



P.O. Box 1749  
Halifax, Nova Scotia  
B3J 3A5 Canada

**Item No. 12.1.2**  
**Transportation Standing Committee**  
**January 24, 2019**

**TO:** Chair and Members of Transportation Standing Committee

**Original Signed**

**SUBMITTED BY:**

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Dave Reage, MCIP, LPP, Director, Halifax Transit

**Original Signed**

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Jacques Dubé, Chief Administrative Officer

**DATE:** October 25, 2018

**SUBJECT:** **Access-A-Bus Continuous Improvement Service Plan**

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**ORIGIN**

On September 19, 2017, Regional Council approved a motion that included direction for staff to:

“Direct Halifax Transit to propose revisions to the current set of Eligibility Criteria for use of the Access-A-Bus service with the aim of restricting eligibility to those that cannot use the conventional transit service.”

**LEGISLATIVE AUTHORITY**

Transportation Standing Committee Terms of Reference, section 4 (a) which states: “The Transportation Standing Committee shall oversee and review the Municipality’s Regional Transportation Plans and initiatives, as follows: overseeing HRM’s Regional Transportation Objectives and Transportation Outcome Areas”.

Section 69(1) of the Halifax Regional Municipality Charter provides that “the Municipality may provide a public transportation service ...”

Section 79(1)(o) of the Halifax Regional Municipality Charter provides that “The Council may expend money required by the Municipality for ... public transportation services”.

## **RECOMMENDATION**

It is recommended that the Transportation Standing Committee recommend that Regional Council direct Halifax Transit to adopt the Access-A-Bus Continuous Improvement Service Plan and work toward achieving the vision of guaranteed accessible transit, and same-day service.

## **BACKGROUND**

The most recent strategic plan for Access-A-Bus (AAB) was approved by Regional Council on November 9, 2010. This plan has been used for guidance in the planning and operation of AAB service. On September 19, 2017, Regional Council provided direction for Halifax Transit to prepare reports on several aspects of AAB service, including potential revisions to the eligibility criteria.

On April 8, 2018, Halifax Transit upgraded the existing AAB scheduling system, a software program called Trapeze PASS. In preparation for the upgrade, the project team identified several business process improvement opportunities. Through PASS system configurations and user training, the AAB service has achieved some significant improvements. Specifically, there was a 6% increase in the average number of daily passengers, equating to over 5,000 more passengers transported from April 30 to October 31, 2018 than for the same six months in 2017.

To build on this success, and implement the opportunities identified as part of this process, Halifax Transit has developed the Access-A-Bus Continuous Improvement Service Plan (Attachment A). This plan will include a review of eligibility criteria, as directed by Regional Council.

## **DISCUSSION**

Through extensive internal review, Halifax Transit's previous Access-A-Bus model was determined to be inefficient and unreliable, with challenges addressing an increasing demand for paratransit service. It was determined that several factors had inhibited the effective delivery of the AAB service to the public.

- Increased number of potential AAB riders and increased number of trips requested per client, resulting in:
  - High number of trips denied/not provided and riders scheduled on the waiting list;
  - High peak volume of calls when phones open in the morning (7am – 8am); and
  - High number of trips booked up to seven days in advance, only to be cancelled at the last minute.
- Sub-optimal use of the Trapeze PASS scheduling system, resulting in:
  - Scheduling of inefficient trips (high percentage of deadheading, high cost per trip, low numbers of trips per hour);
  - High level of manual effort required to review and adjust Trapeze PASS schedules; and
  - Lack of reliability of Trapeze PASS data and reports.
- Perceived resource capacity shortage with existing number of buses and operators to deliver rides.

Some improvements in efficiency and service delivery were introduced through the Trapeze PASS upgrade, including:

- Improved and standardized employee processes;

- Automated batching and scheduling of daily trips;
- Development of quick reference guides and detailed training material;
- Updated data (load times, load factors, mobility aids, space types, costing weights, pick-up time calculations);
- Updated maps and map speeds;
- Better reporting functionality; and
- Improved statuses and data collection methods to drive evidence-based decision making

The development of the service improvement plan will enable Halifax Transit to move toward a new and realistic vision to provide :

- Universal access;
- Flexible mobility options;
- Additional capacity on current fleet and service hours to increase ridership;
- Decrease wait-list times; and
- Improvement to booking window.

These improvements will address previous challenges while maximizing the utility and investment in accessible transit.

#### *Access-A-Bus Continuous Improvement Service Plan*

Halifax Transit has developed the Access-A-Bus Continuous Improvement Service Plan to define activities for sustainable improvements to meet the accessible transit demands of today and into the future. In developing the Access-A-Bus Continuous Improvement Service Plan, consideration was given to Halifax Transit's overall accessible transit mandate, and how the paratransit and conventional transit services can become more integrated to support the needs of accessible transit users.

The Access-A-Bus Continuous Improvement Service Plan capitalizes on this momentum and outlines both the strategic framework and specific activities to ensure ongoing improvements.

The Access-A-Bus Continuous Improvement Service Plan strives to meet the goals of guaranteed trips and same-day service. To achieve this, multiple actions have been described to help meet three specific public objectives: No trip denials, just-in-time service, and adaptable service.

Four focus areas have been identified by the Plan, with short, medium, and long-term actions to achieve each.

**Focus I: Continuous Improvement** – create more capacity with existing resources. An example of a short-term action under this focus area is generating a new list of daily operator work assignments (run cut) to optimize efficiencies. This work was completed in late 2018.

**Focus II: New Technology** – utilize technology to provide a better service. An example of a medium-term action under this focus area is the installation of mobile data computers onboard the para-transit vehicles to improve service delivery.

**Focus III: Adaptable Service** – give clients the best service that fits their abilities. An example of a medium-term action under this focus area is reviewing the registration and eligibility criteria for AAB clients.

