MobilityPLUS and Kiwanis Transit Five-Year Business Plan 2017-2021

Report
March 2017

Regional Municipality of Waterloo, Grand River Transit (GRT)

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Executive Summary

Introduction
This is the third Business Plan for the specialized transit services of the Region of Waterloo, MobilityPLUS and Kiwanis Transit. The first Business Plan (2003-2007) focussed on increasing the variety and the quantity of available specialized transit services to clients, also reducing unit cost per passenger trip. The focus of the second Business Plan (2012-2016) was on consolidating the achievements accomplished during the previous plan, while building more management capacity and improving service quality. This Business Plan (2017-2021) will:

- Address increasing demands driven by population growth and aging population influences
- Develop strategies for dealing with implications of new eligibility criteria (under AODA)
- Improve service quality and customer satisfaction
- Improve productivity and cost effectiveness
- Conform to AODA Standards and all other legislation
- Address transit accessibility issues
- Maintain a high level of employee satisfaction and workplace excellence

Key areas for consideration include:
- AODA compliance
- Development of the family of services concept, including integration with ION to deal with increasing demands
- Effective use of technology

Five-Year Plan Recommendations – Resource Implications

Recommended Service Improvement Plan – MobilityPLUS

Table ES-1 shows a summary of the Business Plan elements, and, where relevant, estimates of capital and operating costs to 2021.

The next five years will continue to see substantial growth in demand for MobilityPLUS services and the recommendations of the plan are designed to ensure the necessary resources and supports are in place to meet the growing needs of the community in Waterloo Region, including measures to help moderate the growth in demand and effectiveness and efficiency measures to help manage the growth in resource needs.

As shown in Table ES-1and Table ES-2, effective management of the systems will still require additional resources to meet the continued growth in demand to 2020.
### Table ES-1: MobilityPLUS Business Plan Elements and Cost Summary

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Requirement</th>
<th>Timing</th>
<th>Capital Cost</th>
<th>Annual Operating Cost</th>
<th>Total Operating Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting Additional Demand</td>
<td>Additional Vehicles</td>
<td>5 vehicles</td>
<td>1 each year</td>
<td>$500,000</td>
<td>175,000/veh</td>
<td>2,600,000</td>
</tr>
<tr>
<td>AODA compliance</td>
<td>Eligibility form and assessment</td>
<td>Updated form and process</td>
<td>Year 1</td>
<td>Nil</td>
<td>Staff time</td>
<td>Staff time</td>
</tr>
<tr>
<td>AODA Compliance</td>
<td>Increased same-day capacity</td>
<td>Further efficiency review</td>
<td>Year 1</td>
<td>50,000*</td>
<td>Ni</td>
<td>Nil</td>
</tr>
<tr>
<td>AODA Compliance</td>
<td>Cross-boundary Transfer</td>
<td>New Transfer points (3)</td>
<td>Initiate Year 1, complete Year 2</td>
<td>75,000</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>Family of Services</td>
<td>Dialysis Management</td>
<td>Engage stakeholders</td>
<td>Year 1</td>
<td>Nil</td>
<td>Staff time</td>
<td>Staff time</td>
</tr>
<tr>
<td>Technology</td>
<td>Trapeze / online Module</td>
<td>Purchase additional module</td>
<td>Year 1</td>
<td>100,000</td>
<td>Staff time</td>
<td>Staff time</td>
</tr>
<tr>
<td>Technology</td>
<td>Advance notification</td>
<td>Purchase additional module</td>
<td>Year 3</td>
<td>50,000</td>
<td>Staff time</td>
<td>Staff time</td>
</tr>
</tbody>
</table>

* One-time efficiency review cost

### Recommended Service Improvement Plan – Kiwanis Transit

Table ES-2 shows a summary of the Business Plan elements recommended for Kiwanis Transit.

### Table ES-2: Kiwanis Transit Business Plan Elements and Cost Summary

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Requirement</th>
<th>Timing</th>
<th>Capital Cost</th>
<th>Annual Operating Cost</th>
<th>Total Operating Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting Additional Demand</td>
<td>Additional Vehicles</td>
<td>1 vehicle</td>
<td>Year 2</td>
<td>100,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asset Management</td>
<td>Reduced Life cycle</td>
<td>Reduce lifecycle to 5 years</td>
<td>Year 1</td>
<td>*</td>
<td>20,000</td>
<td>100,000**</td>
</tr>
<tr>
<td>Asset Management</td>
<td>Reduced Life cycle</td>
<td>Reduce lifecycle to 5 years</td>
<td>Year 2 (additional vehicle)</td>
<td>*</td>
<td>20,000</td>
<td>80,000</td>
</tr>
<tr>
<td>Staffing</td>
<td>Operations Manager</td>
<td>1 FTE</td>
<td>Year 2</td>
<td>75,000</td>
<td></td>
<td>300,000</td>
</tr>
<tr>
<td>AODA Compliance</td>
<td>Fare parity</td>
<td>Route 21 zone</td>
<td>Year 1</td>
<td>Nil</td>
<td>10,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Element</td>
<td>Description</td>
<td>Requirement</td>
<td>Timing</td>
<td>Capital Cost</td>
<td>Annual Operating Cost</td>
<td>Total Operating Cost</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------------</td>
<td>----------------------</td>
<td>----------</td>
<td>--------------</td>
<td>-----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>AODA Compliance</td>
<td>Fare parity</td>
<td>New route zones</td>
<td>Year 3***</td>
<td>Nil</td>
<td>10,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Family of Services</td>
<td>Elmira Community Loop</td>
<td>1 vehicle</td>
<td>Year 2</td>
<td>100,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family of Services</td>
<td>Elmira Community Loop</td>
<td>Stop infrastructure</td>
<td>Year 2</td>
<td>25,000</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>Family of Services</td>
<td>Dialysis Management</td>
<td>Engage stakeholders</td>
<td>Year 1</td>
<td>Nil</td>
<td>Staff time</td>
<td>Staff time</td>
</tr>
<tr>
<td>Technology</td>
<td>TripSpark IVR / online Module</td>
<td>Purchase additional service</td>
<td>Year 3</td>
<td>Nil</td>
<td>$10,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>Technology</td>
<td>Advance notification</td>
<td>Purchase additional service</td>
<td>Year 3</td>
<td>Nil</td>
<td>Future - unknown</td>
<td>Future - unknown</td>
</tr>
</tbody>
</table>

* Annualized contribution to capital expressed as operating cost
** Annual maintenance cost reduction expected from shorter life span
*** Potential new Wellesley route assumed for Year 3

**Recommendations Summary**

**Mobility Plus**

*Family of Services Development*

**Use of Conventional Fixed Route Services**

- To maximize the advantage of ION, both MobilityPLUS and Kiwanis Transit should work with their customers to orient them to the advantages of using the LRT service and accessing destinations close to stops.
- MobilityPLUS and GRT should monitor the growth in use of conventional accessible bus services by people with disabilities, to ensure that the customer experience is not unduly affected by capacity issues.

**Dialysis Trips**

- MobilityPLUS and GRT should fully examine the implications of and support for a transition out of the dialysis transportation business, to be consistent with other communities in the Province. Dialysis transportation could be delegated to the Non-Emergency Medical Transportation service.
- Remaining in the transportation business will require additional capital and operating funds to accommodate projected growth.
  - Regional representatives should approach the Local Health Integration Network (LHIN) to explore alternative funding sources.
• Regional Council should also be fully aware of the magnitude of funding and the portion of trips that are dedicated to health transportation. Annual budget requests could specifically identify the growth in these amounts.

Serving the Community of People with Cognitive Disabilities

• MobilityPLUS should work with day program agencies and staff to develop an effective and efficient transition and growth management plan for these trips.
  • This should include a discussion of alternative service delivery options early in the process, even if these alternatives are not required in the short-term, including establishing ride times for individuals, or developing a transfer system to consolidate smaller area fixed route trips onto larger vehicles.

Travel Training

• In 2017, MobilityPLUS should update their program to incorporate features of the ION LRT and build some short-term capacity for handling increases in demand.

Operational Effectiveness

• MobilityPLUS should work to enhance the efficiency of the operations through improved use of the software.
  • This will require a more comprehensive operational review in this area to improve the overall capacity of the system, especially to provide some same-day trips capacity, and to reduce the ad hoc used of taxis.

Service Delivery Supports

Eligibility

• MobilityPLUS needs to develop a comprehensive new eligibility application and assessment process.
  • This process must cover the wider range of eligibility now to be considered, but also be geared towards identifying specific conditional eligibilities.
  • MobilityPLUS should implement this detailed assessment process as soon as possible to minimize cost impacts
  • Until the process is implemented, MobilityPLUS must grant temporary eligibility to applicants that cannot be properly assessed.

Cross-boundary Coordination

• To improve trips connecting between the Urban and Rural Service areas, MobilityPLUS should:
  • Establish a cross-boundary zone in the Rural area (including North Dumfries) where MobilityPLUS will provide direct trips to its customers;
  • Work with Kiwanis Transit to establish convenient safe transfer locations for trips beyond the cross-boundary zone; and
  • Revisit these locations on a periodic basis to ensure they continue to meet customer needs.
AODA Compliance

To enhance the accessibility of the system and ensure the highest degree of compliance with AODA regulations, it is recommended that GRT MobilityPLUS:

• Develop and implement updated application and assessment processes as soon as possible, so that assessments can be tailored to the specific individual and the new criteria. In the interval, temporary eligibility should continue to be granted to applicants without a physical disability.

• Continues to accept calls up until the required time the day before travel, with a good faith effort to book travel. In the short- and medium-term, MobilityPLUS should explore ways to expand travel capacity for short-term, or even same day trips (see Section 7). Instructions to customers should still recommend calling on the second day before the trip.

