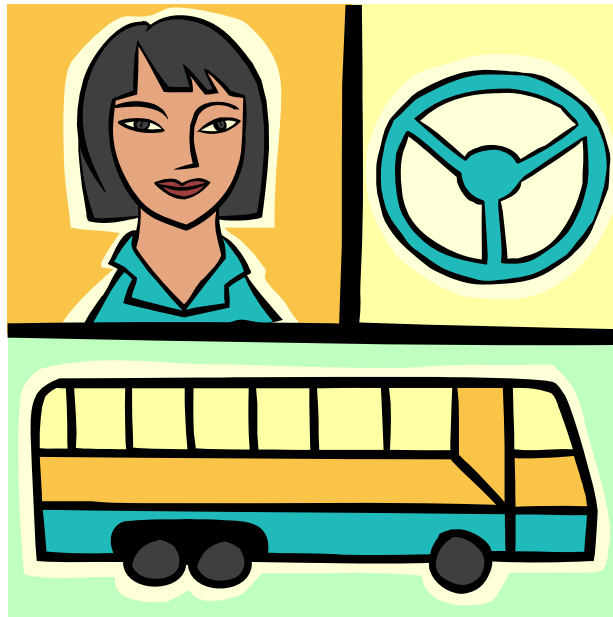


# Transportation Team Process Management Report Fall 2007



**NORTHERN ESSEX**  
COMMUNITY COLLEGE  
Haverhill • Lawrence

## **Table of Contents**

<u>Description</u>	<u>Page Number</u>
Team Member List .....	4
Project Statement.....	5
Introduction.....	6
Background.....	7
Operational Definitions .....	8
Relations Diagram.....	9
Defining the Current Process.....	10
Current Process Analysis .....	11
Improvement Theory .....	19
Implementation Plan .....	27
Project Timeline/Gantt Chart .....	29
Costs .....	30
How Team will Engraft Improvements .....	32
Evaluation Plan .....	32
Statements of Appreciation and Gratitude .....	33
References.....	34
Appendix.....	35
Appendix A: Focus Group Report.....	35
Appendix B: Shuttle Survey – Student Users.....	37
Appendix C: Institutional Shuttle Survey Results.....	39
Appendix D: Focus Group: Shuttle User Questions.....	41
Appendix E: Focus Group: Shuttle Non-User Questions.....	42

Appendix F: Student Shuttle Survey – Spanish Version .....	43
Appendix G: Student Shuttle Survey.....	44
Appendix H: Institutional Shuttle Survey.....	45
Steering Committee Feedback Form .....	46

## **Team Members**

### Team Co-Sponsors

Dr. David Hartleb, President, Northern Essex Community College  
Jean Poth, Vice President, Institutional Advancement

### Team Leader

Dina L. Brown, Director, Student Engagement Center

### Team Members

Janice Rogers, ESL Curriculum Coordinator  
Sue Shain, Registrar, Haverhill Campus  
Lori Smerdon, Staff Assistant, Institutional Advancement  
Junior Leal, Student, Accounting

### Team Resources

Deborah Salerno, Student, Polysomnography  
Barbara Stachniewicz, Professor, Department of English and Foreign Languages  
Babak Alian, Student, Liberal Arts  
Bill Blouin, Eagle Security

## **Project Statement**

To improve the transportation process as measured by efficiency in time, cost and satisfaction of students, faculty and staff who are accessing college campuses including Haverhill and Lawrence locations.

## Introduction

According to the Reason Foundation, a lack of mobility is a key reason why the transit-dependent poor have trouble moving up the economic ladder. Mobility affecting the economy could, potentially, translate to increasing access to education and increasing the number of students taking classes. Researchers Rémy Proud'homme and Chang-Woon Lee analyzed employment dynamics in 22 French cities. They discovered that when mobility increased—when people were able to increase the area they could reach in a fixed amount of time—the economy expanded. Could this be true for access to classes?

And so our journey begins...

Referenced from: [http://www.reason.org/pb43\\_whymobilitymatters.pdf](http://www.reason.org/pb43_whymobilitymatters.pdf).

## **Background**

“...the best of all roads are those which foster movement towards a desirable social goal.” - John Brinkerhoff Jackson, *Byway Beginnings: Understanding, Inventorying, and Evaluating a Byway's Intrinsic Qualities*

In 1999, as a result of a mandate in the Strategic Plan, members of the Northern Essex Community College administration proposed a shuttle service through the security service. At the time, Merrimack Valley Security Services provided two 7-8 passenger campus shuttles on an “as-needed” basis, for runs during daytime hours. This proposal was introduced as three-month trial program shuttle service to assist students with transportation needs going between the Lawrence and Haverhill campuses.

While our Strategic plan has changed through the Appreciative Inquiry Process, we still indicate that, “We are committed to providing affordable access to educational opportunity.” Not specifically mentioning transportation, one can infer that transportation is key to access.

In 2007, the “Shuttle Service” is now a part of the Security Contract, currently Eagle Security & Investigative Services, utilizing two passenger vans that can accommodate up to twenty-five people per trip. The Shuttle has definitely served its purpose free of charge to students and an occasional faculty or staff member for over eight years, but has done so with glitches, concerns, and a mound of paperwork along the way.

For at least four years, the “Shuttle Service” has made its way onto the NECC Student Senate agenda with various concerns stemming from overcrowding, safety, and even music issues. Each year, attempts are made by all parties to improve the system, but complaints continue, and the work that is done by various offices to maintain and promote this service continues to increase.

This process management study comes at a good time, as the creation of what is currently being called the President’s Climate Commitment Committee is being formed. The commitment of this initiative is to, “address the climate challenge by reducing global warming emissions.” Specifically, they are charged with selecting two tangible actions this calendar year, one of which is reducing automobile travel by faculty, staff, and students.

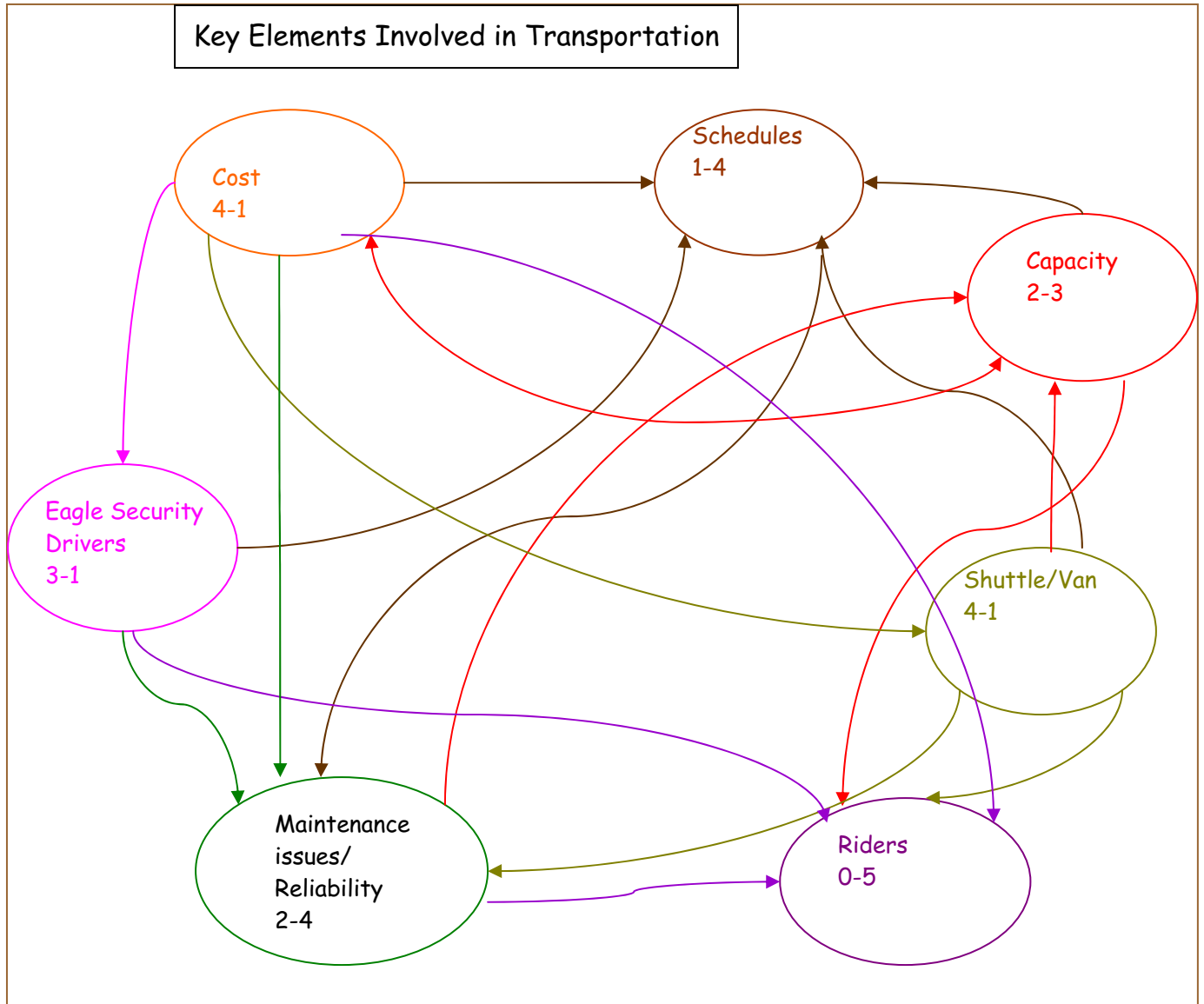
Through this review, we will examine the current system, take into consideration the riders’ interest, and try to envision the bigger picture of Northern Essex and where we would like to be in the future, keeping in mind the development of the Allied Health building in Lawrence and the possible implications on parking and transportation.

## **Operational Definitions – Student Shuttle**

- Amesbury Street – Lawrence Campus annex building.
- ESL – English as a Second Language.
- “Green” – Environmentally friendly, in terms of power and energy. For this purpose of this report, it refers to fuel-efficiency.
- MVRTA – Merrimack Valley Rapid Transit Authority.
- “NECCO Express” = Express bus service operated by Merrimack Valley Rapid Transit Authority (MVRTA). The express bus leaves the Buckley Garage in Lawrence at 7:20am and arrives at the Northern Essex Community College campus in Haverhill at 7:50am and the return to Lawrence is at 2:15pm from Haverhill arrive in Lawrence at 2:45pm. The cost associated with this is \$1.00 each way.
- Registrar – For the purposes of this process may be defined as the Registrar or her designee in the Welcome Express Area in Haverhill and Lawrence.
- Security – Currently, Eagle Security and Investigative Services, also known as Eagle Security. The security company contracted by Northern Essex Community College to provide transportation service along with other standard security services.
- Shuttle – vans operated by Eagle Security are free for registered NECC students.
- Student – Currently registered student at Northern Essex Community College.
- Shuttle pass – Permit issued by the Registrar that determines what times to use the shuttle for a given semester.
- Shuttle service – Transportation provided by the Northern Essex Community Security Service between the Lawrence and Haverhill campuses.
- Team – Refers to Transportation Process Management Team.
- Temporary pass – Shuttle pass issued by the Registrar for short-term use for special circumstances.
- TDM – Transportation Demand Management or Mobility Management – a general term for strategies that results in more efficient use of transportation resources.
- User – Current Student approved to take the shuttle between campuses.

## Relations Diagram

A relations diagram is a pictorial diagram of the key elements involved in a process. The cause and effect relations are shown by using arrows connecting the key elements. The head of the arrows point to the effect. It distinguishes the difference between the root causes of a problem and the symptoms of the problem. The elements with the most heads are the root effects. The elements with the most tails are the root causes. Causes are the processes that drive other processes.



