal, state, and local funds. Cities and towns with small, urbanized bus systems seem to face these negative issues due to ample parking and low traffic congestion. So, then why do small cities continue to support the small urbanized bus system? Lee, Wohar, and Uhm (2016) states, "Bus services in small...urban areas provide increased mobility to individuals who have no other means of transportation (p.861)." In general, it is to help the people who have no other option, such as the elderly or poor. Public transportation can specifically help those who could not get work because they cannot afford a car, or for the handicapped or elderly who cannot drive. Fond du Lac Area Transit is one such system.

Fond du Lac Area Transit (FDLAT) is the smallest urbanized transit system in the United States, and is easily overlooked by the general public. FDLAT is located in Fond du Lac, Wisconsin, a city with a population around 50,000. It has a small transportation system that has increased ridership by 9.8% from 2011 to 2015 according to the Legislative Fiscal Bureau 2017 paper on Mass Transit Funding (Horton, 2017, p.3). It presently operates five weekday bus routes and one school tripper route with complimentary paratransit services (Handi-van and Non-ADA) and taxi service where buses do not operate. I am seeking to improve the performance of and provide answers to some of the issues FDLAT and other small transportation systems face. These issues are

decentralization, cost, socioeconomic issues, and lack of education. Research and data collection are important in order to provide better transportation for all.

Even though public transportation in small towns and cities are quite important there is not a lot of research on the issue. “Such a topic has been, for the most part, ignored by earlier literature” (Lee et al., 2016, p. 861). Many who live in small cities can afford at least one car, can easily and cheaply park where they want to, and can also get from point A to point B faster than it would take to use a bus. “Census data also showed that household car ownerships in rural areas of Australia and the US were higher than the national average...” (Santoso, Yajima, Sakamoto, and Kubota 2012, p.321). Because many people in rural or small towns own cars it can make it hard to explain to Fond du Lac citizens and even city council members why public transportation is so important to keep and grow in a small system.

Some people believe public transportation has no place within a small city. People who can afford a car do not understand the importance of using public transportation. Public transportation provides a service, especially to low income individuals and students. Many students have no other means of transportation to get to middle or high school because the distance is too far to walk, parents are working, or unfortunately, are not present in their lives.

Low-income individuals do not have the money to purchase a car or to pay for its upkeep. These individuals rely on public transportation to get them to work to provide a living for themselves and their families. FDLAT also provides transportation for handicapped individuals. Brooke industries employs individuals who are mentally or

physical handicapped with jobs. FDLAT provides a route in the morning and afternoon specifically for these individuals who cannot drive to get to work. If FDLAT did not provide this Brooke Industries route many of these people would have to rely on taxi's or family which they may not be able to afford or they may not have family members who could take them. Critics of small transportation systems lack education, this is the largest problem a small transportation system faces. This means it is the small transportation systems job to educate those critics on the importance of getting Brooke Industries employees to work, getting students to school, and providing a service for low-income families to get to the grocery stores, to name just a few reasons.

Small transportation systems are important to a community. My rationale for studying small transportation systems, specifically FDLAT, is because it not only helps people who have no other means of transportation get to where they need to go, I also wanted to help Fond du Lac Area Transit to continue to grow and expand. Even though FDLAT has seen an increase in ridership we have to be able to maintain and/or continue to grow for our passengers. Too many times small transportation systems importance are overlooked due to lack of understanding; in the paper I intend to educate the public on the importance of it.

Chapter II – Objectives

Through extensive review of literature, the purpose of this paper is twofold: (1) to identify the struggles small transportation systems face, and (2) to identify approaches to improving the small transportation systems, specifically FDLAT. This area of small transportation systems has little research behind it. I see decentralization, cost, socioeconomic issues, and the lack of education as key issues which impact small system transportation performance. The importance of this paper is to identify ways to help educate the public on the importance of small transportation systems. Figuring out which barriers FDLAT specifically has and then defining and implementing ways to improve services from two demographic surveys is another way I will answer questions to these issues. These survey results will consist of three years of research from 2014, 2015, and 2017. With the results and further research I hope to help not only FDLAT but also other small transportation systems. The following is the research I have gathered thus far.

Chapter III - Scope

The scope of this research is clearly defined, it will simply be research completed within FDLAT between the years of 2014 and 2017. FDLAT is the smallest urbanized bus system in the United States and therefore researching the areas of failures and successes can be used to improve other small and medium transit systems. State regulations on public transportation is specific to each state while federal regulation is almost completely universal to those public transportation agencies who receive federal funds. Therefore, to do too much research outside of the state would be hard to compare. However, this does not mean one should not research outside of the country or state and learn from others positive and negatives experience with public transportation. This research will include examples from other countries such as Japan and Europe.

This research is unfortunately limited by many factors, and those should be clearly defined. Time is the biggest factor of limitation. I was fortunate to have two years and many classes while in the Masters Public Administration classes to collect the data that is included in the study but the focus on small system transportation could be done by including so much more, such as considering other small transportation systems in Wisconsin like Oshkosh (Go Transit), Merrill transportation, Beloit Area Rural Transportation (BART), and so on. There are also different kinds of small system transportations such as curb to curb pick up, but Fond du Lac Area Transit is what is called Fixed Route Transportation. Fixed Route Transportation is defined as having multiple routes that run continuously throughout operating service.

Another limitation is my surveys from 2017. FDLAT was working with ECWRPC (East Central Wisconsin Regional Planning Commission) to help develop a Transportation Development Plan in 2014 and 2015. FDLAT had people from ECWRPC helping to distribute surveys with supervisor and myself. In 2017, I alone with one volunteer was distributing surveys all outside of my work hours, with limited hours between 2:30pm and 6:30pm, Monday through Friday. This means I was unable to get surveys distributed to those who rode the bus between 6:00am and 2:30pm. By limiting the scope of research, I can produce the following data within months and hope to continue to use it to further my research over years to come.

Chapter IV – Methodology

A small system will not improve with just one issue resolved; this has been discovered in the below literature review. It will be a combination of different solutions and should be introduced incrementally by solving major issues first. Fond du Lac Area Transit has recently made improvements such as adding more peak hour service and extending a half hour onto the end of the service day, but it still needs help. As the city continues to grow FDLAT will need to be able to grow with it. For example, the city of Fond du Lac has a large population of low-income individuals moving from the Chicago and Milwaukee area due to readily available low-income housing. Many low-income individuals rely on public transportation to get them to the grocery store, medical appointments, school, and work. People who are coming from a larger city may expect to have the same transportation available to them as they did in Milwaukee or Chicago. Unfortunately, FDLAT provides a much smaller service. Some of these individuals are looking for entry level jobs. Many of these jobs are second or third shift and most have weekend hours. In many cases FDLAT does not provide service on nights or weekends which means low-income working individuals are forced to pay \$16 round trip to go to work. When FDLAT doesn't run on nights and weekends it contributes to the poverty epidemic. A vicious cycle where the poor stay poor because they cannot afford to just hop in a car but instead must use their income to pay for transportation just to keep a job.

The original problems such as the needing more technology, keeping the system updated, and especially education will need to be implemented to keep FDLAT working

efficiently and effectively. My hope is that by improving multiple aspects (education, planning, quality of service, knowing the passengers, new systems, and technology) of FDL's transportation service, the service will be better and more efficient for users, which will also increase ridership and hopefully increase funds and hours of service.

I will provide passengers and non-users with a demographic survey to see where FDLAT can improve. It is appropriate to not only test current passengers but to also test those that do not use FDLAT too. FDLAT will benefit from knowing why someone does not ride and what would make them ride. The passenger surveys will help FDLAT to know their passengers better and to hopefully help to improve their overall experience with public transportation.

The FDLAT riding population averages 600 passengers per day. It is important to note how representative these passenger's surveys are to the riding population of FDLAT. In 2015, there were 75 respondents or 12.5% of the riding population. In 2016, there was a total of 99 respondents or 16.5% of the riding population. In 2017, there was a total of 33 respondents or 5.5% of the riding population.

Some of the survey questions were taken from previous FDLAT demographic surveys. This will help me to compare answers from 2017 to past years and see if we are improving, declining or if FDLAT is staying the same. Some questions I have added specifically to help me discover the issues with small system transportation. See Appendix A for the survey questions.

Chapter V – Literature Review

The Struggles of the Small Transportation System

Urban decentralization and transit. Small transportation systems face many problems, one of which is urban decentralization. This is when areas around the central urban core or city start to expand and grow in population, leaving the urban area to decline. The area around the central core then becomes suburban. Jaroszynski, Brown, and Bhattacharya (2016) state, “The innovation of the automobile, coupled with significant road investment, gave further impetus to decentralization...as people and businesses relocated...to suburban locations where lower-cost land was plentiful” (p.1501). This can create many problems for a small bus system.

If businesses start to move out of the central business district of the city and into the suburbs, the transit system may not be equipped to run to these businesses because the expanded area means more money to run a bus route. For example, in Fond du Lac, the Social Security Office moved to a more rural area where there was no bus service. FDLAT was not contacted about the building being moved. Shortly-after it was built, FDLAT was told that by federal law the Social Security Office had to be on bus route. FDLAT was forced to quickly move a route into the area, which in turn meant they had to decrease service in another area. This could have been solved if the Social Security Office put their building on a bus route to begin with.

Because of this unfortunate separation of urban versus suburban area, “transit systems are unable to increase their share of travel: the consequences of this...include an

inability to reduce the automobile dependency of suburban residents, which contributes to congestion, pollution and other negative externalities” (Jaroszynski et al., 2016, p. 1502).

The lack of money to expand public transportation means that if businesses move to the suburbs the people who are dependent on public transportation may either lose their job when it moves to the suburbs, or will not have as many employment opportunities simply because they cannot get there. On the other end, public transportation may lose choice riders, who were using public transportation because it was convenient. The loss of any riders means loss of money.

In general, decentralization is an issue for big and small transportation systems, however small transportation systems are rarely equipped with providing a decentralized transportation system to match urban decentralization. “Their resources might be inadequate to effectively serve the entire community with a system whose very design depends on providing frequent service to facilitate seamless transfer” (Jaroszynski et al., 2015, p.1516). So, the problem lies within the expansion of a city, which is an ever-constant event. It is good for the growth of the city however when not planned properly it can be devastating for public transportation and those who depend on it. I will discuss this further in the planning paragraph under ways to improve public transportation.

Socioeconomic factors and costs. There will always be critics when it comes to public transportation, especially for small cities. In general, the commuting trip, especially for small systems, has continued to decline, “from 12.6% in 1960 to 4.7% in 2000” (Lee et al., 2016, p.862). These percentages reflect people using transportation. Unfortunately, that does not mean there are no longer people who need public

transportation. In fact, there is a large group of underrepresented people who need public transportation. Lee et al. (2016) researched who uses public transportation and in their conclusion states, “workers with less than 12 years of schooling, especially female workers, single workers, divorced and widowed workers, and black and Hispanic workers are most likely to use bus service for their commuting” (p.880). So, if public transportation goes away, how do these people continue to work, and more importantly live? They are then out of a job which in turn may lead to homelessness or being put on welfare, neither of which are favorable alternatives.

The issue here tends to be cost of subsidization for public transit critics. “Transit fare subsidization may be an inefficient way to discourage automobile use” (Lee et al., 2016, p.862). The truth of the matter is unless public transportation is free, it will never discourage those who can afford a vehicle not to buy one. Another claim critics of public transportation make is many well-off people use public transportation in large cities, meaning that the taxpayers are paying a price for the affluent to ride the bus at a subsidized cost. This brings up an income distribution issue. The last issue Lee et al. (2016) talks about is imposing a congestion price instead of subsidizing public transportation. Therefore, this could push people to use non-motorized modes to help with congestion and pollution.

Lack of education. In small cities, people who do not use public transit tend to be uneducated when it comes to public transportation. For example, before I started working for Fond du Lac Area Transit I had no idea there was a bus system in the city. I had lived in this city my whole life and I was oblivious to any buses. I was very fortunate I grew up

right next to all the schools I went to so walking was not an issue. I had a car when I turned 16 so I never had the need to use a bus after that. It was not that I ignored the buses; it was that I was never educated on how to use the bus system.

In a small city, there is ample parking and no rush hour traffic. If one has a car, in general, it is faster to get from ones starting point to their destination in less time than it would take to use a bus. Fond du Lac City Council members have in the recent past questioned why there is a bus system at all, wanting to only run during peak hours or wanting to cut a huge amount of hours overall. Right now, a couple of things are helping this lack of education with Fond du Lac City Council. The first is there a city council member who is very pro-public transportation and uses the bus on occasion. He is a great advocate for FDLAT. The second is Fond du Lac Area Transit Manager, Lynn Gilles, presents a short PowerPoint presentation to the city council every year, updating them on FDLAT. Education is the key to providing better transportation, especially providing the right people with this education.

Chapter VI – Recommendations

Approaches to Improving Small Transportation Systems

Planning. To really make a successful transportation system, a lot of well thought out plans must come into play before implementation. One must look at ridership numbers, where the big businesses are who provide a large number of the population with work, where low-income housing is located, where government buildings are located, grocery stores, shopping centers, schools, hospitals, social service agencies, city limits, federal and state regulations which come with funding, and which kind of transportation such as paratransit, Non-ADA, fixed route, or shared ride taxi service should be provided. The article *Planning, Transportation, and the Small City* by Ralph A. Gakenheimer (1966) suggests for a small city transportation system to thrive it must work with a planning department. Of course, this is not a small feat to accomplish. “The small city often cannot buy the full gamut of technical services it needs to plan for its future or engage the attention of good mind to think creatively about its future” (Gakenheimer, 1966, p.84). Although his article may be dated, the financial issues of a small city versus that of a large city, should be addressed. The planning therefore must come into to play early on with other departments such as engineering and community services. For example, if a Walmart or hospital is coming to a small city, it would be a good decision to plan for it to be on an already existing route or nearby route. This will make it accessible to those who would be likely to use their services. “there must be the means of making determinations about the land use pattern in advance of transportation planning,

which then helps implement such decisions” (Gakenheimer, 1966, p.87). This also goes for the transportation department needing to think ahead and discuss possible land use with the planning department. In Gakenheimer’s (1966) words, both departments should be “flexible instruments.” This will make it easier for departments to change if they both know well in advance of the changes that may come.

In an article by Dharmadhikari and Lee (2015) they explain more about the importance of planning, specifically ensuring low-income groups having accessibility to grocery stores. Their specific research dealt with students who are low-income and their ability to easily grocery shop for healthy foods. Accessibility being the key word in this article, “Due to the importance of the connectivity of the public transit to places in the city, the mobility and transit service plan play an important role in grocery shopping” (Dharmadhikari & Lee, 2015, p.12). Students and low-income people need easy accessibility to food, a basic human need. This can be accomplished through planning, “...in urban planning this can help to provide insights into the transit routes and placement of grocery stores” (Dharmadhikari & Lee, 2015, p.14). If low-income housing is being built, it could be built near the bus route that runs to a grocery store if there is room to do so. The same goes for hospitals and employment alike, planning is key to helping individuals have accessibility in small cities. Also, this would likely be relevant because Fond du Lac has a few colleges.

The idea of planning services for the need of people is not only present in the United States but also in other countries such as England. In the article, “Accessibility and capability: the minimum transport needs and costs of rural households” by Smith,

Hirsch, and Davis (2012, p.93) focuses on planning for the lowest needs possible. “Public transportation planning should be based both on the location and general accessibility of services but also on the needs of a particular population in terms of income, age, car ownerships, etc.” (Smith et al. 2012, p.93). This study helps to identify and minimize the disadvantaged who live in rural areas in England. By knowing their population and their needs they can better address where transportation can help low income individuals and they can plan for better transportation in the future.

Education. Another area of planning is finding out who your passengers could potentially be and educating them. For example, through FDLAT’s Development Plan, conducted from 2014 to 2016, FDLAT was able to meet and get feedback from area stakeholders, one of which included the Fond du Lac Housing Authority. Many people who live within the several house authority buildings do not own a car. These people use the bus frequently. When Pick n’ Save in Fond du Lac stopped providing them with a van service for weekly grocery shopping the housing authority turned to FDLAT for help. Through planning, FDLAT was able to provide bus training for all housing authority buildings. These trainings provided individuals with maps, a FDLAT backpack, a coin purse to hold bus passes or tokens, a cheat sheet with multiple different ways to get from the housing authorities to which ever grocery store they would like to shop, and a time for questions and answers. FDLAT received a lot of positive feedback for these trainings from the housing authority, and it gave administration one on one time with new passengers. The City Council President happened to be at one of the trainings and talked

highly at a City Council Meeting about the training provided giving FDLAT some positive recognition.

Future planning for training includes the Senior Center, all elementary schools, middle schools, and Fond du Lac High School. For the Senior Center, FDLAT will provide a bus to tour and provide training with mobility devices and using the bus ramp. This is especially important to help those who may have no other means of transportation due to loss of license or who just do not feel as comfortable driving in their later years. For elementary schools, it will be a fun training day, where kids can tour a bus and learn how to plan a route. This will hopefully set a child up to feel comfortable riding the bus, especially since they are potential future riders. For middle school students, FDLAT has provided training with parents on registration days. Parents are grateful to learn the bus is not a scary place for their child, and it has made students less nervous to ride the bus.

Quality of service. It is no secret that people will pay for something that is of good quality. The same goes for public transportation, and “transit users today are more demanding from the bus providers including fast and reliable service, shorter walking distance to stops, low floor buses, cheaper service and friendly, safe drivers” (Rohani, Wijeyesekera, and Karim, 2013, p.171). In a world where your reputation can be blasted all over social media in a matter of seconds, quality service is a must for small transit agencies. In large cities one may ride public transportation because it is much quicker than driving, so a nice demeanor from a driver may not be as important. However, small systems most likely will not have this same timeliness and need to focus more on cheaper fares and customer service. FDLAT can say they have quality system in the 2014, 2015,

and 2017 demographic surveys that were provided to passengers some of our highest compliments were friendly bus drivers and reliable transportation. Another way FDLAT can measure quality is through Facebook. FDLAT can look at ratings and comments from passengers on what we are doing right and what we are doing wrong. This helps us to quickly solve problems and understand where we are doing things right so we know to keep up with areas our passengers enjoy.

Bus Rapid Transit (BRT) is a hot topic in Wisconsin Urban and Rural Transit Association meetings. These meetings usually include at least one representative from each Wisconsin transit agency and also include someone from the DOT. BRT is a favorable idea amongst agencies, however there are some political barriers. “BRT provides affordable connectivity, and fast and reliable services for a range of requirements” (Lindau, Hidalgo, & Lobo, 2014, p.9). For example, if Fond du Lac Area Transit were to be involved with a BRT it would most likely join with Oshkosh in the north and Milwaukee to the south. If just these three cities were to connect an individual could use bus transportation to get from Oshkosh all the way to Milwaukee without having to use a personal vehicle. This is something that is unattainable right now, but could be a very important addition to keeping the small transportation system alive and well.

There are some important reasons that it would be hard for a small system to introduce a BRT in the near future. First, “institutional arrangements requiring the coordination of multiple agencies...” and “there is insufficient practical knowledge on how to plan, implement and operate such systems” (Lindau et al., 2014, p.9). Speaking to

coordination of multiple agencies, first the federal government has guidelines about going out of urbanized transportation zones (UTZ). For example, if Fond du Lac wanted to meet a Milwaukee bus in West Bend to transfer passengers, both Fond du Lac and Milwaukee would be out of their UTZ's which in turn is how the Federal and State governments figure out how to distribute transportation funding. The issue gets even murkier when an agency starts asking for West Bend to provide local funds because there is a transit stop there.

There is also an insufficient practical knowledge on how to plan, implement, and operate a BRT because there just aren't that many, especially when discussing smaller systems or state wide BRT's. Small systems have the disadvantage of not being able to be a guinea pig. In reality, they have less money they wait for a larger system or systems to work the kinks out before they would implement a BRT. A BRT would be very beneficial to the small transportation system in the future, it could provide more funding from the Federal and State government and even other local governments, but it seems to be a long way out from any planning implementation.

Understanding the rider. To put it simply, businesses give the customer what they want, so public transportation should give the passengers what they want. Of course, this is all to a certain extent due to state and federal regulations but it can be done. A questionnaire survey was distributed in Hidaka, a small city in Japan. After the questionnaire was examined the following improvements were determined. "In order to bring in...new patronage, the service improvements should focus on increasing the service frequency, extending the operating hours, maintain the reliability of the bus

timetable, adjusting the bus timetable with the train schedule, and offering an attractive bus fare package” (Santoso et al., 2012, p.328). This survey helped to understand the needs of their passenger, and from this questionnaire, they could make improvements to their services. Bus providers can determine a route is more beneficial going left but if the passengers want to go right, it is up to the bus provider to provide service to the right. One must know their customer in order to sell their product to them.

In the article, *Understanding the Impacts of a Combination of Service Improvements Strategies on Bus Running Time and Passenger’s Perception*, Hirsh and Davis (2012) evaluates the impacts of implementing a combination of strategies, designed to improve the bus transit service, on running time and passenger’s satisfaction. Diab and El-Geneidy (2012) state “reduction in running time is expected to increase ridership and rider satisfaction” (p.616). In today’s world getting to one’s destination fast is important. Timeliness is a must and unfortunately the world isn’t slowing down any time soon. If it takes a passenger all day to do errands, this becomes inefficient. Or if an individual can only make one interview in a day, it may take them longer to get a job. Some changes Societe de transport de Montreal (STM) did was to improve their system in small changes such as a smart card system. A smart card reader would allow the passenger to use a smart card or even a smart phone to pay for fare on the bus. This not only saves time but it is also attractive. Fond du Lac Area Transit currently accepts money, tokens, and hard copy passes. If FDLAT were to implement a smart card reader this would save time picking up passengers, helping to decrease money handling by drivers and change dispensing which takes up a large amount of time. It would also

decrease inaccurate fares being put into the bus vaults, which could even save FDLAT a small amount of money in the long run.

Some issues here may be the older generation not wanting to use the smart cards and some of the low-income individual may not have a smart phone. Another issue would be the initial cost of the readers.