**Focus IV: Integrated Trips** – become a holistic trip planner. An example of a long-term action under this focus area is the development of a strategy to provide integrated trips.

Pursuing these four focus areas will improve the Access-A-Bus service in alignment with the vision and guiding principles of the plan.

The actions related to the focus areas identified in the Access-A-Bus Continuous Improvement Service Plan are currently underway. As part of Focus II: New Technology, Mobile Data Terminals are expected to be procured and installed within the next 6 months. A review of registration and eligibility criteria is included as a medium-term action under Focus III: Adaptable Service and will be completed in the context of the larger plan in the next 12 -18 months. Implementation improvements are occurring over the short-term (0-6 months), medium-term (6-18 months), and long-term (18+ months).

#### *Future Fleet Expansion*

The 2018/19 capital and operating budget included funding for six additional paratransit vehicles, as well as the resources required to operate the vehicles. These additional vehicles will be arriving at Halifax Transit in the coming months and will increase the capacity to deliver more rides to address increasing demands on Access-A-Bus service. Beyond 2018/19, due to the focus on improving capacity and delivering better service with the existing resources, it is anticipated that Halifax Transit will be able to steadily increase the number of trips provided without requiring further additional fleet. It is anticipated that through performance excellence, process improvements associated with the Access-A-Bus Continuous Improvement Service Plan will further result in service growth with existing resources that can meet demand over the short term, negating the need for any additional fleet in the next few years.

#### **FINANCIAL IMPLICATIONS**

There are no direct financial implications associated with the recommendation of this report, however, execution of the Access-A-Bus Continuous Improvement Service Plan is anticipated to reduce the cost per trip year-over-year, with a final goal of \$18/trip in contrast to the current \$36/trip. In addition, it is anticipated that efficiencies gained through implementing the recommendation of this report will preclude the need to purchase expansion vehicles in upcoming budget years.

#### **RISK CONSIDERATION**

There are no significant risks associated with the recommendations in this report. The risks considered rate low. To reach this conclusion, consideration was given to operational, financial, and strategic risks.

#### **COMMUNITY ENGAGEMENT**

Public and stakeholder input was collected from; the Accessibility Advisory Committee; recent general accessibility engagement sessions held by the Office of Diversity and Inclusion, and through communications with users of the Access-A-Bus service.

#### **ENVIRONMENTAL IMPLICATIONS**

Execution of the Access-A-Bus Continuous Improvement Service Plan is anticipated to increase ridership and trips per hour. Higher Access-A-Bus ridership and more efficient use of current capacity will reduce emissions associated with private vehicle travel.

**ALTERNATIVES**

The Transportation Standing Committee could choose not to recommend that Regional Council that Halifax Transit adopt the Access-A-Bus Continuous Service Improvement Plan. This is not recommended as the Plan will improve service delivery.

**ATTACHMENTS**

Attachment A – AAB Continuous Service Plan  
Attachment B – Access-A-Bus Strategic Roadmap Presentation

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A copy of this report can be obtained online at [halifax.ca](http://halifax.ca) or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Mike Spicer, Manager Transit Operations, 902.490.1505

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# Access-A-Bus Continuous Improvement Service Plan

# HALIFAX TRANSIT



## Access-A-Bus Continuous Improvement Service Plan

Access-A-Bus is a shared ride transit service for persons who are unable to use the conventional transit system due to physical or cognitive disabilities. Access-A-Bus is available to provide transportation to medical appointments and to allow residents to participate in social, personal, and recreational activities. Access-A-Bus service is offered by Halifax Transit to complement conventional, fixed route service.

The Halifax Transit Access-A-Bus Continuous Improvement Service Plan has been developed to set the strategic framework and define the specific activities to be undertaken by Halifax Transit in order to ensure ongoing improvements to Access-A-Bus service.

### Vision & Guiding Principles

This section describes the vision for Access-A-Bus Service in Halifax, and the guiding principles which have led to the development of this plan.

#### Access-A-Bus Vision

The Halifax Transit Access-A-Bus vision is defined as follows:



*Figure 1: Access- A- Bus Vision Statement*

Everything Access-A-Bus does, it should do with the **clients as the top priority**; therefore, it strives towards the vision of “**Guaranteed accessible transit. Same-day service.**”

**Guaranteed accessible transit** – The future goal is that all passengers have access to transit and will not be denied a trip. If a client calls for a trip, Access-A-Bus will make sure it can be accommodated. Accessible transit isn't just riding on paratransit vehicles (Access-A-Buses), it is using the best means necessary to transport clients from origin to destination. In the future, this could include paratransit buses, taxis, conventional transit, ferries, or even ride sharing services.

**Same-day service** – The future goal is that clients can call and request a trip on the same day they wish to take the trip. For example, a client can call at 8am for a trip to the grocery store in the afternoon. Currently, many clients are unable to book a trip when calling several days in advance, let alone the same day, due to availability of service. This results in most clients calling seven days in advance, only to not be able to take the trip a week later due to how they are feeling, the weather, they no longer require the trip, or they simply forgot they booked it in the first place.

#### Access-A-Bus Guiding Principles

Building on the vision described above, the following guiding principles were defined to address existing challenges:



Figure 2: Access A Bus Guiding Principles

Guiding principles are meant to set the direction and provide a decision-making framework for Access-A-Bus employees. They present a set of themes that help employees make the right decisions when faced with a choice. Each of the five guiding principles were categorized as either External or Internal.

External guiding principles are those which directly affect clients by impacting the way in which service is delivered. Internal guiding principles are principles related to operations and service delivery required to implement the vision described above but which may not be visible to clients using Access-A-Bus service.