Root cause (Tail) = Cost & Van  
Effect (Head) = Rider

### **Defining the Current Process/Situation**

Northern Essex Community College has had a van system for eight years that is referred to as the “shuttle” that transports registered NECC students between the Haverhill campus and the Franklin Street campus in Lawrence. There are two vans that are owned and operated by Eagle Security and hold a maximum of 25 students.

Each semester a schedule of trips is determined by the Registrar’s office and Eagle Security. The Haverhill and Lawrence campus Registrars work with Eagle Security to confirm the number of seats available to students on the shuttle and the schedule for the semester.

A typical Haverhill to Lawrence Shuttle schedule would leave the Haverhill campus every hour at a quarter before the hour beginning at 7:45am until 5:45pm. The next evening shuttle is at 9:05pm, and then again at 10:05pm to accommodate students getting out of evening courses that need to get back to Lawrence.

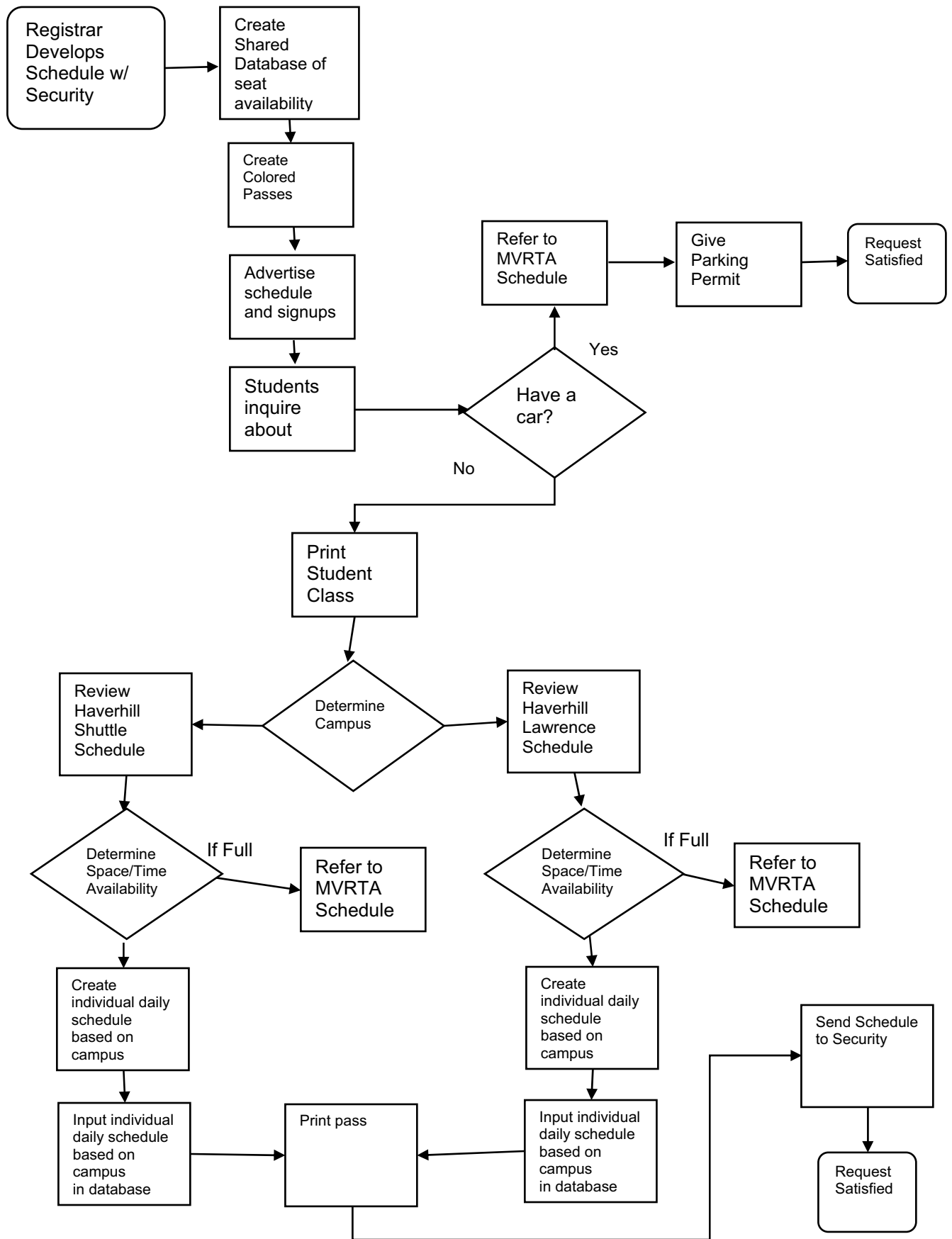
A typical Lawrence to Haverhill Shuttle schedule would leave from the Franklin Street campus every hour at a quarter past the hour beginning at 7:15pm until 5:15pm. The next evening shuttle is at 9:30pm to accommodate students getting back to Haverhill after their evening courses.

Currently, students are required to sign up for the shuttle and get a pass each semester. Student who have courses at both campuses and who do not have other means of transportation are eligible to take the shuttle. Due to limited seating, students are asked if they have other means of transportation before they are issued a pass. Signup begins a week prior to the start of classes. An electronic copy of the shuttle schedule is set up on the shared drive accessible to the Lawrence and Haverhill registration staff. There are two schedules, one Lawrence to Haverhill and the other Haverhill to Lawrence. On each schedule, all of the times are listed with 25 slots available under each time to accommodate the maximum number of students.

The process begins for each student who requests a shuttle pass by printing the student’s schedule. Registration looks at each day of the week to determine what time the student needs to take the shuttle to get back and forth between campuses. A shuttle pass (schedule) is written up which indicates the student’s daily schedule back and forth between campuses. The student’s name is then entered into the master electronic shuttle schedule in the time slot that works best for the student. On average, 100+ students take the shuttle each semester.

Current Process Analysis

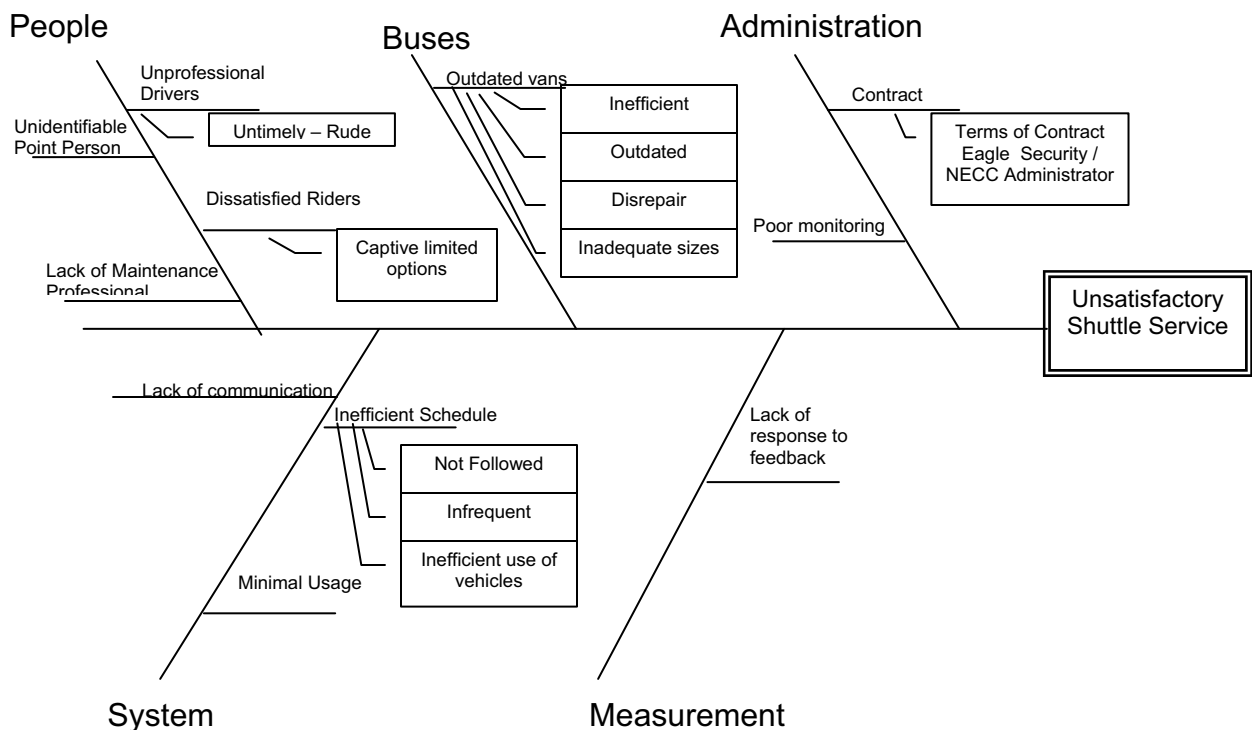
**Transportation Flow Chart**



## Current Process Analysis

As you can see by the Transportation Flow Chart, the process tends to be a bit repetitive, having to look up a students class schedule, looking up to determine the shuttle schedule for each campus, going back and forth between campus, going back again to look at the other campus schedule, etc. This process becomes further complicated by the software used. The shared database is available for everyone within the Welcome Center and Express Area to have access, as students will walk-in requesting transportation throughout the semester, although the brunt of the requests occurs at the beginning. When a staff person is trying to view the schedule to assign times, if another staff person has this shared database open, the staff person then needs to call around to determine who might have the software open. This wastes not only staff time, but more importantly, the students time,

### Process Management – Transportation Team Current Fishbone Diagram



Above is the Fishbone Diagram, or Cause & Effect Diagram. Cause and Effect Diagrams are graphical illustrations showing that a relationship exists between various causes (or processes) and a specific effect (or problem). Each major area is a cause identified with sub-causes underneath. Based on the surveys we conducted, the focus group, and the feedback we have heard from the college community, we have identified the problem of the “Unsatisfactory Shuttle Service” as a result of the people, the buses (vans), the administration of the contract (poor monitoring), measurement (lack of response to feedback), and the system itself (in terms of the schedule).

**Current Process Analysis**

The ridership of the shuttle service has been divided into two: Lawrence to Haverhill and Haverhill to Lawrence. Eagle Security has two vans currently running at each scheduled time from each campus, whether or not passengers are signed up, in order to accommodate the number of students registered for the service. As you can see, the shuttle runs once an hour to each campus, Monday through Friday. Friday night the shuttle stops running to the Haverhill campus from Lawrence at 4:15 PM and the last shuttle leaves the Haverhill campus for Lawrence at 4:45 PM.