A complete overhaul. Maybe the solution to improving the small transportation system is to give it a complete facelift. In an online article in *The Economist* “Beyond” (2007) suggests, “instead of big trains or buses, passengers would board small, driverless pods, for one to four people, which would travel along narrow tracks or elevated rails...on bypasses...” The idea is quite intriguing- small and efficient transportation for a small city. The article goes on to argue that it would decrease operating cost by 40% because there would be no drivers, it would be cheap to build because the rails are holding small pods versus large trains, and the pods would run only on demand so no money would be wasted on redundant service. It does seem a bit strange that a population that can hold a phone, TV, email, and games all in their hand on one device is still relying on a transportation system that has changed so little since its inception.

Another new vehicle is also making its way slowly to the scene, this is the autonomous 101 vehicles, also known as a driverless car. These vehicles can help to solve the first-last mile dilemma. Gibson (2017) defines this term in an online article,

It begins with a ¼ mile. Most people in the United States are

“comfortable” walking less than a ¼ mile to or from public transit stops.

The problem arises when a potential rider is further than a “comfortable

distance” to the necessary fixed-route stop. Of course, what you define as a “comfortable distance” may be very different than what I consider to be a “comfortable distance,” and this distance may vary based on uncontrollable variables such as weather and time of day.

This vehicle would be different from the small rail system and could be even cheaper since instead of building an elevated lightweight rail, all the city would need to do is buy the vehicle. It would be small but beneficial to the small city because it runs shorter distances easily. “These driverless shuttles currently operate short distances in a confined space, including train stations, amusement parks, academic campuses, retirement homes, airports, city centers, hospitals and industrial sites (Gibson, 2016).” These vehicles would be good for fixed routes because they are efficient when running the same routes repeatedly.

Another reason to look into these vehicles is safety. One may think these vehicles would be very unsafe since there is no driver behind the wheel, however they tend to be safer because human drivers can be distracted easily. These autonomous cars would not have distraction; their only focus is to pay attention to the road and to drive. They are also beneficial because they do not need to take bathroom breaks, lunch breaks, and they would essentially do away with union employees producing easier working conditions for administration.

However, there are weaknesses to the autonomous vehicle. First, the autonomous vehicles mentioned above, “can operate up to 10 hours and the average speed is about 10 mph, though can go faster depending on the risk assessment of the service area”

(Harnack, 2017). FDLAT (a small system) runs from 6:00am until 6:30pm, a twelve-and-a-half-hour day, which means at an average speed of 30 miles per hour in the city one would most defiantly have to refuel during the day. This doesn't leave the vehicle autonomous for long, plus the vehicle will essentially have to take a break from the road which means another vehicle will have to replace it.

Another issue is these vehicles can only hold so many, “the electric shuttle that can carry up to 12 people (6 seated, 6 standing). There's a built-in access ramp for passengers with reduced mobility. The shuttle can accommodate one person in a mobility device with 6 seated” (Harnack, 2017). This would not be enough seating, especially during peak hour times when passengers are going to and from work or school.

Technology. Speaking of smart phones, technology is in almost everyone's hands now-a-days and it has become a blessing for small transportation systems. Intelligent Transportation Systems (ITS) on buses, or simply put GPS, has helped improve bus service by being able to see exactly where the bus is on a mobile app or computer. Kern Transit, a small system, wanted to grow and enhance their service. “I can log-in from wherever I am and immediately see where a fixed route bus is and gauge its on-time percentage. We see patterns and can make decision to improve service, explains Bob Neath, Manager over Kern Transit” (Rmwebadmin, 2016). This is a far cry from dispatching over the radio and asking where a bus is located, and then telling the passenger, over the phone, that the bus has already passed. With a mobile app the passengers simply look at their phone to see where their bus is located, saving them and dispatcher time and money.

Delano Area Rapid Transit, another small system, also introduced ITS. Viviana Zamora, the Transportation Manager said,

Our on time performance on our fixed route service has increased on some routes 3-4% and on others by up to 18%. We also used data to determine where to best place our bus shelters based on true passenger pick up information” (rmwebadmin, 2016).

This is a perfect example of how to improve a small transit system, and using technology to best serve the customer. One can see exactly where passengers are boarding or alighting and how many are boarding and alighting. A system can then help to better their system by providing bus benches or shelters to those locations. Seeing where buses are keeping track of drivers can also help to increase ridership. Before GPS bus tracking FDLAT could not see where drivers were located which left them unsupervised. This meant they could take longer breaks without oversight. Now FDLAT administration can see if a bus is running late and keep the drivers on task. Among much other advancement, Delano has seen a more engaged student ridership. Young adults and high school students appreciate the smart technology and this can help create a larger ridership for the next generation.

Fond du Lac Area Transit provides a bus GPS tracker, which allows passengers to see where their bus is in real time. This is especially helpful during days of bad weather, or if a bus is running behind, the passengers can spend those last couple minutes in the house rather than stand outside in a snow storm. FDLAT GPS tracker, also known as Ride Systems, has also been very beneficial for the administration. When a passenger

calls and asks where a bus is located, we can tell them immediately by looking at bus tracker. Before this was installed, we would have to call the driver over the radio and get their location. This not only wasted time but also distracted the driver.

A couple of other technology ideas small systems should look into would be to get on Google Maps and have real time notifications. Having bus systems routes on Google Maps will make it easy for the passengers to plug in their starting location and ending location and plan their entire trip from door to door. This would also include your time to walk to the closest bus stop. Right now FDLAT does not have this service for passengers, and it would certainly help those passengers who have moved or do not ride the bus often. FDLAT is working with the engineering department to set this up. However, is a lengthy and difficult process because unlike other systems, FDLAT picks up and drops off anywhere on the bus route as long as it is safe to pull over.

Real time notifications would be beneficial because they would pop up on one's smart phone when the office needed to notify passengers. This would be especially helpful during bus detours which are sometimes caused by accidents or water main breaks that cannot be planned in advance. This would also help during inclement weather if a bus is running several minutes behind.

Chapter VII – Review of Surveys

Passenger Survey

I conducted a passenger user demographic survey in November of 2017. I did this to compare it to the Transit Development Plan surveys that were conducted in 2014 and 2015. Unfortunately, due to time I was only able to conduct a two-day survey from the hours of 2:30pm through 6:30pm. One volunteer and I conducted these surveys during PM peak hour service while riding the bus. The 2017 passenger's survey produced 33 respondents to the paper surveys. If there were more people to conduct these surveys during different bus service hours I am confident we would have had more respondents. The following are highlights collected from the 2017 surveys that I will be comparing to the 2014 and 2015 surveys. It is important to note the 2014 and 2015 surveys were conducted with many volunteers and over both AM and PM peak hours of service. You will find the passenger survey pie charts and number of respondents in Appendix A.

Most of the respondents were female. This compares to the 2014 and 2015 surveys with female ridership at a higher rate than male ridership. The average age of ridership is 29 years old, while the largest age of respondents were age 17. This is very comparable to the 2015 surveys where the average age is 30 years and largest age of respondents is 16.

Fifty percent of ridership considered themselves white, while 27% considered themselves African American/Black, 10% Hispanic/Latino, Multiple Races 7%, Native

American/Indian 3%, Other 3%, and 0% Asian. It seems the number of passengers that consider themselves white is slowly decreasing from 2014 at 65%, to 2015 at 60%, and 2017 at 50%. Hispanic/Latino has also made a slight increase from 8% in both 2014 and 2015 to 10% in 2017. Native American/Indian has jumped from 2% in both 2014 and 2015 to 3% in 2017. 'Other's' has had a slow increased from 1% in 2014, to 2% in 2015, and 3% in 2017. Multiple Races went from 3% in 2014, to 9% in 2015, but fell back to 7% in 2017. African American/Black ridership has also jumped from 15% in 2015 to 27% in 2017; however in 2014 it was at 21%. Asian had 1% in 2015 but 0% in 2014 and 2017.

This data indicates first that it does depend on when people are riding. While many do ride at the same time every day there will be variations such as work schedule or if a passenger is not riding due unforeseen circumstances. However, the decrease in white ridership indicates that there is more diversity than there was in 2014 and even 2015. As of now FDLAT has not been met with any challenges due to diversity, but something that could be foreseen in the future is the possible need of more FDLAT documents printed in multiple languages, needing translators, or classes on diversity for our drivers and staff.

The majority of household income for FDLAT passengers is less than \$10,000 for all three years, 44% in 2014, 39% in 2015, and 56% in 2017. This data could be swayed slightly because the majority of respondents were students all three years, but this does show that majority of FDLAT's ridership is low-income. To add a nonmathematical comment to this section, I have ridden the bus many times with students after school. From many of their stories they are working two jobs, do not have any parental

compassion at home, and/or are taking care of younger siblings. Some days they do not make it to school because they are so tired from fulfilling other responsibilities.

In 2014, 20% of riders have used transit for five or more years. In 2015, 25% of riders have used FDLAT for five or more years. In 2017, only 13% said they used transit for more than five years. In 2017, the largest percentage of duration ridership was 39% more than one to two years. This could indicate FDLAT having an increase of new passenger riders, which is always welcomed and good for a system to continue growing. However, this could also indicate that people who used it for than five years are no longer riding. This could indicate things such as an older generation maybe unable to travel anymore, or that FDLAT no longer fulfills their transportation needs. Still, passengers who rode more than 10 years and more than two to five years are at a total of 19% which is also important to indicate.

I added a question in 2017 asking ‘how long have you lived in Fond du Lac?’ Thirty-eight percent indicated that they have lived in Fond du Lac for one to five years and 22% indicated five to 10 years, while 22% also indicated 10 to 20 years. This would make sense with the last question, the majority of riders said they had been riding transit for more than one to two years, while the majority of resident years is one to five years.

The majority of passenger ride FDLAT five or more times a week. This has not changed from 2014 or 2015. In 2014 and 2015 41% rode the bus five or more times but in 2017, 65% rode the bus five or more times a week. This is hopefully in reference to adding more peak hour service and a half an hour at the end of the service day.

Seventy-four percent of respondents indicated using FDLAT ‘More Often’ and ‘The Same’ compared to last year. This is slightly less from 2014 and 2015 when it was at 77%. Although, this is a decrease from the previous surveys the people using the bus ‘Less Often’ and ‘Don’t Know’ is up 26% compared to 23% in 2014 and 2015. Also, the number of people using the bus less often decreased significantly with only 3% in 2017 compared to 13% in 2014 and 15%, 2015.

Question number ten of the survey asked, ‘what are the cross streets at the location of your bus stop or major building landmark if you are not sure?’ I wanted to see if we were still picking up people at the same stops as we were in 2014 and 2015, however I realized there was a better way to do this and that would be a completely different survey called ‘Boarding and Alighting.’ This survey would show where the majority of where our passengers get on and off the bus and could be compared to the Boarding and Alighting survey FDLAT did in 2014. Unfortunately, due to the short amount of time I had to complete the surveys, finishing a Boarding and Alighting survey was not an option.

The majority of FDLAT passengers (48%) use FDLAT to get to school and 19% use the bus to get to work in 2017’s survey. In 2014, 40% to get to middle or high school and 39% used the bus to get to work. In 2015, 50% used the bus to get to middle or high school and 25% to get to work. These percentages seem to fluctuate over the three years but the majority of passengers still use the bus to get to work or school.

The majority of Fond du Lac Area Transit passengers ride from 7:01am – 9am and 3:01pm – 5:00pm. This has been the majority in 2014 and 2015 also. There is a shift

though, in 2014 almost 60% of riders rode between 7:01am – 9:00am with only around 25% riding from 3:01-5:00pm. In 2015, 7:01am – 9:00am saw a decrease to around 43% ridership, and increase of ridership from 3:01-5:00pm at just fewer than 40%. In 2017, 7:01-9:00am was at 25% and 3:01-5:00pm was at 32%. These numbers may be reflected by the time of day the 2017 survey was distributed in the afternoon rather than the morning. But the shift is interesting to look at, if the numbers are true, what is making people ride less in the morning and more in the afternoon? Maybe students have rides to school in the morning but not in the afternoon, or second and third shift workers are going to work on the bus but coming home in another form of transportation. This would be a good follow up question to ask in the next demographic survey.

A positive aspect to FDLAT is the majority of our passengers are walking less than one block to get to a bus stop. This means FDLAT is serving the community to the best of its ability by reaching a large number of its passengers to close to their stop. The percentages with this question stayed consistent over the three years: 43% in 2014, 45% in 2015, and 43% in 2017. Only a small percentage of individuals have to walk five or more blocks to a bus stop, 5% in 2014 and 2015, and 7% in 2017.

Thirteen percent of riders said they would not be able to make their trip if FDLAT was not available. In 2014, this number was 19%, and in 2015 it was 9%. Unfortunately, this number has increased in 2017 from a dramatic decrease from 2014 to 2015. This is a large reason why FDLAT and other small system transportation systems must be able to maintain service. Twenty-three percent of riders in 2017 said they would use a taxi, which is \$8 a ride one way in Fond du Lac. With the majority of FDLAT's ridership

house income at \$10,000 or less this is a huge amount to pay to travel one way; a systemic issue of the poor having to pay more and more to survive, while others are able to just hop in a car.

The majority of passengers from 2014, 2015, and 2017 use the monthly pass and cash to pay their fare on FDLAT. It is interesting to me that token use is quite low while cash is quite high. The reason being, tokens save the passenger money. You do have to buy tokens in a package of ten, which depending on if you are student or an adult is either \$11 or \$13. So, this could be an indicator if the passenger is only riding once in a while. This does also show that FDLAT should be marketing the token more to help individuals save money on their trip. The other benefit of the token is it does not expire.

The majority of our passengers do not use our senior or disable discounts. FDLAT has looked into creating a discounted pass or tokens option for senior or disabled riders, but only a limited number of people said they would use it.

The number of unemployed individuals has decreased on FDLAT from 2015 to 2017. In 2015, 50% of riders were unemployed; in 2017, 31% of individuals were unemployed. In 2014, 32% were unemployed, so the number is evening itself back out. This means in 2017 FDLAT transports 38% part-time employed riders and 14% full-time employed riders. FDLAT also transports 14% retired individuals. FDLAT takes a huge percentage of people to work; if the buses could not get them there I wonder how many would have to quit their job and find something in walking distance?

In 2017, 57% of the respondents said they were students. This comes as no surprised as the majority of the respondents said they were using the trip to go to school.

This is another important indication that we transport students to school to get an education. Again, I wonder how many students would have a hard time getting to school if FDLAT did not exist, especially because the school districts do not provide school transportation for students within the city of Fond du Lac.

The majority of respondents said they did not have access to a vehicle for their trip. This has not changed since 2014. In 2017, 80% of passengers did not have access to a motor vehicle to make their trip. In the next question, 45% said FDLAT was their main mode of transportation for work. Continuing to look at the following question, 55% of respondents said their main mode of transportation for purposes other than work was still FDLAT. Again, these are examples of why FDLAT is so important to the economy and to individual's wellbeing.

Information to our passengers on detours, holiday hours, and updates are extremely important to FDLAT. So, we also asked riders to tell us their top three choices to get information on FDLAT. The top two choices were from the bus driver and on the bus. This means two things, first, we need to make sure our drivers are well-informed, educated, and trained to help assist passengers, and second, we need to make sure the bus information centers are always up to date.

The next question is "do you have a smart phone?" This question is important with the many advances in technology FDLAT has made in the past couple of years. We have added a bus GPS tracking system, where passengers can see where the buses are at all times, and we added a Facebook page and Twitter account to send out information and connect with passengers via social media. Seventy-nine percent of respondents said yes

they had a smart phone; only 49% said yes in 2014, and 58% said yes in 2015. As one can see the number has increased dramatically from 2014 to 2017. In my opinion, I see this trend continuing to increase with the government providing smart phones now. This means that more people can get FDLAT information at their fingertips, urgent updates such as detours, or bus delays will help us be more reliable as a bus system for our passengers.

We also asked respondents what they liked and what they disliked about FDLAT. We received many compliments on our friendly bus drivers, as well as other comments such as reliability and quickness. In the improvement section, we saw almost all comments asking for extended services including nights and weekends. This is not a surprise to FDLAT as this is what we hear daily from passengers.

FDLAT survey also asked if they liked the updates that were implemented in January of 2017. Ninety-one percent of respondents said they liked the extended half hour at the end of the day and the added peak hour service. Only 9% (2 respondents) said they did not but did not provide a reason why when asked. This is important for us to know why the extra services are not working, so we may be able to extend this out to social media for more input.

Sixty-seven percent of respondents said they would use a regional transit system or regional transportation authority (RTA) if one was in place. This is important to note for future endeavors of RTA plans. There has been talk in the Fox Valley area of implementing a RTA from Fond du Lac to Green Bay, and meetings on ongoing.

Non-user Survey

I conducted a non-user survey during November 2017. I dropped off surveys at businesses around Fond du Lac such as St. Agnes Hospital, Aurora Healthcare Center, and The Senior Center. Aurora Healthcare center and The Senior Center were the two places I was able to collect surveys. There were a total of thirty respondents to the non-user surveys.

During our Transit Development Plan, ECWRPC and FDLAT also collected non-user surveys. These were completed in May of 2015. The following are the highlights from the survey from 2017 and how they compare to 2015.

Again, we see the female respondents are much higher than the male respondents. In 2015 there were 67% female respondents and in 2017 there were 80% female respondents. The average age of respondents was 63 years old, which would make sense because of the number of respondents from The Senior Center.

Almost all non-user respondents considered themselves white (93%); there was one person who was Native American/Indian and another respondent who considered themselves multiple races. This did not surprise me at all because the last survey 73% of respondents considered themselves white.

The majority at 24% of non-user respondents made \$50,000 to \$74,999 of annual income. This is a huge gap between the majority of passenger respondents who are below \$10,000 for annual income; a correlation that most likely relates to why these people do not use the bus. The next highest percentage was 19% and that group made \$35,000 to \$49,000 for annual income. Compare this to the passenger survey where the next highest

percentage was an annual income of \$15,000 to \$19,999. One can easily see the separation between annual income from a user and a non-user.

The majority of respondents (69%) have lived in Fond du Lac for 20 or more years. These numbers do not surprise me. The senior center was one of the two places the non-user surveys were distributed, so there is a higher majority of seniors who took the survey. The majority of the people riding the bus had lived in Fond du Lac for only one to five years, another interesting dichotomy.

Sixty-three percent of non-user respondents 'strongly agree' FDLAT provides a valuable and necessary transportation service to the community; this has increased slightly from the 55% that 'strongly agreed' in 2015. Seventy-seven percent of respondents 'strongly agree' FDLAT is important for the local community, and 48% 'strongly agree' FDLAT is only for those who cannot afford a car. This is very important to note because in 2015, 50% of respondents 'strongly agreed' FDLAT is only for those who cannot afford a car. This means between 2015 and 2017 FDLAT has made a larger impact on education that we have provided to the community. Our teaching to schools, healthcare centers, and low-income housing on top of other things has paid off. This is important to know that Fond du Lac citizens understand the importance of the bus system.

Ninety-three percent of respondents said that they used a vehicle to get around the City of Fond du Lac; again, this is not surprising due to the high number of people who drive in the city and how many people own a car.

Our next question asked which change in service FDLAT could implement to get you to ride the bus. Unfortunately, the largest percentage said 'Other' and did not provide a response. The second highest change at 20% was closer to stops to home/work/school. This was different from the 2015 as the highest reason at 17% said extended routes. I know from the literature review only enhancing one thing will not get a non-user to ride, so it could be a mere coincidence that this has differed over a couple of years. Although, it could mean the changes that FDLAT added in January of 2017 are shifting why people will not ride FDLAT. We may be able to provide them with the service hours but the bus stop is now too far away.

Thirty percent of respondents in 2015 said if transit could get you to your destination faster than other modes of transportation they would ride the bus. This we know to be true for the literature on small transportation. In small cities people are less likely to ride transit because their vehicle can get them to their destination faster. However, in 2017 only 15% of respondents said they would ride if transit could get you to your destination faster than other modes of transportation. In 2017, 47% of respondents said they would ride FDLAT if the gas prices were high and 21% said if they could reduce their carbon footprint. Again, we are seeing a shift from 2015 to 2017. This could be another response from increasing education or adding more service.

Forty percent of respondents in 2017 said they would 'maybe' use a regional transit system. Forty-one percent said they would not use a regional transit system and only 17% said yes they would use one. In 2015, 50% of respondents said 'maybe', 30% said 'yes', and 21% said 'no'. This is disappointing to see the numbers drop because now

an RTA is actually being talked about. In an ideal scenario, I the additional question of why one would not use and RTA, to see the responses and analyze more from there.

My last question was added for 2017. 'If there was education about FDLAT at your work place or social gathering place would you attend?' Forty-eight percent said 'maybe', 40% said 'no', and only 12% said 'yes.' I am hopeful that bringing educational transit classes to the workplace or social gatherings place will continue to increase why small transportation especially FDLAT is so important.

Chapter VIII – Considerations and Implications

As stated in my methodology, small systems transportation is rarely researched. What was found was a very small combination of struggles and approaches to improving

the small transportation issue. Decentralization being the first issue discussed above is a major issue for not only large transportation agencies but also small. When people start migrating towards cheaper land outside of the city, it does not mean that transportation will necessarily move with them. Moving transportation from its centralized urban area would create multiple problems. One problem being that if it were to move to a suburban area it is less efficient for the central urban area. This is the case if funding is low, which it usually is for small systems, and then they try to spread a transportation system using the same materials they started with. People who then move to the suburbs buy vehicles which cause more congestion. The other issue is business' moving into this small suburban area. People who then need or have to use public transportation can no longer get to their job. They are then out of a job or have to find a new one.