Guiding Principles at the heart of this plan are as follows:

- **No Trip Denials** – This guiding principle speaks to the aim of accommodating every eligible trip request that is received. The type of vehicle, time of day, and length of trip may all vary.
- **Just-in-time Service** – This guiding principle speaks to the effective scheduling of clients. Similar to just-in-time inventory, just-in-time service is the effective scheduling of clients that request a trip shortly before it's needed. It is also related to the effective use of Operators and buses so resources being are used efficiently and are not sitting idle.
- **Adaptable Service** – Access-A-Bus clients have a large range of abilities, and Access- A-Bus service should be provided in a way that supports their diverse needs. The service should match the clients' needs including: customer calls, reoccurring trips, templated trips, minimized violations, and eventually different types of vehicles (conventional transit, taxis, vans, etc.).
- **Utilize Data and Technology** –Collecting more high-quality data will make for better decision-making and a positive impact on the clients. Utilizing current technology and accepting new technology will not only benefit clients but management and front-line staff as well by informing service related decisions.
- **Open Communication** – There is a lot of knowledge and wisdom within the employees of Access-A-Bus that could be shared more frequently in order to provide a higher level of customer service and improve the client experience and operational efficiency. Everyone on the Access-A-Bus team, no matter the role or shift, should communicate regularly to each other and clearly to clients in order to build on what's great about the Access-A-Bus service today and make it better for clients in the future.

## Implementing the Vision

Delivering the ambitious vision described above will take teamwork, and the Access-A-Bus team is ready for the challenge. Figure 3 below identifies the specific actions to be undertaken by each member of the team in order to make this vision a reality.



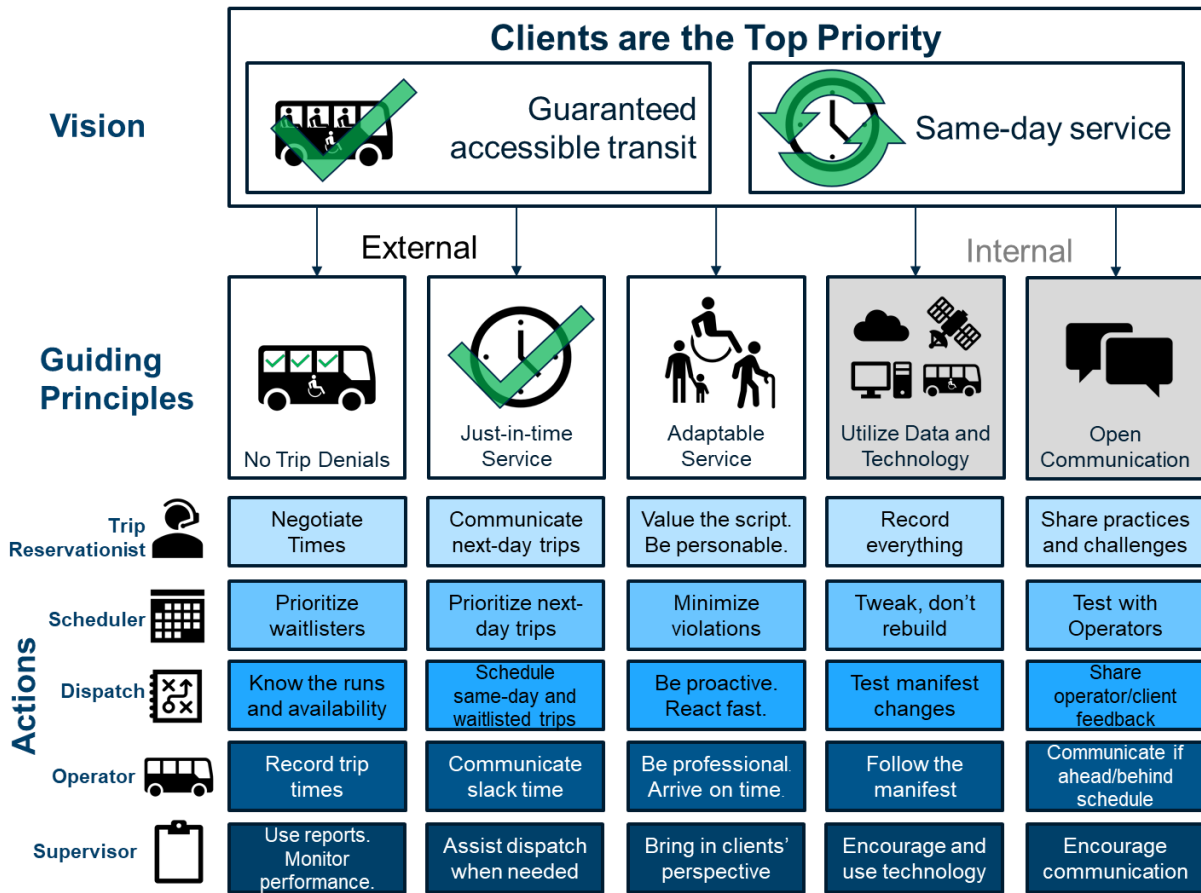
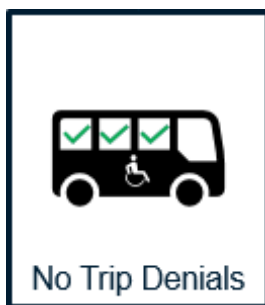


Figure 3: Actions by Role

The following describes how each action falls under the umbrella of the guiding principles described above.



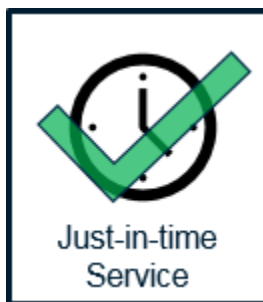
**No Trip Denials** – This guiding principle speaks to the aim of accommodating every eligible trip request that is received. The type of vehicle, time of day, and length of trip may all vary.