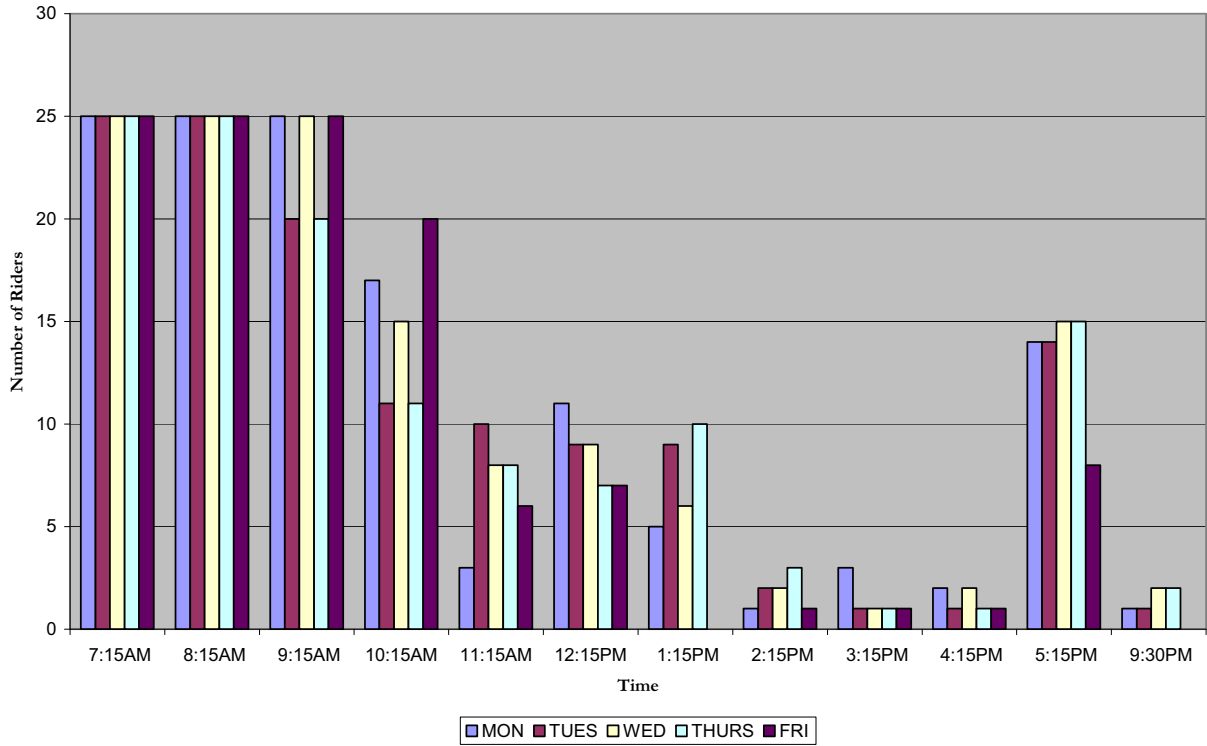
<b>Leaves Lawrence @</b>		<b>Leaves Haverhill @</b>	
<b>To Haverhill campus</b>	7:15 AM	<b>To Lawrence campus</b>	7:45 AM
	8:15 AM		8:45 AM
	9:15 AM		9:45 AM
	10:15 AM		10:45 AM
	11:15 AM		11:45 AM
	12:15 PM		12:45 PM
	1:15 PM		1:45 PM
	2:15 PM		2:45 PM
	3:15 PM		3:45 PM
	4:15 PM		4:45 PM
	5:15 PM		5:45 PM
	6:15 PM		9:05 PM
	9:30 PM		10:05 PM

The Lawrence to Haverhill shuttles are filled to capacity first thing in the morning (7:15 AM) most days of the week through the 10:15 AM shuttle. The busiest day of the week, according to the data, is Wednesday, with 135 riders throughout the day. (This number may be a duplicated number, meaning that the student may be taking multiple trips back and forth between campuses.)

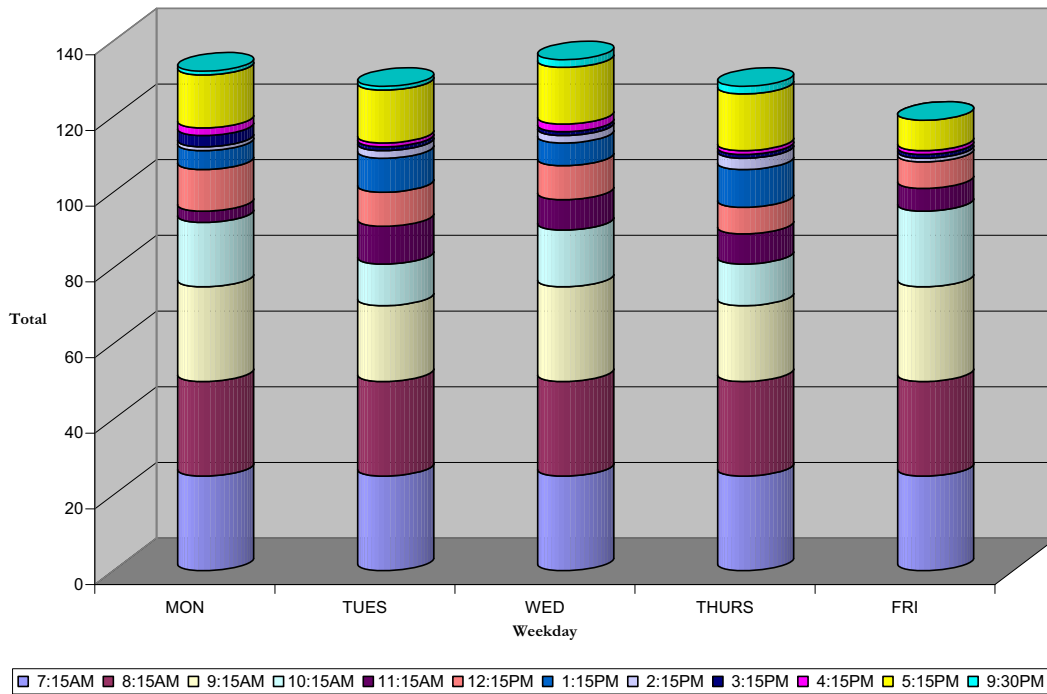
The Haverhill to Lawrence shuttle tends not to be as busy in the morning, understandably. The students that have come from the Lawrence campus tend to return to Lawrence from Haverhill in the afternoon, however the time of day that they return is spread out. The shuttle seems to be equally busy Tuesday, Wednesday, and Thursday, taking 153, 151, and 149 riders respectively, back and forth throughout the day.

Of note, there is the “NECCO Express,” an express bus operated by Merrimack Valley Rapid Transit Authority that runs from the Buckley Garage in Lawrence at 7:20 AM and arrives on the Haverhill campus at 7:50 AM. Despite the existence of the express bus, the NECC Shuttle is still full at that time every day of the week.

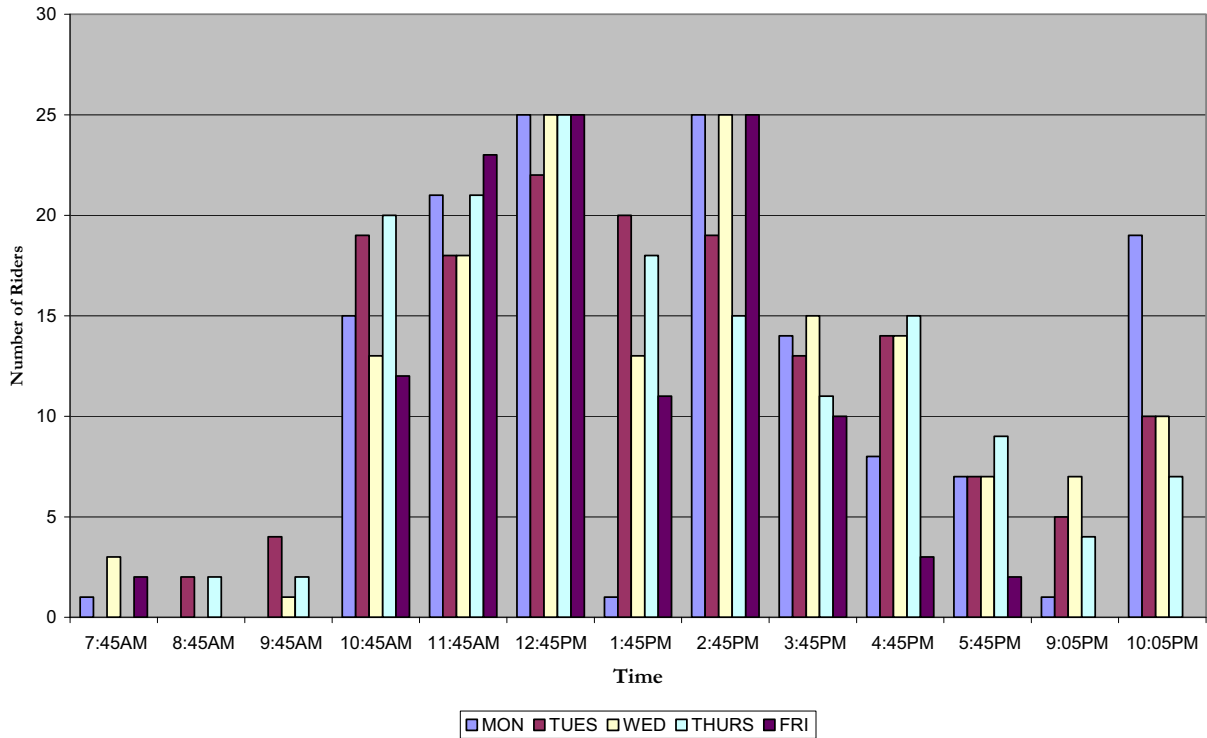
Lawrence to Haverhill Ridership



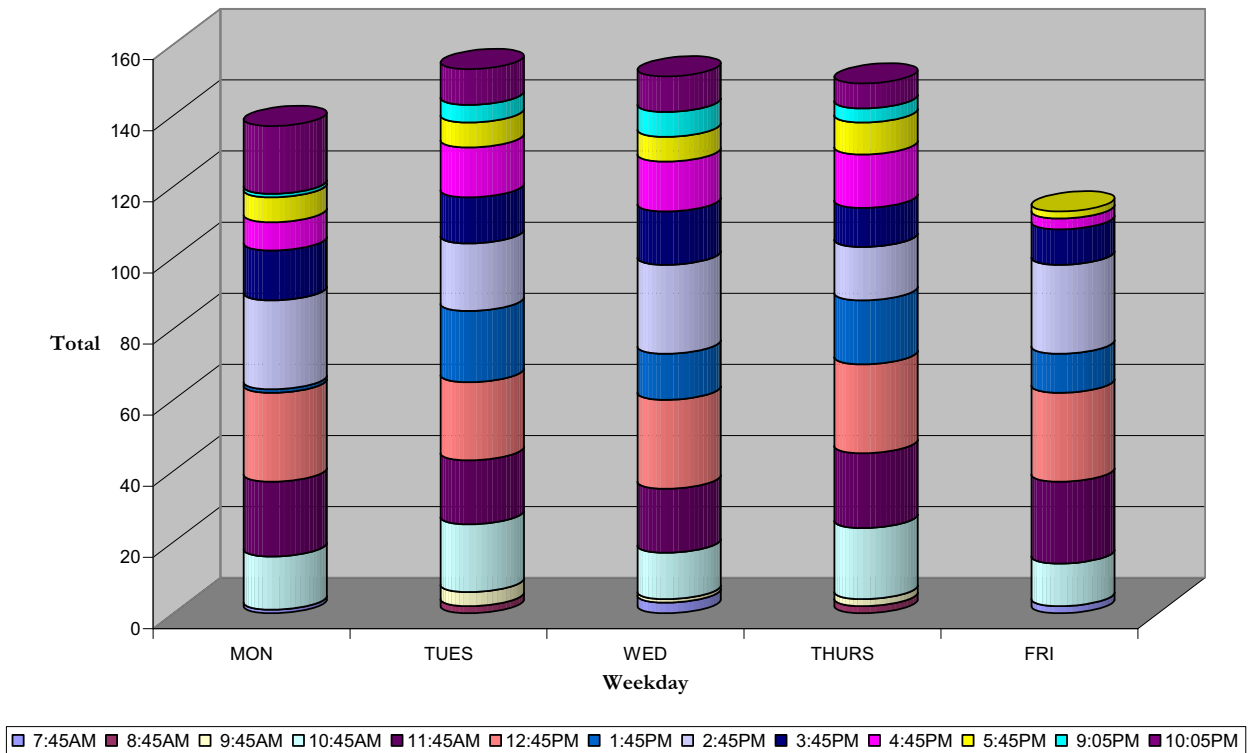
Lawrence to Haverhill Daily Ridership Total



### Haverhill to Lawrence Ridership



### Haverhill to Lawrence Daily Ridership Total



## Current Process Analysis

As part of this process we conducted three surveys, one to the NECCUM institutions, one to all of the Community Colleges in Massachusetts and one to the current users of the NECC shuttle. We also conducted a focus group for students, faculty, and staff, both current riders and non-riders. Each provided helpful data in our journey to improve the current transportation system. Some of the issues that arose were able to be remedied immediately, while more issues and problems have come to light.