Decentralization then causes socioeconomic issues for the low-income and underrepresented individuals whose only means is to use public transportation. For the poor, handicapped, elderly, and students using transportation this is a cheap means to get to places they desperately need to go. The demographic surveys indicate the need for FDLAT in helping individuals get to work and school. In Fond du Lac the true cost (what the transportation system pays) is around \$8.00 to get one person from point A to point B, but Fond du Lac Area Transit charges \$1.50 instead. A taxi service in Fond du Lac will also charge \$8.00 at the minimum for one ride. This is a difference of \$6.50 one way, and \$13 round trip. For a person who is low income with the survey states most of FDLAT ridership is, this would be detrimental. Decentralization, cost, socioeconomic factors, and gas prices are only a small portion of the struggles of a small transportation

system. More research on a comparison between large systems and small could be another strong factor to study, along with rider surveys from a variety of small transportation systems. I however did not research this comparison for this project

The above research provides five approaches to improving small transportation systems. Planning is a key factor making small transportation systems thrive. If a city is planned around a transportation system or if the agency is notified of future building of companies or suburbs this will help plan the need of transportation in small cities. Planning is important to making almost all endeavors successful, transportation is no different.

Quality of service and understanding the rider are both very important in providing quality transportation service to the customer. Just because a person desperately needs transportation does not mean they will find another way around town if the quality of service is horrible. Small transportation agencies need friendly drivers, clean buses, and efficient transportation. Lucky for FDLAT it seems we are doing a good job with friendly drivers and efficient as the survey states. The agency also needs to understand the wants and needs of their customers. If an agency does not go where their customers need to go it is obsolete for the rider to use. This will be further looked at when the passenger survey is conducted with Fond du Lac Area Transit riders. This is why the demographic survey is so important for small systems to conduct, FDLAT knows riders want extended hours and weekend service, now that we know we can fight for it.

Technology and considering a brand-new system is something that needs to be address, and at least talked about by all small systems. In general government agencies, which most transportation systems are under in the United States, are behind the private markets when it comes to technology. If a simple smart phone GPS is added to the system, it could mean a world of difference for not only the rider but also the agency in expanding. Most GPS technology now comes with reports such as on time reporting, which could help in cutting or adding route time. Google Maps and real time notifications will also help to provide better service to the passengers. Know that FDLAT knows a large percentage of their passengers have a smart phone we can heavily market our Facebook page, Twitter account, and Google Maps route planner.

Also, even though ‘The Economist’ article above may be many years away from implementation, change is important and should be talked about (“Beyond,” 2007). Why hasn’t transportation dramatically improved over hundreds of years? Is it because of government, or a lack of innovation? Maybe half of the above problems could be solved by a brand-new way of small public transportation.

Lastly, education should be a huge consideration when providing customer service. If your city is not educated on public transportation they are less likely to understand it, especially if neither they nor anyone ‘in the know’ do not use the system. Educating elementary school kids could provide a system with future riders, educating parents and middle school students will help them to understand the safety and ease of getting students to school, and educating senior citizens will help them to feel like they have freedom they may have never known about. Educating the right people, such as City

Council is especially important as this could make all the difference in a small system. By reaching the ears of individuals you can change and help transportation as a whole. In appendix C, I have added an education development plan FDLAT has started working on to help teach students, senior citizens, and more.

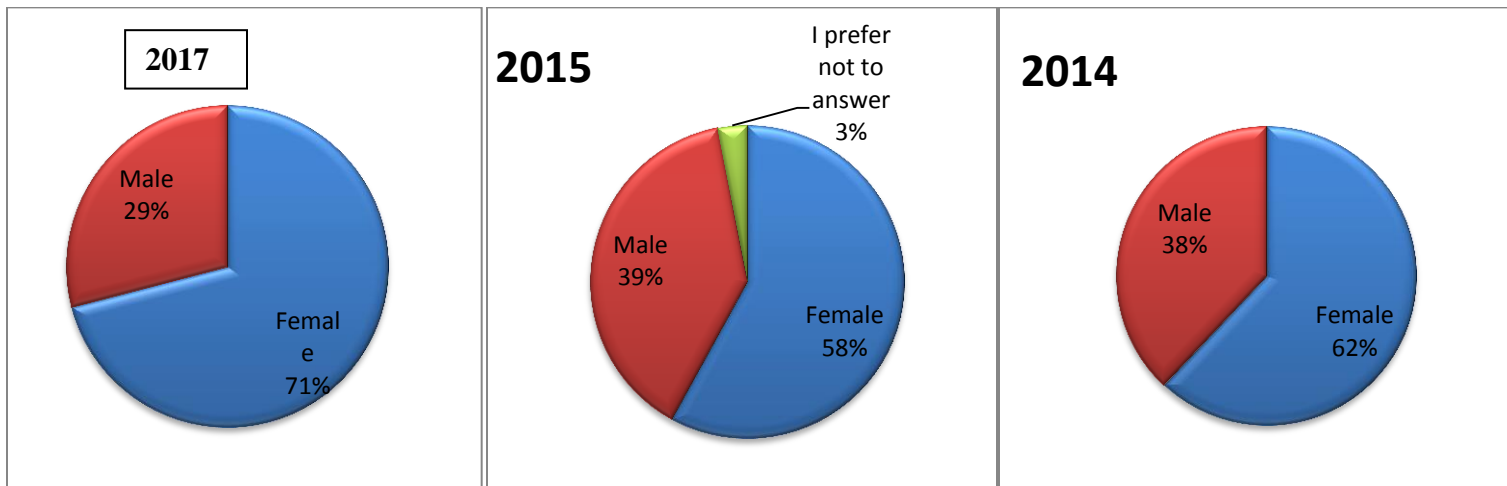
Small transportation agencies face many struggles: decentralization, cost, socioeconomic factors, and lack of education to name a few. They face competition from the automobile and free street parking, unlike their large transportation agency counterpart. The fact is there will always be the people who desperately need public transportation. The mom who cannot take her kids to school in the morning, the handicapped person who needs to get to work, and the elderly gentleman who needs to go to dialysis every week, these are the people who need small transportation agencies. So, it is up to the bus provider to plan accordingly, give the best quality of service, understand the rider, use technology to their advantage, and consider creating a brand-new system. This is what will make a small transportation system great.

While I have some wonderful research, future research should be conducted as well especially with education since I was unable to discover any as of yet. It was hard to find research on small system transportation and that is why it is important for me to research this topic. Fond du Lac Area Transit is a small system; however, it is a big city amenity that is so appreciated. I want to see it thrive along with other small systems. This research is important for the underprivileged, the elderly, students, and so many more individuals.

APPENDIX A

Passenger Survey 2017

- 1) What is your gender?
- a. Male
 - b. Female
 - c. Other
 - d. Prefer not to answer



2) How old are you?

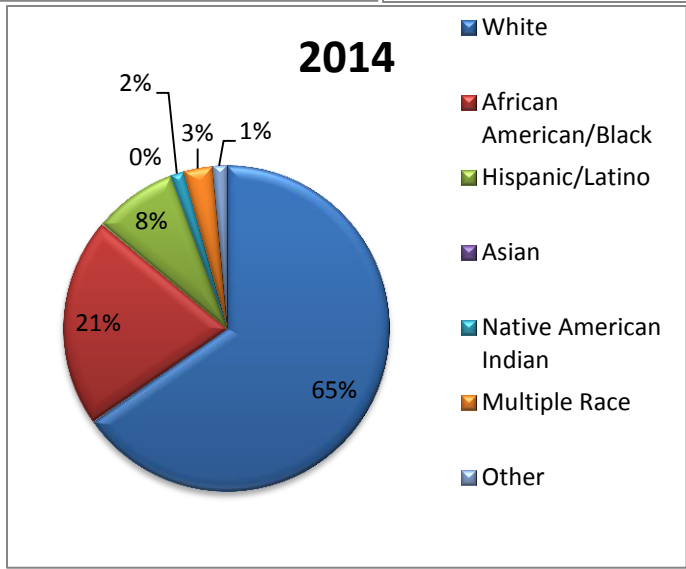
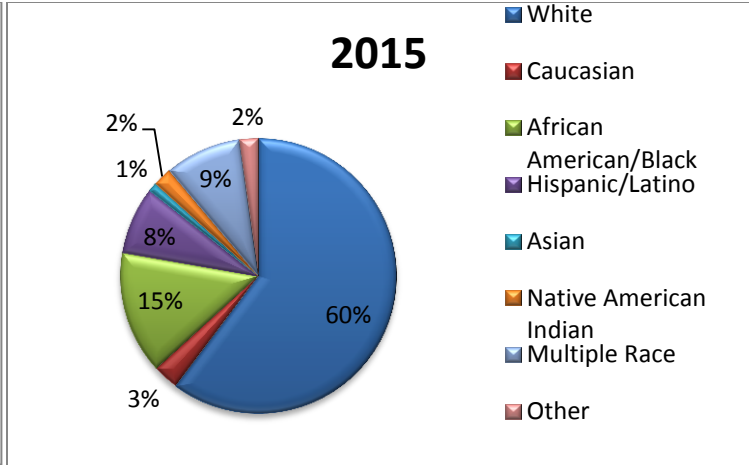
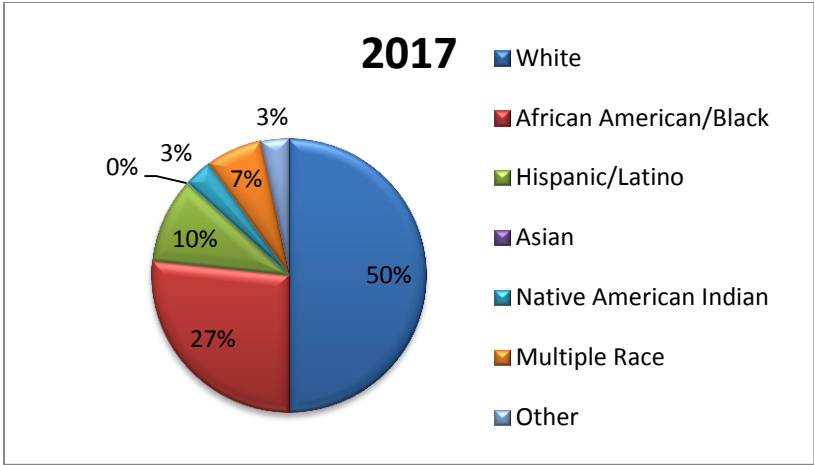
2017

29 is the median age of the group.

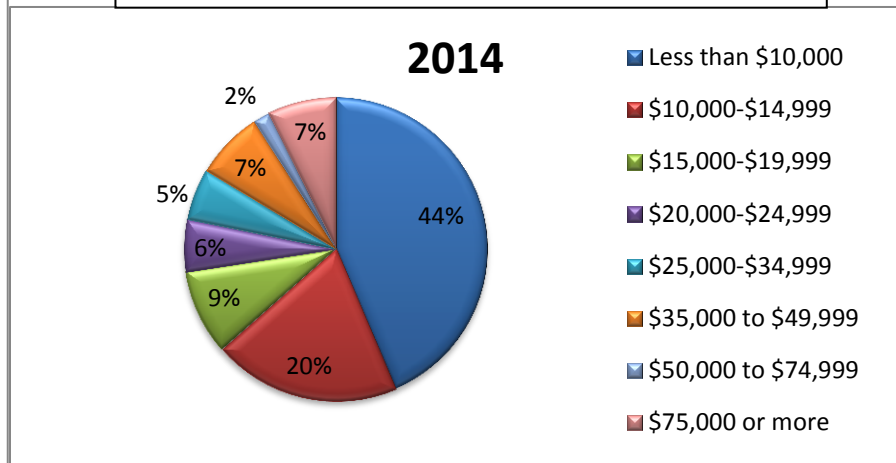
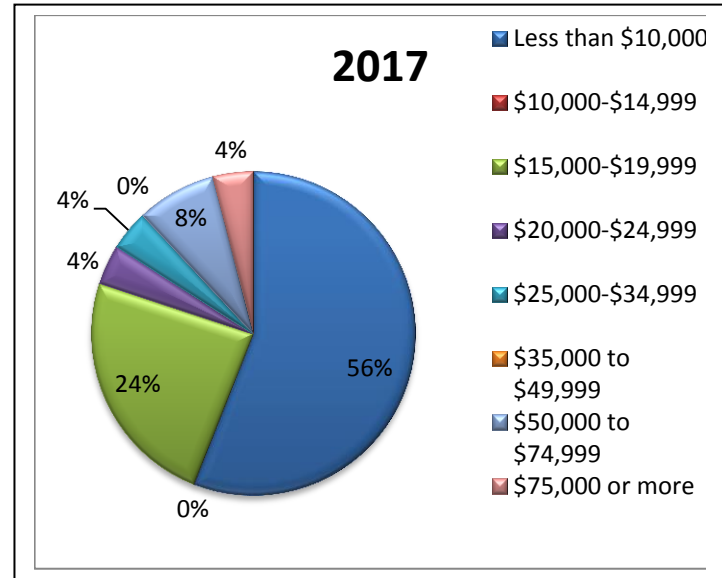
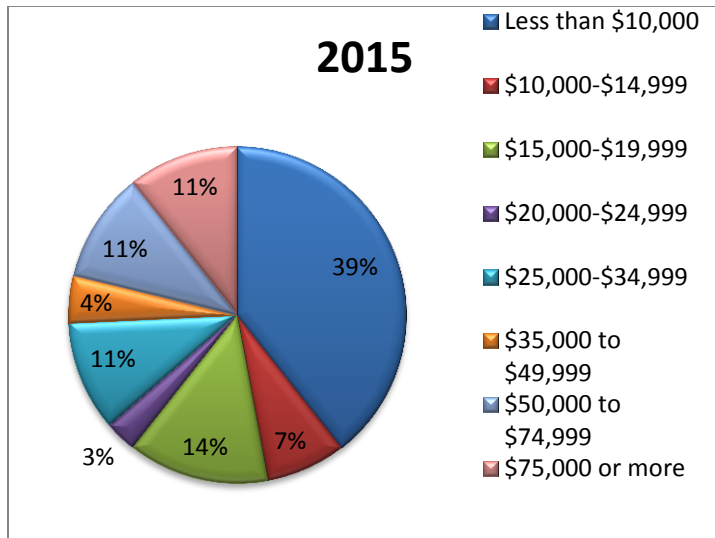
Age 17 was the highest number of respondents

3) Do you consider yourself?

- a. White
- b. African American/Black
- c. Hispanic/Latino
- d. Native American/Indian
- e. Asian
- f. Multiple Races
- g. Other

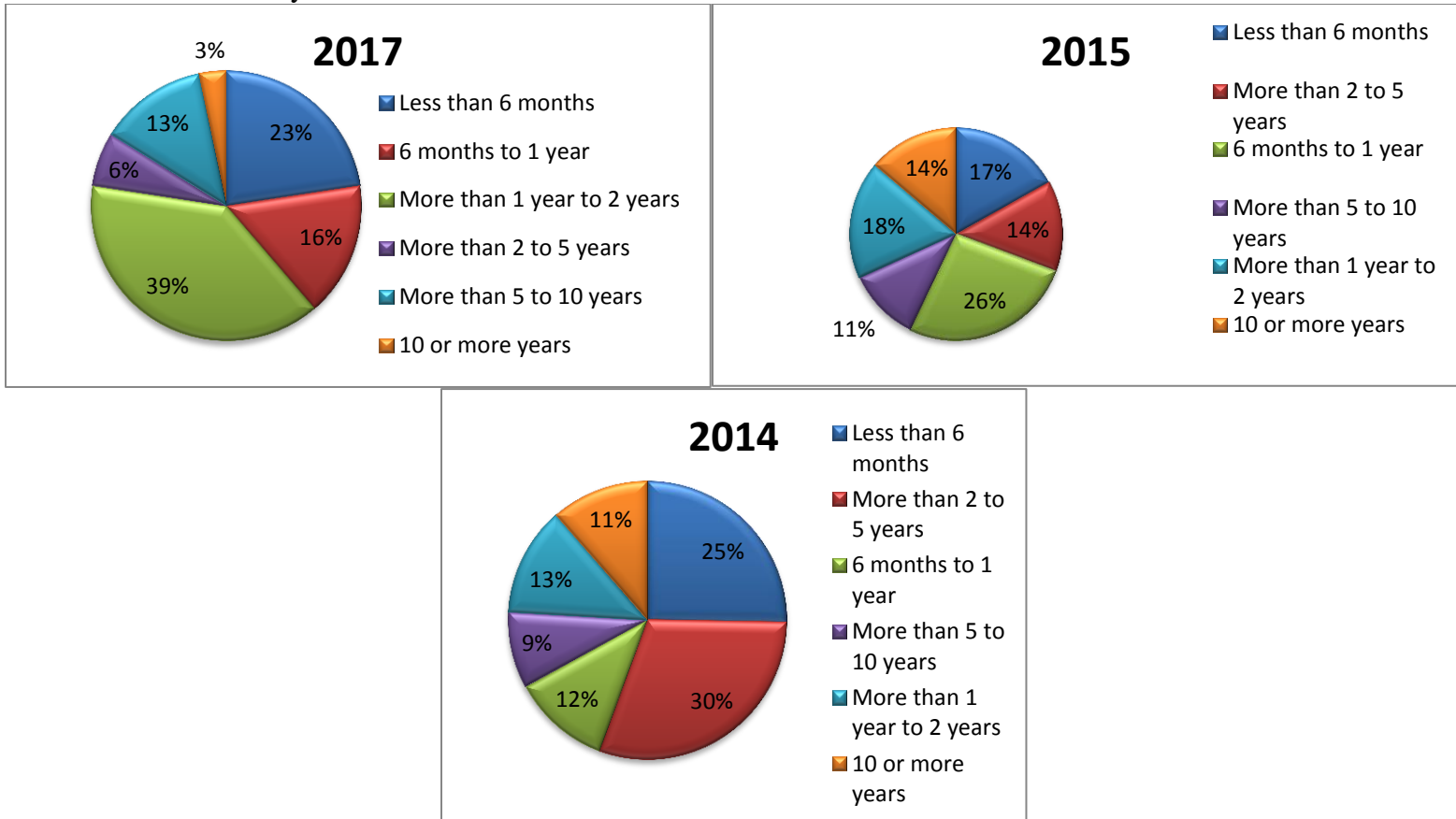


- 3) What is your household's (combined) annual income?
- a. Less than \$10,000
 - b. \$10,000 - \$14,999
 - c. \$15,000 - \$19,999
 - d. \$20,000 - \$24,999
 - e. \$25,000 - \$34,999
 - f. \$35,000 - \$49,999
 - g. \$50,000 - \$74,999
 - h. \$75,000 or more

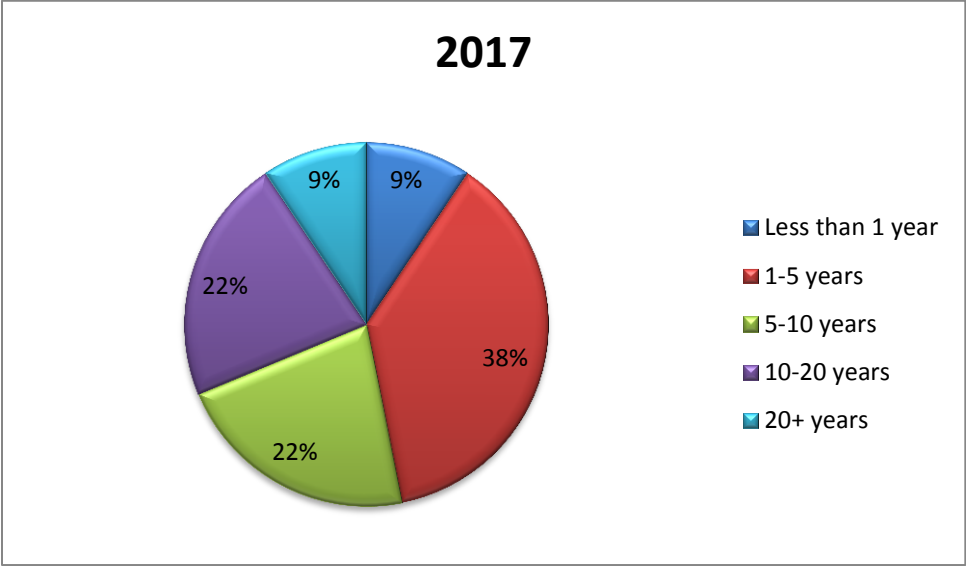


4) How long have you been using FDLAT?