**Actions to be undertaken:**

1. **Negotiating Trip Times** – When talking to the client on the phone, Trip Reservationists will work with the client to ensure they're getting the bus for the time they **need**, not necessarily the time they **want**. Trips such as going shopping, getting groceries, or visiting a friend may be flexible to move to different times of the day where there are more buses available, allowing for other clients to take trips during busy times of the day.
2. **Prioritizing clients on the waitlist** – It is easy for Schedulers to get caught up in optimizing trips, making them more cost efficient or a quicker trip for the client, but the priority should be on clients

that want a trip and do not have one scheduled. Schedulers will prioritize providing all clients with trips before trying to provide clients with a more efficient trip.

3. **Building awareness of open availability** – The Dispatchers have the best overall view of the utilization of buses on the road. Some Operators are occupied their entire shift while others have slack time. This slack time could be more effectively used for clients and reduce trip denials. This information should be recorded and communicated to other Access-A-Bus staff.
4. **Tracking trip times** – The best method to understand when buses are under-utilized or over-capacity is for the Operators to record actual trip arrival and departure times. The software creates schedules based on estimated travel times. If actual trip times are shorter than what is being allotted for in the schedule, more time could be made available to accommodate more trips.
5. **Reporting and Monitoring of Performance** – The system has data on all past trips and a great deal of reporting capability. Supervisors should be using the data and reports to better understand how to utilize the resources that are currently available to reduce trips denials.



**Just-in-time Service** – This guiding principle speaks to the effective scheduling of clients. Similar to just-in-time inventory, just-in-time service is the effective scheduling of clients that request a trip shortly before it's needed. It is also related to the and the effective use of Operators and buses so resources being used efficiently and are not sitting idle.

#### **Actions to be undertaken:**

1. **Communicate next-day trips to clients** – Currently, most clients are calling in for their trips seven days in advance. With changes to the service and system, clients are now more likely to receive their trip if they call in only one day in advance. Trip Reservationists will communicate this to the clients.
2. **Prioritize next-day trips** – Since clients can call in to book a trip seven days in advance, schedulers can start working on schedules seven days in advance. The focus should be on tomorrow's trips and tomorrow's waitlist, not trips several days out.
3. **Schedule same-day and waitlisted trips** – It is the Dispatchers' responsibility to monitor and adjust trips on the day of service. They should be proactively trying to schedule waitlisted clients and clients that have requested trips on the day of service.
4. **Communicate slack time** – If a bus is on the road, it should be actively picking up or dropping off clients. If an Operator is waiting between trips and has downtime, they will be proactive in notifying Dispatch they are available for other trips.
5. **Assist dispatch when needed** – The more proactive dispatch is to become, the more assistance they will require (either by technology or other staff). Supervisors can help dispatch proactively adjust trips later in the day to accommodate more trip requests.



**Adaptable Service** – Access-A-Bus clients have a large range of abilities, and Access- A-Bus service should be provided in a way that supports their diverse needs. The service should match the clients’ needs including: customer calls, reoccurring trips, templated trips, minimized violations, and eventually different types of vehicles (conventional transit, taxis, vans, etc.).

**Actions to be undertaken:**

1. **Leverage the script and be personable** - Call scripts are provided to Trip Reservationists to ensure they are communicating, and asking for, all the important information necessary to provide a high-quality trip. The script is less of a traditional call script and more of a guideline for Trip Reservationists. They should still be personable and professional when dealing with clients that may have difficulties booking a trip or communicating over the phone.
2. **Minimize schedule violations** – Violations in the schedule, such as backtracking, on-board time, late pick-ups, and late drop-offs are often to the detriment of the client and overall operational efficiency. Schedulers should aim for 100% on-time performance for scheduled pick-ups and drop-offs and look for trips below the thresholds.
3. **Be proactive and react fast** – If Dispatch is responding to late pick-ups, drop-offs, or poor service, they need to react fast. Ideally, Dispatch is monitoring the service live and being proactive before substandard service occurs.
4. **Be professional and arrive on time** – The Operators are required to follow the manifest designed to provide ample time for picking up, transporting, and dropping off clients without rushing. If the Operator is running behind time, it is imperative they notify Dispatch if it will affect their on-time performance. Also, Operators should always be professional to clients of all abilities. Some clients require more time, support, and attention – a key part of the Access-A-Bus service.
5. **Bring in clients’ perspective** – As noted in the vision, clients are the top priority and every action should be made with the client top of mind. It is important for the Supervisors to question actions and processes and align decisions in the best interest of the clients.



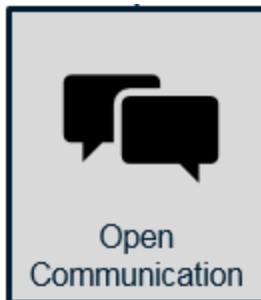
**Utilize Data and Technology** - Collecting more high-quality data will make for better decision-making and a positive impact on the clients. Utilizing current technology and accepting new technology will not only benefit clients but management and front-line staff as well by informing service related decisions.

**Actions to be undertaken:**

1. **Record details into the system** – Putting all trip booking information in the software will allow schedulers, dispatchers, and operators to make the best decisions possible. On top of the regular trip information, the Trip Reservationist should also record any special pick-up/drop-off information and insights from the call.
2. **Shape schedules, don’t rebuild** – The Trapeze PASS scheduling software has been developed to automatically build schedules for repeat trips and called in trips. Sometimes, there are mistakes

or inefficiencies based on the data and information entered. When this happens, Schedulers should tweak the schedule, runs, and trips, and not be building runs from scratch.

3. **Test manifest changes** – While Operators know Halifax and its roads better than most, if they try to switch the order of events on a manifest, they may not realize the effects later in the day. Dispatch can test these changes on the system to see if they are better than originally scheduled or if they are harmful to the overall service.
4. **Follow the manifest** – Today, the most effective way for Operators to use data and technology is to follow the manifests the data and technology produces. If the manifests are showing travel times that are unreasonable, Operators should continue to fulfill the trips, record the times, and report back to dispatch so times can be updated in the system for future trips.
5. **Encourage and use technology** – Like in most businesses, it starts from the top. If supervisors and management are using the technology, front-line staff are more likely to adopt it and use it to its full potential. Supervisors should monitor that processes are being followed and encourage the use of technology.