Barbara Stachniewicz graciously served as our facilitator for the focus group, through which students were given index cards and asked to rate their satisfaction with the current service and then to describe their experience with the shuttle in one word. The median score was a 5 on a scale of 1-10, but the one word descriptors included, “good, unsanitary, inadequate, nonexistent, miserable, OK, and exasperating.” Participants also completed a questionnaire (see appendix for entire report) and Barbara led a discussion around those questions.

The issues that emerged as a result of the focus group included, the van itself, safety, cleanliness, size, schedule and timeliness. In terms of safety, the issues focused on a few areas, which had this Process Management Team concerned, to say the least. There were reports of a door not closing properly, while in another incident that same door fell off the van, and in a more recent incident the Registrar received a Self-Service comment of the door falling off again. Other incidents dealing with safety included the lack of working seat belts. While we have worked with Security and Maintenance to insure that all seatbelts do work, the question is whether or not the seatbelts are in place, i.e. falling between the seats, students sitting on other seatbelts not noticing seatbelts. Regardless, there is a seatbelt issue for students, real or perceived.

The other issues that were discussed included overcrowding, schedule and timeliness. Several participants of the focus group felt that a bigger vehicle would allow more people to use the service. In addition, they indicated that some of the larger students are not physically comfortable in the current van. Given the current schedule, the timing is inconvenient and students feel that they are wasting valuable time waiting for the next shuttle. The current shuttle does not fit with the class schedule. This was a common theme on the survey and within the focus group.

Through the focus group, the question about Eagle Security and accountability came up. It became clear that there is not a clear line of communication for users who have problems or concerns and several users questioned Eagle Security’s ability to manage the shuttle. As a Process Management Team we believe that rather than putting the blame on Eagle Security, we, as the college, need to take responsibility for managing their contract and feel that the contract needs to be monitored closely. In terms of contact and communication, it was suggested in the survey to add a contact phone number within the vehicles. This seems like an easy improvement to address passenger concerns.

One cannot just look at the problems of the service, especially as we look at Appreciative Inquiry, we must look at the benefits or strengths within the current process. The focus group and the survey both indicated the fact that there is such a service at no cost to students is a big plus. The focus group also indicated that they get to their classes on time about 95% of the time. This is significant! When students were asked about paying for the service, the majority indicated that they

did not want to pay for such a service. Although one student survey did indicate, “A fee for the service allows a connection & appreciation for what the students are getting.”

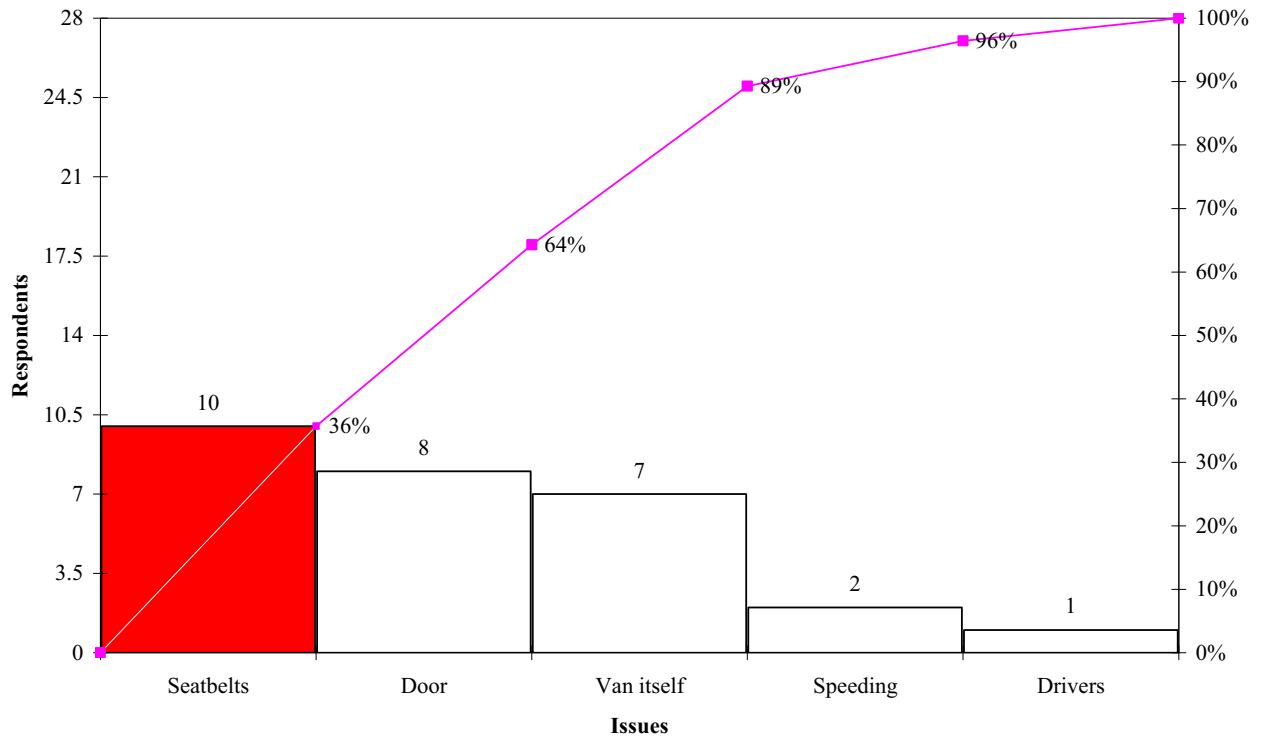
Students in both the survey and the focus group were both asked to indicate possible areas and/or solutions for improvements. Their ideas included:

- 🌍 Changing the shuttle schedule
- 🌍 Getting larger vehicles
- 🌍 Making multiple stops on both campuses
- 🌍 Work with MVRTA for increased possibilities
- 🌍 Maintain vehicles regularly
- 🌍 Put contact number in vans
- 🌍 Make vehicles handicap accessible
- 🌍 Expand service to College Community
- 🌍 Pay closer attention to contract

We have looked at several of these recommendations and as a result of their input have been able to address many of the issues under our improvement theory in terms of both a short-term solution and for future improvements.

## Current Process Analysis

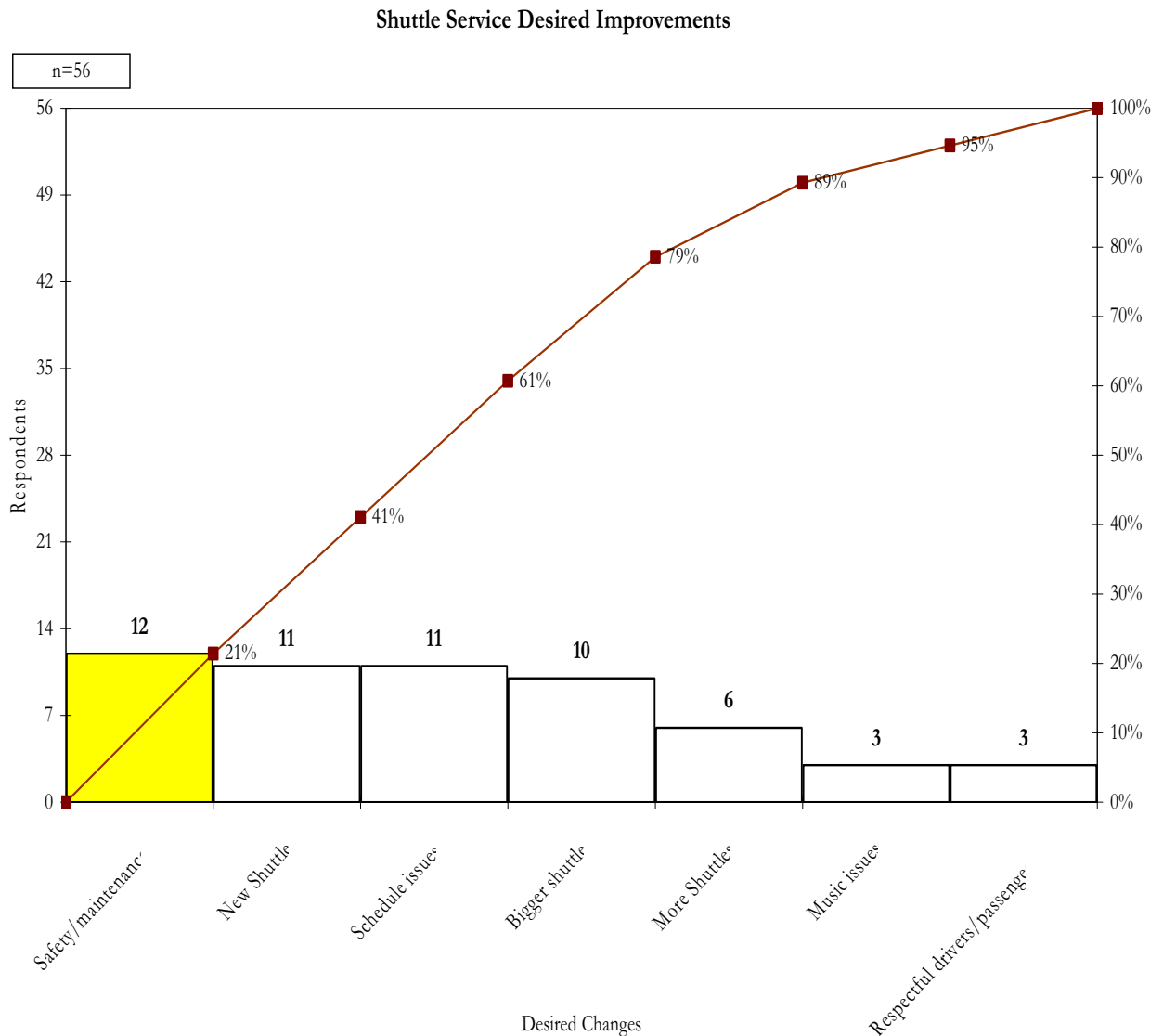
### Shuttle Safety Concerns



A Pareto Chart is a graphical tool for ranking causes from most significant to least significant. As part of our data collection, we conducted a survey of current shuttle users. One question asked, "Are there any safety concerns you have while on the shuttle?" This Pareto Chart was used to help focus on the issues the respondents identified as their safety concerns, areas that should aid us and help focus on making improvements if possible. It indicates the largest improvement opportunities thus allowing maximum improvement for a given effort.

When asked if they had any safety concerns, of the 52 survey respondents, 25 indicated there were "No Safety Concerns", and three respondents did not answer. The majority of users (28 respondents), however, did indicate some form of safety concern. As you can see here, seatbelts appeared to be the most significant safety concern (36%) by respondents, while speeding and the drivers seemed to be minor safety concerns.

## Current Process Analysis



In the same student survey, we asked the users, “In general, how can the shuttle service be improved?” We left this question open-ended, which allowed for multiple answers. Fourteen users did not answer this question, leaving 38 students to come up with 56 responses (some users had multiple responses). The area with the most desired improvement is in the area of safety and maintenance (21%). Tied for a close second area of improvement is the desire for a new shuttle and “schedule issues.”