• Revises its policies to:
  • Consider dialysis trips similar to any other trip purpose (including for subscription trips);
  • Provide the same booking window for all trips, regardless of trip purpose; and
  • Define subscription trip availability based on frequency and regularity, without regard for trip purpose.

Technology

• Continue to plan implementation and use of an IVR and on-line booking system;

• Once available, implement advance notification system to make day-before reminder calls or notices;

• Develop a pilot program to pilot advance trip notification call-outs and monitor results; and

• Develop pre-paid account system (integrated with EasyGo accounts).

Kiwanis Transit

Family of Services Development

• To maximize the advantage of ION, both MobilityPLUS and Kiwanis Transit should work with their customers to orient them to the advantages of using the LRT service and accessing destinations close to stops

Service Delivery Supports

Staffing

• Kiwanis Transit should hire a new operations manager, as recommended in the previous plan, to relieve current pressures and help manage succession planning.

Vehicle Life Cycle

• The replacement period for Kiwanis Transit vehicles should be formally reduced to five years. This will improve the overall condition of the vehicles near the end of their life, improving the customer experience and perhaps reducing maintenance costs slightly.
Kiwanis Transit Elmira Community loop

- Kiwanis Transit should further develop the concept for a community connector route in Elmira. This includes:
  - Refining and confirming route a preferred route option
  - Working with GRT, the Township and the Region to confirm the concept and identify cost/resource sharing arrangements

Cross-Boundary Coordination

- To improve trips connecting between the Urban and Rural Service areas, Kiwanis Transit should:
  - Continue to monitor the cost of its current cross-boundary trip policy and consider additional transfer trips for cross-boundary trips in the future, if warranted by potential cost savings.

AODA Compliance

To enhance the accessibility of the system and ensure the highest degree of compliance with AODA regulations it is recommended that Kiwanis Transit:

- Identify an appropriate service area for conventional fixed routes, including potential future routes, and develop a plan to establish fare parity and hours of service parity within that zone (see Section 7).

Technology

- Continue to plan implementation and use of an IVR and on-line booking system;
- Once available, implement advance notification system to make day-before reminder calls or notices;
- Monitor MobilityPLUS pilot program to pilot advance trip notification call-outs; and
- Develop pre-paid account system (integrated with EasyGo accounts).
Consultation Process

Stakeholder Consultation

Stakeholder consultation was an important part of the study process and informed the review of existing services as well as the development of alternatives. A variety of stakeholder interviews were held with various health and social service agencies to help determine:

- Current perspectives on the user experience;
- Plans for program growth or expansion, if any; and
- Current and future transportation needs and use of MobilityPLUS or Kiwanis Transit.

Vision and Mission Refresh

As part of the consultation process, a Vision workshop was held with the Steering Committee to review and refresh the Vision and Mission Statements. The outcome of this session was:

- A renewed draft Vision, to help shape the draft Mission of the new Business Plan and guide the organization for the life of the plan:

  “Universal access, where customers matter and independence is valued.”

- A renewed draft Mission, to guide the development of options, evaluations, and recommendations throughout the remainder of the project and beyond:

  “All eligible riders have safe, reliable, and timely access to the Family of Services to travel to their destinations in the Region of Waterloo.”

Existing Service Review

While the two systems operate on quite a different scale in terms of ridership and resources, service characteristics and performance patterns are quite similar, with some notable exceptions:

- Eligibility: Kiwanis Transit serves an additional seniors’ market that MobilityPLUS does not, since the Rural Service area has almost no conventional transit service

- Longer distances: Kiwanis Transit covers a much larger area and travels much longer distances, which tend to affect several factors:
  - Higher average speed (38km/h vs. 24km/h);
  - Longer trips (15km vs. 9km); and
  - Proportionately less use of taxis, with a higher cost per taxi trip.

Table ES-3 shows a summary of the service characteristics for the Urban and Rural service areas. Note that the Urban service area is served by MobilityPLUS (as well as North Dumfries), while the Rural service area (excluding North Dumfries) is served by Kiwanis Transit.
### Table ES-3: Summary of Waterloo Region Specialized Transit Services (Urban and Rural area)

<table>
<thead>
<tr>
<th>Service Area Population</th>
<th>Rural Service Area</th>
<th>Urban Service Area</th>
<th>Totals for 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>58,000</td>
<td>508,500</td>
<td>563,500</td>
</tr>
<tr>
<td>Registered Clients (Total)</td>
<td>1,922</td>
<td>7,143</td>
<td>9,065</td>
</tr>
<tr>
<td>Registered Clients (Active)</td>
<td>1,922</td>
<td>2,815</td>
<td>4,737</td>
</tr>
<tr>
<td>Trips Provided (Total)</td>
<td>49,500</td>
<td>415,750</td>
<td>465,250</td>
</tr>
<tr>
<td>Dedicated Vans</td>
<td>39,200</td>
<td>154,325</td>
<td>193,525</td>
</tr>
<tr>
<td>Contracted Services</td>
<td>7,800</td>
<td>69,325</td>
<td>77,125</td>
</tr>
<tr>
<td>Commuter Bus</td>
<td>N/A</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Taxi Scrip</td>
<td>N/A</td>
<td>69,300</td>
<td>69,300</td>
</tr>
<tr>
<td>Conventional Transit</td>
<td>2,500</td>
<td>112,800</td>
<td>115,300</td>
</tr>
<tr>
<td>Total Cost of Service</td>
<td>$1,380,000</td>
<td>$8,649,000</td>
<td>$10,029,000</td>
</tr>
<tr>
<td>Net Cost of Service</td>
<td>$1,287,600</td>
<td>$6,888,600</td>
<td>$8,176,200</td>
</tr>
<tr>
<td>Cost per Trip (all trips)</td>
<td>$27.88</td>
<td>$20.80</td>
<td>$21.56</td>
</tr>
<tr>
<td>Net Cost per Trip (all trips)</td>
<td>$26.01</td>
<td>$16.57</td>
<td>$17.57</td>
</tr>
<tr>
<td>Trips Provided per Capita</td>
<td>0.85</td>
<td>0.82</td>
<td>0.82</td>
</tr>
</tbody>
</table>

### AODA Assessment

As of January 1, 2017, the final two new requirements that specifically affect the delivery of service for specialized transit came into force:

- **New eligibility criteria**
- **Fare parity**

The operations and policies of both GRT MobilityPLUS and Kiwanis Transit were reviewed with respect to the new and existing requirements, with the following recommendations. For the purposes of this assessment, Kiwanis Transit and GRT were deemed to be separate operators providing service in the same jurisdiction.

**MobilityPLUS (Urban)**

With respect to Clause 63 – Categories of Eligibility (new): GRT MobilityPLUS should develop and implement updated application and assessment processes as soon as possible, so that assessments can be tailored to the specific individual and the new criteria. In the interval, temporary eligibility should continue to be granted to all applicants who have a disability.

With respect to Clause 71 – Booking: In the short- and medium-term, MobilityPLUS should explore ways to expand travel capacity for short-term, or even same day trips. Instructions to customers should still recommend calling on the second day before the trip.

With respect to Clause 72 – Trip Restrictions: GRT MobilityPLUS should revise its policies to:

- Consider dialysis trips similar to any other trip purpose (including for subscription trips);
- Provide the same booking window for all trips, regardless of trip purpose; and
Define subscription trip availability based on frequency and regularity, without regard for trip purpose.

**Kiwanis Transit (Rural)**

Kiwanis Transit has no specific compliance issues, but there is an area of ambiguity with respect to the service area of Route 21 - Elmira (and future similar routes). To remove any doubt, Kiwanis Transit should identify an appropriate service area for conventional fixed routes, including potential future routes, and establish fare parity and hours of service parity within that zone.

**Market – Ridership**

Three significant factors are forecasted to effect MobilityPLUS ridership, and to a lesser degree, Kiwanis Transit ridership over the life of the plan:

- The introduction of new eligibility criteria on January 1, 2017, introduced a new market of potential registrants for MobilityPLUS - people with cognitive disabilities;
- Significant growth in dialysis patients and transportation needs (small absolute numbers for Kiwanis Transit); and
- Continued aging of the population.

Table ES-4 shows a summary of the projected 2021 ridership, with a total of 555,000 for MobilityPLUS, increasing from 415,750 in 2015; and 56,650 for Kiwanis Transit, increasing from 50,000 in 2015. Excluding conventional transit trips, MobilityPLUS is projected to grow from 292,960 trips in 2015 to 374,700 – an overall increase of about 28 percent. For Kiwanis Transit, the increase is about 8.5 percent. The difference in these values is largely attributable to the introduction of the new market of people with cognitive disabilities on MobilityPLUS, which alone accounts for a 17 percent increase.

This increase is the primary factor influencing the additional resource requirements for both systems.

**Table ES-4: Projected Ridership by Market (Urban and Rural area)**

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Clients Inc.</td>
<td>15,750</td>
<td></td>
<td>15,750</td>
</tr>
<tr>
<td>General Population</td>
<td>210,000</td>
<td>13,250</td>
<td>223,250</td>
</tr>
<tr>
<td>Dialysis</td>
<td>44,600</td>
<td>3,500</td>
<td>48,100</td>
</tr>
<tr>
<td>People with cognitive disabilities</td>
<td>50,800</td>
<td>15,800</td>
<td>66,600</td>
</tr>
<tr>
<td>Seniors</td>
<td>0</td>
<td>3,350</td>
<td>3,350</td>
</tr>
<tr>
<td>Taxi Scrip</td>
<td>69,300</td>
<td>0</td>
<td>69,300</td>
</tr>
<tr>
<td><strong>subtotal</strong></td>
<td>374,700</td>
<td>51,650</td>
<td>426,350</td>
</tr>
<tr>
<td>Conventional Transit</td>
<td>180,300</td>
<td>5,000</td>
<td>185,300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>555,000</td>
<td>56,650</td>
<td>611,650</td>
</tr>
</tbody>
</table>
Service Development

Family of services

MobilityPLUS, and to a lesser degree Kiwanis Transit, has already begun to develop a broad range of integrated services that can help moderate the growth in demand for door-to-door services.