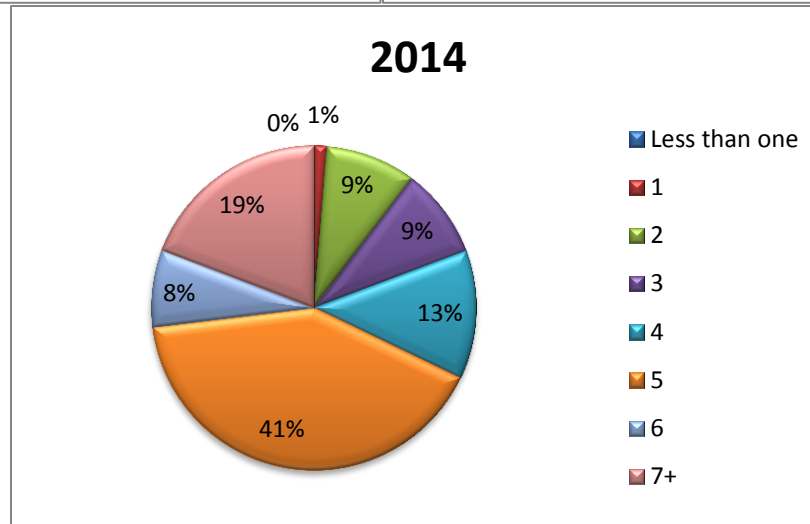
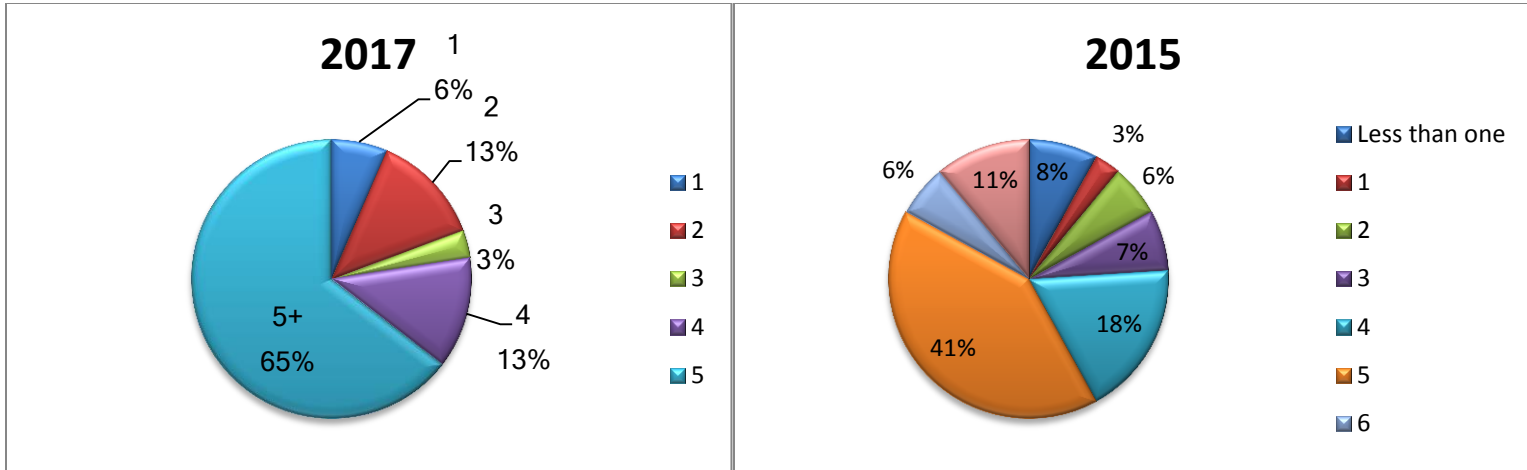
- a. Less than 6 months
- b. 6 months to 1 year
- c. More than 1 year to 2 years
- d. More than 2 to 5 years
- e. More than 5 to 10 years
- f. 10 or more years



- 5) How long have you lived in Fond du Lac?
 - a. Less than 1 year
 - b. 1-5 years
 - c. 5-10 years
 - d. 10-20 years
 - e. 20+ years

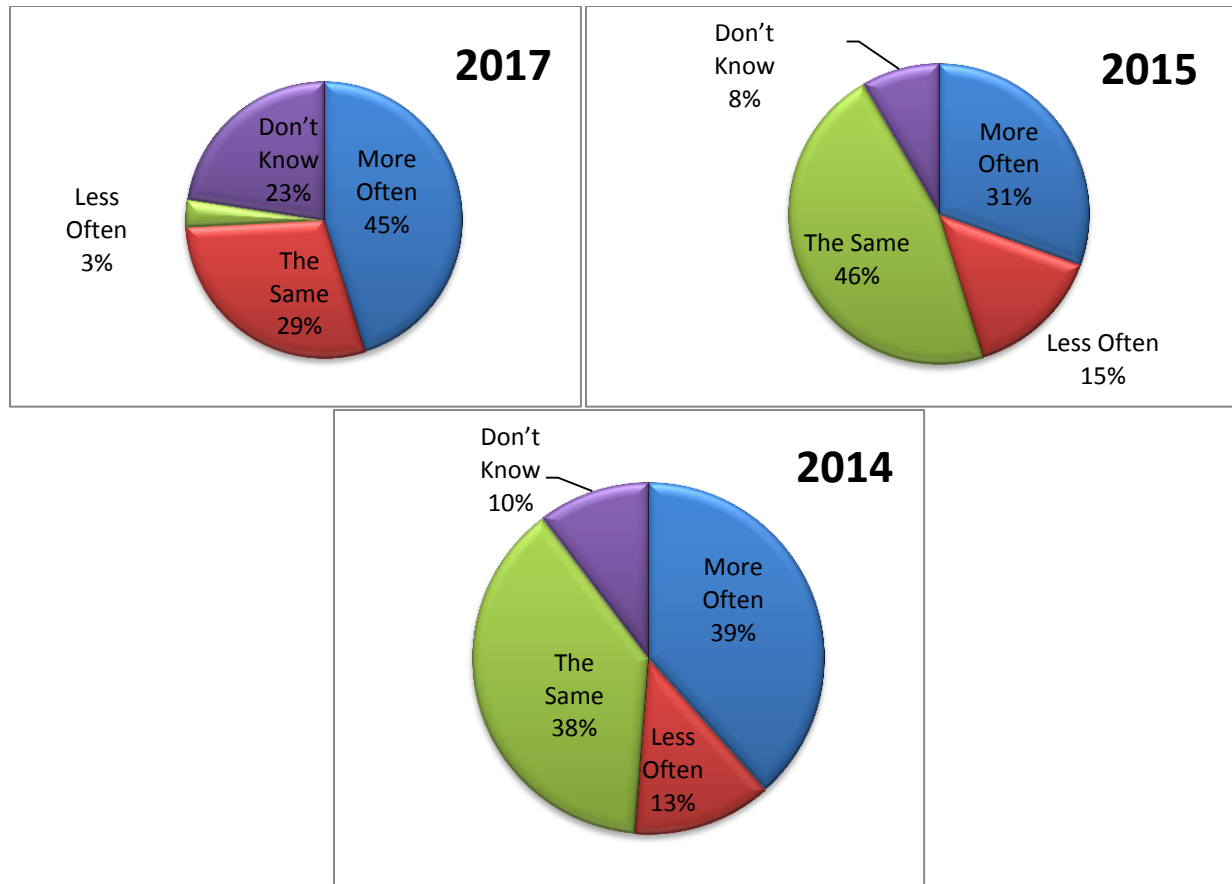


- 6) In an average week, how many days do you ride the bus?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. 5+



7) Compared to one year ago, are you using FDLAT:

- More often
- The same
- Less often
- Don't know



8) If using FDLAT less often, why?

Responses

I started walking home from school

9) What are the cross streets at the location of your bus stop (or major building landmark if you are not sure)?

Bus stop number or street where you get on the bus:

Nearest cross street to the stop:

Butler

Portland & Division

Mercury Marine

Martin & Pioneer

Route 50

Seymour & Arndt

Hometown Bank

13th & Main

Transfer Zone

Brooke & Walker

Main Street

Seymour & Russell

Main Street by the Fire Station

South Park Ave & East 2nd

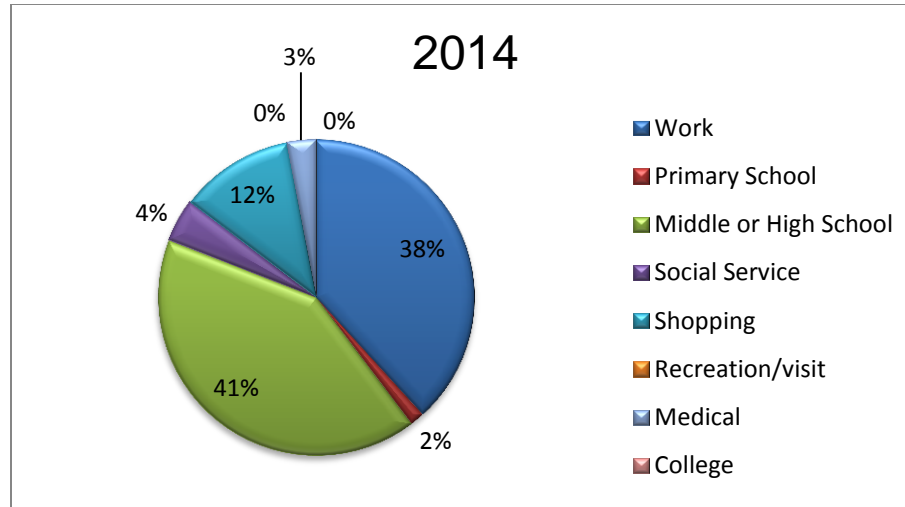
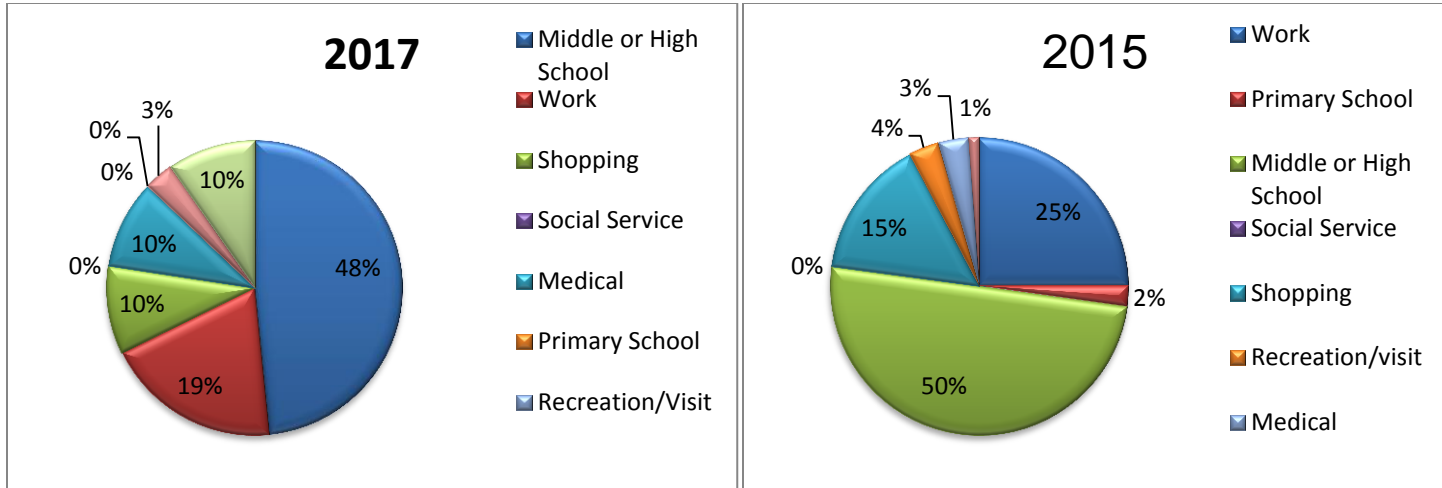
Riverview Apartments

10th St & Park Ave

Peters & Arndt

10) What is your main purpose in using the bus for this trip?

- a. Middle or High School
- b. Work
- c. Shopping
- d. Social Service
- e. Medical
- f. Primary School
- g. Recreation/Visit
- h. College
- i. Other (please specify)



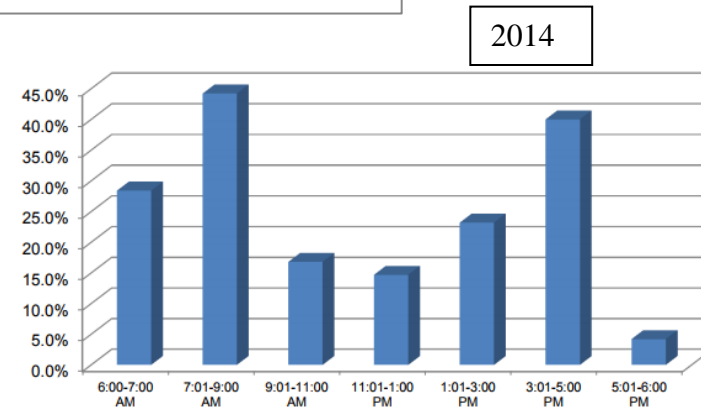
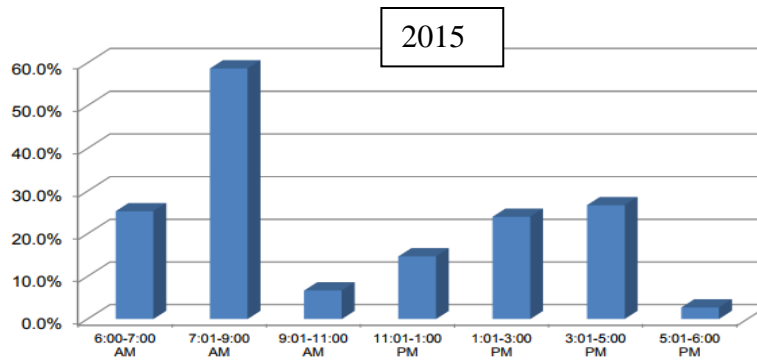
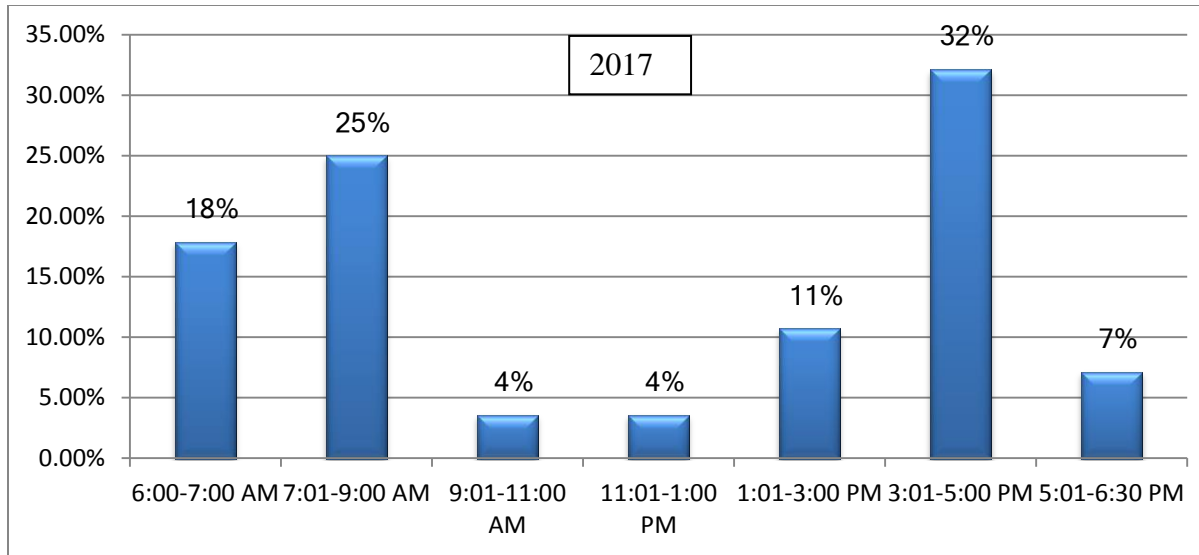
11) About how long (in minutes) will your trip take from your front door to your final destination (including transfers)?

Responses

| | | | |
|------------|------------|-----------------|-----------|
| | 35-45 | 1 hr. 40 | |
| 1 minute | minutes | minutes | |
| | 35-45 | | |
| 5 minutes | minutes | Answered | 20 |
| 7 minutes | 45 minutes | Skipped | 13 |
| 10 minutes | 1 hour | | |
| 10 minutes | 1 hour | | |
| 10-20 | | | |
| minutes | 1 hour | | |
| 15 minutes | 1 hour | | |

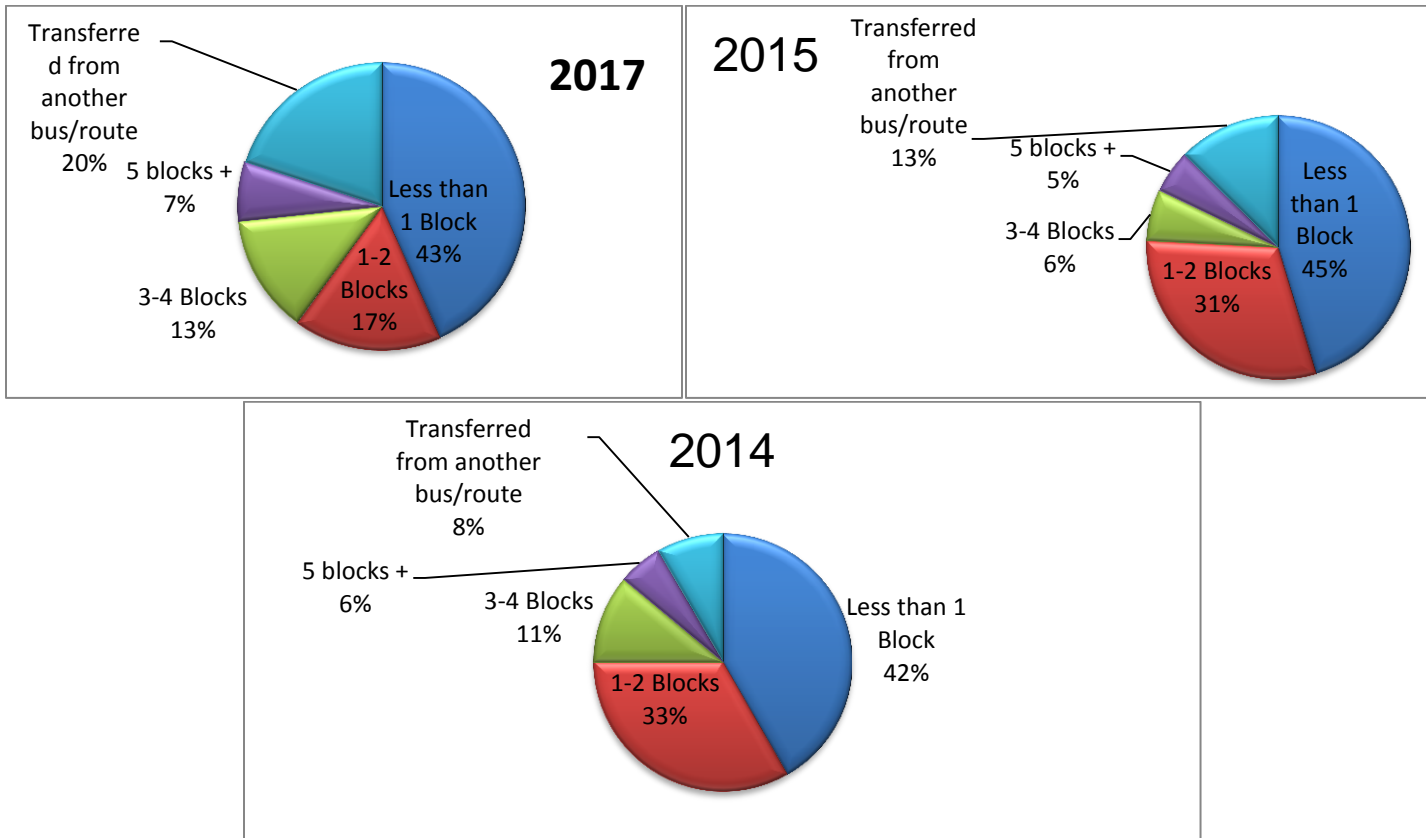
12) What time of day do you most often use FDLAT?

- 6am – 7am
- 7:01am – 9:00am
- 9:01am – 11:00am
- 11:01am – 1:00pm
- 1:01pm – 3:00pm
- 3:01pm – 5:00pm
- 5:01pm – 6:30pm



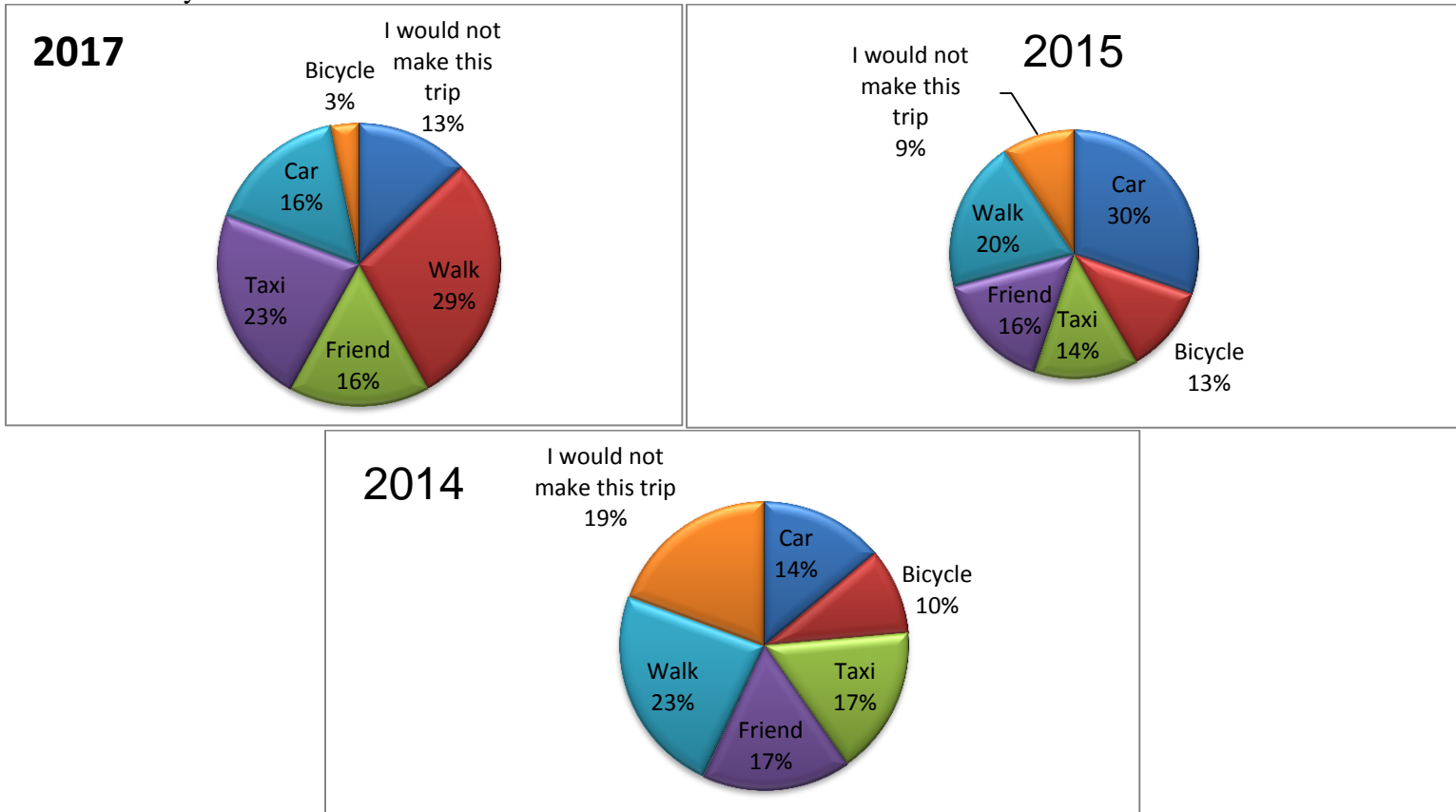
13) How far did you come to get to the bus stop for this bus?