In correlating the data, the safety concerns and reviewing student comments, it is no surprise that the biggest issue is that of safety and maintenance. Comments from the focus group and the survey indicated that we need to get the door fixed, door “falling off” and other similar concerns. Other comments included not having seatbelts, having seatbelts not working, etc. Both of these issues have been addressed with the Eagle Security and Cliff Clarke, who indicate all seatbelts are in the van and are working.

Improvement Theory

## Force Field Analysis

**Desired Change:** Better shuttle service with a “green” solution.

Countermeasures Proposed Solutions	Forces		Action To Be Taken
	For (Driving Forces)	Against (Restraining Forces)	
(Short term) Have three vans in use and in good operating condition at all times	Riders- growing need	Too few vans (need a bigger fleet or greater capacity). Drivers and maintenance contribute to unreliable service.	Talk with Eagle Security about need for additional (“third”) working van for the short term.
Revise current schedule and add more times based on a larger fleet size and limit service when classes are not in session.	Eliminate need for signing up for shuttle passes.	Limited schedule. Complicated sign-up procedure.	Seek approval for revised schedule from Eagle Security and Registrar.
Marketing campaign for students, staff, and faculty in advance of implementation of any changes.	Leadership support as demonstrated by the formation of this Process Management Team	Who is affected by the change? College community	Work with Marketing & Publications and the Observer to advertise.
Talk to security company in advance about survey results and recommendations to be made. Work with Comptroller for bid process for new Security contract (current contract expires in June 2008).		Who is affected by the change? Security company	Meet with head of Security and interested parties.
Seek grant money and other funding. Consider instituting a rider fee on a sliding scale.	Some funds available from current administrative budget	More funding needed.	1.Approach NECC Foundation for funding to support short-term solution. 2.Apply for grant for hybrid buses for the long-term solution.
(Long term) Purchase/lease hybrid mini buses	Environmental factors. Presidents Climate Commitment Committee is working to reduce greenhouse gas emissions by 80% by reducing travel by faculty, staff, and students.	High cost.	Seek grants for hybrid mini buses.

## Improvement Theory

The initial formation of the Transportation Process Management Team was to address concerns about the “Shuttle Service.” As we studied the Shuttle Service, more issues were brought to light, both the appreciation for the service by the students and the frustration of the safety and maintenance problems encountered, but one thing was evident, there was a need for change. After reviewing the data from the survey and focus group, as well as through input from faculty, staff and students, this Process Management Team has compiled several recommendations to improve the quality of the service.

1. Eliminate the necessity of a shuttle pass.
2. Make the Shuttle available to faculty, staff, and students.
3. Short-term Solution – Work with existing Eagle Security contract to lease/purchase one additional van (used) to increase total number of vans to three.
4. Work with existing Eagle Security contract to change shuttle schedule (we have devised to plans based on the fiscal liability to the College.)
5. Work with future security contracts to include language that would promote the lease/purchase vans that would produce lower gas emissions.
6. During periods when classes are not in session, reduce the number of shuttles that are in operation to one vehicle running on as an “as-needed” basis (no regular runs).
7. Work with security contract to find “Green” grants for vehicle purchases and work with local dealers for possible deals.
8. Work with Merrimack Valley Rapid Transit Authority to create additional express runs between Lawrence and the NECC Haverhill campus.
9. Place questions and concerns contact number in all vehicles.
10. Long-term solution – work with security contract to purchase 3 mini-buses (to include additional seating) to replace current van system.
11. Look at future opportunities for growth; i.e. Saturdays, North Andover site, extra-curricular events, summer schedule.
12. Work with current and future security contract to focus on ADA compliance.
13. Have team involved with bid process for new security contract.

## Short-term Solutions

▪ **Increase Number of Vans.** The short-term solution, if approved, we hope to implement for the spring semester (January 2008). We were able to research the availability of numerous 15-passenger vans on the market for sale, as well vans for rent. If the Steering Committee would prefer the rental option, the cost is not quite one-half the cost of the lease or purchase. Dependent upon funding available, and since the current Eagle Security contract expires June 30, 2008, the rental may be more appropriate. Regardless of the options, the current vans will need to be maintained over the winter recess, as the safety issues need to be addressed.

▪ **Revise Schedule.** As part of the short-term solution, the Transportation Process Management Team has put together a recommended shuttle schedule to address the needs and concerns voiced during data collection. Through both the survey and the focus group, students, and later faculty, indicated that we should change the schedule to make it run more frequently, so students are not wasting “valuable time” and since the schedule does not coincide with the course offerings. Our

response has been to put together a departure schedule of one vehicle every **fifteen minutes** during peak times. This would mean that we would have three vans running throughout the morning, one every fifteen minutes, as opposed to vans every hour (maximum capacity 25 passengers). We feel that this could accommodate a maximum number of 45 students per hour, as long as the Security provider maintains the 15-passenger van component of their contract. (The majority of the fall semester, they are operating one 15-passenger and one 8 passenger due to maintenance issues.) We would like to make the new NECC Shuttle available to faculty, staff and students, without reserving a space.

- **Work on Security Contract.** The current Eagle Security Contract is going to expire June 30, 2008, and will, as part of standard operating procedure, go out to bid, in April 2008. The Transportation Process Management Team believes that we should work with the Vice President of Administration and Finance and the Comptroller with this process, as we have studied this issue. We feel that our involvement would be in terms of assisting with the shuttle component of the contract only, providing the data we have found, including language consistent with the President's Climate Committee (lowering greenhouse gas emissions, etc.), and sharing the impact and concern that the students have addressed.

### **Other Recommendations**

- **Eliminate the Shuttle Pass.** We believe that through this plan, we have eliminated the necessity of the Shuttle pass, which would reduce the amount of time that the Registrar's office would have to work on schedules, and the amount of time students would have to concern themselves when and if they lose or need to change their passes.
- **Encourage the College Community to Ride.** Along with the other colleges across the state, we want to make the shuttle available to faculty and staff, as well as the students. We believe that this will reduce the amount of staff time submitting and processing travel reimbursements, as well as, the amount of money being asked to be reimbursed.
- **Add Contact Number.** An immediate fix to help students when they have a question or concern is to place a contact telephone number within each vehicle. The students have tended to contact Security and, while they address the concerns, the College may or may not be aware of these concerns, until it becomes a bigger issue. This may be due in part to the lack of monitoring of the contract. Some students have indicated their discomfort with complaining to Security, as they feel that the College should be made aware of problems. By adding a College contact number, this would address any concerns and help the College monitor the contract.
- **Limit Shuttles during Breaks.** Another recommendation that our team is submitting is that during times when classes are not in **session**, that we reduce our existing shuttle to an "as-needed" basis, having only one shuttle operate during that time. That will reduce the cost of the driver and the mileage. Currently, we are operating on a more consistent schedule, but not on a regular schedule. There is a need for some of our work-study students to use the shuttle during the break period, however the question is, do we need to have students use the shuttle to register for classes when we have staff that can do this on both campuses? While we agree that for events like Women Returning to School or the Veteran's Affair event (offered in August), it may be viable to have the shuttle operate for special services, but not on an hourly basis.

- **Areas for Future Review.** Areas for future review, discussion, should include expansion of shuttle service to the North Andover site, other Lawrence buildings, Saturday service, and service for extra-curricular opportunities. Originally, we had hoped to include additional sites in our discussion, unfortunately, we determined that this was part of the 100-acre field and needed to focus in on something more manageable. We do not know if there is a need for Saturday service, and there may not be a need, but it is an area that we did not study.

One area that was discussed with faculty through several encounters was the idea of making the service available to students to participate in extra-curricular opportunities. While we may have addressed this by changing the schedule for some activities, for opportunities like the Top Notch Theatre, the schedule may not be late enough for them. A final area that needs to be reviewed is a summer schedule. A possible short-term solution may be that it remains the same as last summer until it can be reviewed more in-depth.

### Long-Term Solution

- **Work with MVRTA.** The “NECCO Express” is a great service available through MVRTA. We feel that the number of students utilizing the van currently could be used to increase the number of “NECCO Express” buses available during peak times. The current MVRTA schedule does not run after 7:00 PM and runs every 70 minutes from the Haverhill campus. It takes approximately 1 hour 40 minutes to get from Haverhill to Lawrence Buckley Transportation Garage, during a non-express run. While the “NECCO Express” service would help provide a service to our students, and reduce the normal length of time a student would take a bus from Lawrence to Haverhill, we think that this, in combination with the other NECC efforts, could be a valuable step to improve the system.
- **Insure ADA Compliance.** A concern addressed by students was the fact that our current shuttle service was not ADA compliant. As we look to the future, this is one consideration within the Security contract that will need to be addressed, as well as for when, and if, we expand the service.
- **Expand the Service.** In the future, as we make the service available to faculty, staff and students, we will need to replace the existing van system with a larger, mini-bus system. The mini-buses will be able to serve far more people and perhaps address the issue of ADA compliance.

### The Green Solution – Long-term Solution

- **Lower Gas Emissions.** Working with future Security contracts to find “Green” Grants will not only help the environment, but will also help us work towards achieving the goals that were established as part of the Presidents Climate Commitment Committee. This Commitment is a fight against global warming, signed by President Hartleb, one of over 430 college and university presidents, addressing the climate challenge by “eliminating global warming emissions and by integrating sustainability into their curriculum.”

The search to improve transportation and the reduce greenhouse gas emissions has shown that increasing shared campus programs has often reduced automobile trips by 10-30% (Campus TM online, 2007). According to the Campus Transport Management Encyclopedia online, Ubillos and Sainz (2004) developed a model of university student transit travel in Bilbao, Portugal. As students were sensitive to price, schedule and service quality, they looked at a combination of increased

frequency, for their purposes in rail service, while they reduced bus fares which resulted in an increased ridership and reduction in local traffic congestion and pollution emissions.

The Equity impact indicates that most campus transport systems are open to all students, and sometimes available to employees. It appears that the costs of these services are then part of all student fees, regardless of whether they utilize the service, comparable to paying a student fee and not being a member of a club or organization.

Best Practices for Campus TDM programs include (taken from Online TDM Encyclopedia)

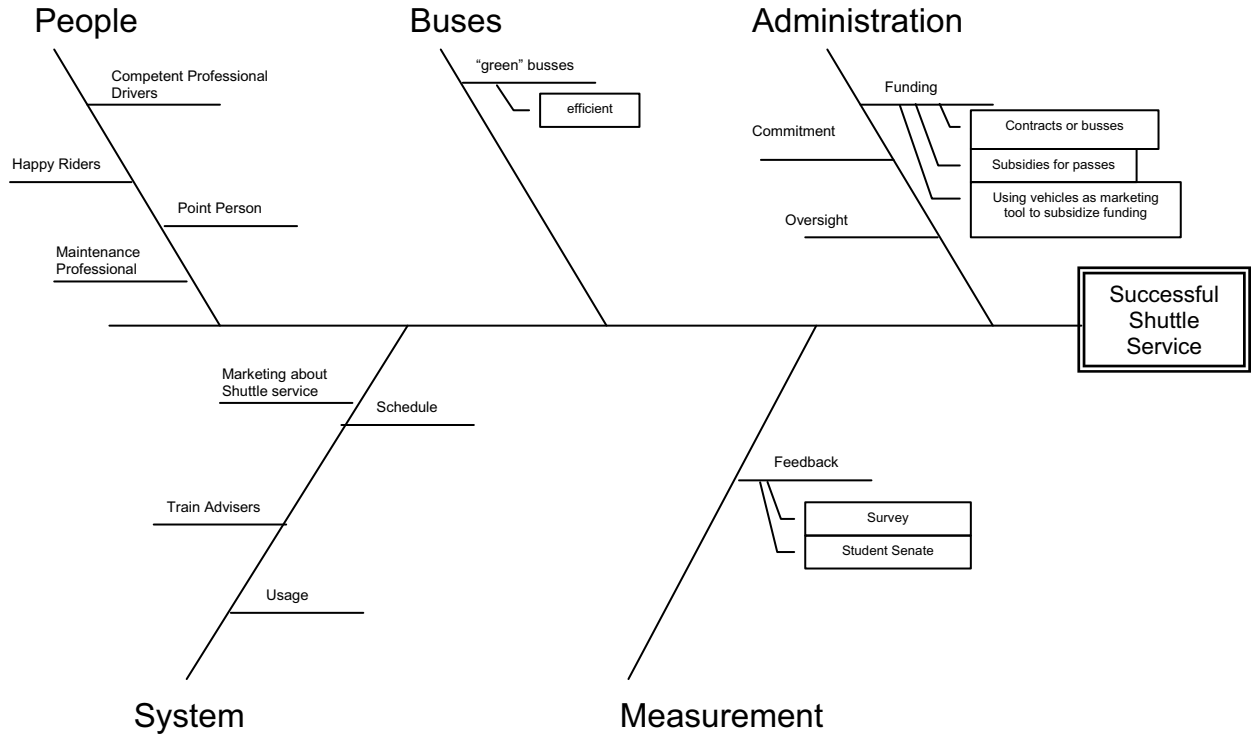
- Provide a variety of improvements and services, including specialty services such as transport for recreational trips and special events.
- Involve administrators, managers, students and staff in planning and implementing the program.
- Emphasize benefits to students and staff from improved transportation services, including financial savings, improved choice, improved exercise (for cycling and walking) and environmental benefits.
- Improve pedestrian and bicycle conditions on campus and in surrounding areas.