- ION – The introduction of light rail service in Kitchener and Waterloo offers an excellent opportunity to accommodate additional trips by registered riders, both diverted from existing door-to-door service as well as new trips in the system. It also provides the opportunity to use ION as part of the trip, when either the origin or destination of the trip is accessible to an ION stop by the individual user. The door-to-door service can then be limited to providing the first-mile or last-mile portion of the trip, freeing resources for other trips.

- Dialysis – Dialysis transportation consumes an important percentage of MobilityPLUS resources, and includes a large percentage of riders who would otherwise not be eligible for MobilityPLUS. This report recommends consideration of a transition out of this facet of medical transportation (with grandfathering for existing patients), or engaging with the Local Health Integration network (LHIN) to explore additional funding. Maintaining dialysis transportation will require operational changes within the life of the plan to accommodate new facilities planned for the Cambridge site.

- Community of people with cognitive disabilities – This represents a new market for MobilityPLUS (though not for Kiwanis Transit), which could grow to represent more than 15 percent of total ridership over the life of the plan. Managing this demand will require updates to the eligibility review process immediately, expansion of the travel training program in the short-term, and consideration of alternative service delivery, like the commuter service with a shift to van-based, semi-fixed route operation.

- Travel training – Represents an important element of managing demand, and will need to be enhanced in the short-term for the introduction of ION in early 2018, as well as expansion to maximize the number of trips that can be accommodated on services other than the door-to-door service.

- Door-to-door operations – This report also recommends a more detailed review of daily operations of the MobilityPLUS door-to-door service delivery to help to find ways to expand same-day capacity

Support

Several support initiatives are recommended for both MobilityPLUS and Kiwanis Transit over the five-year plan:

- Staffing
  - Kiwanis Transit to add an operations manager, responsible for operations support and training.
• Community loop
  • Kiwanis transit to work with GRT to add a supporting community loop in Elmira, to improve coverage of the Route 21 service and provide additional capacity for accessible trips within the community.

• Vehicle life cycle
  • GRT should formally acknowledge a change in life cycle for Kiwanis Transit leased vehicles, from six years to five years, to enhance reliability, improve the customer experience and reduce end-of-life maintenance costs.

• Eligibility and assessment
  • MobilityPLUS should immediately update its eligibility assessment form and review process to consider all applicants under the new eligibility criteria, and effective manage allocation of eligible riders to the appropriate element of the family of services.

• Cross-boundary coordination
  • MobilityPLUS should establish a cross-boundary zone in the Rural service area, where direct rides will be provided by MobilityPLUS to and from Kitchener / Waterloo origins and destination. Further, MobilityPLUS and Kiwanis Transit should coordinate to establish appropriate transfer points to accommodate longer distance trips in the most efficient and customer-friendly way possible.

Technology

New and expanded technology deployment can help both MobilityPLUS and Kiwanis transit improve efficiency and enhance the customer experience. Several projects are underway or anticipated.

The technology-related recommendations of this plan include:

• MobilityPLUS
  • Continue to plan implementation and use of an IVR and on-line booking system.
  • Once available, implement advance notification system to make day-before reminder calls or notices.
  • Develop a pilot program to pilot advance trip notification call-outs and monitor results.
  • Develop pre-paid account system (integrated with EasyGo accounts).

• Kiwanis Transit
  • Continue to plan implementation and use of an IVR and on-line booking system.
  • Once available, implement advance notification system to make day-before reminder calls or notices.
  • Monitor MobilityPLUS pilot program to pilot advance trip notification call-outs.
  • Develop pre-paid account system (integrated with EasyGo accounts).
1 Introduction

This is the third Business Plan for the specialized transit services of the Region of Waterloo, MobilityPLUS and Kiwanis Transit. The first Business Plan (2003-2007) focused on increasing the variety and the quantity of available specialized transit services to clients, also reducing unit cost per passenger trip. The focus of the second Business Plan (2012-2016) was on consolidating the achievements accomplished during the previous plan, while building more management capacity and improving service quality. This Business Plan (2017-2021) will:

- Address increasing demands driven by population growth and aging population influences
- Develop strategies for dealing with implications of new eligibility criteria (under AODA)
- Improve service quality and customer satisfaction
- Improve productivity and cost effectiveness
- Conform to AODA Standards and all other legislation
- Address transit accessibility issues
- Maintain a high level of employee satisfaction and workplace excellence

Key areas for consideration include:
- AODA compliance
- Development of the family of services concept, including integration with ION to deal with increasing demands
- Effective use of technology

Specialized transit services have been considerably consistent within the Urban and Rural area from 2010 to 2015; an average of 90 percent of the service being provided within the Urban area (see Figure 3-4 to Figure 3-3). The number of boardings per hour decreased between 2011 and 2014, during the second Business Plan (2012-2017), and considerably increased in 2015. Contrary, the number of operating hours increased between 2011 and 2014, and decreased in 2015; operating hours and boardings behaving almost in opposite directions. Further information on the evolution of specialized transit services within the Waterloo Region can be found in Section 3.

For this new Business Plan period (2017-2021), the focus is on “putting the passenger first”, which is both the new plan’s perspective and Guiding Principle. As a result, the 2017-2021 Business Plan:

- Begins with a refresh on the vision statement, ensuring it sets the proper framework for the future development of services;
• Means ensuring access to appropriate mobility options that meet the travel needs of the customer, while remaining effective and efficient to ensure maximum service availability to all customers;
• Means ensuring that MobilityPLUS services and the interface with other members of the family of services meets or exceed accessibility requirements; and
• Means ensuring that the proper service delivery mechanisms and infrastructure are in place to provide safe, reliable and effective transportation.

In addition to the Guiding Principles, this Business Plan addresses seven key focus areas:
• Service Improvement Plan and Ridership Growth Strategy;
• Service Performance Monitoring Plan;
• GRT/LRT Integration Staging Plan;
• Customer Satisfaction Plan;
• Marketing Strategy and Implementation Plan;
• Transit Technology Strategy; and
• Financial Plan.

This new Business Plan will also guide to improve the existing transit network service levels for the next five years, as well as help achieve the annual transit ridership target of 28 million by 2021 and 53 million by 2031, set by the 2011 Regional Transport Master Plan.

1.1 Study Approach

This Plan has been undertaken under the direction of Regional Municipality of Waterloo, Grand River Transit (GRT). Steer Davies Gleave was retained as the prime consultant, (with Carpentier Consulting as a sub consultant) and has worked closely with the Regional Municipality of Waterloo as well as with several key stakeholders, including:
• Kiwanis Transit Director
• MobilityPLUS director and staff
• Community OT
• Community Support Connections
• Community Alzheimer’s Program
• K-W Seniors Day Program
• Kinsmen Centre
• KW AccessAbility
• JLC
During the development of this Business Plan (2017-2021), technical working teams, comprising specialists from within various departments at the Waterloo Region and representatives from the above stakeholder list, have met frequently, on milestone points, and have shaped together the development of the Plan.

Compliance with AODA regulation was assessed with the assistance of Carpentier Consulting, and studies on similar and/or comparable Specialized Transit Services (i.e. Durham Region, Gatineau, Halifax, Hamilton, London, Saskatoon, and Windsor) were undertaken, to better assess the existing services of the Waterloo Region.
2 Stakeholder Consultation

2.1 Consultation Activities

This section describes the consultation activities undertaken through the development of the new Business Plan (2017-2021):

- Stakeholder meetings with staff and agencies.

2.2 Stakeholder Engagement Meeting – The Vision Workshop

This first stakeholder consultation meeting (see Figure 2-1) was divided into two sessions, focusing on the revision of the Vision and Mission statements. The approach to the Vision Session was integrated with the engagement plan for the overall study, and was directed by four main principles:

- Accountability – Uphold accountability to stakeholder participants by providing timely, easy-to-understand and accessible information, and by demonstrating how participants’ views and perspectives inform the study;
- Clarity – Consultation activities will clearly define the purpose and the scope of the consultation, and the roles and responsibilities of stakeholder participants;
- Openness and Inclusivity – Encourage a wide cross-section of people to share their views and perspectives; and
- Flexibility – Engagement process will be adaptable to the needs of participants, considering their different abilities, areas of expertise, geographic distribution, and availability.

This session presented the existing vision as a starting point, and included an assessment of the continued relevance of elements of the vision and its ability to create an appropriate service environment for the future; the 2012-2016 Vision was:

"MobilityPLUS provides persons with disabilities in the Urban Service Area of Waterloo Region and North Dumfries with access to safe, convenient and comfortable transportation, encouraging the use of Grand River Transit accessible buses whenever possible and providing a range of specialized services to people who cannot use regular transit due to a disability."
The project team believes that guiding statements – vision statements, mission statements, goals and objectives – are important, and should be taken seriously by organizations that develop them. They are not an exercise to be endured, then forgotten.

Figure 2-1: Stakeholder Engagement Meeting – Vision Workshop

The objective of this first stakeholder engagement meeting was, thus, to revisit the Vision of the 2012-2016 Plan, and prioritize the investment needs for the next five years. In addition, this meeting helped determine the qualities that needed to be reflected in a vision and a mission statement, which resulted into two distinct statements that met these needs.

The Mission statement had to encapsulate the answers to the questions GRT MobilityPLUS had to respond to: “Why are we here?” “Where are we going?”. The question of “Why are we here” was further broken down into discussion points around questions such as:

- Why do we exist?
- Who do we serve?
- Which need do we fill?
- What promise do we make?
The existing vision statement and its renewed version was evaluated in terms of its ability to describe or indicate the following:

- What type of business GRT MobilityPLUS will be, as defined by something measurable (i.e. market share or position, revenues, customer perceptions);
- Where GRT MobilityPLUS will be doing this work geographically;
- What products, services, or offerings GRT MobilityPLUS will provide; and
- Who GRT MobilityPLUS’ ideal customer base will be.