- a. Less than 1 block
- b. 1-2 blocks
- c. 3-4 blocks
- d. 5+ blocks
- e. Transferred from another bus



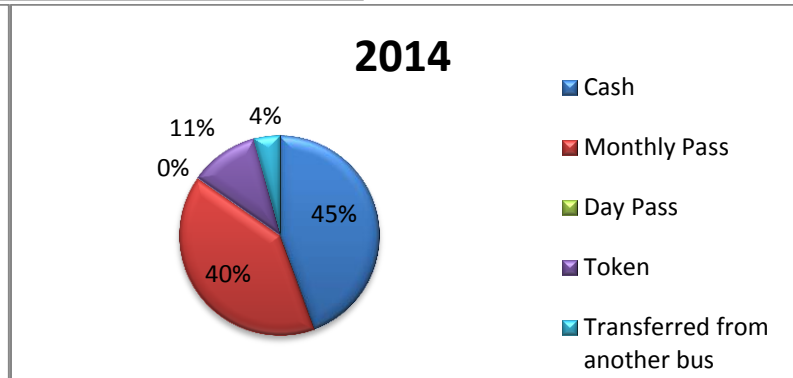
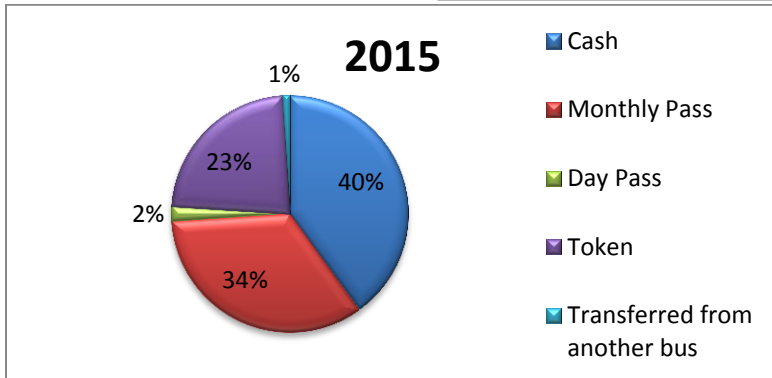
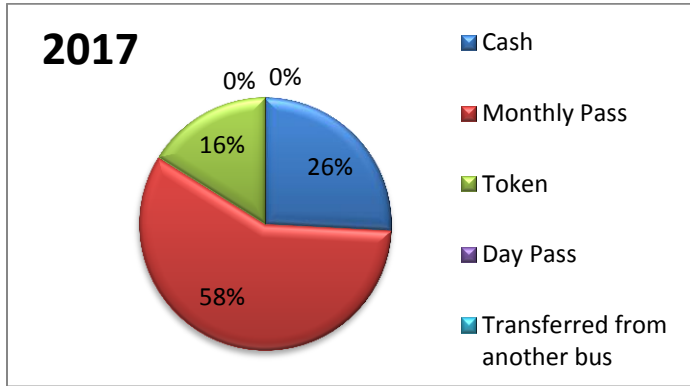
14) If FDLAT were not available, how would you make this trip?

- a. I would not make this trip
- b. Walk
- c. Friend
- d. Taxi
- e. Car
- f. Bicycle



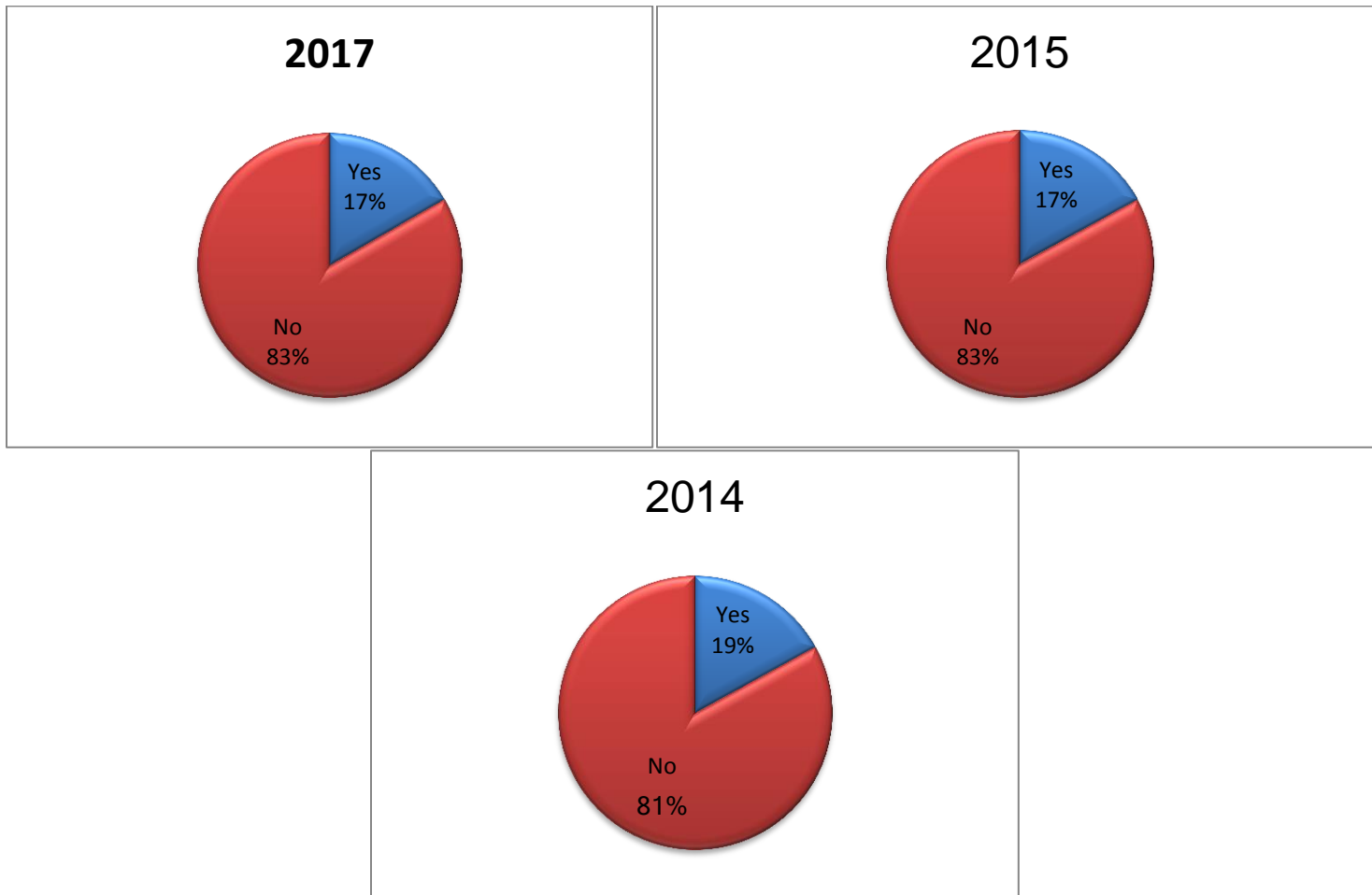
15) How will you pay your fare on this bus today?

- a. Cash
- b. Monthly pass
- c. Token
- d. Day Pass
- e. Transfer from another bus

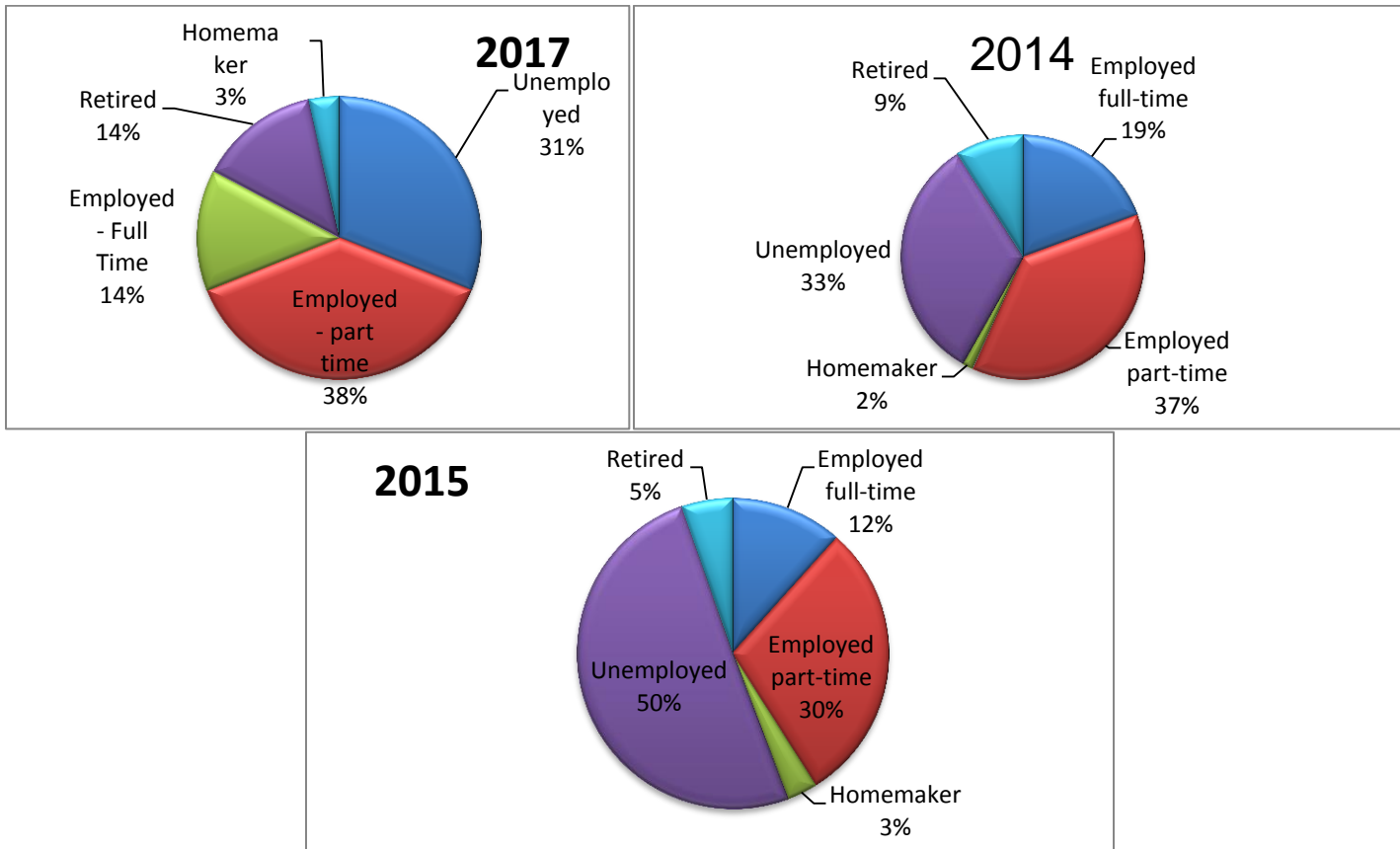


16) Do you use Senior or Disable Discounts?

- a. Yes
- b. No

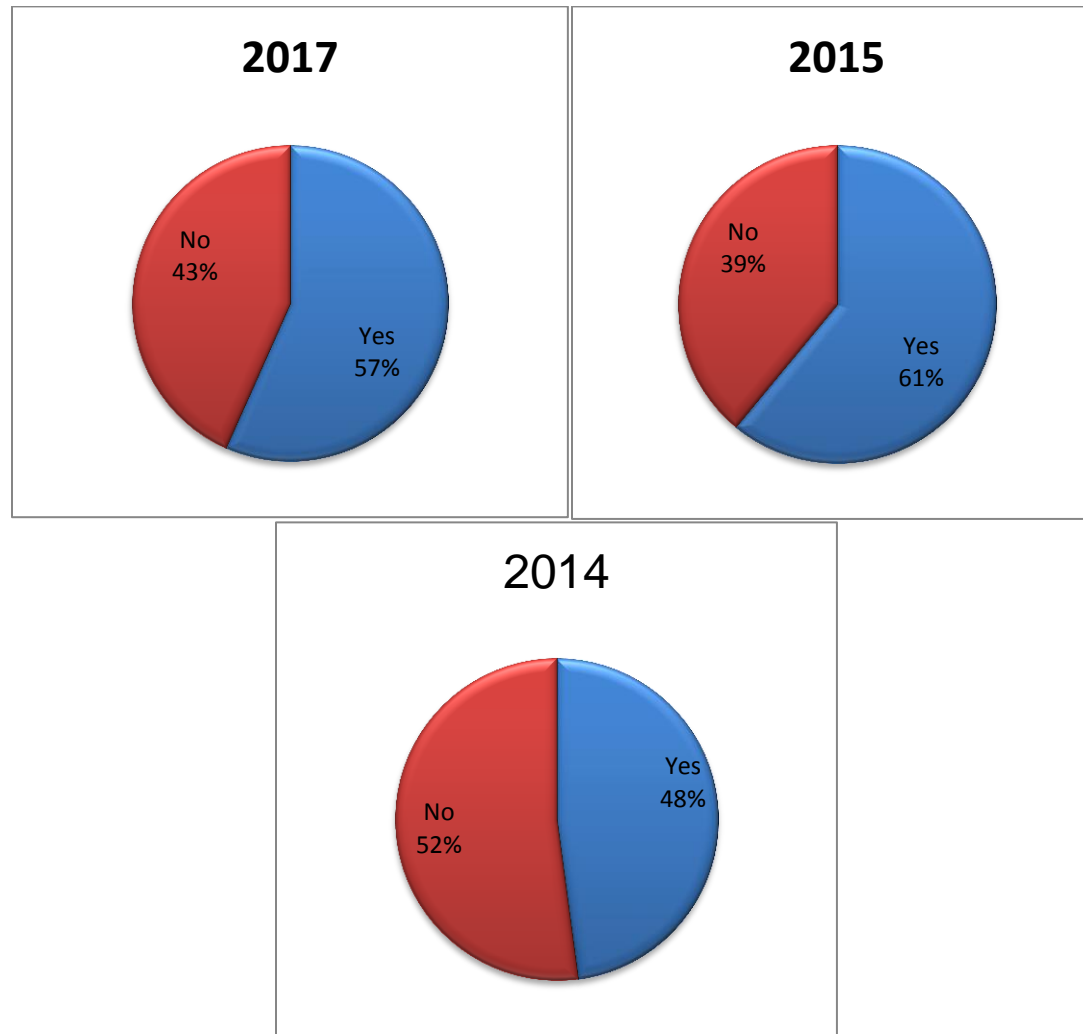


- 17) Are you presently?
- a. Unemployed?
 - b. Employed part-time?
 - c. Employed full-time?
 - d. Retired?
 - e. Homemaker?



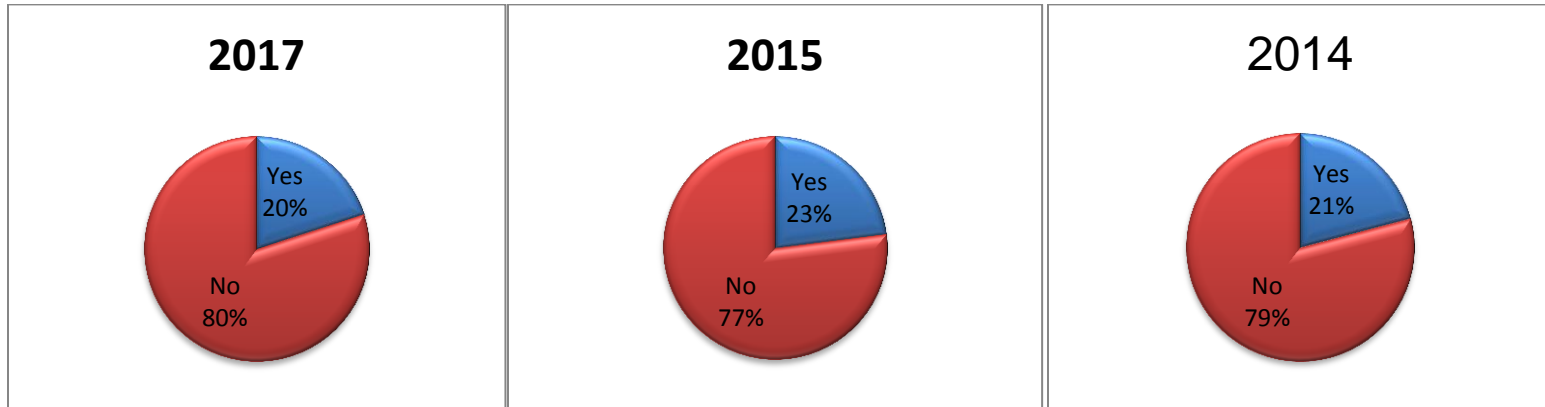
18) Are you a student?

- a. Yes
- b. No

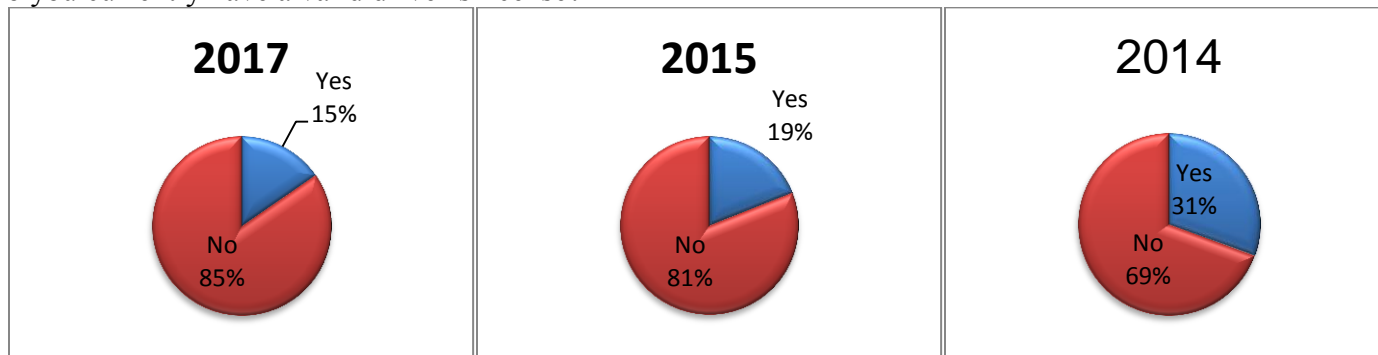


19) Was a motor vehicle available to you for this trip today?

- a. Yes
- b. No

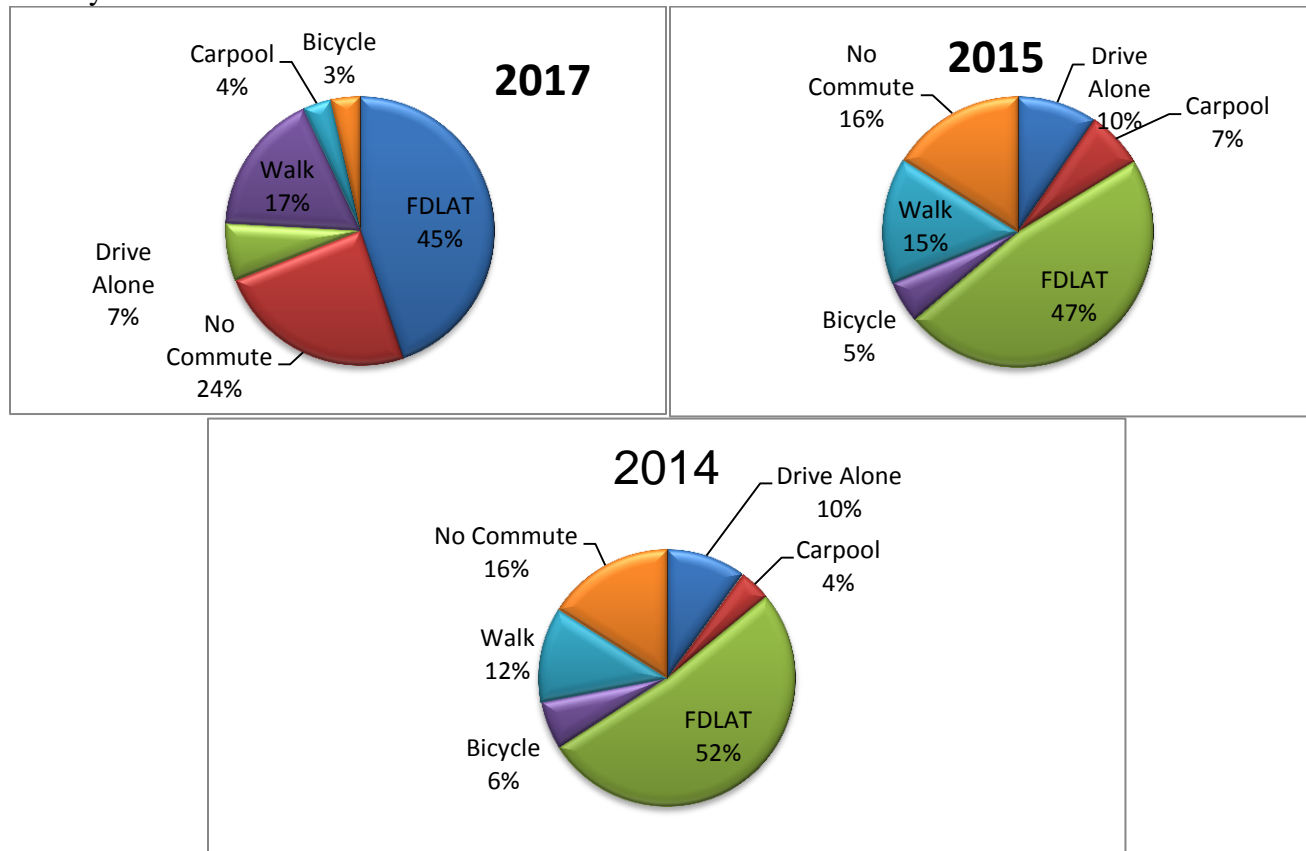


20) Do you currently have a valid driver's license?