Other possibilities to further protect the environment, while meeting the needs of our student population is to look into fuel efficient hybrid school buses. IC Corporation partnered with Enova Systems created a hybrid school bus that is supposed to be able to reduce emissions by 90 percent and increase fuel efficiency to a reported 70 to 100 percent.

Thanks to this initiative, led by college & university presidents, there may be more opportunities for grants and educational opportunities that surround the reduction of global warming and reducing greenhouse gas emissions.

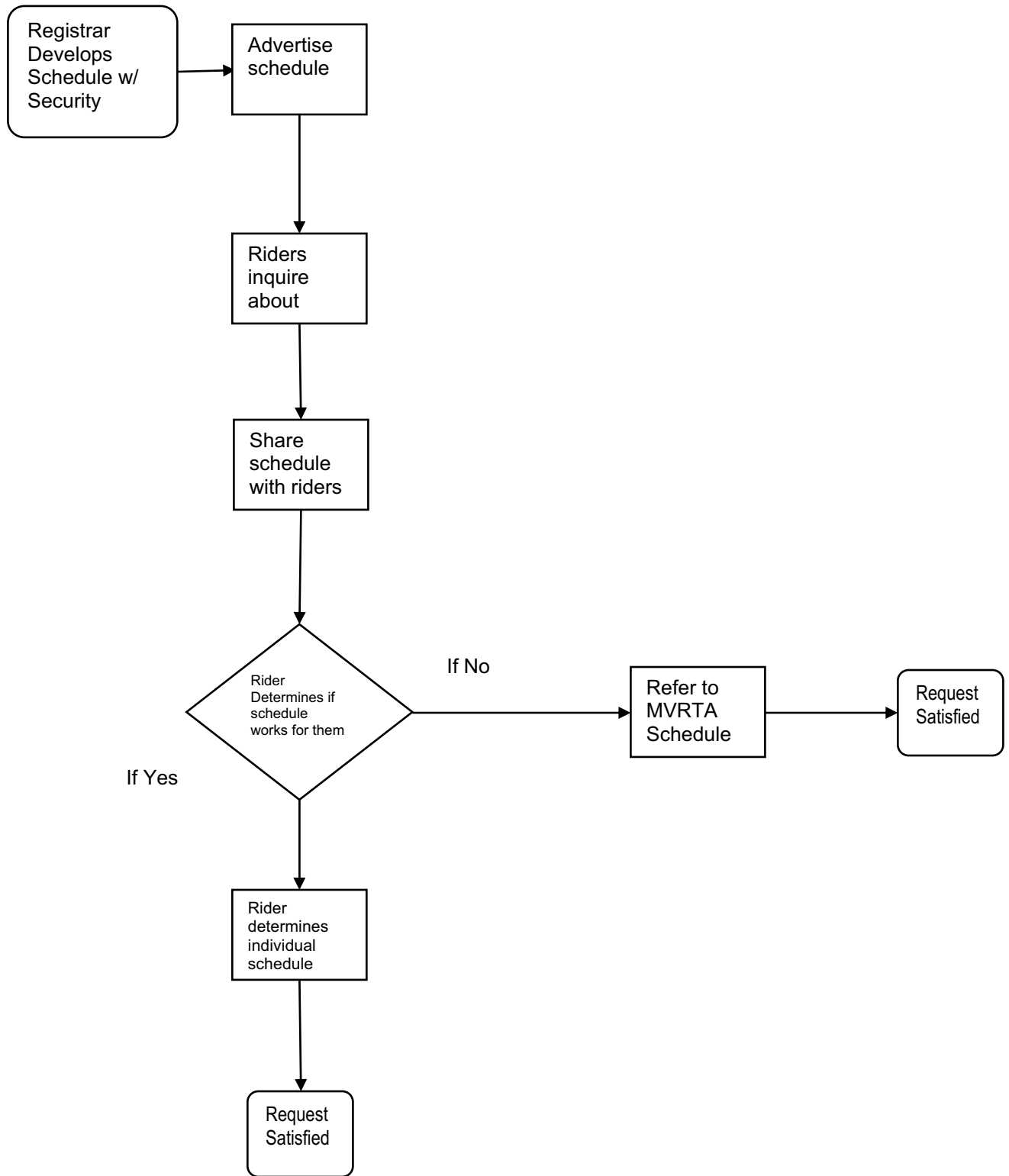
Improvement Theory

Process Management – Transportation Team  
Fishbone Diagram



Improvement Theory

**Revised Transportation Flow Chart**



## **Implementation Plan**

Dependent upon the Steering Committee approval, and dependent upon funding, we hope to put the revised schedule into action for January 2008. In order for us to be able to get the plan into place, we have already had initial discussions with Eagle Security, making them aware of the potential schedules.

We have discussed how we will need to make students aware of the revised schedule, sending current students letters, emails, and phone calls to make them aware of the changes so that they can plan ahead. We will continue to need to work with Academic Advisors, especially those that work with ESL students.

Once the revised schedule begins in January, we will need to monitor it, and the Registrar's office has indicated that it will continue to do some of the initial data entry work for this project. Our team believes that could use a clipboard as a rudimentary "sign-in" list; determining who is using the service, faculty, staff, or student and how often they use it. A survey will need to be administered to riders mid-semester and at the end semester to determine the success of the changes. The success of the changes will also be determined by the lack of calls and concerns on the Student Senate agenda.

Our Team also discussed the creation of marketing tools for the new service. We spoke with Maureen O'Leary in Marketing & Publications to determine possible costs and options for materials. Depending on the number of pieces and size, we can get about 1500 full-color brochures, similar to the College Life piece, for about \$600.

**Project Timeline/Gantt Chart**

Project Implementation for Transportation Process Management Team  
Fall 2007

Responsibility	Activity	Dec '07	Jan '08	Feb '08	Mar '08	Apr '08	May '08	Jun '08	Jul '08	Aug '08	Sep '08	Dec '08	Spr '09
Registrar and Eagle Security	Create new schedule	█	█										
Team, Marketing & Publications	Advertise new schedule for spring		█										
Registrar and Eagle Security	Implement new schedule		█	█	█	█	█						
Van drivers, Registrar, Team	Monitor use with onboard clipboards		█	█	█	█	█						
Team and Eagle Security	Evaluate short-term solution						█	█					
Institutional Advancement office	Seek grants or outsourcing options for long-term solution		█	█	█	█	█	█	█	█			
Team	Report to Steering Committee on progress							█					
Security, VP Administration, Team	Establish schedule for long-term solution								█	█			
Marketing & Publications, College Community and Team	Advertise shuttle schedule for fall								█	█			
Team	Compile Results										█	█	
Team	Report Results to Steering Committee											█	
Security, VP Administration, Team	Implement long-term solution										█	█	█
Security, VP Administration, Team	Implement and evaluate satisfaction surveys										█	█	█
Security, VP Administration, Team	Compile results and make further recommendations										█	█	█

**Plan A - If money was not a problem**

Total number of trips per day = 85

Friday evening trips end at 5:15pm

	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>
Bus 1	7:15AM	7:45	8:15	8:45	9:15	9:45	10:15	10:45	11:15	11:45	12:15
Bus 2	7:30AM	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30
Bus 3	7:45AM	8:15	8:45	9:15	9:45	10:15	10:45	11:15	11:45	12:15	12:45

	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>
Bus 1	12:45	1:15	1:45	2:15	2:45	3:15	3:45	4:15	4:45	5:15	5:45
Bus 2	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	
Bus 3	1:15	1:45	2:15	2:45	3:15	3:45	4:15	4:45	5:15	5:45	6:15

	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>
Bus 1	6:15	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30
Bus 2										
Bus 3	6:45	7:15	7:45	8:15	8:45	9:15	9:45	10:15	10:45	11:15

**Plan B – A little more realistic, in terms of fiscal responsibility.**

Total number of trips per day = 65

Friday evening trips end at 4:30pm

	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>
Bus 1	7:15AM	7:45	8:15	8:45	9:15	9:45	10:15	10:45	11:15	11:45	12:15
Bus 2	7:30AM	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30
Bus 3	7:45AM	8:15	8:45	9:15	9:45	10:15	10:45	11:15	11:45	12:15	12:45

	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>
Bus 1	12:45	1:15	1:45	2:15							
Bus 2	1:00	1:30	2:00	2:30				5:00	5:30	6:00	6:30
Bus 3	1:15	1:45	2:15	2:45	3:30	4:00	4:30	5:15	5:45	6:15	6:45

	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>	<i>LAW</i>	<i>HAV</i>
Bus 2	7:15PM	7:45	8:15	8:45	9:15	9:45	10:15	10:45	11:15

## Costs

The costs associated with this Process Management Report are estimates, some costs if accepted by the Steering Committee, can be paid by Northern Essex Community College, while others can be written into the Security Contract. Our current Security Contract includes the Shuttle Service will expire in June 2008, but is going out to bid in the spring semester. It is possible that with the new contract we can write in the cost of the shuttle driver.

A few of our costs can be reduced in terms of staff time spent on the process to create the shuttle passes, printing schedules for 180 students, etc. In addition, assuming we are encouraging faculty and staff to utilize this service to travel between campuses, it should reduce the number of travel reimbursements received by the College. There would be an additional savings to the College that is not factored in below, that would include the time saved by not having to process travel reimbursements for staff.

The current cost being paid to for Shuttle Service is **\$155,310.40**. The costs that we are proposing for our recommendation would be *in addition to* the current budget. The current budget includes the security vans patrolling the college parking lots for an unspecified amount of trips, additional trips during the summer which we have not accounted for, and possible courier trips. (Security did not believe that Courier cost was included in the shuttle expense, however, it was not broken down within the expense sheet for past year.)