The answers to the above questions, and the perspectives of the group, informed the discussion about where GRT MobilityPLUS is going; which was structured around the key issues of:

- Integration of service in the regional Urban and Rural service areas;
- Development of the family of services concept and implications for riders;
- Maturation of AODA accessibility and implications for harmonization of standards;
- Use of technology; and
- Customer service and communication issues and opportunities.

The outcome of this session was:

- A renewed draft Vision, to help shape the draft Mission of the new Business Plan and guide the organization for the life of the plan:

  “Universal access, where customers matter and independence is valued.”

- A renewed draft Mission, to guide the development of options, evaluations, and recommendations throughout the remainder of the project and beyond:

  “All eligible riders have safe, reliable, and timely access to the Family of Services to travel to their destinations in the Region of Waterloo.”

### 2.3 Stakeholder Engagement Discussions: What We Heard

#### 2.3.1 Community Program

- Rely on MobilityPLUS for a significant portion of transportation, along with Community Support Connections and taxis
- Important contributor to peak demands – especially AM period
- Operators are terrific, very caring
2.3.2 Riders / Advocates / Operators / Union

- Recent lack of capacity
- Subscriptions limit peak capacity
- Travel training should be expanded – bus buddy program would be valuable
- Need accessible supervisors van
- Continue to support use of conventional service
- Using ION for part of trip will be valuable
- Using ION for part of trip will not be significant
- Long waits on the phone – phone answered 25 mins or more
- Same day bookings would add spontaneity, perhaps add trips and reduce unmet demand
- Emailed cancellations would be very useful
- Emailed bookings desirable
- Fare Parity issues – prepaid fares
- Lack of transfers
- Electronic “alert” system to report pending bus arrival, needed
- Operators are terrific
- MobilityPLUS is valued in the community
- Desire to partner with MobilityPLUS to assist with travel training
- Accessible taxis – contract should allow for zone, or flat rate fare
- Riders on ION will need the pickup window adjusted to 15 mins AFTER train arrival – not before
- ION stations will need to be identified for use with Mobility Plus, as some may not be workable

2.3.3 Staff

- Role of transit / Urban Rural
- Boundary issues / inconsistencies
- Vehicle replacement issues
- Staffing requirements
- Taxi contracts, renewal and opportunities
- Trapeze needs updating, and full available modules
- AODA concerns, compliance
• Dialysis
• Kiwanis Transit
• continuing role – assess future roles
• staffing requirements
• service options around Route 77 and Route 21
• MobilityPLUS: Eligibility Criteria expansion to include “cognitive” issues, as per AODA
• Table communication system must be used properly, and perform well
• Dispatch, operations – phones, bookings, call taking, dispatching, Trapeze – overview
3 Description and Assessment of Existing Services

3.1 Service Organization

Specialized transit services are provided in Waterloo Region by two organizations: Grand River Transit (GRT), a department of the Region of Waterloo operates MobilityPLUS service; and Kiwanis Transit, a separate not-for-profit agency governed by its own board of directors.

The Region of Waterloo funds the services (along with fare revenue and gas tax contributions). Tax levies on the lower tier municipalities are approved by each of those municipalities as part of the annual budget process.

Since amalgamation of transit services in 2001, the Region has maintained two service areas:

- Urban Service Area – comprising the three cities of Kitchener Waterloo and Cambridge, which prior to amalgamation all had conventional transit service
- Rural Service Area – comprising the townships of Woolwich, Wilmot, Wellesley and North Dumfries.

In this system, MobilityPLUS generally operates service in the Urban area and Kiwanis Transit generally operates service in the Rural area. However, because of the geography and logistics of serving the larger Rural area, MobilityPLUS also serves North Dumfries, while Kiwanis Transit serves the other three townships.

Much of the reporting by the two agencies is done in terms of the service they provide, and it is often difficult to separate the Rural service component of North Dumfries from the GRT MobilityPLUS reporting. For this reason, in the information reported in this Business Plan, information for the Urban area includes North Dumfries and information for the Rural area excludes, North Dumfries, unless specifically noted.

Figure 3-1 shows the municipalities of the Region of Waterloo and the boundaries of the service area.
3.2 Service Description

3.2.1 Hours of Service and Fares

Both MobilityPLUS and Kiwanis Transit offer people with disabilities a door-to-door, shared ride, accessible public transit service (see Table 3-2). To use this service, one must meet specific eligibility criteria; eligibility is considered on a case-by-case basis and is not based on a particular disability, nor is it based on income level or lack of accessible public transit in an applicant’s area.

Table 3-1: Service Characteristics – Hours of Service and Fares

<table>
<thead>
<tr>
<th></th>
<th>Urban Area (MobilityPLUS)</th>
<th>Rural Area (Kiwanis Transit)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hours of Service</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekdays</td>
<td>5:15am to 1:15am</td>
<td>6:00am to 6:00pm</td>
</tr>
<tr>
<td>Saturday</td>
<td>5:30am – 1:15am</td>
<td>7:00am to 5:00pm</td>
</tr>
<tr>
<td>Sunday</td>
<td>7:15am to 1:15am</td>
<td>No service</td>
</tr>
<tr>
<td><strong>Fares</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>$3.25</td>
<td>$3.25</td>
</tr>
<tr>
<td>Adult Ticket</td>
<td>$2.66 (5 for $13.30)</td>
<td>$2.66 (5 for $13.30)</td>
</tr>
<tr>
<td>Reduced Ticket</td>
<td>$2.31 (5 for $11.55)</td>
<td>$2.31 (5 for $11.55)</td>
</tr>
<tr>
<td>Monthly Pass</td>
<td>$82.00</td>
<td>$82.00</td>
</tr>
<tr>
<td>Reduced Monthly Pass</td>
<td>$70.00</td>
<td>$70.00</td>
</tr>
</tbody>
</table>
In addition to these criteria, resident of the Rural service area who are older than 65 are eligible to use the service.

Note that the fares presented in Table 3-2 show that both Kiwanis Transit and GRT MobilityPLUS maintain the same fare structure. These fares are also identical to those for GRT’s conventional service.

### 3.2.2 Trip limitations

Connections to and from North Dumfries are limited, with trips generally only available between the Township and location in Cambridge. Riders capable of using the conventional transit service can do so for free within the Urban service area.

Connections from the rest of the Rural area served by Kiwanis Transit are general only available to locations in Kitchener and Waterloo and exclude Cambridge because of the distance involved.

### 3.2.3 Conventional Accessible Transit

GRT operates conventional accessible transit services throughout the Urban service area, as well as Route 21 from Conestoga Mall in Waterloo to Elmira in Woolwich Township. To encourage the use of conventional services by those who can use it for some trips, GRT offers free transit to MobilityPLUS registrants.

Kiwanis Transit riders are able to transfer to Route 21 with the payment of an additional fare.

### 3.2.4 Eligibility

In compliance with the Accessibility for Ontarians with Disabilities Act (AODA) (*RSO 2005 c. 11*), both MobilityPLUS and Kiwanis Transit offer accessible origin-destination services for residents with a disability and, in the case of the Rural service area, for residents older than the age of 65.

MobilityPLUS in compliance with the Integrated Accessibility Standard (IASR) (*O.Reg 191/11 updated O.Reg 165/16*), offer three categories of eligibility: unconditional, conditional and temporary. Without conventional transit services in the Rural service area, conditional eligibility is irrelevant to Kiwanis Transit, who offer unconditional and temporary eligibility.

More details on eligibility and AODA compliance are included in Section 5.

### 3.2.5 Trip Booking

Both agencies maintain similar booking procedures:

- **MobilityPLUS**
  - Recreational/Personal Trips can be booked up to seven days in advance, but should be booked at least one business day ahead of the requested trip time.
  - Medical, post-secondary education and employment-related trips can be booked up to 28 days in advance, but should be booked at least one day ahead of the requested trip time.
  - Bookings for employment, educational and medical purposes are available as Subscription Bookings; which are repetitive trips booked for same time and day of the week, and same pick-up and drop-off location.
  - Booking hours are 8:30am to 10:15pm Monday to Sunday.
• Dispatch operates during service hours, and handles same day cancellations and changes.
• Pick-up window is from 15 minutes prior to the scheduled pick-up time to 15 minutes after the scheduled pick-up time.

• Kiwanis Transit
  • Bookings for all trips are available from one month in advance up to 48 hours before the intended trip.
  • Booking hours are 8:00 am to 5:00 pm Monday to Friday and 9:00 to 3:00 pm Saturday.
  • Dispatch operates during service hours, and handles same day cancellations and changes.
  • Pick-up window is from 15 minutes prior to the scheduled pick-up time to 15 minutes after the scheduled pick-up time.

3.2.6 Service Provision

Both MobilityPLUS and Kiwanis Transit operate dedicated accessible vans with employee-drivers, as well as supplementing this service with contracted service of taxi and van operators. Approximately 75 percent of trips on Kiwanis Transit are accommodated on dedicated vans, while for MobilityPLUS this portion is about 52 percent. The reason for this difference is primarily the availability of taxis in the Urban area and their suitability to shorter trips, while most Rural area trips are much longer than in the Urban area.

For MobilityPLUS riders, TaxiSCRIP is also available. TaxiSCRIP subsidized taxi trip coupons are sold in booklets at 50 percent of the redeemable value of the coupons; registrants may purchase up to three $40 booklets per month at $20 each.