**Open Communication** – There is a lot of knowledge and wisdom within the employees of Access-A-Bus that could be shared more frequently in order to provide a higher level of customer service and improve the client experience and operational efficiency. Everyone on the Access-A-Bus team, no matter the role or shift, should communicate regularly to each other and clearly to clients in order to build on what's great about the Access-A-Bus service today and make it better for clients in the future.

#### **Actions to be undertaken:**

1. **Share practices and challenges** – The team of Trip Reservationists should share best practices and challenges with each other more often. Any issues with the technology should be communicated directly to the technology service advisors and challenges with clients should be passed to management.
2. **Schedulers test with operators** – When reviewing and updating schedules that do not appear accurate, Schedulers should communicate with Operators to test the accuracy and effectiveness of the schedules.
3. **Share feedback from the road** – Dispatchers are usually the staff that hear from Operators about the challenges they face from the schedule or with clients. This information should be shared with the rest of the team so processes, client information, or software system settings can be changed.
4. **Communicate if ahead/behind schedule** – To offer a higher-quality service, Operators should be communicating to dispatch if they are running behind schedule and are likely to arrive late. Dispatch can help by sending a spare run or engaging another Operator that is already on the road. If ahead of schedule (because of a cancellation, for example), Operators should also communicate to dispatch if they're available to accommodate another trip.
5. **Encourage communication** – Supervisors should constantly be encouraging communication amongst the Access-A-Bus team. All five roles need to work together to deliver an efficient, effective, and high-quality service to clients.

## Focus Areas

Action plans are being developed by Halifax Transit to implement improvements over the short-term (0-6 months), medium-term (6-18 months), and long-term (18+ months). The action plans have been categorized into four focus areas:





	 <b>Focus I: Continuous Improvement</b> Create more capacity with what we already have	 <b>Focus II: New Technology</b> Utilize technology to provide a better service	 <b>Focus III: Adaptable Service</b> Give clients the best service that fits their abilities	 <b>Focus IV: Integrated Trips</b> Become a Holistic Trip Planner
Short-term (0-6 months)	<ul style="list-style-type: none"> <li>• Visit Service Providers</li> <li>• Create Call Scripts</li> <li>• Reporting and Daily Management</li> <li>• Review Policies and Practices</li> <li>• Improve Repeater Templates</li> <li>• Data Cleanup</li> <li>• New Runcut</li> <li>• Collect On-Time Performance</li> </ul>	<ul style="list-style-type: none"> <li>• Write Mobile Data Computers (MDC) RFP</li> </ul>		
Medium-term (6-18 months)	<ul style="list-style-type: none"> <li>• Update Map Speeds</li> <li>• Forecast Demand Levels</li> <li>• Improve Costing Weights</li> </ul>	<ul style="list-style-type: none"> <li>• Implement MDCs</li> <li>• Implement Interactive Voice Response (IVR)</li> </ul>	<ul style="list-style-type: none"> <li>• Registration and Eligibility Criteria</li> <li>• Transit Training Program</li> <li>• Review Alternative Transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Setup Control Room</li> <li>• Review Eligibility Service Area</li> </ul>
Long-term (18+ months)		<ul style="list-style-type: none"> <li>• Online Booking</li> <li>• Fare Management</li> </ul>	<ul style="list-style-type: none"> <li>• Implement Alternative Transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated Trips</li> </ul>

Figure 4: Recommended Implementation Timeline

**Focus I: Continuous Improvement** – create more capacity with what we already have

### Short-term:

1. **Visit Service Providers** – Visit and understand the providers' (and their clients') needs. Access-A-Bus will get insight to the policies and processes that may need to be updated and help inform all the other projects in the implementation plan. Service providers include the adult service centres (workshops), day programs, hospitals performing dialysis, grade schools, and homes that host group trips.
2. **Create Call Scripts** – Standardize the call-taking practices to ensure a consistent, high-quality service for the clients. The call scripts will ensure customer interactions are polite and professional and the data and information critical to booking a trip is collected. Call scripts should result in increased customer satisfaction and higher-quality data in the system.
3. **Reporting and Daily Management** – Daily management is a Performance Excellence principle. It is the practice of measuring how the service is performing and connecting it to staff roles. Staff will have better insight into the vision and operations of the business so they can better communicate

and provide suggestions. The system has many reporting capabilities that can be leveraged and applied to a scoreboard that is visual to all staff.

4. **Review Policies and Practices** – Clear policies and definitions that are consistently practiced and enforced will help the efficiency and effectiveness for Access-A-Bus and its clients. This includes reviewing policies/definitions/practices for no shows, cancel at door, late cancellations, repeaters, repeater violations, recertification, denials, waitlists, same-day trips, and on-time performance. This policy review will also include consideration of moving from a door to door service model, to curb to curb service, whereby Operators will continue to load and unload clients, but will no longer assist in bringing them to the door of their destination.
5. **Improve Repeater Templates** – Only certain types of repetitious trips will be put on templates to make the schedule more efficient. This will allow more clients to have repeater status but will also open more capacity for other clients to receive their trips and only need to call in the day before. The goal is to increase passengers per hour, increase capacity, offer more clients repeater status and lower the demand on Trip Reservationists. Clients with the need will have more consistent service (templates) while opening space for more clients to become repeaters (batched).
6. **Data Cleanup** – With better data, staff and Trapeze PASS will be able to make more efficient schedules and make better informed decisions. The goal is to standardize client data so Trapeze PASS can create the best schedules and staff can offer the best service. Review data such as: client data, groups, locations, alert types, trip comments, and client booking time constraints.
7. **New Runcut (shift schedule)** – Shift capacity will be aligned to match demand so slack time is reduced and passengers per hour metrics increase. The runcut will be adjusted to best match the demand of clients depending on the day of the week and the time of day. This will open up more capacity for clients to receive their trips and only have to call in the day before.
8. **Collect On-Time Performance** – Currently, Halifax Transit does not collect measures of on-time performance. While the MDC technology will automate this in the near future, Operators should be recording their arrival and departure times of every pick-up and drop-off on their manifest. This data will help inform the on-time performance, the accuracy of the system's calculated travel times, load times, and unload times.