### **Plan A Costs – Semester One**

<i>Item</i>	<i>Expense to Security</i>	<i>Expense to NECC</i>
Marketing of Shuttle changes		\$600.00
Shuttle Drivers		\$10,200.00
1 @ \$8.50/hour X 40hrs X 20 weeks		
1 @ \$8.50/hour X 20hrs X 20 weeks		
Transportation costs for increased number of trips		\$56,700.00
150 additional trips per week X 27 miles X 20 weeks X		
\$.70/mile (based on current cost)		
Purchase Used Van (Ford E-350 15 passenger van or similar)	\$20,000.00	
Estimated Staff savings – processing passes		(\$1770.00)
Estimated Staff savings – travel reimbursements (Ten staff per week X 20 weeks X 27 miles X \$.40/mile)		(\$2160.00)
<b><i>Estimated Totals</i></b>	<b>\$20,000.00</b>	<b>\$63,570.00</b>

**Plan A Costs – Year One**

<i>Item</i>	<i>Expense to Security</i>	<i>Expense to NECC</i>
Marketing of Shuttle changes		\$600.00
Shuttle Drivers		\$20,400.00
1 @ \$8.50/hour X 40hrs X 40 weeks		
1 @ \$8.50/hour X 20hrs X 40 weeks		
Transportation costs for increased number of trips 150 additional trips per week X 27 miles X 5 days a week X 40 weeks X \$.70/mile (based on current cost)		\$113,400.00
Purchase Used Van (Ford E-350 15 passenger van or similar)	\$20,000.00	
Estimated Staff savings – processing passes		(\$3540.00)
Estimated Staff savings – travel reimbursements (Ten staff per week X 40 weeks X 27 miles X \$.40/mile)		(\$4320.00)
<b><i>Estimated Totals</i></b>	<b>\$20,000.00</b>	<b>\$126,540.00</b>

**Plan B Costs – Semester One**

<i>Item</i>	<i>Expense to Security</i>	<i>Expense to NECC</i>
Marketing of Shuttle changes		\$600.00
Shuttle Drivers		\$10,200.00
1 @ \$8.50/hour X 40hrs X 20 weeks		
1 @ \$8.50/hour X 20hrs X 20 weeks		
Transportation costs for increased number of trips 54 additional trips per week X 27 miles X 20 weeks X \$.70/mile (based on current cost)		\$20,412.00
Purchase Used Van (Ford E-350 15 passenger van or similar)	\$20,000.00	
Estimated Staff savings – processing passes		(\$1770.00)
Estimated Staff savings – travel reimbursements (Ten staff per week X 20 weeks X 27 miles X \$.40/mile)		(\$2160.00)
<b><i>Estimated Totals</i></b>	<b>\$20,000.00</b>	<b>\$27,282.00</b>

**Plan B Costs – Year One**

<i>Item</i>	<i>Expense to Security</i>	<i>Expense to NECC</i>
Marketing of Shuttle changes		\$600.00
Shuttle Drivers		\$20,400.00
1 @ \$8.50/hour X 40hrs X 40 weeks		
1 @ \$8.50/hour X 20hrs X 40 weeks		
Transportation costs for increased number of trips 54 additional trips per week X 27 miles X 40 weeks X \$.70/mile (based on current cost)		\$40,824.00
Purchase Used Van (Ford E-350 15 passenger van or similar)	\$20,000.00	
Estimated Staff savings – processing passes		(\$3540.00)
Estimated Staff savings – travel reimbursements (Ten staff per week X 40 weeks X 27 miles X \$.40/mile)		(\$4320.00)
<b><i>Estimated Totals</i></b>	<b>\$20,000.00</b>	<b>\$53,964.00</b>

## **How the Team will Engraft the Improvements into the System**

Upon approval of the Steering Committee, members of the Transportation Process Management Team will meet to discuss implementation and modify the plan if necessary. The Transportation Team will, if approved, work with Eagle Security, Maintenance, Academic Advisors, and students, in the implementation of the newly revised schedule. The team will meet once a month to discuss issues, review data, determine the necessity of future focus groups, survey students, and create reports for the steering committee/sponsors. Ideally, the future of the schedule will be developed in discussion with a designee from the Vice President of Administration and Finance's office and the Registrar.

To engraft the improvements into the system, the availability of the schedule and service will need to be advertised to all current and potential users through a variety of channels including:

1. Broadcast e-mail to all of the college community, including students.
2. Advertise in the Observer.
3. On the NECC website.
4. Announce the service in the NECC Newsletter.
5. Announce the service in the Student Activities Monthly E-Zine (Electronic Newsletter).
6. Create a brochure with schedule.
7. Put up Flyers in all the building on both campuses, and annexes.
8. Have a link or Pop-Up Window on the students e-mail or portal welcome page.
9. Work with faculty advisors to make sure students are aware of the new "policy" and schedule.
10. Talk to anyone and everyone to encourage them to use this service and about the availability.
11. Assist any follow-up teams.

## **Evaluation Plan**

The Team will gather data and feedback on the satisfaction and number of shuttle users in the following ways:

1. Short-term plan – have riders sign a clip board each time they take the shuttle. (Data entry to be managed by Registrar's office, and will include whether rider is faculty, staff or student)
2. Drivers will track number of riders per trip per time.
3. Survey riders at two points during the semester, mid and end of semester.
4. Satisfaction will also be determined by lack of calls or complaints made about the service and number of times that it is placed on the Student Senate agenda.

Upon review and analysis of the results, Dina Brown and/or Sue Shain will report back to our sponsors and the Steering Committee to determine the effectiveness and viability of the schedule.

### **Statement of Appreciation and Gratitude**

The Transportation Team traveled a long distance in a short amount of time, which is often a struggle in the transportation field, but it has been an incredible journey. Along the way, we received help and guidance, without which our journey could not have been completed.

We would like to thank a few people whose assistance made this project a success.

**Dr. David Hartleb**

**Jean Poth**

**Dr. Stan Jensen**

**Kathy Ronaldson**

**Bill Blouin, Eagle Security**

**Mark Casey**

**Cliff Clarke**

**Veronica Galvan, work-study student**

**Donna Holloran**

**Barbara Stachniewicz**

**Colleen Walsh**

**Babak Alian, student**

**Debbie Salerno, student**

Thanks to the members of CCSLA who took the time to complete the institutional survey and followed up on the survey.

And thanks to the students who helped us in data collection efforts for this project.

## References

Reason Foundation. Why Mobility Matters. By Ted Balaker. Reason Foundation.

Policy Brief 43. Aug. 2006. 25 Oct. 2007 <[http://www.reason.org/pb43\\_whymobilitymatters.pdf](http://www.reason.org/pb43_whymobilitymatters.pdf)>.

“Campus Transport Management.” Online TDM Encyclopedia. 27 Aug. 2007. Victoria

Transport Policy Institute. 2 Nov. 2007 <<http://www.vtpi.org/tdm/tdm5.htm>>.

**Appendix A**  
**Focus Group Report – Fall 2007**  
**Submitted by Barbara Stachniewicz**

**NECC Shuttle Service**

Focus Group Date: Wednesday, Oct. 17 from 12-1 in TC 103.  
Facilitator: Barbara Stachniewicz: Note taker: Debbie Salerno  
20 people present – but the group kept changing as people arrived and left!

Dina Brown introduced the subject and me and then we began.

We then gave students index cards and asked them to rate their satisfaction with the shuttle service and then to describe their experience with the shuttle in one word.

Rating of Satisfaction (Scale is 1-10): 1, 2, 3, 3, 5, 6, 6, 6.5, 8,  
One word descriptions include: good, unsanitary, minimal, inadequate, nonexistent (twice), miserable, OK, and exasperating.

Mean: 4.5  
Median: 5  
Mode: 6

All participants were given a few minutes to fill out a questionnaire and then we began to discuss their responses. There were twice as many surveys filled out by non users as by users. (I have included all surveys with this report.)

Biggest issues:

The van itself was a BIG issue. Participants talked about:

**Safety:** specifically, a lack of working seat belts; a door that does not close properly; one incident where a door fell off while the van was on the road; one incident where a tire blew out on the highway; if a mechanical emergency requires a switch to a smaller van, some students have to sit on a tire well.

**Cleanliness:** odors in the upholstery, mold and fungus in the van

**Size:** Overcrowded. A bigger vehicle would allow more people to use the service. (This came up several times.) Also, bigger students are not physically comfortable in the current van.

**Atmosphere** It seems to smell bad; it is very noisy.

Then there was the issue of the schedule/timeliness: The schedule is inconvenient and students feel they are wasting valuable time waiting for the next shuttle. There is a general feeling that the shuttle does not fit with the class schedule.

The question about Eagle Security and accountability came up. It became clear that there is not a clear line of communication for users who have problems or concerns and several users questioned Eagle's ability to do this job.

**Strengths of the service:** The fact the service exists is a big plus! Also, everyone in the room reported that they get to their classes on time about 95% of the time. This is significant!

Users reported few problems with the initial sign up system. Although the work is huge for Sue, she is doing a fabulous job! There were a few problems with the limited number of seats, and even though seats open up after the first few weeks, this does not help students who need the service during those critical weeks in the semester.

**Additional Data:** Janice Rogers brought in some surveys from students in ESL classes in Lawrence, and the response from users was much more positive. This is not surprising. Unhappy users are more likely to give up an hour of their time for a focus group.

Some ideas for solutions/improvements:

- Alternate buses on the half hour.

- Larger vehicles

- Multiple stops in Lawrence/both campuses

- Work with MVRT for some possibilities

Paying for Service: This question divided the room. About the group said that they would pay for better service, but half said they could not afford to. If the college instituted a fee, some attention would have to be paid to questions of accessibility.

Finally, a larger question came up and many participants felt it deserved greater attention: has the college outgrown the initial reason for the service. Several participants asked about expanding the service to users (students, faculty, and staff) who have cars, but have a need to go between the campuses. IS there any discussion about a more extensive shuttle service? One that would be available to more riders? One that makes frequent trips between the campuses? One that would not require signing up in advance?

**Appendix B**  
**Shuttle Survey – Student Users**  
**Sample Size – 52**  
**32% Response Rate – Total Users 164**

1.) How many times a week do you ride the shuttle?				
1X/week - 2	2X/week – 5	3X/ week – 13	4X/week –9	5or more X/ week - 23
2.) Does the shuttle run on schedule?				
Always - 16	Most of the time - 28	Sometimes - 5	Rarely - 2	No answer – 1
3.) Does it depend on the day?				
Yes- 24	No - 25	No answer – 3		
4.) Do you have classes on Amesbury Street?				
Yes - 7	No – 44	No answer - 1		
5.) If yes, can you get to your classes on time from Franklin Street drop-off point?				
Yes - 5	No - 2			
6.) Were you able to get a space on the shuttle when you signed up?				
Yes - 45	No - 7			
7.) Which campus do you originate from?				
Lawrence - 43	Haverhill - 6	Unreadable - 1	This is first year - 1	No answer - 1
8.) Are there any safety concerns you have while on the shuttle?				
No - 25	Seatbelts - 10	safety of the vehicle - 4	Driver speeding – 2	
No Answer -3	drivers ability to drive - 1	Door - 8	Yes - 3	
9.) Has the NECC shuttle service satisfied your transportation needs?				
Yes - 40	No - 9	No Answer - 3		
10.) If no, why not?				
Drivers leave early, shuttle broke down, loud music		Not safe, vans in poor condition, badly managed - 3		
No space sometimes - 4	Not dependable	Can't always get to class on time.	Schedule - 5	
Customer service (rude drivers) and shuttle is late - 1				
11.) Would you be willing to pay a rider fee?				
Yes - 17	No - 34	Depends - 1		
12.) In general, how can the shuttle service be improved?				
Get bigger, have more, or replace some vans - 15		Buses need handicap access, help #		
Change the shuttle schedule (add hours between 6-9pm and leave every 30 mins.) - 5		a very good service - 2	No Answer – 14	
Fix belts, clean regularly - 2	New shuttle - 8	Seat one - ???	Better maintenance – 1	
Improve cust. Service - 2	On time – 3	New door - 5	Music on - 1	
13.) Comments.....				
The shuttle ride is enjoyable, good staff members doing a fine job.				
The shuttles radio is off now and it's not easy riding a full bus with no sound.				
Have shuttle times not conflict with class time. My class ends at 2:45 and shuttle leaves at 2:45				
Everything else is good.				