3.2.7 Service Summary

A summary of key statistics for 2015 in the Region (Rural and Urban) is shown in Table 3-2.
### Table 3-2: Summary of Waterloo Region Specialized Transit Services (Urban and Rural area)

<table>
<thead>
<tr>
<th></th>
<th>Rural Service Area</th>
<th>Urban Service Area</th>
<th>Totals for 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>58,000</td>
<td>508,500</td>
<td>563,500</td>
</tr>
<tr>
<td>Registered Clients (Total)</td>
<td>1,922</td>
<td>7,143</td>
<td>9,065</td>
</tr>
<tr>
<td>Registered Clients (Active)</td>
<td>1,922</td>
<td>2,815</td>
<td>4,737</td>
</tr>
<tr>
<td>Trips Provided (Total)</td>
<td>49,500</td>
<td>415,750</td>
<td>465,250</td>
</tr>
<tr>
<td>Dedicated Vans</td>
<td>39,200</td>
<td>154,325</td>
<td>193,525</td>
</tr>
<tr>
<td>Contracted Services</td>
<td>7,800</td>
<td>69,325</td>
<td>77,125</td>
</tr>
<tr>
<td>Commuter Bus</td>
<td>N/A</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Taxi Scrip</td>
<td>N/A</td>
<td>69,300</td>
<td>69,300</td>
</tr>
<tr>
<td>Conventional Transit</td>
<td>2,500</td>
<td>112,800</td>
<td>115,300</td>
</tr>
<tr>
<td>Total Cost of Service</td>
<td>$1,380,000</td>
<td>$8,649,000</td>
<td>$10,029,000</td>
</tr>
<tr>
<td>Net Cost of Service</td>
<td>$1,287,600</td>
<td>$6,888,600</td>
<td>$8,176,200</td>
</tr>
<tr>
<td>Cost per Trip (all trips)</td>
<td>$27.88</td>
<td>$20.80</td>
<td>$21.56</td>
</tr>
<tr>
<td>Net Cost per Trip (all trips)</td>
<td>$26.01</td>
<td>$16.57</td>
<td>$17.57</td>
</tr>
<tr>
<td>Trips Provided per Capita</td>
<td>0.85</td>
<td>0.82</td>
<td>0.82</td>
</tr>
</tbody>
</table>

### 3.3 Service Characteristics

The following section with its graphics provide a summary of key elements of the services in both the Urban and Rural service areas, showing the evolution of key statistics since 2010.

As shown in Figure 3-2 to Figure 3-4, for both Rural and Urban areas, there are two types of specialized transit services: dedicated and non-dedicated. For the Waterloo Region, the most commonly used service type is dedicated service, with an average of 144,529 annual trips in the Urban area, and 36,968 annual trips in the Rural area, between 2010 and 2015.
Figure 3-2: Service type (Urban area) – dedicated and non-dedicated service

Figure 3-3: Service type (Rural area) – dedicated and non-dedicated service
As shown in Figure 3-5 to

Figure 3-7, the number of total boardings per hour decreased between 2011 and 2014 (from 2.6 to 2.53), but considerably increased in 2015 (up to 2.63). Nevertheless, the operating hours increased between 2011 and 2014 (from 67,245 to 73,363), and decreased in 2015 (down to 71,270); operating hours and boardings almost behaving in opposite directions.

Further study might be required to understand the reason that led to a reduction of specialized transit service demand, while increasing the number of operating hours; for example, providing a larger number of operating hours to Rural areas after 2011/2012, as well as the increasing number of cancelled trips in the Urban area (almost doubling).
Figure 3-5: Dedicated Urban service hours compared to the number of passengers per hour (Urban area)

Figure 3-6: Dedicated Rural service hours compared to the number of passengers per hour (Rural area)
In the case of the Rural area, the number of boardings varied between 3.22 on its highest point in 2012, to 2.19 on its lowest point in 2014; a difference of 1.03 boardings per hour. Contrary, the demand in the Urban area has been considerably consistent between 2010 and 2015, with only 0.18 boardings per hour difference (2.45 boardings on its lowest point in 2012, to 2.63 on its highest point in 2014 and 2015).

3.4 Clients and Ridership

As shown in Figure 3-8 and Figure 3-9, the user type has barely changed between 2010, 2012, 2014 and 2015; with the exception of non-dedicated service in the Rural area – a result of reporting changes rather than any specific change in the market.

Overall, the highest number of specialized transit trips is requested by ambulatory users, in both Rural and Urban areas; with the exception of non-dedicated trips in Urban areas where the “other” type of users make a higher usage of this type of service. The type of user that falls into the “other” category might help determine the specialized transit service that is required for the Urban area in the Waterloo Region, and thus should be subject to further study.

Due to the much higher number of trips in the Urban area (see Table 3-2), the demand of each user group for all trips in the Waterloo Region (both dedicated and non-dedicated services) is almost exactly the same as the Urban demand.; this is very clear when referring to Figure 3-9.

As shown in Figure 3-8, there is also a higher relative percentage of ambulatory users in the Rural Service Area than the Urban Service Area. In the Urban area, dedicated service is provided to an almost equal number of ambulatory and wheelchair/scooter users. In the Rural area, the eligibility of all seniors regardless of functional ability likely drives a higher percentage of ambulatory riders.
Additionally, attendant users seem to be consistent among both areas. For non-dedicated service, attendants and companions comprise a very small portion of total trips in both areas.

Figure 3-8: User type by dedicated service

![Dedicated Service Chart](image)

Figure 3-9: User type by non-dedicated service

![Non-dedicated Service Chart](image)
3.5 Operating Characteristics

In 2015, MobilityPLUS provided wheelchair-accessible dedicated service through 30 vans/minivans, and non-dedicated service through 21 accessible taxis under contract. In total, it operated 57,291 revenue hours of service, with an average occupancy of 2.70 passenger trips per vehicle hour. Average trip length was 9.7km and the average cost per trip in 2015 was $32.24.

Kiwanis Transit operated six dedicated vans (five in peak) with a total of about 14,500 vehicle-hours, carrying 2.59 passengers per hour. An average trip length of about 14.5km highlights one of the key service characteristics differences between the Urban and Rural service area – with much longer distances to be covered in the Rural service area.

3.6 Financial Overview

Figure 3-10 to Figure 3-12 show the total operating expenses and the total operating revenue of the Waterloo Region between 2010 and 2015. To understand how years compare one another, the operating costs and expenses show their linear trend line (left axis), overlaying with the net cost per passenger (right axis).

From the analysis done in Figure 3-5 to Figure 3-7, where 2015 shows the greatest number of passenger trips per hour and a close to average operating hours, it might have been expected for 2015 having the lowest net cost per trip than any other year since 2010. Nevertheless, when looking at Figure 3-12, 2015 shows the highest operating costs and almost the lowest operating revenue (after 2014), with a net cost per passenger of $29.82. One interesting finding is that 2010 and 2011 had the best net cost per passenger trip ($25.90 and $27.35 respectively), but offered the lowest number of vehicle hours (see Figure 3-5 to Figure 3-7). Contrary, 2014 brings the highest net cost per passenger trip ($30.00), but it also provided the highest number of vehicle hours.

As shown in Figure 3-10 to Figure 3-12, while the operating expenses have increased between 2010 and 2015 (from $8,003,701 to $10,064,883 in total), the operating revenue figures have a very slightly decreasing trend line (from $952,345 to $840,886 in total); which means that higher investment does not necessarily mean a greater benefit. In addition, the net cost per passenger seems to have increased similarly to the operating costs: much faster between 2010 and 2013 ($25.90 to $29.70 net cost per passenger, and $8,003,701 to $9,930,671 operating costs), and slowly stabilizing between 2013 and 2015 ($29.70 to $29.82 net cost per passenger, and $9,930,671 to $10,064,883 operating costs).

The above findings show that a higher number of service hours does not necessarily mean a higher number of riders, nor a lower cost per passenger. Also, net cost indicators should not be used for comparison, since these can be misleading; for example, a low net cost might hide a lack of investment in service and operations (meaning lower operating expenses); and a high net cost might be due to a higher investment in service and operations, and not due to a lack of demand.

It is also important to note that, for consistency in comparison with other communities in the next section, trips diverted to conventional transits are not counted, nor factored into this assessment. MobilityPLUS diverts a considerable portion of its trips to its accessible fixed route service (almost 30 percent in 2015), which drives the total cost per trip down and overall productivity up (See Table 3-2)
Figure 3-10: Operating expenses and revenue, compared to the cost per passenger (Urban area)
Figure 3-11: Operating expenses and revenue, compared to the cost per passenger (Rural area)

Figure 3-12: Operating expenses and revenue, compared to the cost per passenger (Total area)
4 Comparison to other Peer Services

4.1 Comparison Data

This section provides a brief comprehensive evaluation of the current specialized transit services and operations in eight regions: Durham Region, ON; Gatineau, QC; Halifax, NS; Hamilton, ON; London, ON; Saskatoon, SK; Windsor, ON; and Waterloo Region, ON (comprising both the Waterloo Urban and Rural area)\(^1\). All analyzed data have been collected from the CUTA 2014 Specialized Transit Services Fact Book.

4.1.1 Demand for Specialized Transit Service

As shown in Figure 4-1, there are two types of specialized transit services: dedicated and non-dedicated. Three out of the eight analyzed regions only offer (or report) dedicated service (Halifax, London, and Windsor); while Waterloo Region, Gatineau, and Durham Region offer close to half of each service type (56 percent, 61 percent, and 48 percent dedicated service respectively). In the case of Hamilton and Saskatoon, they both offer mainly dedicated service (82 percent and 97 percent respectively).

As shown in Figure 4-2, the number of passenger trips per hour seems to be fairly homogeneous among all analyzed regions, with the exception of Gatineau and Halifax, which have a considerably higher and lower demand than the median respectively. Contrary, the number of operating hours varies among regions, Hamilton providing a considerable higher service level than the other seven regions. When comparing the total dedicated service hours by the number of passenger trips per hour, Waterloo Region seems to fall slightly above the median (72,338 total annual service hours, with 2.45 passenger trips per hour); Waterloo Region offering a total of 74,521 annual service hours, and having a demand of 2.50 passenger trips per hour.