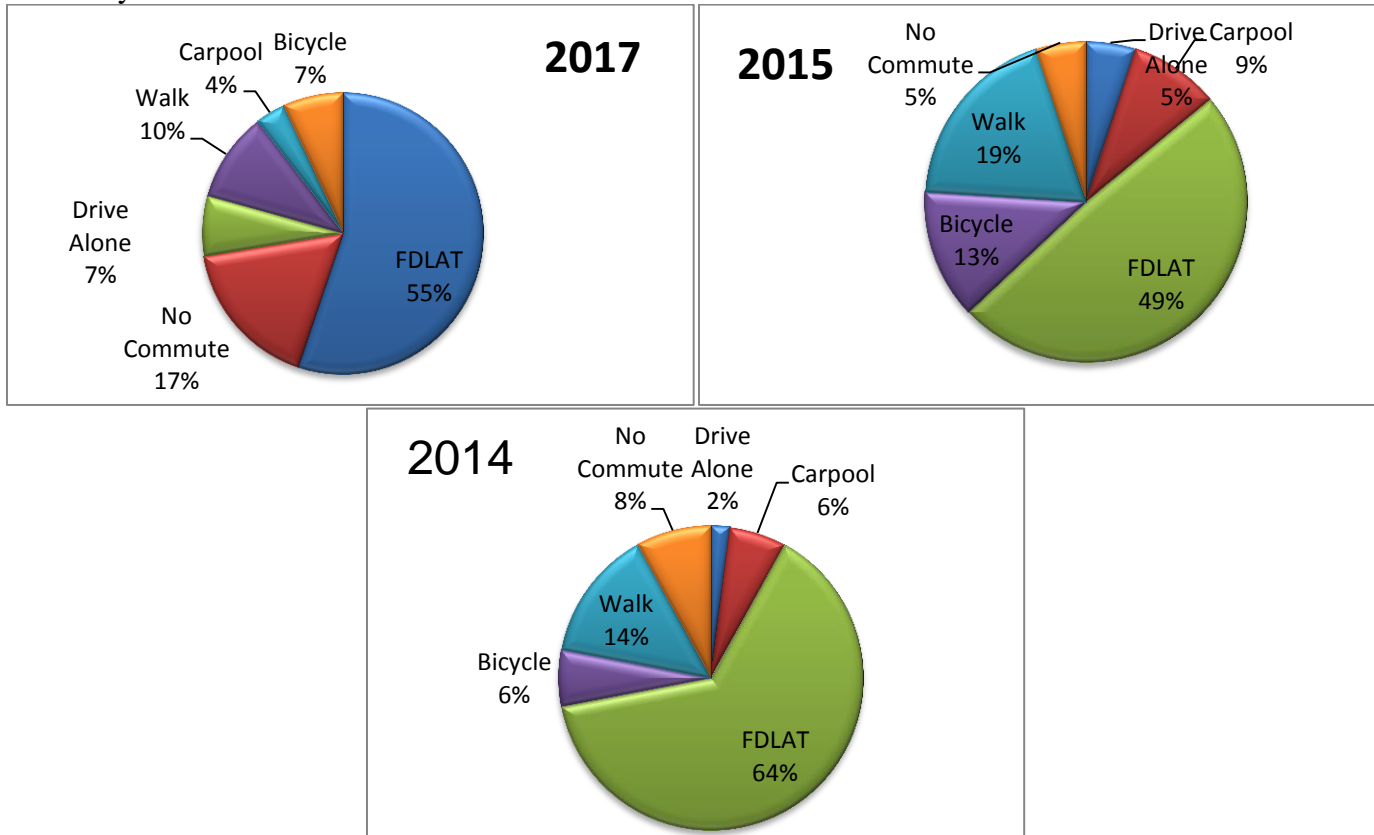
21) Which is your main mode of transportation for work?

- FDLAT
- No commute
- Drive alone
- Walk
- Carpool
- Bicycle



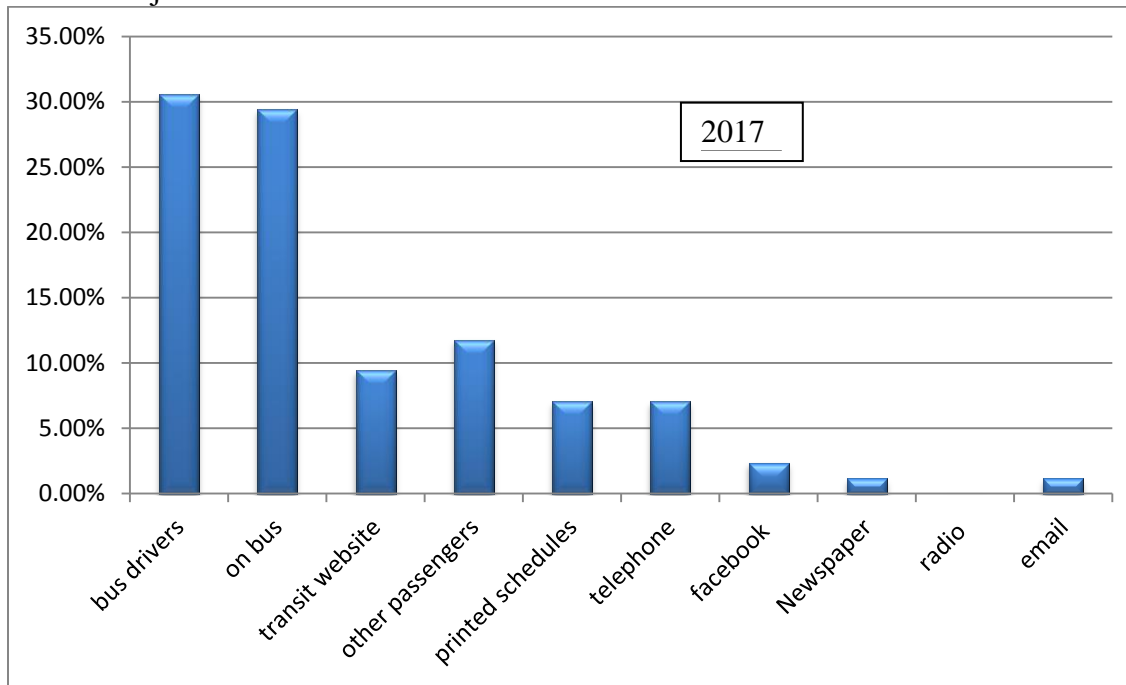
22) Which is your main mode of transportation for purposes other than work?

- a. FDLAT
- b. No commute
- c. Drive alone
- d. Walk
- e. Carpool
- f. Bicycle

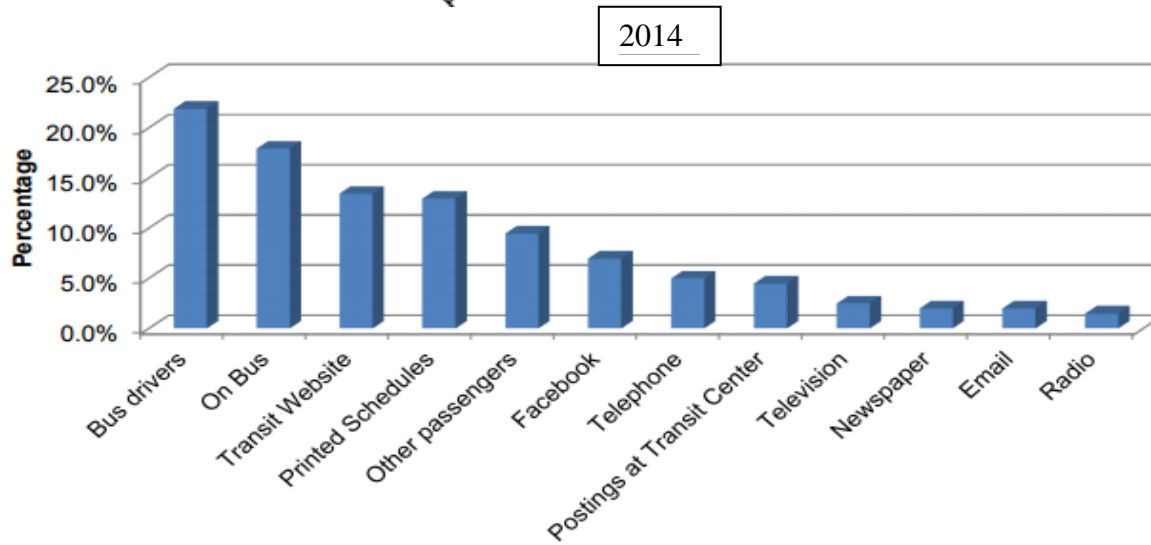
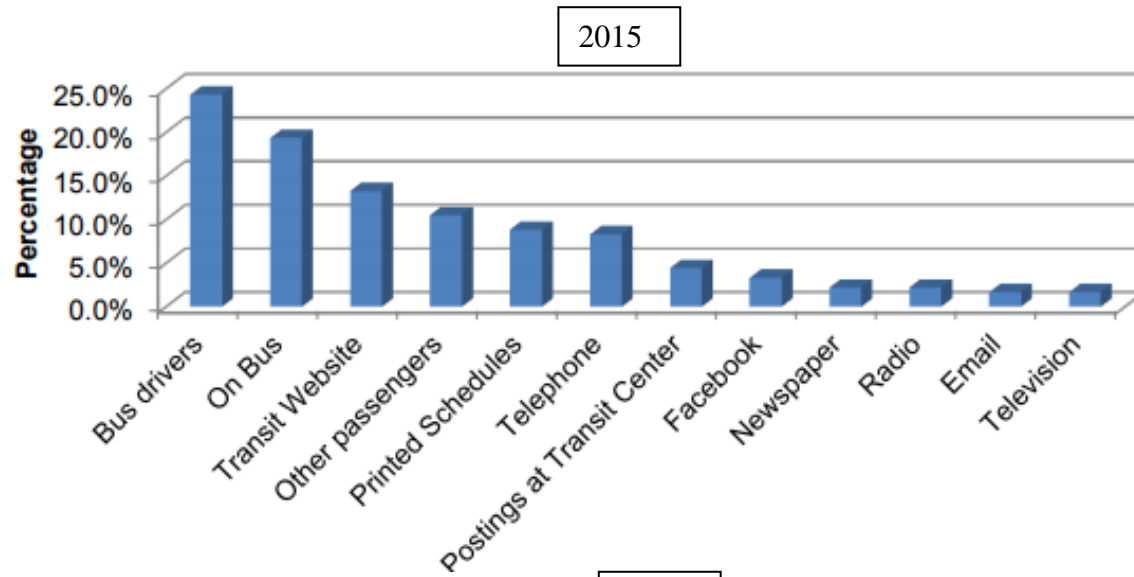


23) What are your top 3 choices to get information on FDLAT?

- a. Bus drivers
- b. On bus
- c. Transit website
- d. Other passengers
- e. Printed schedules
- f. Telephone
- g. Facebook
- h. Newspaper
- i. Radio
- j. Email

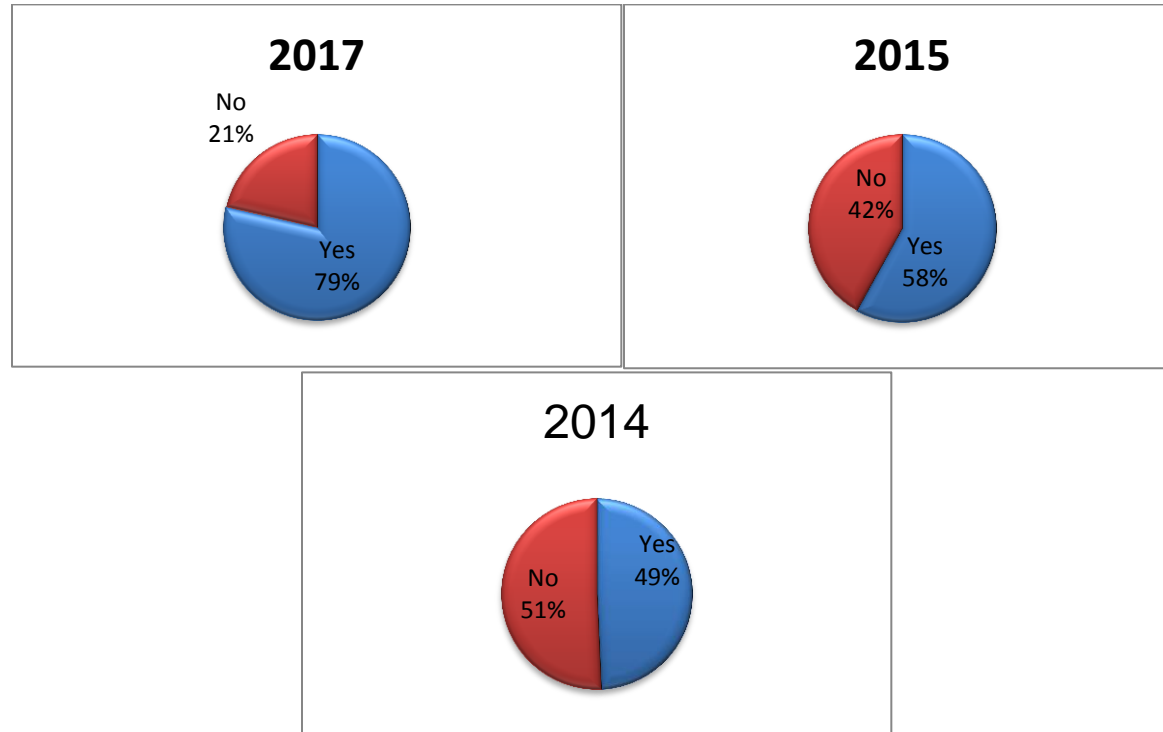


***Note: Some people did not give a totally of 3 answers.



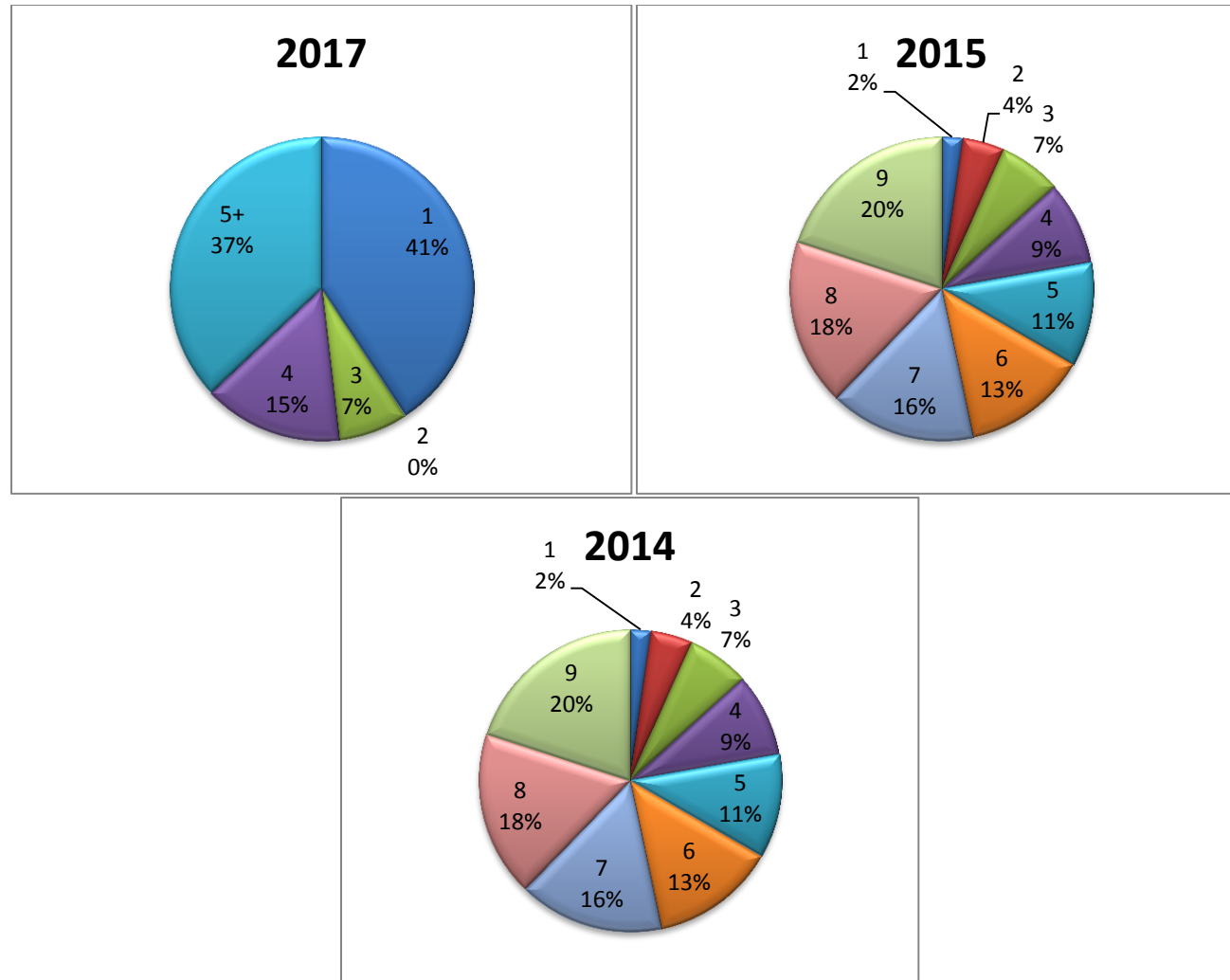
24) Do you have a smart phone?

- a. Yes
- b. No



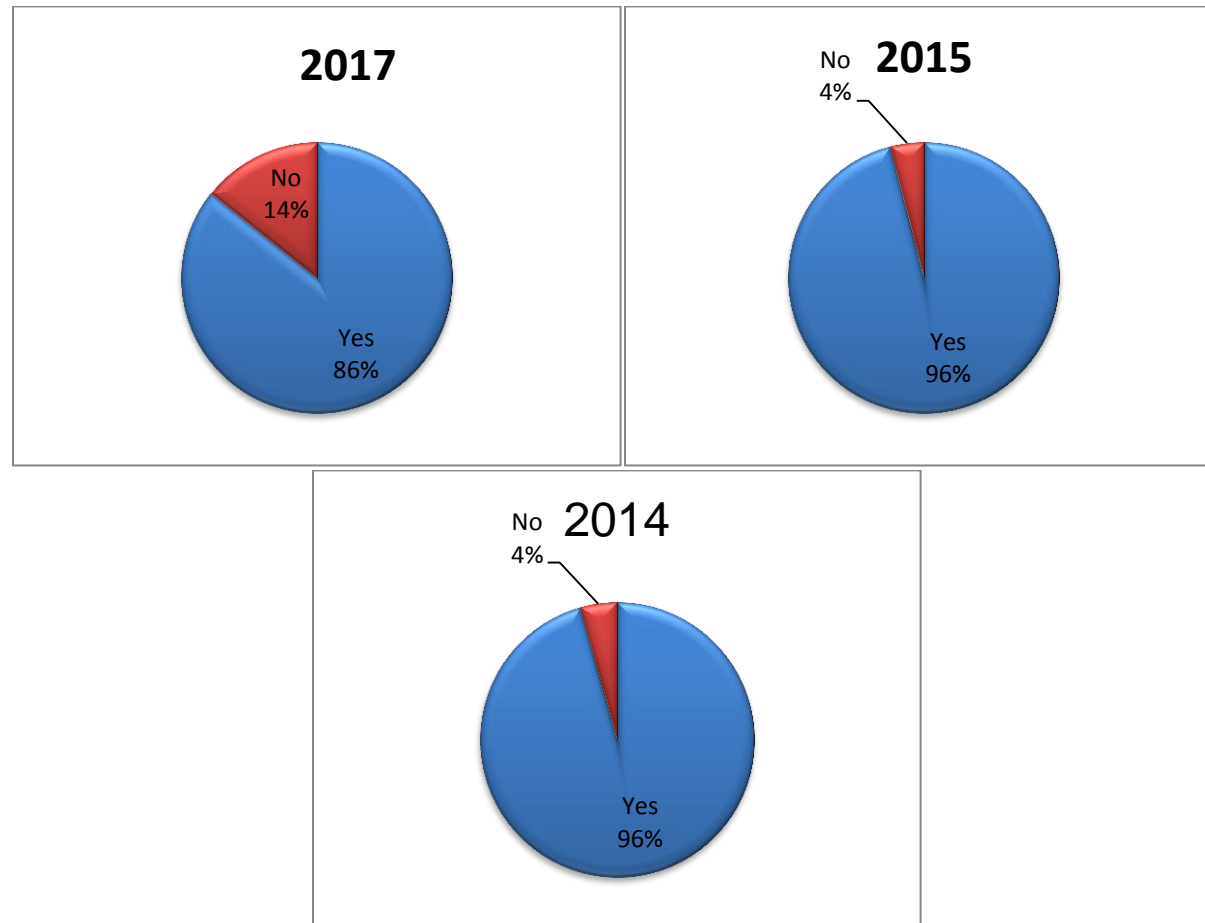
25) How many people (adults & children) live in your household?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5+



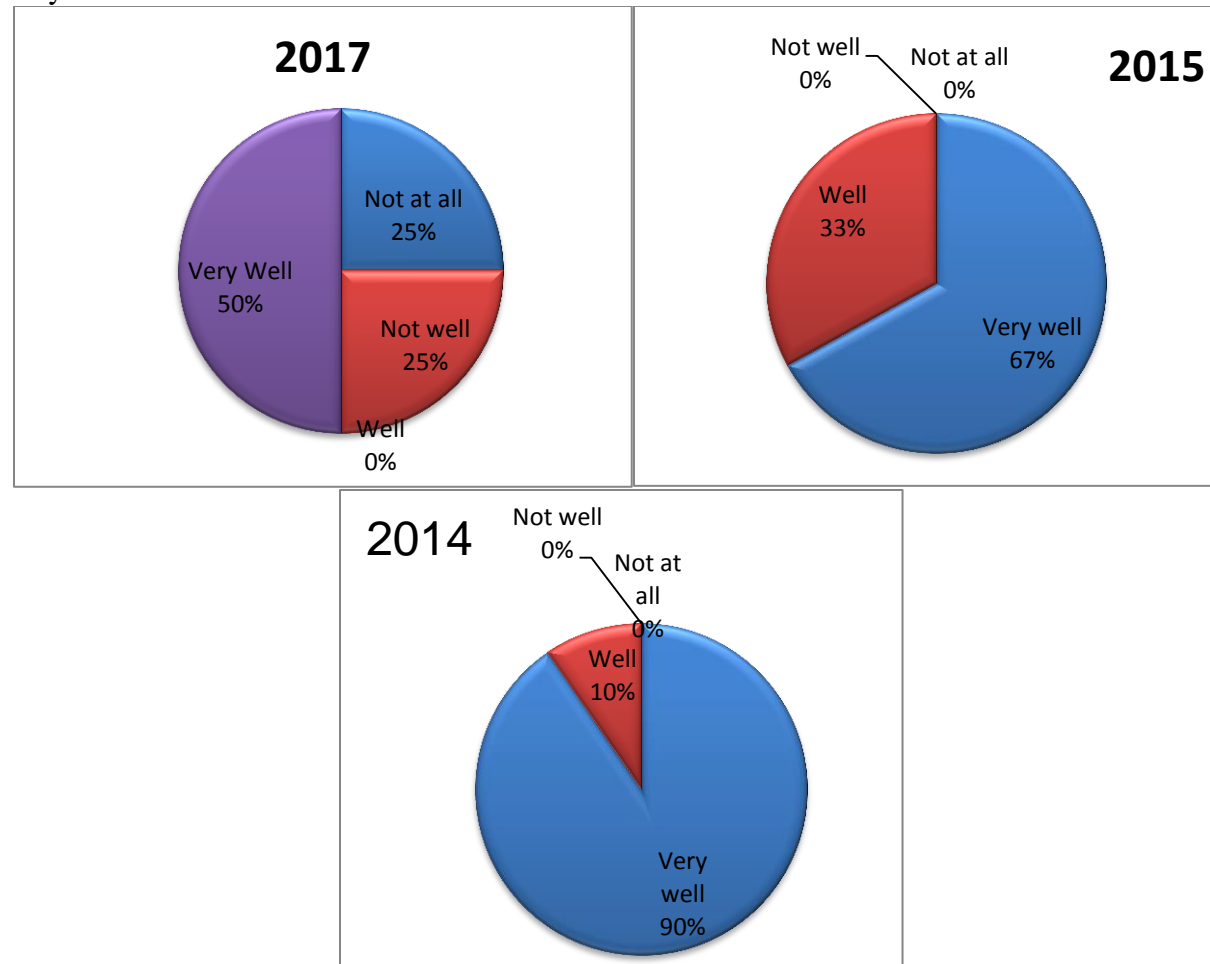
26) Is English your primary language?