<p>You should have more bus drivers to do the night shift. Sometimes my classes end early or are canceled and I end up waiting three hrs. This is just not fair. What would happen in an emergency?</p>
<p>A fee for the service allows a connection and appreciation for what the students are getting. In addition a vehicle that looks professional is also an advertising tool for NECC as well as a signature of pride for users.</p>
<p>New Van!</p>
<p>There needs to be something (vehicle) more suitable for multi-passengers. Also, having driver(s) that respect their job and patrons essential as well. A fee for the service allows a connection &amp; appreciation for what the students are getting. In addition, a vehicle that looks professional is also an advertising tool for NECC as well as a signature of pride for users.</p>
<p>I can not afford to pay a rider fee because of book cost, rent, transportation to and from work and school, etc.</p>

## Appendix C Institutional Shuttle Survey – Massachusetts Community Colleges

	<i>Does your college have a shuttle service?</i>	<i>Do you own, rent or contract out?</i>	<i>Open to students, Faculty, and/or staff?</i>	<i>How many people can the service accommodate at a time? Per Day?</i>
<b>Berkshire</b>	No	n/a	n/a	n/a
<b>Bristol</b>	No, but we financially supplement the regional bus passes	n/a	To all students only	n/a
<b>Bunker Hill</b>	Yes	own	Yes	15 per shuttle between 2 campuses
<b>Cape Cod</b>	Yes	We use local service that has a stop at our campus throughout the day year round.	Yes	as many as needed
<b>Greenfield</b>	No	n/a	n/a	n/a
<b>Holyoke</b>	Yes	own on campus shuttle from buildings to parking lots. We also have PVRTA (bus) stop on campus, seasonally.	Yes All	van - 15 passenger
<b>Massasoit</b>	Yes	own	all	15 passenger van, rarely fully
<b>Middlesex</b>	Yes	both	all	24 passenger bus, 14 passenger van (2)
<b>North Shore</b>	Yes	contract out	Yes	unknown no run has been filled to capacity
<b>Quinsigamond</b>	No	n/a	n/a	n/a
<b>Springfield Technical</b>	Yes	own	all	7 vans/ 24 passenger shuttles

	<i>How often does the service run?</i>	<i>Do people have to sign up?</i>	<i>Who pays for the service?</i>	<i>How do you advertise?</i>
<b>Berkshire</b>	n/a	n/a	n/a	n/a
<b>Bristol</b>	The regional bus service operates 7-6	No, but they need to buy the pass at BCC ahead of time	Students fees	Flyers
<b>Bunker Hill</b>	Every 30 minutes- 2 at the same time between 2 campuses	No	The college	Flyers, orientation, and students' handbook
<b>Cape Cod</b>	4 times a day M-F less Sat. and Sun.	No	The students- can purchase multipl rider tix.	They do the advertising and give us their schedules.
<b>Greenfield</b>	n/a	n/a	n/a	n/a
<b>Holyoke</b>	Every 10 minutes 8am-2pm M-F	No	Student fees	We don't, a side from info in the student handbook
<b>Massasoit</b>	3 times per day, between Canton and Brockton	No	? Free to students	FAQ booklet, orientation, website
<b>Middlesex</b>	Every 15 minutes 7am-9pm (break 2-5)	No	not grant or student fees who's left?	Flyer with schedule
<b>North Shore</b>	7am-4 non-stop b/t campuses 3 campuses M-F. When classes are in session only	No	Student fees	Web site, campuslink pipeline, flyers
<b>Quinsigamond</b>	n/a	n/a	n/a	QCC advertises the WRTA (Worcester local city bus) Just a stop
<b>Springfield Technical</b>	Every 15 mins (not sure of hours	No	College	When the sign up for parking they get info.

<i>Who manages the service at your institution?</i>		<i>Comments</i>	<i>Contact</i>
<b>Berkshire</b>	n/a	We have a bus stop on campus. The bus is part of the county system.	Dane Wested
<b>Bristol</b>	Still up in the air. Student life and student accounts	This is new so still experimenting. \$50 months pass offered to students \$25 and student Life pays the rest.	Kathy Burns or secretary Pat Ollila 508-678-2811 ext. 2222
<b>Bunker Hill</b>	Facilities right		Paul Righi 617-228-3474
<b>Cape Cod</b>	n/a	You can check out their website if you google b-bus	lcrawley@capecod.edu
<b>Greenfield</b>	n/a	We have a town bus that stops at our campus several times a day. There is no college funded transportation.	n/a
<b>Holyoke</b>	n/a	n/a	Vivian Ostrowski 552-2418
<b>Massasoit</b>	Facilities	He also bring the interoffice mail in between campuses	508-558-9100 ext. 1485 jblandino@massasoit.mass.edu
<b>Middlesex</b>	contract service	n/a	John Lyons
<b>North Shore</b>	Dean of students	Does not run during spring or weekend break nor in the evening even though there are evening classes	Dr. Martha Brine (Interim Dean) ext. 2120
<b>Quinsigamond</b>	n/a	n/a	n/a
<b>Springfield Technical</b>	Campus Police	Good System. Students Love it	Andrea Tarpey/ shuttle contact info. Chief Campus Police Dave Siano

## Appendix D

### Focus Group Shuttle User Questions

1. Do you currently use the shuttle? Have you used the shuttle previously?
2. Has the shuttle service satisfied your transportation needs? Yes/No                      If no, why not?
3. What changes would you like to see, if any?
4. Would you take the shuttle for meetings/events during the day at no cost to you?
5. What do you think is the best part of the shuttle service? What do you like about the shuttle service?
6. Would you be willing to pay for the shuttle, if necessary?
7. What would be a reasonable amount to pay for a direct service between campuses?

## Appendix E

### Focus Group Shuttle Non-User Questions

1. Are you aware there is a FREE shuttle service between campuses?
2. Why don't you use the shuttle?
3. Would you take the shuttle for meetings/events during the day at no cost to you?
4. What might be the best way to make people aware of the shuttle service?
5. What would the shuttle service have to look like for you to use it?

## Appendix F



### NECC Encuesta Sobre Servicios al Estudiante de Transportacion Gratis (shuttle) entre Ambos Campos Universitarios

NECC esta llevando una encuesta o cuestionario de como mejorar los servicios de transportacion del shuttle entre ambos campos universitarios. Por favor, toma unos minutos y responde a este cuestionario, te ayudara a que tengas un mejor servicio para ti y tus companeros. Gracias por tomar tu tiempo.

1. Cuantas veces usas el servicio de autobus o shuttle?

2. El autobus o shuttle llega a tiempo de acuerdo al itinerario?  Siempre  Algunas Veces  
 La mayoría de las veces  Pocas veces

3. Depende del dia que utilizo este servicio? si  no

4. Tienes dases en la calle Amesbury de Lawrence? si  no

Si tu contestacion es afirmativa, llegas a tiempo a tus clases cuando el servicio de transportacion te deja en la calle Franklin, Lawrence? si   
no

5. Cuando aplicastes a usar el servicio de transportacion o shuttle, se te hizo facil conseguir espacio? si  no

6. De que campo originalmente vienes?

7. Mientras utilizas el servicio de transportacion universitario o shuttle, te preocupas por tu seguridad?

8. Te sientes satisfecho del servicio de transportacion de NECC al estudiante? si  no

Si tu contestacion es negativa, cual es la razon?

9. Estarias dispuesto o dispuesta a pagar una tarifa por este servicio? si  no

10. En tus propias palabras por favor dejanos saber como el servicio de NECC de transportacion al estudiante o shuttle, podria ser mejorado?

Comentarios...

Favor enviar cuestionario a el Departamento del Estudiante (Student Activities Department) Building D, oficina D117, en Sport & Fitness Center. Para informacion favor llamar al 978-556-3732 o enviar por correo electronico Dina Brown a [dbrown@necc.mass.edu](mailto:dbrown@necc.mass.edu). Gracias.

## Appendix G



### NECC Student Shuttle Survey

We are examining options to improve the shuttle service for the College Community. To better serve your needs, we have put together this survey. Please take a few minutes to answer the questions as best that you can. Thank for your time!

1. How many times a week do you ride the shuttle?

2. Does the shuttle run on schedule?  Always  Most of the time  Sometimes  Rarely

3. Does it depend on the day? yes  no

4. Do you have classes on Amesbury Street? yes  no

If yes, can you get to your classes on time from the Franklin Street drop-off point? yes  no

5. Were you able to get a space on the shuttle when you signed up? yes  no

6. Which campus do you originate from?

7. Are there any safety concerns you have while on the shuttle?

8. Has the NECC shuttle service satisfied your transportation needs? yes  no

If no, why not?

9. Would you be willing to pay a rider fee? yes  no

10. In general, how can the shuttle service be improved?

Comments...

Please submit this survey to the Student Activities Department in D117 on the Haverhill campus in the Sport & Fitness Center. For more information, please call 978/556-3732 or email Dina Brown at [dbrown@necc.mass.edu](mailto:dbrown@necc.mass.edu). Thank you.

## Appendix H



### NECC Shuttle Survey

We are examining options to improve the shuttle service at Northern Essex College Community. Please take a few minutes to answer the questions as best that you can. Thank for your time!

1. Does your College have a shuttle/transportation service? yes  no

If yes, do you own, rent or contract out?

2. Is this service open to students, faculty and/or staff?

3. How many people can the service accommodate at a time? Per Day?

4. How often does the service run? Hourly? 24/7? Every 5 minutes?

5. Do people have to sign up to use the service? yes  no

6. Who pays for the service? Grant? Student fees? Per usage?

7. How do you advertise for transportation service?

8. Who manages the services at your institution?

Comments...

Institution name

Contact info

When completed, you can either click on submit by email or print the form and email it to Dina L. Brown, Director, Student Engagement Center at Northern Essex Community College. For more information, or if you have any questions, please contact me at 978/556-3732.

Thank you for your time!

## Steering Committee Feedback Form

Team Name: Transportation Process Management Team

Date: November 28, 2007 Sponsors: President David Hartleb & Vice President Jean Poth

Team Leader: Dina L. Brown Team Scribe: Dina L. Brown

***Ideas for Improvement***

***Support? Y or N***

1. Short-term Solution – Work with existing Eagle Security contract to lease/purchase one additional van to increase total number of scheduled vans to three.	
2. Work with existing Eagle Security contract to change shuttle schedule to Plan A.	
3. Work with existing Eagle Security contract to change shuttle schedule to Plan B.	
4. Eliminate the necessity of the shuttle pass.	
5. Encourage the College Community (faculty, staff in addition to the current student riders) to use the Shuttle.	
6. Place questions and concerns contact number in all vehicles.	
7. Work with future security contracts to include language that would promote the lease/purchase vans that would produce lower gas emissions.	
8. During periods when classes are not in session, reduce the number of shuttles that are in operation to one vehicle running on as an “as-needed” basis (no regular runs).	
9. Work with security contract to find “Green” grants for vehicle purchases and work with local dealers for possible deals.	
10. Work with Merrimack Valley Rapid Transit Authority to create additional express runs between Lawrence and the NECC Haverhill campus.	
11. Long-term solution – work with security contract to purchase 3 mini-buses (to include additional seating) to replace current van system.	
12. Look at future opportunities for growth; i.e. Saturdays, North Andover site, extra-curricular events.	
13. Work with current and future security contract to focus on ADA compliance.	
14. Have team involved with bid process for new security contract regarding shuttle service.	

Steering Committee Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Team Feedback Meeting Date: \_\_\_\_\_