\(^1\) The Waterloo Region data includes both the Grand River Transit (GRT) MobilityPLUS, and Woolwich Transit Inc. o/a Kiwanis Transit authorities.
Figure 4-1: Service type – dedicated and non-dedicated service

![Service Type (2014)](image)

Figure 4-2: Dedicated service hours compared to the number of passenger trips per hour

![Provided Service (2014)](image)

Source: Data calculated by SDG, based on the CUITA raw data (Specialized Transit Services Fact Book, 2014).
The fewest number of dedicated service hours is provided by Windsor, while the highest number of total dedicated service hours is provided by Hamilton (20,407 and 222,318 respectively). Nevertheless, when comparing the passenger trips per hour, Windsor is higher than the average (showing a greater cost/benefit ratio than any other analyzed region), while Hamilton has a below average productivity (2.58 and 2.38 respectively). In addition, Halifax has the highest productivity of all eight regions (3.04 passenger trips per hour), and offers a close to average number of dedicated service hours (76,711 in total). Gatineau has the lowest productivity of all eight analyzed regions, but still offers a service level close to the median.

### 4.1.2 User Type

As shown in Figure 4-3 and Figure 4-4, the highest number of specialized transit trips is requested by ambulatory users, for both dedicated and non-dedicated services; with the exception of Hamilton.

In the case of wheelchair/scooter users, the demand is much lower for non-dedicated services than for dedicated services. The number of attendants and companions for both types of service is variable between regions. Finally, the “other” type of users is only relevant in the Waterloo Region, for non-dedicated services. The type of user that falls into the “other” category might help determine the specialized transit service that is required for the Waterloo Region, and thus should be subject to further study.

**Figure 4-3: User type by dedicated service**

<table>
<thead>
<tr>
<th>Region</th>
<th>Ambulatory</th>
<th>Wheelchair/Scooter Users</th>
<th>Attendants</th>
<th>Companions</th>
<th>Other (specified)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterloo Region, ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durham Region, ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gatineau, QC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Halifax, NS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamilton, ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London, ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saskatoon, SK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windsor, ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Dedicated Service (%) (2014)](image-url)
4.1.3 Operating Costs

Figure 4-5 shows the total operating expenses and the total operating revenue for all eight analyzed regions. To understand how regions compare one another, the axes have been placed in the median values ($6,061,885 operating expenses, and $363,758.50 operating revenue), making it easier to identify the regions that fall above or under the median values. Also, the size of each region varies depending on the net operating cost per passenger; the higher the net cost per passenger, the larger the circle in the figure.

As shown in Figure 4-5, there seems to be a linear trend line among all regions, where Durham Region, Halifax and Saskatoon seem to have similar operating expenses and revenue. Hamilton has the highest operating expenses ($17,726,516), but has also the highest operating revenue ($1,510,226); nevertheless, it does not bring the lowest net cost per passenger ($27.51), the median being $26.22. In second position comes Waterloo Region, with $10,030,875 of operating expenses and $839,330 of operating revenue, but the net cost per passenger ($30.00) is higher than both the median and the one in Hamilton.

One interesting finding is that Windsor has one of the best cost/benefit ratios, but offers the lowest number of vehicle hours (see Figure 4-2), this only being dedicated service. Also, it brings a slightly lower net cost per passenger ($24.93) than the median. Contrary, Hamilton brings one of the highest net cost per passenger ($27.51), but it also provides the highest number of vehicle hours.
The above findings show that a higher number of service hours does not necessarily mean a higher number of riders, nor a lower cost per passenger. Also, net cost indicators should not be used for comparison, since these can be misleading; for example, a low net cost might hide a lack of investment in service and operations (meaning lower operating expenses); and a high net cost might be due to a higher investment in service and operations, and not due to a lack of demand.”
Figure 4-6: Operating expenses and revenue, compared to the cost per passenger – Waterloo Region (Urban and Rural area)
5 Accessibility for Ontarians with Disabilities Act Compliance

5.1 Background

The Accessibility for Ontarians with Disabilities Act (AODA, 2005) is designed to provide a high degree of accessibility to Ontario residents and has specific implications for transit services. Regulations published under the Act (O.Reg 429/07 and O. Reg 191/11) have required phased implementation of a variety of accessibility measures related to vehicles, technology, infrastructure, service guidelines and policies and eligibility.

At the time of the last Business Plan, many of these milestones had yet to be reached, and there were a number of tasks for both MobilityPLUS and Kiwanis Transit to accomplish. As of January 1, 2017, the final milestone in the regulations has been reached, and both systems are now required to be fully compliant with the integrated Accessibility Standard (IASR) (O. Reg 191/11) and the Customer Service Standards (O.Reg 429/07).

This section reviews the current status of compliance for both MobilityPLUS and Kiwanis Transit and makes recommendations to address any outstanding issues.

5.2 Assessment Review

This review was completed through discussions with staff, a review of published information (including websites) and stakeholder consultation, comparing current and planned initiatives against the requirements of the regulations.

As noted in Section 3, GRT currently operates Route 21 in the Rural service area primarily served by Kiwanis Transit. This conventional fixed route service creates a context where the relationship between the Urban and Rural service areas are blurred – since traditionally there has been no fixed route service in the Rural area, and the division of operating responsibilities within the two areas was clear.

The applicability of some of the AODA regulations are not clear, as result of the ambiguous relationship between Kiwanis Transit and GRT. Kiwanis Transit, while funded by the Region of Waterloo is not simply a contractor providing service in a specific geographic area – it is a separate organization with its own Board of Directors that is able to establish its own eligibility, operating standards and fares. However, the service is fully funded by the Region, and the service complies with Regional transit service standards. Further, the Region, though GRT operates Route 21 – a conventional fixed route service serving Woolwich Township and Route 77 – a flex-route service
serving Wilmot Township. Each of these services are funded by the Region, supported by a regional transit levy on ratepayers in each of the Townships. A similar arrangement is used to provide specialized transit and service for seniors in North Dumfries, but this service is operated by GRT MobilityPLUS.

The IASR has specific elements that apply when conventional transportation services and specialized transportation services are provided by separate transportation service providers in the same jurisdiction. For the purposes of this assessment, Kiwanis Transit and GRT MobilityPLUS were assumed to represent this case.

5.3 Requirements Effective January 1, 2017

As of January 1, 2017, there are two new requirements that specifically affect the delivery of service for specialized transit:

- New eligibility criteria
- Fare parity

5.3.1 Eligibility Requirements

Effective January 1, 2017, specialized transit operators are required to establish three categories of eligibility as follows:

- Unconditional eligibility – for person with a disability that prevents them from using conventional transportation services.
- Temporary eligibility – for a person with a temporary disability that prevents them from using conventional transportation services.
- Conditional eligibility – for a person with a disability where environmental or physical barriers limit their ability to consistently use conventional transportation services.

Further, the regulations note that “A specialized transportation service provider may deny requests for specialized transportation services to persons who are categorized as having temporary eligibility or conditional eligibility if the conventional transportation service is accessible to the person and the person has the ability to use it.”

5.3.2 Fare Parity

Effective January 1, 2017, where conventional transportation services and specialized transportation services are provided by separate transportation service providers in the same jurisdiction, the specialized transportation service provider cannot charge a fare that is greater than the highest fare charged for conventional transportation service. This means that Kiwanis Transit cannot charge more than GRT for a similar trip.

Other fare parity regulations requiring GRT MobilityPLUS to have the same fare, fare structure and fare media as GRT’s conventional services came into effect on July 1, 2012, six months prior to the January 1, 2013, AODA compliance implementation date.

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2 191/11 Section 63 citation.
5.4 Compliance Issue Areas

5.4.1 MobilityPLUS

MobilityPLUS has achieved compliance incrementally with each annual milestone in the AODA legislation, but more attention to some compliance issues is recommended, either to enhance the customer experience of accessibility, or to remove all doubt about the level of compliance.

- **Clause 63 – Categories of Eligibility.** As described above, this requirement came into effect on January 1, 2017.

  **Assessment**

  Nominally, GRT MobilityPLUS complies with this requirement. Published material indicates the three categories of eligibility, and the intent is to assess applicants in this manner. This represents a new market of riders for GRT MobilityPLUS, and GRT is now required to assess applications from all applicants with a disability, including those with a cognitive disability and without a coincident physical disability. However, GRT does not currently have the application form nor the assessment process in place to adequately assess applicants against these categories and criteria. This in itself does not make GRT non-compliant, so long as the system adheres to the requirements of Clause 64 (Eligibility Application Process) which requires an assessment to be completed within 14 days, following which, temporary eligibility is granted until the process is complete.

  This puts GRT MobilityPLUS in the position of granting eligibility to all applicants, including those that might be granted conditional eligibility, or found eligible only for the accessible fixed route system. Over time, this will amount to a significant cost issue, and will add, at least temporarily, more passengers.

  **Recommendation**

  GRT MobilityPLUS should develop and implement updated application and assessment processes as soon as possible, so that assessments can be tailored to the specific individual and the new criteria. In the interval, temporary eligibility should continue to be granted to all applicants who have a disability.

- **Clause 66 – Fare Parity.** This clause requires specialized transit and conventional transit to maintain the same fare structures and media for both systems, or provide a suitable accessible alternative (for media).

  **Assessment**

  Currently, GRT MobilityPLUS does not provide transfers to riders using both the conventional fixed route and MobilityPLUS service. This point is irrelevant, since MobilityPLUS riders are allowed free transportation on the conventional system when presenting their identification. However, these requirements should be considered with any changes to the fare structure over time, and with the implementation of smartcard services.

  **Recommendation**

  No action is required at this time.
• **Clause 71 – Booking.** This clause, which came into effect January 1, 2014, requires service providers to provide same-day service to the extent it is available, and if not available, to accept booking requests up to three hours before the published end of service on the day before the intended day of travel.