- a. Yes
- b. No



27) If English is not your primary language, how well do you understand the English Language?

- a. Not at all
- b. Not well
- c. Well
- d. Very well



28) What do you like best about Fond du Lac Area Transit?

Responses

That they run until 6pm

Reliable

Friendly

It's available

Bus Drivers

Friendly bus drivers

It gets me places

Don't know

The Drivers

Quickness

Reliable

It provides me a way

home

Friendly Drivers

Drivers are all kind

Very nice bus to ride on

29) What would you like to see FDLAT improve?

Responses

Run on Weekends

nothing

Saturday service until noon

Later bus hours

Nothing

later bus hours

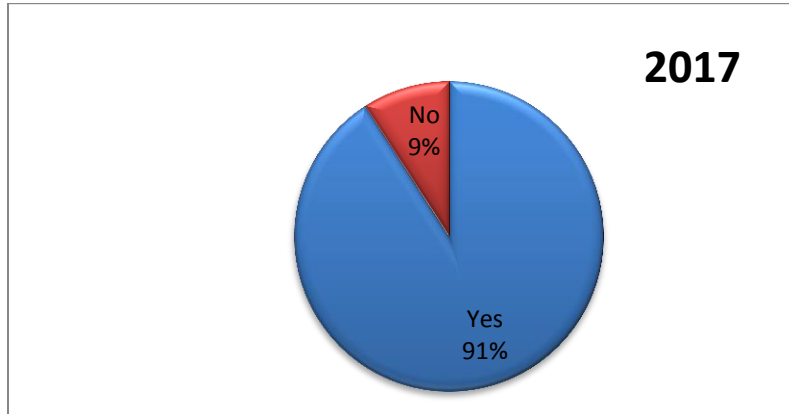
It run for more hours & on weekends

None

More hours & later service

30) Do you like the updates to FDLAT that were made on January 3, 2017?

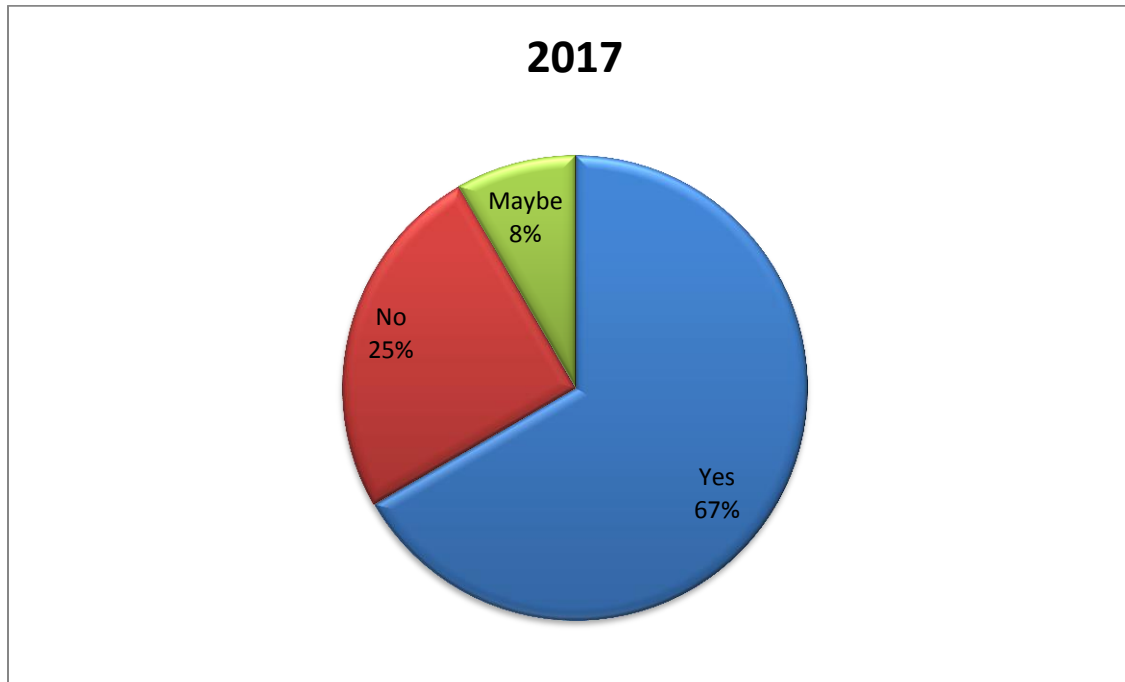
- a. Yes
- b. No



31) If you answered no, why?

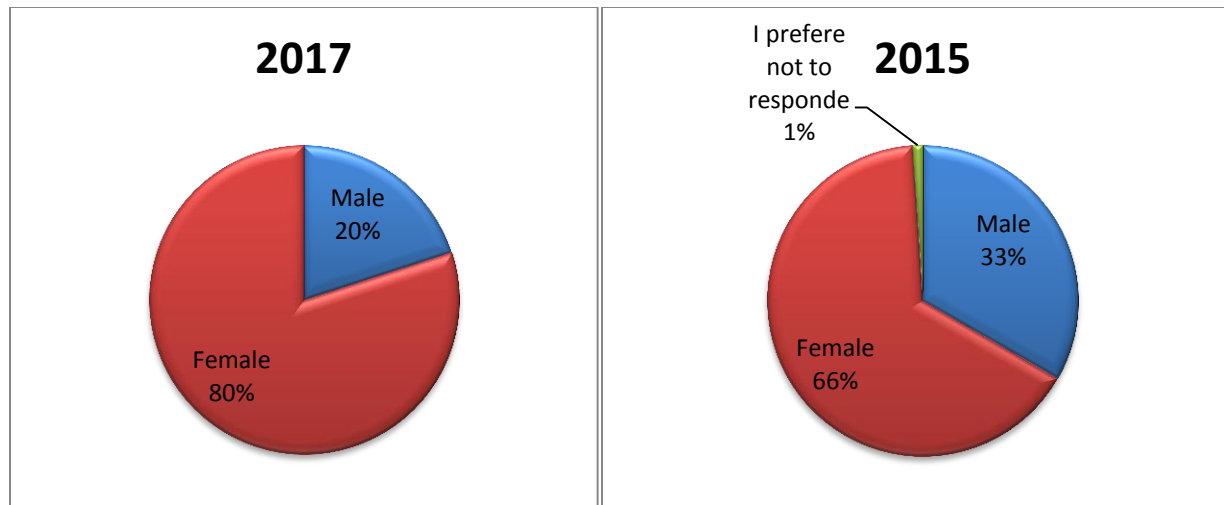
The two that responded no to question #31 did not give a reason why.

- 32) Would you use a regional transit system if one was in place? Example: transportation to Oshkosh, Appleton or Green Bay.
- a. Yes
 - b. No
 - c. Maybe



APPENDIX B
Non-user Survey

- 1) What is your gender?
- a. Male
 - b. Female
 - c. Other
 - d. Prefer not to answer



- 2) How old are you?

Responses

22
24
28

39
53
53
57
59
60
64
65
70
70
70
70
71
73
74
75
78
78
80
81
82
89

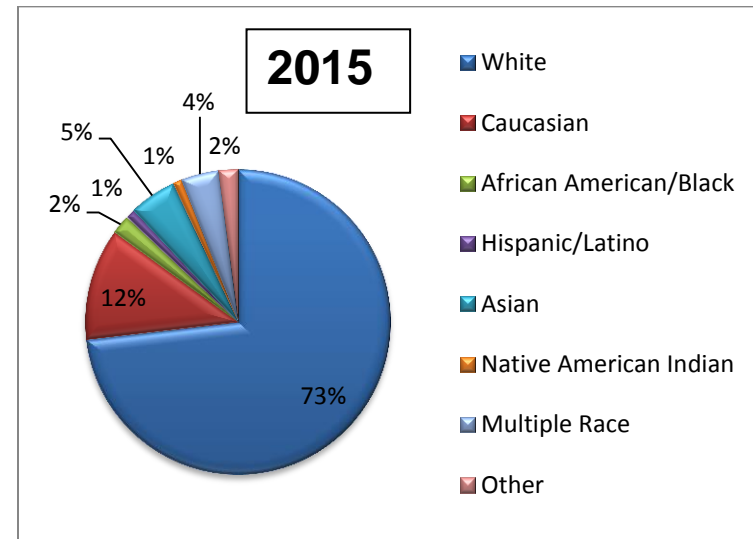
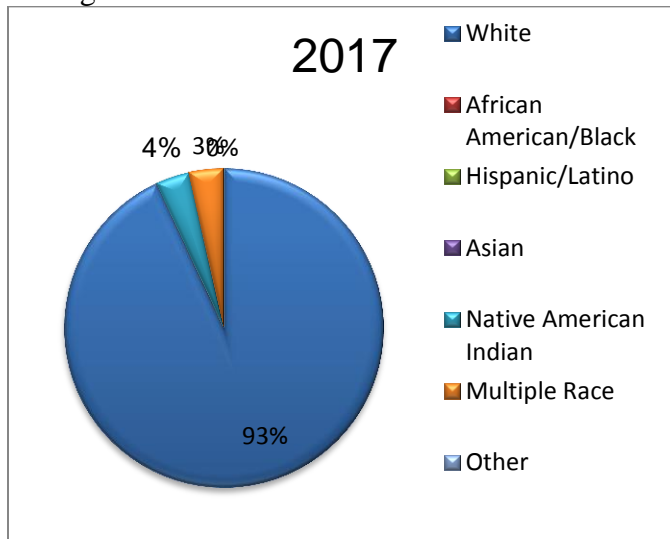
Answered 25

Skipped 5

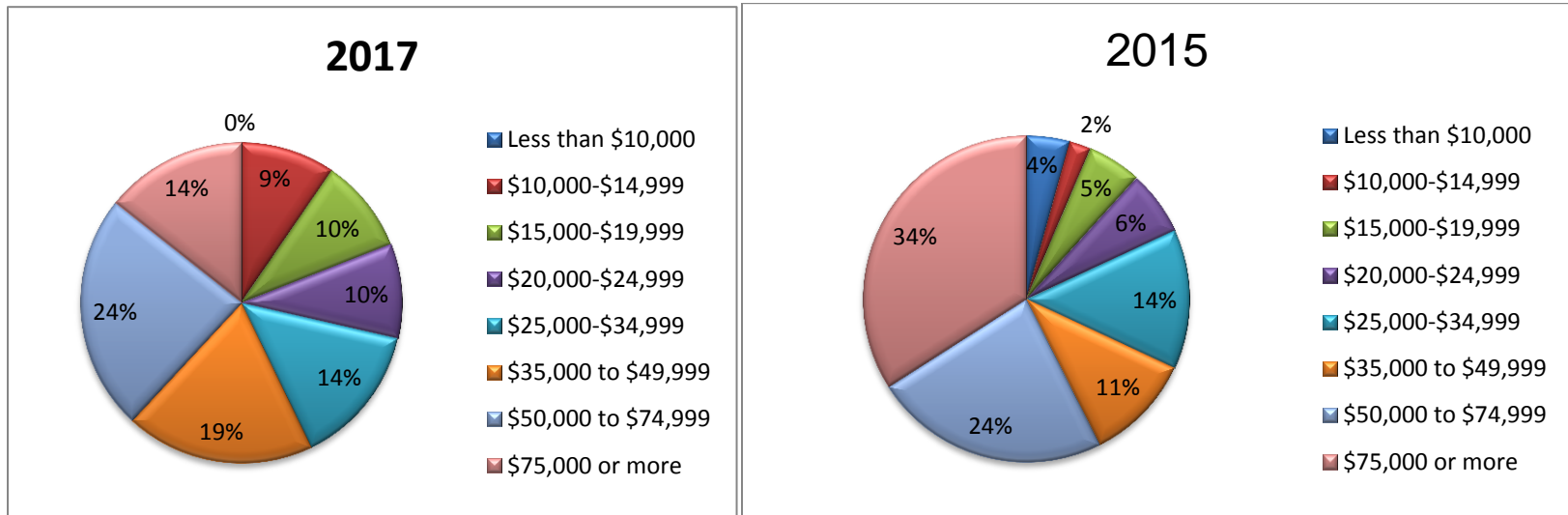
Average age is 63 years old.

70 was the largest number of respondents.

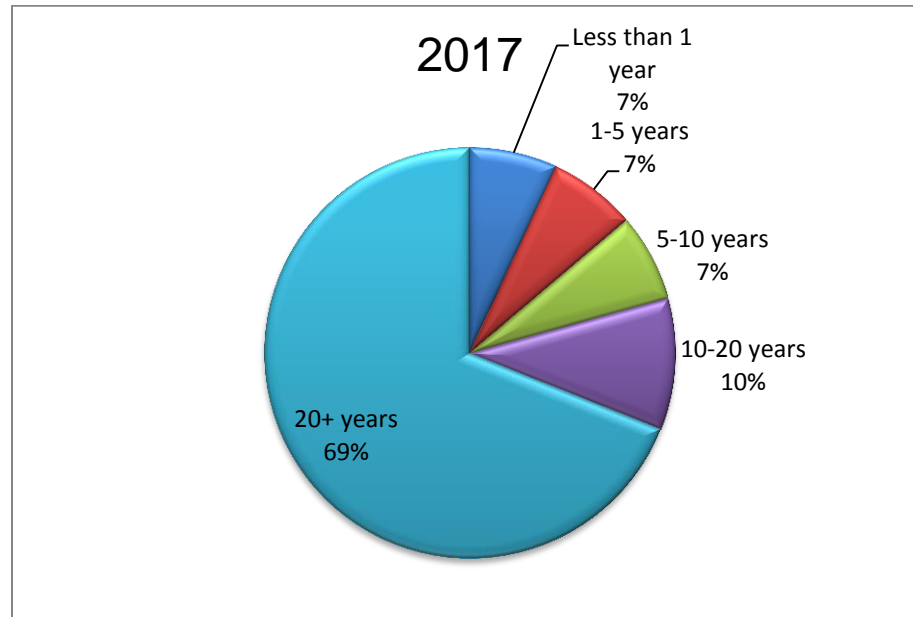
- 3) Please select the race or ethnicity that best describes you?
- a. White
 - b. African American/Black
 - c. Hispanic/Latino
 - d. Native American/Indian
 - e. Asian
 - f. Multiple Races
 - g. Other



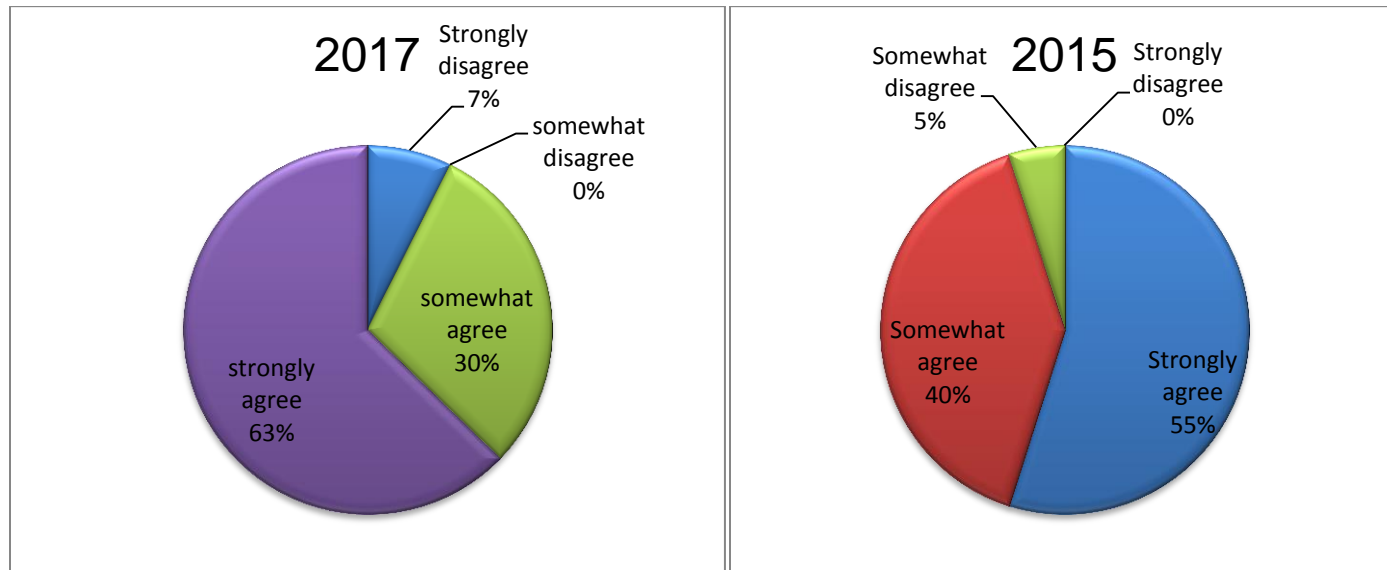
- 4) What is your household's (combined) annual income?
- d. Less than \$10,000
 - e. \$10,000 - \$14,999
 - f. \$15,000 - \$19,999
 - g. \$20,000 - \$24,999
 - h. \$25,000 - \$34,999
 - i. \$35,000 - \$49,999
 - j. \$50,000 - \$74,999
 - k. \$75,000 or more



- 5) How long have you lived in Fond du Lac?
- l. Less than 1 year
 - m. 1-5 years
 - n. 5-10 years
 - o. 10-20 years
 - p. 20+ years

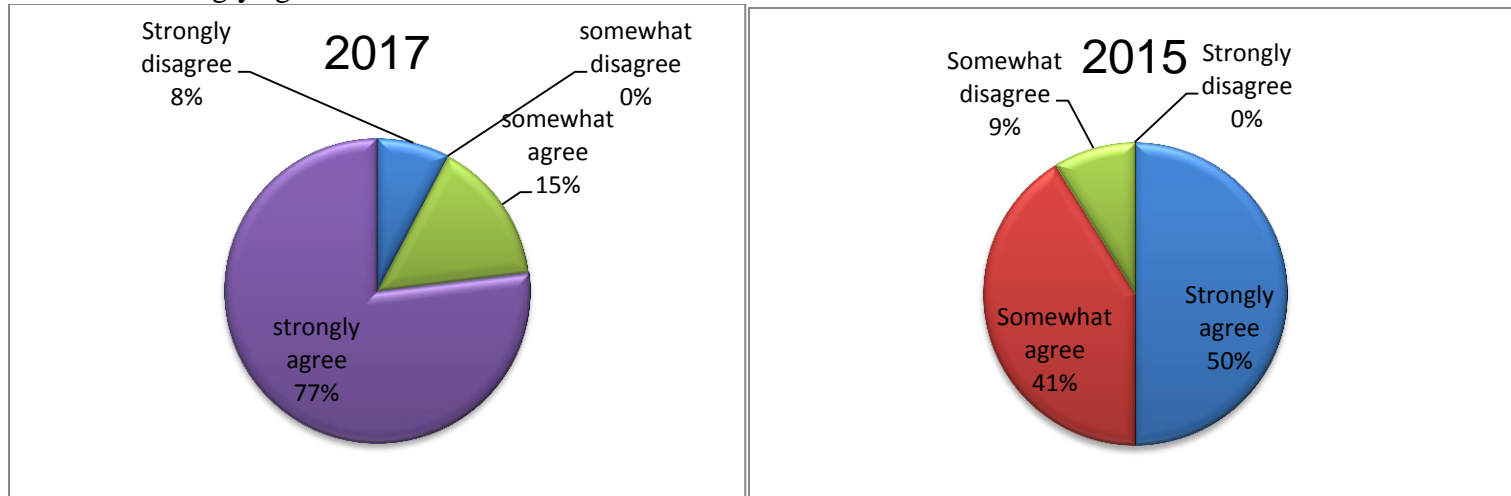


- 6) FDLAT provides a valuable and necessary transportation service to the community?
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Somewhat agree
 - d. Strongly agree

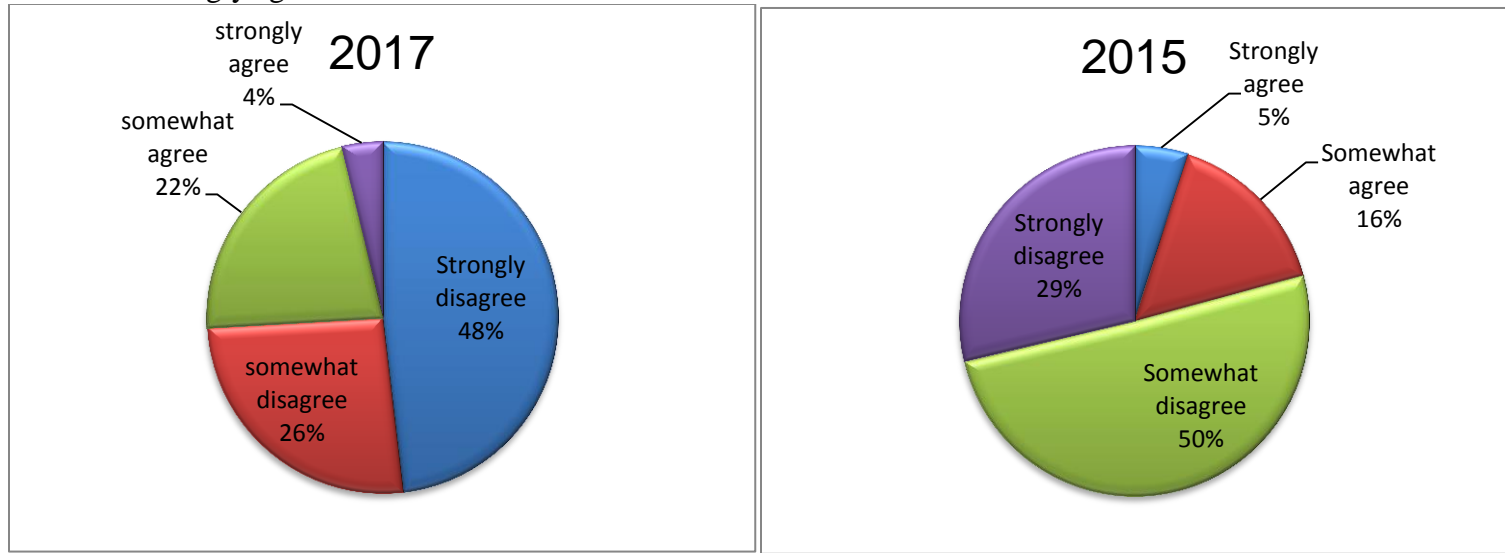


7) FDLAT is important for the local economy?