Medium-term:

9. **Update Map Speeds** – With more data from on-time performance data collection, the technology team can update the map speeds in the system to more accurately reflect Halifax conditions such as rush hour, areas of congestion, and seasonality changes.
10. **Forecast Demand Levels** – To more accurately reflect the requirement for more buses and operators, demand levels need to be forecasted. This will incorporate the aging population of Halifax and the potential changes to boundaries, anticipated development, technology, and eligibility.
11. **Improve Costing Weights** – Costing weights are how the system creates a live schedule.

**Focus II: New Technology** – utilize technology to provide a better service

Short-term:

1. **Write Mobile Data Computers (MDC) RFP** – The project team has finished documenting requirements for an MDC solution and is preparing an RFP. The RFP is focused on the MDC software with the option to procure hardware more cost-effectively through existing channels.

Medium-term:

2. **Implement MDCs** – Once a product has been selected, the project team will conduct testing, training, and implement MDCs on the Access-A-Bus fleet. With the new technology, a large emphasis will be put on updating processes and managing change with affected employees.

3. **Implement Interactive Voice Response (IVR)** – IVR is an automated telephony system that can dial out to customers when the bus is close to arrival so they are prepared for pick-up. It can call customers for service updates, change in trips, and other related announcements. The system can also collect and confirm trip bookings from clients.

Long-term:

4. **Online Booking** – Clients currently need to phone in to book their trips but the goal long-term is to give clients the option to book their trips online.
5. **Fare Management** – Paratransit has a distinct advantage over conventional transit because all clients' trips are logged into the system. Some jurisdictions are no longer collecting fare on buses and collecting money in advance from customers and drawing from that account for every trip. This means clients do not have to worry about cash, tickets, or monthly passes and Operators do not need to take the time to collect and deposit fares.

**Focus III: Adaptable Service** – give clients the best service that fits their abilities

Medium-term:

1. **Registration and Eligibility Criteria** – Match eligibility criteria to functionality and **adapt the service** to best meet client needs. Update eligibility to the following categories: unconditional eligibility (all trip requests), conditional eligibility (environmental or physical barriers limit the ability to consistently use accessible conventional transit services), and temporary eligibility (limited duration e.g., surgery recovery). The registration application will need to be updated as a result and has many opportunities for improvement. Service needs to be focused on the clients' abilities so that they get the best service. This is anticipated to create capacity for those that need the service most.
2. **Transit Training Program** – Clients will be trained to navigate conventional transit to provide more mobility options and flexibility. Access-A-Bus service will have more capacity for the clients that truly need it.
3. **Review Alternative Transportation** – Evaluate methods such as contracted taxi sedan services, subcontracting other paratransit vehicles, and even ride-sharing. The focus will be on contracted taxis that are primarily for ambulatory clients. The purpose of this service is to provide needed capacity on the current Access-A-Bus system for clients using mobility devices, particularly during peak period travel. These trips are provided at the same fare and hours, but are assigned on a trip-by-trip basis at the discretion of the dispatcher.

Long-term:

4. **Implement Alternative Transportation** – After evaluation, the alternative transportation services will likely be contracted to a local taxi company. The team will need to develop an RFP, determine technology requirements for taxis, integrate the technology with Halifax Transit's systems, and train staff and new taxi drivers on new processes. A taxi script program may also be a part of the implementation.

**Focus IV: Integrated Trips** – become a holistic trip planner (mobility-as-a-service)

Medium-term:

1. **Setup Control Room** – A control room will be an area where Access-A-Bus and conventional transit Dispatchers work together and survey the entire fleet of Halifax Transit. If clients are to transfer from an Access-A-Bus to a conventional bus, the two teams must work closely together.

2. **Review Eligibility Service Area** – By leveraging conventional transit for more clients and building a more effective and efficient service, capacity may become available for Access-A-Buses to travel outside the 1000-metre conventional stop radius that is currently policy.

Long-term:

3. **Integrated Trips** – Also known as mobility-as-a-service, integrated trips is using all methods of accessible transportation to get clients from origin to destination seamlessly. A client may get picked up by an Access-A-Bus, dropped off at the ferry terminal, ferried to a bus, bused to a terminal, where a taxi picks them up to transport the client on the final leg of their trip.

Implementing these four strategies will improve the Access-A-Bus service in alignment with the vision and guiding principles.

## Performance Measures

To measure the performance and success of the Access-A-Bus service, five key metrics were selected to connect the targeted improvements and the guiding principles:

- **Trip denials** – The percentage of trip requests unable to be accommodated
- **On-time performance** – The percentage of time a bus arrives within the 30-minute pick-up window
- **Trips per hour** – The number of trips provided divided by the combined bus operating hours
- **No shows/late cancels** – The percentage of scheduled pick-ups that are either no shows or late cancellations
- **Cost per trip** – The total operating costs divided by the total number of trips

The past and current metrics reflect the difference made by upgrading the scheduling system and system parameters, updating processes, and providing training and documentation to all staff.

The metrics under targeted improvements are estimates based on the benefits of the focuses of projects. For instance, the group of projects under the continuous improvement focus is estimated to decrease trip denials from 5% to 2%. The green around the metric shows the progress from current state to future state (long-term integrated trips). Some groups of projects have larger impacts than others on certain performance indicators. For instance, the group of projects under the adaptable service focus (Registration and Eligibility Criteria, Transit Training Program, and Review Alternative Transportation) will likely have very little effect on on-time performance or no shows/late cancels, but it will likely have a large effect on cost per trip. The metrics in bold under the fourth focus of integrated trips are the long-term targets for Access-A-Bus.