**Assessment**

At the outset of this study, MobilityPLUS has had booking staff available three hours prior to the published end of service on the day before the intended day of travel but in practice was only able to accept trip bookings until a minimum of 24 hours in advance, mostly due to day-before scheduling and budget constraints. This would appear to contravene the spirit of the clause, which is intended to give people access to next day trips late in the day, if same day travel is not available.

**Recommendation**

As a result of this study, GRT has ceased to require the minimum advance booking time, and accepts calls up until the required time the day before travel, with a good faith effort to book travel. In the short- and medium-term, MobilityPLUS should explore ways to expand travel capacity for short-term, or even same day trips (see Section 6). Instructions to customers should still recommend calling on the second day before the trip.

• **Clause 72 – Trip Restrictions.** This clause prohibits specialized transit providers from limiting the availability of trips by a) restricting the number of trips that can be requested, or b) implementing a policy or practice that unreasonably limits the availability of transportation.

**Assessment**

MobilityPLUS has a potential compliance issue in three areas with respect to this clause, though the strict applicability of the clause and the current policy is vague.

Currently, MobilityPLUS prioritizes:

• Dialysis trips;
• Medical trips by allowing these trips to be booked sooner than other trips; and
• Work, school and medical trips by allowing only these trip purposes to be booked as subscription trips.

The prioritization of dialysis trips, apart from creating a non-compliance issue, also runs counter to future efforts to effectively manage dialysis transportation.

**Recommendation**

GRT MobilityPLUS should revise its policies to:

• Consider dialysis trips similar to any other trip purpose (including for subscription trips);
• Provide the same booking window for all trips, regardless of trip purpose; and
• Define subscription trip availability based on frequency and regularity, without regard for trip purpose.
5.4.2 Kiwanis Transit

On the basis that Kiwanis Transit and GRT MobilityPLUS are separate providers serving the same jurisdiction, there are two minor areas of concern with respect to AODA eligibility.

Since Route 21 operates within Woolwich Township, serving Elmira with connections to Conestoga Mall, the regulations can be interpreted to place requirements on the specialized transit service that operates in the same area.

This means that Woolwich residents who live in an area served by Route 21 (generally considered within 400m of a stop, though this is not defined in the AODA regulations) must have equal access to service whether via the conventional transit service or specialized transit service.

- **Clause 66 – Fare Parity.** As noted above, this clause requires specialized transit and conventional transit to maintain the same fare structures and media for both systems, or provide a suitable accessible alternative (for media).

  *Assessment*

  For eligible riders living within the service area of Route 21, fare parity must be maintained. This means that people living within 400m of a Route 21 stop, who cannot use the services of Route 21, are eligible for specialized transit service, and must be able to access the service with the same fare and fare media as other riders. This would require a free transfer to Route 21 for those riders able to use the service, but requiring Kiwanis Transit to get to the stop.

- **Clause 70 – Hours of Service.** This clause requires specialized transit and conventional transit to maintain the same hours of service in the same service areas.

  *Assessment*

  Currently, Route 21 operates on weekdays until about 7 pm in Elmira and 7:20 pm in St. Jacobs. Hours of service parity would require Kiwanis Transit to operate the same hours – but only for those riders within the serviced area of Route 21.

  *Recommendation*

  With respect to Clause 66 and Clause 70, to remove any doubt, Kiwanis Transit should identify an appropriate service area for conventional fixed routes, including potential future routes, and establish fare parity and hours of service parity within that zone. Section 6 includes a proposal for additional service that may be effective in addressing hours of service.

  Note also that as a flex route that serves people with disabilities, Route 77 and other “bus plus” services can be considered specialized transportation services and do not fall under these requirements.
5.5 AODA Compliance Recommendations Summary

5.5.1 MobilityPLUS

To enhance the accessibility of the system and ensure the highest degree of compliance with AODA regulations, it is recommended that GRT MobilityPLUS:

- Develop and implement updated application and assessment processes as soon as possible, so that assessments can be tailored to the specific individual and the new criteria. In the interval, temporary eligibility should continue to be granted to applicants without a physical disability.

- Continues to accept calls up until the required time the day before travel, with a good faith effort to book travel. In the short- and medium-term, MobilityPLUS should explore ways to expand travel capacity for short-term, or even same day trips (see Section 7). Instructions to customers should still recommend calling on the second day before the trip.

- Revises its policies to:
  - Consider dialysis trips similar to any other trip purpose (including for subscription trips);
  - Provide the same booking window for all trips, regardless of trip purpose; and
  - Define subscription trip availability based on frequency and regularity, without regard for trip purpose.

5.5.2 Kiwanis Transit

To enhance the accessibility of the system and ensure the highest degree of compliance with AODA regulations it is recommended that Kiwanis Transit:

- Identify an appropriate service area for conventional fixed routes, including potential future routes, and develop a plan to establish fare parity and hours of service parity within that zone (see Section 7).
6 Analysis of Specialized Transit Market and Ridership

6.1 Existing Specialized Transit Ridership

Existing ridership was established in two separate perspectives:

- By mode – according to the vehicle used for transportation (see Table 6-1)
- By market – according to the rider’s eligibility for the service (see Table 6-2)

These data were used as the primary inputs to the ridership forecast for 2021.

6.1.1 Existing Ridership by Mode

Table 6-1 shows the existing (2015) ridership for both the Urban and Rural service areas. In the Urban service area (including North Dumfries), MobilityPLUS carried approximately 225,000 riders, plus about 70,000 trips were taken using the Taxi Scrip program. In addition to these trips, an estimated 112,000 trips were taken on GRT’s conventional accessible service by MobilityPLUS registrants, for a total of more than 400,000 trips. This is about 10 percent below the 2016 forecast of 455,000 trips from the previous Business Plan.

Table 6-1: Existing Ridership by Mode (Urban and Rural area)

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated Van</td>
<td>154,325</td>
<td>39,200</td>
<td>193,525</td>
</tr>
<tr>
<td>Ambulatory</td>
<td>79,500</td>
<td>27,100</td>
<td>106,600</td>
</tr>
<tr>
<td>Wheelchair</td>
<td>60,500</td>
<td>8,000</td>
<td>68,500</td>
</tr>
<tr>
<td>Attendants</td>
<td>14,325</td>
<td>4,100</td>
<td>18,425</td>
</tr>
<tr>
<td>Taxi</td>
<td>69,325</td>
<td>7,800</td>
<td>77,125</td>
</tr>
<tr>
<td>Ambulatory</td>
<td>55,750</td>
<td>5,550</td>
<td>61,300</td>
</tr>
<tr>
<td>Wheelchair</td>
<td>13,575</td>
<td>2,250</td>
<td>15,825</td>
</tr>
<tr>
<td>Total Pre-booked</td>
<td>223,650</td>
<td>47,000</td>
<td>270,650</td>
</tr>
<tr>
<td>Taxi Scrip</td>
<td>69,310</td>
<td>0</td>
<td>69,310</td>
</tr>
<tr>
<td>Conventional</td>
<td>112,725</td>
<td>2,500</td>
<td>115,225</td>
</tr>
<tr>
<td>Total</td>
<td>405,750</td>
<td>49,500</td>
<td>455,250</td>
</tr>
</tbody>
</table>
Kiwanis Transit, service the Rural townships (excluding North Dumfries), carried about 10 percent of the trips carried on MobilityPLUS, including 39,000 van trips and about 8,000 trips on contracted taxis. This is about 5 percent higher than the forecast of forecast of 45,000 trip from the previous Business Plan.

In total, the 2015 ridership amounts to approximately 91 percent of the previous forecasts for 2016, and 2016 estimates for the two services bring the estimated 2016 ridership to about 95 percent of the previous estimates.

The fact that the Rural service has grown faster than predicted and the Urban service slower than predicted is a consideration for the future forecasts developed in the next section.

### 6.1.2 Existing Ridership by Market

With the growth of different types of service as part of the family of services, it is important to understand the market segmentation of the Region’s specialized transit ridership. Table 6-2 shows this breakdown for both the Urban service area (including North Dumfries) and the Rural service area (excluding North Dumfries).

**Table 6-2: Existing Ridership by Market (Urban and Rural area)**

<table>
<thead>
<tr>
<th>Passenger Category</th>
<th>Annual trips – Urban</th>
<th>Annual Trips - Rural</th>
<th>Annual Trips - Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Clients</td>
<td>Included in general population trips</td>
<td>14,500</td>
<td>14,500</td>
</tr>
<tr>
<td>General Population</td>
<td>175,715</td>
<td>12,200</td>
<td>187,915</td>
</tr>
<tr>
<td>Dialysis</td>
<td>38,000</td>
<td>2,900</td>
<td>40,900</td>
</tr>
<tr>
<td>People with cognitive disabilities</td>
<td>10,000</td>
<td>14,650</td>
<td>24,650</td>
</tr>
<tr>
<td>Seniors</td>
<td>0</td>
<td>2,750</td>
<td>2,750</td>
</tr>
<tr>
<td>Taxi Scrip</td>
<td>69,310</td>
<td>0</td>
<td>69,310</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>303,025</strong></td>
<td><strong>47,000</strong></td>
<td><strong>350,025</strong></td>
</tr>
<tr>
<td>Conventional Transit</td>
<td>112,725</td>
<td>2,500</td>
<td>115,225</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>415,750</strong></td>
<td><strong>49,500</strong></td>
<td><strong>465,250</strong></td>
</tr>
</tbody>
</table>

Some important differences to note in the market groups between Urban and Rural service areas include:

- Service to seniors in the Rural service area;
- Service to the community of people with cognitive disabilities in the Rural service area;
- Availability of conventional accessible transit services and taxi scrip program in the Urban area; and
- Service to dialysis patients in both areas, though the rate of dialysis trips as portion of total service in the Urban area is almost three times that of the Rural service area.
6.2 Future Ridership Estimates

6.2.1 Forecast Methodology

Determining future ridership is critical to the effective planning for MobilityPLUS and Kiwanis Transit. For this Business Plan, the methodology used differs from that used in the past plans. In those plans, total ridership for each area was forecast on the basis of trips per capita, combined with the projected population growth, then distributed among the modes.