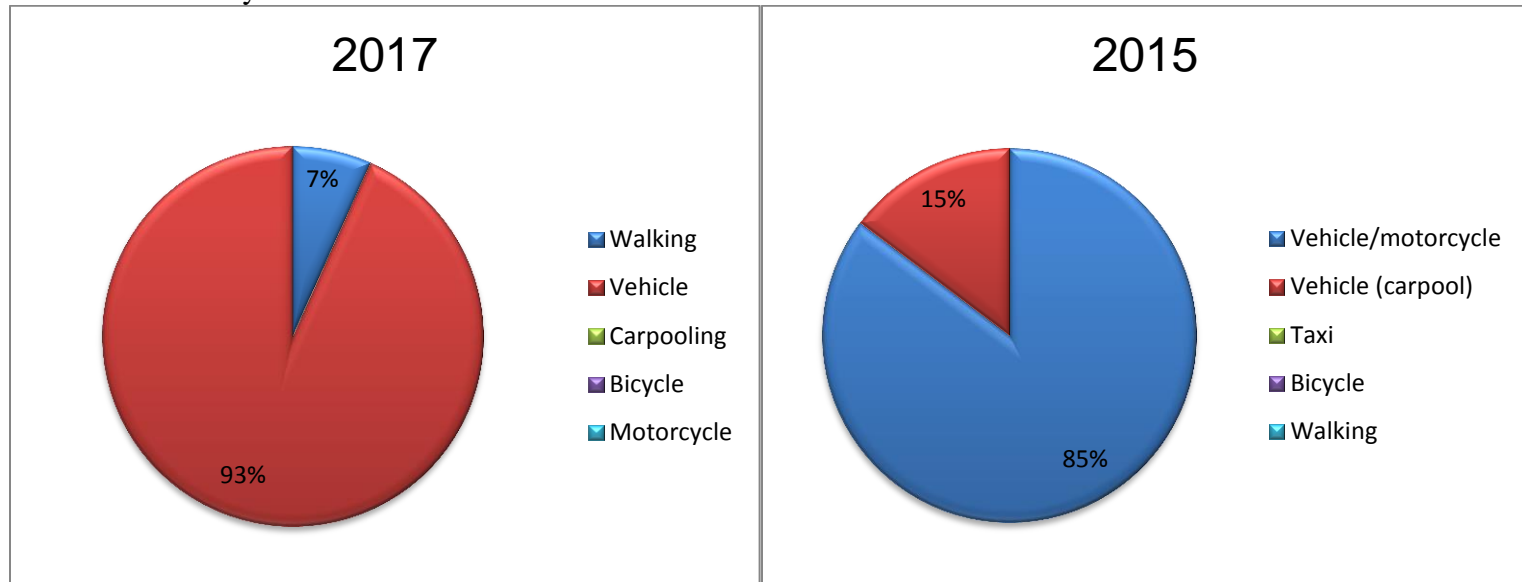
- a. Strongly disagree
- b. Somewhat disagree
- c. Somewhat agree
- d. Strongly agree



- 8) FDLAT is only for those who cannot afford a car.
- Strongly disagree
 - Somewhat disagree
 - Somewhat agree
 - Strongly agree

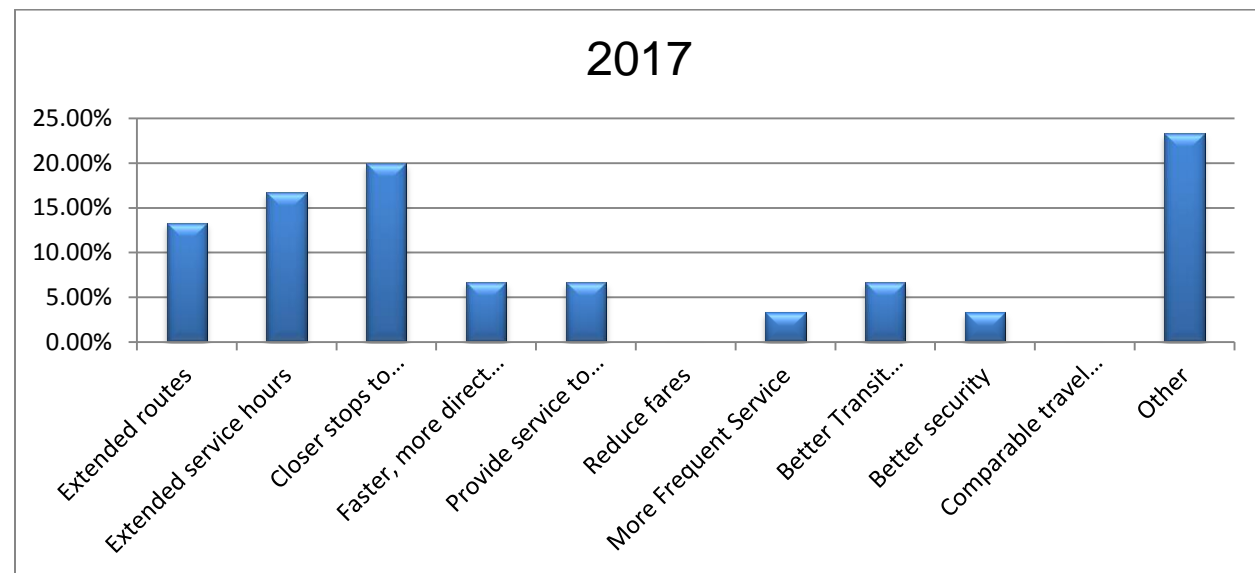


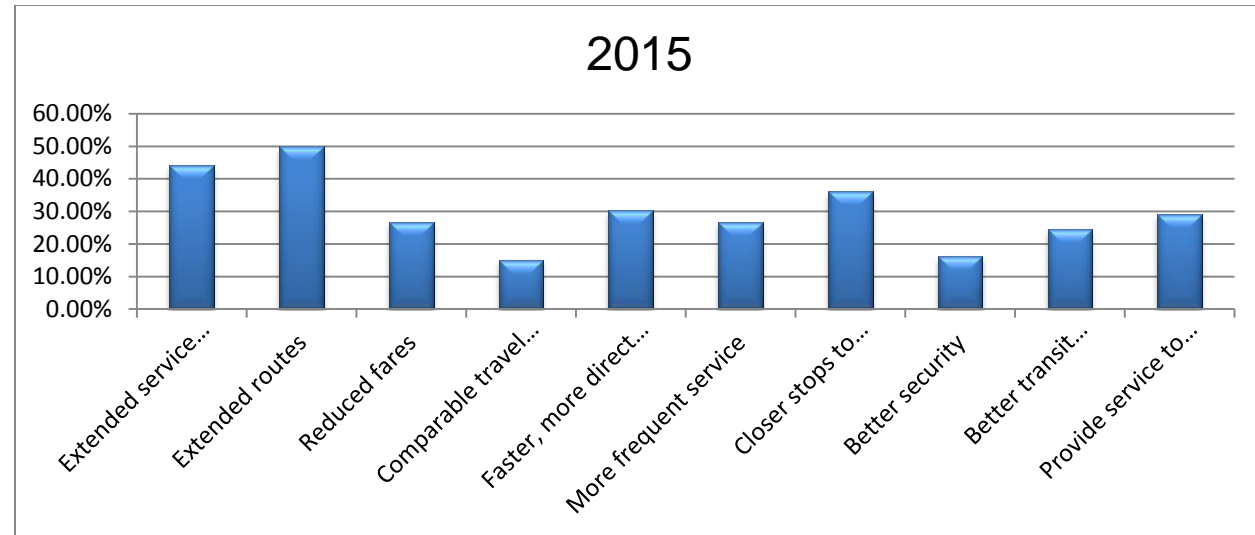
- 9) What method of transportation do you use most often for traveling around the City of Fond du Lac?
- a. Walking
 - b. Vehicle
 - c. Carpooling
 - d. Bicycle
 - e. Motorcycle



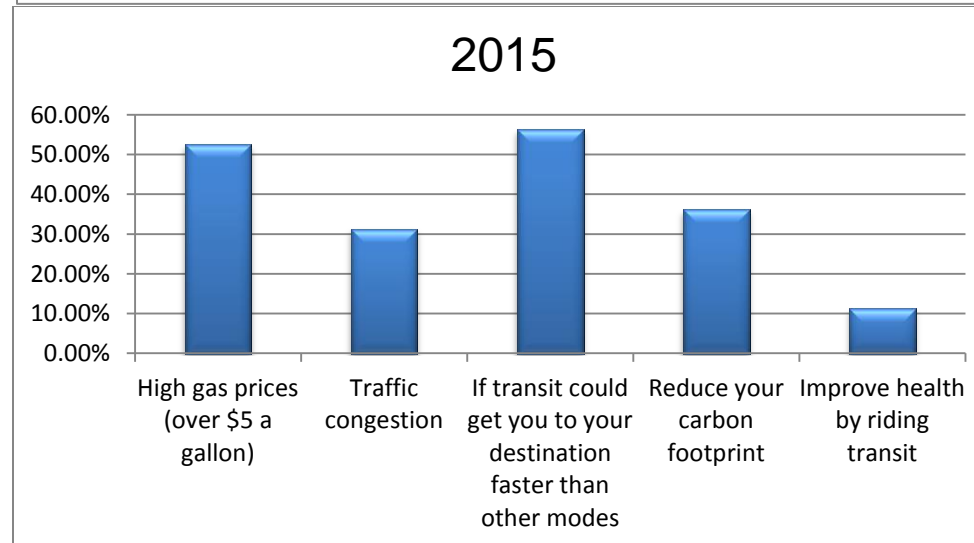
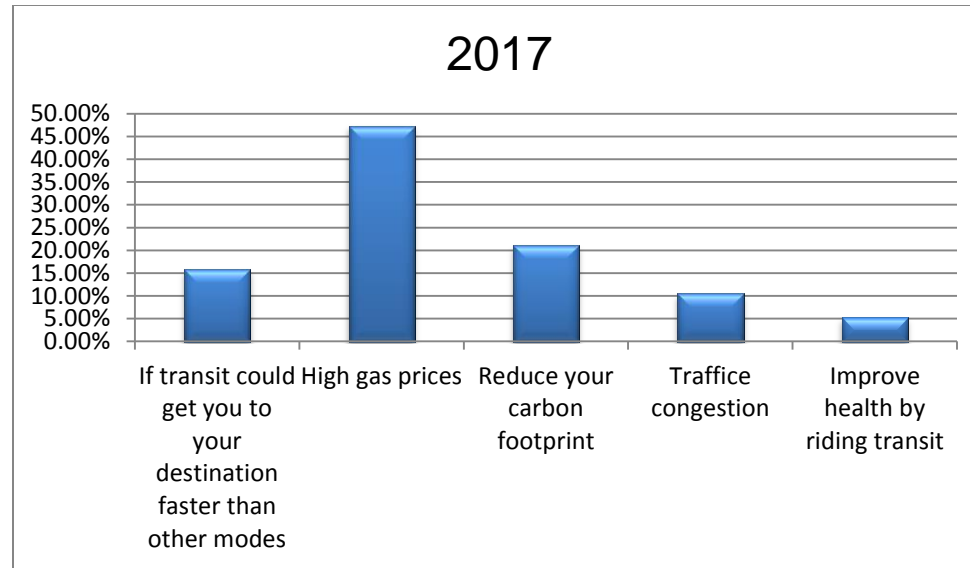
10) What change(s) in service could FDLAT implement to get you to ride the bus?

- a. Extended routes
- b. Extended service hours
- c. Closer stops to home/work/school
- d. Faster, more direct routes
- e. Provide service to special events
- f. Reduce fares
- g. More frequent service
- h. Better transit information
- i. Better security
- j. Comparable travel times to other modes
- k. Other



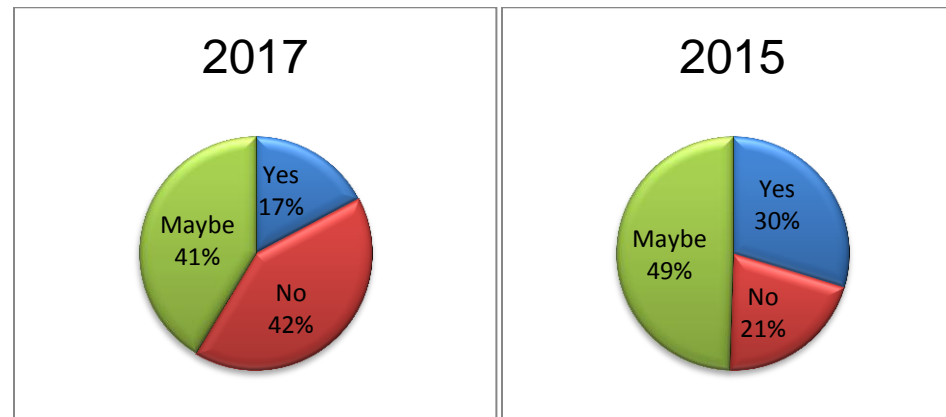


- 11) Would any of the following factors make you more likely to use FDLAT bus service?
- a. If transit could get you to your destination faster than other modes
 - b. High gas prices
 - c. Reduce your carbon footprint
 - d. Traffic congestion
 - e. Improve health by riding transit



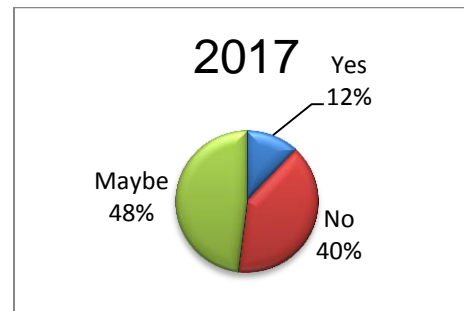
12) Would you use a regional transit system if one was in place? Example: transportation to Oshkosh, Appleton or Green Bay.

- a. Yes
- b. No
- c. Maybe



13) If there was education on FDLAT at your work place or social gathering place would you attend to learn more about the bus system?

- a. Yes
- b. No
- c. Maybe



APPENDIX C

Educational Development Plan

How to Ride Transit

Educational Development Plan

Outreach to take place in Fall of 2018



How to Ride Fond du Lac Area Transit Educational Development Plan

Summary

By striving to provide a flexible continuum of services which encompasses travel training and other related mobility supports, the How to Ride Transit program will promote universal access, support, encourage and enhance individual independence, and improve quality of life. The travel training will be short-term, intensive, individualized course of instruction designed to promote the independent travel of older adults, people with disabilities, and school aged children.

Program Elements

The most effective travel training programs offer a continuum of services that provide access to information, training and support for all customers. Program elements will include:

- **Personalized trip planning** that is easy to access, and addresses the individual travel needs of each customer. Assist in guiding individuals through the transportation resources and options available in the community. This personalized service provides customers with information on all transportation options so they are able to choose the best option for each of their trips.
 - Can happen at community events as well as over the phone as has been happening.
- **Rider education** outreach to familiarize customers with their transportation options, including bus, Handivan and all other community-based transportation options.
 - Plan to have a community night at the library on how to ride the bus, events at the senior center, and an event at local elementary schools.
- **Vehicle familiarization** services designed for individuals who need assistance and practical experience boarding buses and/or Handivan vehicles. To reduce the potential for unnecessary anxieties, this training takes place when the vehicles are available or not in service.
- **Ongoing support and training** for local partners in the community that serve older adults and people living with disabilities. Working with community organizations, human service agencies, local jurisdictions and other regional partners will result in improved communication and coordination while providing individual customers with improved access to services.
 - plan to create a program going to senior center(s) once a month on a regular basis to do route planning and travel education

- **Specialized one-on-one travel training**, a short-term, one-on-one, intensive and individualized course of instruction designed to teach older adults and people with disabilities to travel safely and independently using public transportation.
 - May be marketed as the Bus Buddy program. Have a group of volunteers trained in FDLAT policy and bus travel to ride the buses and help those in need of travel planning in real time.

Suggested Education Plan for those with Disabilities or School Aged Children

Identify Emotions with Traveling Independently

- For some, this may be the first experience with true independence. The individuals may not be accustomed to making decisions or being self-reliant. Rather than minimize or ignore these fears, you should respond with empathy and understanding. You must work with the individuals to identify and discuss each fear then find ways to help work through the feelings and take steps to overcome any problems.
- Identifying Our Fears Worksheet

Identifying Our Fears

- 1) Ask people to write down their fears.
Tell them to try to think of anything that might be scary while riding transit.
- 2) Discuss precautions taken by transit. (Ex: security systems, CCTV, Lighting, etc.)
- 3) Write down precautions and solutions next to the fear it addresses.
Hopefully nearly all fears will be able to be addressed

Developing Support

- Riding public transportation does not happen in isolation, but involves interactions with other people as well as the individual's environment. Many people already receive help from people involved in their lives. These individuals are pre-existing natural support for the rider and can help reinforce the skills needed for independent travel. Members of a rider's natural support network might include: family members, friends, professionals, neighbors, and direct care staff

New people will be encountered on the way to and from the bus stop, but these people should NOT be mistaken for helpers.

Natural Support Network

- 1) Ask people to develop a list of natural helpers in their environment.
- 2) Identify and suggest other natural helpers in the community.
Help create a list of other natural helpers.
- 3) Discuss the helpers on the list. Talk about why certain people are safe to seek help from while others are not.

Transit Safety Tips

- Arrive at the stop 5-10 minutes ahead of the scheduled time to minimize unnecessary waiting
- Gain familiarity with the area; some stops are safe during daylight hours, but become dangerous during the evening hours.
- Have the exact fare ready when boarding
- Keep personal property on your lap, under your, or between your feet
- If you're feeling uneasy, change seat and alert the operator
- Try not to doze off or become absorbed in a book or music
- Don't engage in unnecessary conversation with strangers and NEVER give out personal information
- Stay seated until the vehicle comes to a complete stop
- Be alert as you step out and away from the vehicle NEVER cross the street in front of a transit vehicle; wait for the vehicle to pull away giving a clear view of the street
- Cross at a crosswalk or corner and always wait for the WALK signal to illuminate
- Stand at least two feet from the edge of train platforms
- Let other riders exit before boarding
- Don't touch vehicle doors as they are opening or closing and NEVER lean against them

Events

Senior Center(s)

- Initial Education Night
 - Presentation on Transit and all it has to offer as well as how to ride
 - Focus on Handivan, handicap accessibility, and price
- Ongoing outreach program
 - Return once a month to plan routes and answer questions one-on-one

Director is Cathy Loomans
920 322-3630

Elementary School(s)

- One time, possibly yearly, presentation on Transit and all it has to offer as well as how to ride
- Focus on how to ride and safety
- All area elementary schools?

Chegwin Elementary School
(920) 929-2820

Evans Elementary School
(920) 929-2828

Lakeshore Elementary School
(920) 929-2901

Parkside Elementary School
(920) 929-2840

Pier Elementary School
(920) 929-2868

Riverside Elementary School

(920) 929-2880

Roberts Elementary School

(920) 929-2835

Rosenow Elementary School

(920) 929-2996

Sabish Middle School

(920) 929-2800

STEM Academy Grades 3-5

(920) 906-6722

STEM Institute Grades 6-8

(920) 906-6722

Theisen Middle School

(920) 929-2850

Waters Elementary School

(920) 929-2845

Woodworth Middle School

(920) 929-6900

Library Community Night

- Educational event to be tailored to the audience in attendance
920-929-7080

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