Performance Indicators	Guiding Principle	Actual		Targeted Improvements			
		Past (2017)	Current (2018)				
Trip denials		N/A <sup>1</sup>	5%				
On-time performance		N/A	N/A <sup>2</sup>				
Trips per hour		1.8	2.0				
No shows/late cancels		12.6%	12%				
Cost per Trip		\$39.16	\$36				

<sup>1</sup>Not previously tracking callers that were denied a trip and did not want to be put on the waiting list

<sup>2</sup>Not currently collecting arrival/departure times of buses for each trip

# **Guaranteed accessible transit. Same-day service.**

# Clients are the Top Priority

## Vision



Guaranteed accessible transit




Same-day service

### External

### Internal

## Guiding Principles




No Trip Denials



Just-in-time Service



Adaptable Service



Utilize Data and Technology



Open Communication

Trip Reservationist 

Negotiate Times

Communicate next-day trips

Value the script. Be personable.

Record everything

Share practices and challenges

Scheduler 

Prioritize waitlisters

Prioritize next-day trips

Minimize violations

Tweak, don't rebuild

Test with Operators

Dispatch 

Know the runs and availability

Schedule same-day and waitlisted trips

Be proactive. React fast.

Test manifest changes

Share operator/client feedback

Operator 

Record trip times

Communicate slack time

Be professional. Arrive on time.

Follow the manifest

Communicate if ahead/behind schedule

Supervisor 

Use reports. Monitor performance.

Assist dispatch when needed

Bring in clients' perspective

Encourage and use technology

Encourage communication

# Pain Points



**Improved**



Scheduling System  
Upgrade Project  
(April 2018)



Growing  
Waitlists



Manual Effort



Unreliable  
Reporting



Inefficient  
Scheduling



**Still  
Improving**



Continuous  
Improvement  
Projects



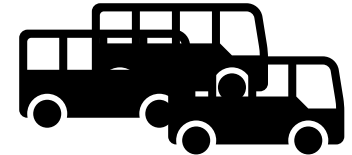
Calls Waiting  
7am-8am



7-Day Booking  
Late Cancellations

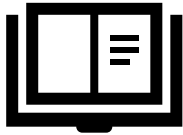


Increasing  
Demand

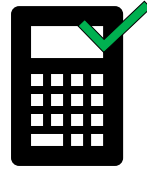


Limited  
Resources

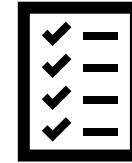
# Scheduling System Upgrade Results



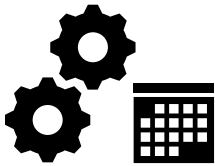
Standardized  
Processes



Improved  
Data



Quick Reference  
Guides



Automated  
Scheduling

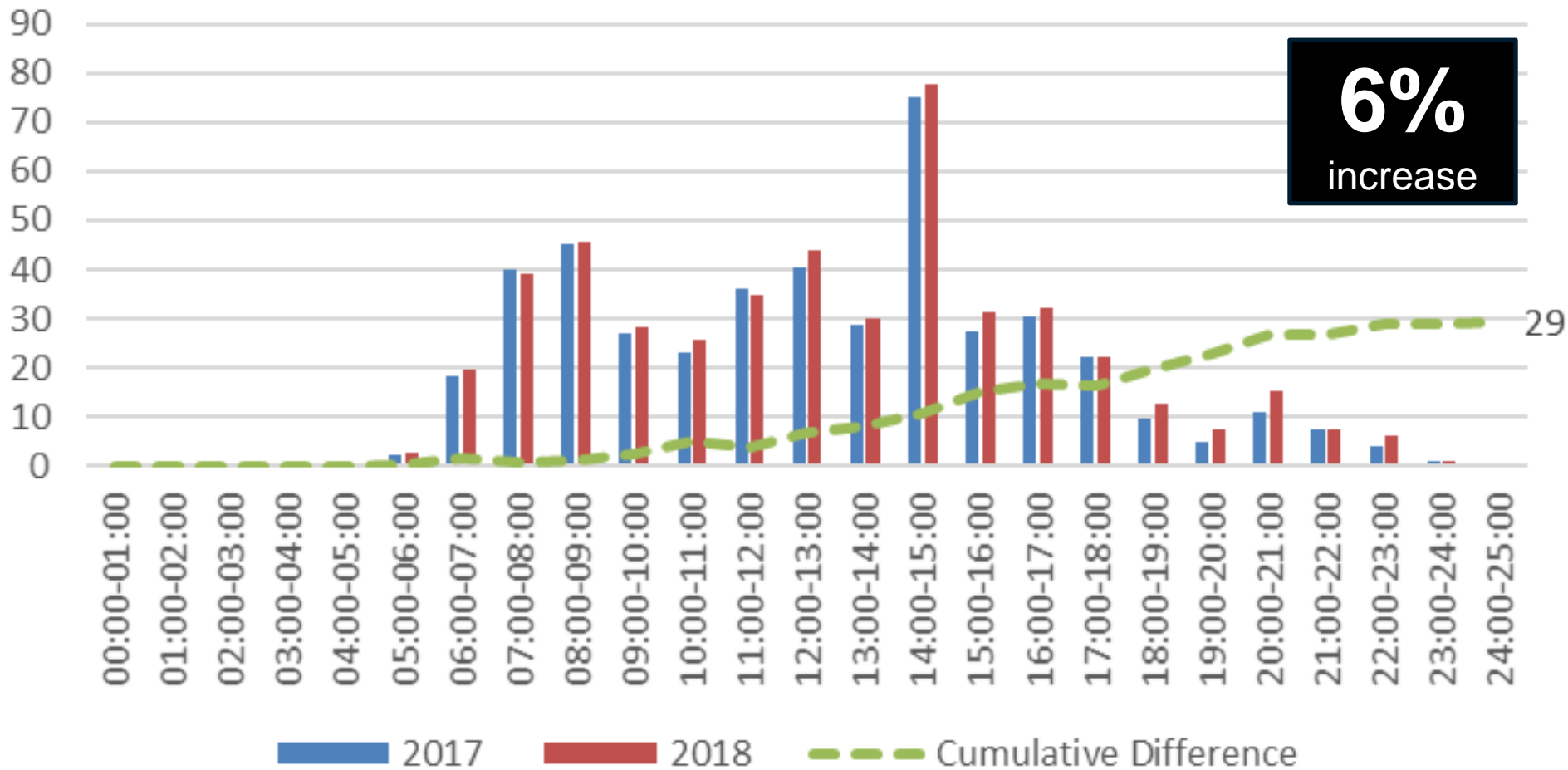


Updated Maps  
and Speeds



Better Reporting

# Average Riders by Time of Day (May-Aug)



Over **5000** more passengers transported from April 31<sup>st</sup> – October 31<sup>st</sup> (6 months)





## Focus I: Continuous Improvement

Create more capacity with what we already have

- Visit Service Providers
- Create Call Scripts
- Reporting and Daily Management
- Review Policies and Practices
- Improve Repeater Templates
- Data Cleanup
- New Runcut
- Collect On-Time Performance



## Focus II: New Technology

Utilize technology to provide a better service

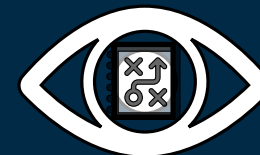
- Write Mobile Data Computers (MDC) RFP



## Focus III: Adaptable Service

Give clients the best service that fits their abilities

- Registration and Eligibility Criteria
- Transit Training Program
- Review Alternative Transportation



## Focus IV: Integrated Trips

Become a Holistic Trip Planner

- Setup Control Room
- Review Eligibility Service Area

Short-term  
(0-6 months)

Medium-term  
(6-18 months)

Long-term  
(18+ months)







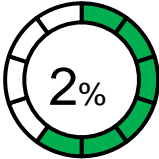
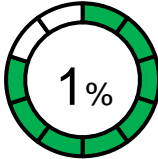
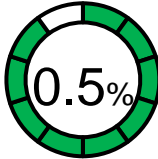
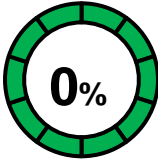


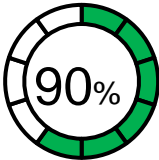
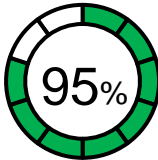
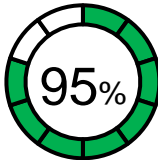









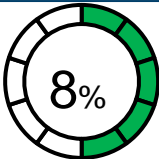
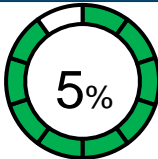
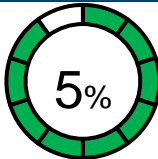
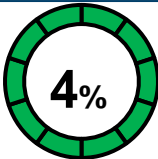






- Online Booking
- Fare Management

- Implement Alternative Transportation

- Integrated Trips

Actual

Targeted Improvements

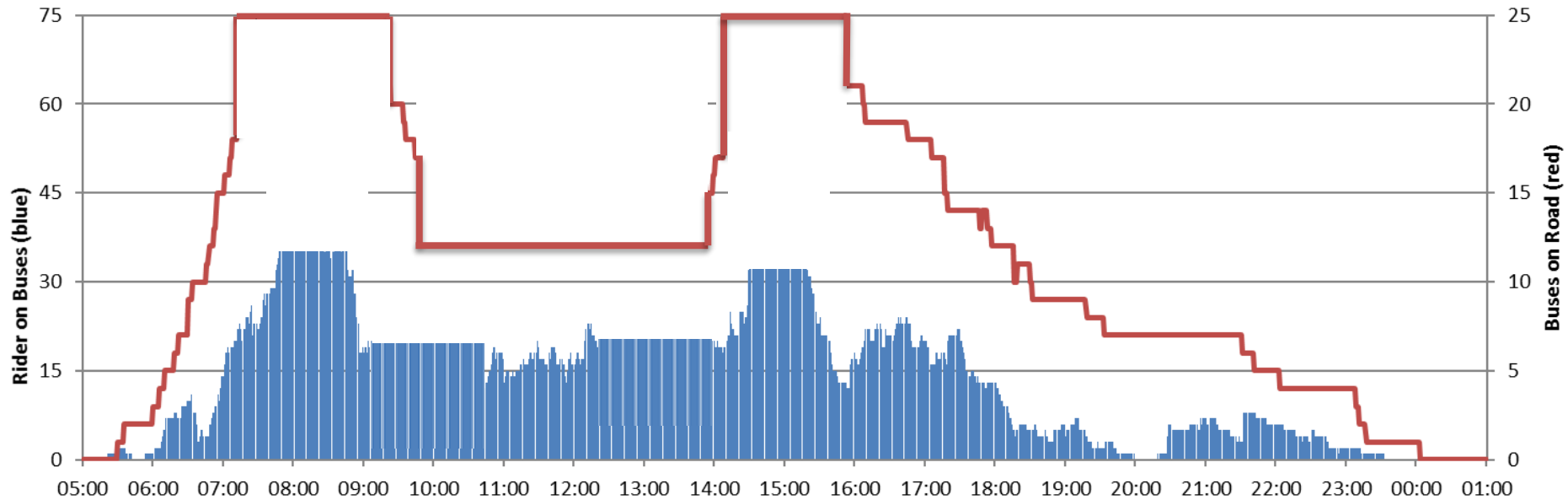
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## Buses and Riders



### Continuous Improvement Project Examples:

1. **Adjust Capacity** – Update Runcut
2. **Smooth Demand** – Update Repeater Templates + Call Script