Figure 6-1 shows an overview of the ridership forecasting process, with separate forecast developed for each market stream.

Figure 6-1: Ridership Forecast Methodology

In this case, a number of anticipated changes in specific market influences led to the decision to apply forecast to each of the markets separately, using different factors for the Urban and Rural service areas, where relevant, and then creating an aggregate forecast.
Specific market areas for growth include:

- **Dialysis** – expected to increase substantially, and have a corresponding greater impact in absolute trip growth in the Urban area compared to the Rural area.

- **Revised eligibility criteria** – new AODA regulations in effect as of January 1, 2017 require MobilityPLUS to consider applications from all applicants, including those with cognitive disabilities. This represents a new market for the Urban service.

- **Conventional transit riders** – the introduction of the ION LRT service in 2018 and further growth in accessible conventional transit in the Rural area will enhance opportunities for eligible riders to use these services.

### 6.2.2 Growth Rate Inputs

Separate growth rates for each market groups were developed to guide the future ridership projections.

**Dialysis Transportation**

Transportation of dialysis patients now represents approximately 15 percent of the overall specialized transit service and closer to 20 percent in the Urban area.

Future growth rates for dialysis were obtained in consultation with staff of the renal unit at Grand River Hospital, who outlined the following considerations:

- For the five-year planning horizon of this Business Plan, prevalence of patients requiring dialysis treatment is expected to grow at up to 5 percent annually, resulting in a 28 percent increase in dialysis patients.

- MobilityPLUS provides the majority of transportation services to outpatients on dialysis.

- Moderating impacts of increased home dialysis programs and a planned dialysis unit at Cambridge hospital need to be considered:
  - An new unit at Cambridge is expected to be online with the planning period for this plan; however, it will also likely replace some or all of the capacity currently at the Freeport Campus.
  - Even if the overall capacity increase is small, the presence of a unit in Cambridge will lead to productivity improvements for Cambridge-based trips.

- Despite the availability of an ION stop at the hospital property entrance, staff do not expect a significant portion of patients currently using MobilityPLUS to shift to ION, nor for patients currently driving to the hospital to shift.

Taking all of these factors into account, a growth in dialysis patients was set at 4 percent per year, with consideration for productivity improvements once the Cambridge unit comes online. This results in a projected future dialysis ridership of 44,600 for MobilityPLUS and 3,500 for Kiwanis Transit.
Program Clients and General Population

While Kiwanis Transit was able to provide specific ridership for both program clients and the general population, this information was not available for the Urban area service. In many instances, it is more effective to separate these markets and forecast the growth in program transportation demands based on projected enrolment for each of the various programs.

However, in discussion with a number of the stakeholders responsible for day programs, it was noted that budget constraints in this area are quite rigid, and no agency forecast an expansion to their program capacities. As a result, day program transportation is not expected to change at a rate different from the general population growth for the market group.

Table 6-3 shows past, current, and projected populations for the service areas. The 2011 and 2016 values were taken from the federal census, forecasts for 2021 are planning estimates provided by the Region of Waterloo. These forecast planning values have typically exceeded actual values in previous estimates by up to 10 percent.

These annual increases over the last five years of between 1 percent and 2 percent, with the higher ranges typically in the lower population township communities. For the upcoming five years, the 2021 forecasts show considerable higher growth rates for the Urban area, and fairly consistent growth rates for the Rural area. In examining these forecast numbers; however, it is clear that they were based on high projected estimates for 2011 and 2016, with projected growth rates continuing in the 1 percent to 1.5 percent range.

Table 6-3: Existing and Future Population

<table>
<thead>
<tr>
<th></th>
<th>2011 Actual</th>
<th>2016 Census</th>
<th>Annual Increase</th>
<th>2021 Forecast</th>
<th>Annual Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchener</td>
<td>219,153</td>
<td>233,222</td>
<td>1.25%</td>
<td>257,504</td>
<td>2.0%</td>
</tr>
<tr>
<td>Cambridge</td>
<td>126,748</td>
<td>129,920</td>
<td>0.49%</td>
<td>144,811</td>
<td>2.2%</td>
</tr>
<tr>
<td>Waterloo</td>
<td>98,780</td>
<td>104,986</td>
<td>1.23%</td>
<td>145,909</td>
<td>7.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>444,681</strong></td>
<td><strong>468,128</strong></td>
<td><strong>1.03%</strong></td>
<td><strong>548,224</strong></td>
<td><strong>3.3%</strong></td>
</tr>
<tr>
<td>Wellesley</td>
<td>10,713</td>
<td>11,260</td>
<td>1.00%</td>
<td>11,577</td>
<td>0.5%</td>
</tr>
<tr>
<td>Wilmot</td>
<td>19,223</td>
<td>20,545</td>
<td>1.34%</td>
<td>22,293</td>
<td>1.7%</td>
</tr>
<tr>
<td>Woolwich</td>
<td>23,145</td>
<td>25,006</td>
<td>1.57%</td>
<td>27,332</td>
<td>1.8%</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>53,081</strong></td>
<td><strong>56,811</strong></td>
<td><strong>1.37%</strong></td>
<td><strong>61,202</strong></td>
<td><strong>1.5%</strong></td>
</tr>
<tr>
<td>North Dumfries</td>
<td>9,334</td>
<td>10,215</td>
<td>1.84%</td>
<td>10,728</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>507,096</strong></td>
<td><strong>535,154</strong></td>
<td><strong>1.08%</strong></td>
<td><strong>620,154</strong></td>
<td><strong>3.1%</strong></td>
</tr>
</tbody>
</table>

Taking this into account, the growth rate used for the population growth-related portions of the demand forecasts was established as:

- 2.0 percent for the Rural service area (8 percent over five years)
- 1.75 percent of the Urban service area (9 percent over five years)

This rate was applied to the general population demand as well as program-related demand.
For seniors, the growth rate for the age cohort from 65 to 69 years of age up to over 85 years of age were calculated, resulting in growth rates for seniors’ transportation demand (for those without disabilities) of about 4 percent of the Rural area.

These rates of increase result in future forecasts for this market group of 210,000 rides on MobilityPLUS and 29,000 on Kiwanis Transit.

People with Cognitive Disabilities

The new AODA regulations with respect to eligibility opens an new market are for MobilityPLUS in the Urban area. Except for the limited commuter bus service, this is a market which has not traditionally been served. In the Rural area, this market is well-established as part of the service.

To determine the projected demand for this market in the Urban area, the first step was to compare to the Rural area, where people with cognitive disabilities are already eligible. As shown in Table 6-2, this market represents almost one-third of the Rural service ridership, indicating an almost 50 percent increase in projected demand in the Urban area, if the same ratio were to hold. This comparison was discounted for several reasons, primarily that program clients in the Rural area have few other choices and must travel much longer distances. The absence of conventional transit increases specialized transit demand and the distances traveled also reduces the personal transportation of these individuals, since it us harder for family caregivers to accommodate these longer trips. For these reasons, this kind of comparison was rejected.

From this point, a first principles approach was developed which examined the overall population potential for this market within the Urban area, based on local demographics and statistics from the Canadian Survey on Disability (CSD). The demand projections were developed with the following steps:

- **Step 1 – Determine overall market population**
  - The CSD indicates that the prevalence of individuals with cognitive disability in the population is about 0.53 percent\(^3\). With a projected Urban population of approximately 550,000 in 2021, this equates to about 2,900 people.

- **Step 2 – Determine the potential number of applicants from among the overall group**
  - The CSD indicates that about 85 percent of the total population with cognitive disabilities fall into the “mild” category, and few if any of this group would be unable to use conventional accessible transit. The disabilities of the remaining 15 percent of this group fall into a classification of moderate, severe or profound.
  - Also, about 40 percent of this group have a co-incident physical disability, which would mean that they are already eligible for MobilityPLUS services, and will be registered if they require the service.
  - Applying these two overlapping factors (assuming all of the 15 percent of the market with a disability greater than “mild” are part of the coincident physical disability group) leaves a market group of approximately 1,700 individuals with a mild disability and no coincident physical disability – who could potentially apply for service.

\(^3\) CSD citation.
• Step 3 – Determine the number potential eligible applicants, and the potential distribution to family of service modes
  • For this step, individuals in the potential market were assumed to have a range of disabilities relative to their ability to use the various transit modes available from GRT. For this analysis, this range of disabilities was assumed to be normally distributed and a hypothetical distribution was developed.
  • Applying the characteristics of a normal distribution resulted in the following estimates:
    - Approximately 260 with more than above average functionality with respect to transportation;
    - Approximately 600 with above average functionality; and
    - Approximately 600 with below average functionality.

• Step 4 – Apply these estimates to potential eligibility review outcomes
  • The more than above average group was assumed to have no restriction in their ability to use transit, and their eligibility outcome is expected to be for conventional accessible transit (260 individuals).
  • The above average group was assumed to fall across the threshold of being able to use conventional accessibility transit and requiring assistance to do so. For this estimate, 35 percent of this group (210 individuals) were assumed to have no restriction, while the remaining 390 could use conventional accessible transit with the assistance of travel training or a companion.
  • The below average group was similarly divided, in the opposite ratio, meaning that about 65 percent (390 individuals) could use conventional accessible transit with the assistance of travel training or a companion, and the remaining 210 individuals would have conditional eligibility for family of services modes.

Table 6-4 shows the summary result of these steps – then number of potential registrants in each category.

**Table 6-4:** Potential Market Demand from people with cognitive disabilities

<table>
<thead>
<tr>
<th>Eligibility</th>
<th>Potential Market Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessible Conventional Transit Only</td>
<td>470</td>
</tr>
<tr>
<td>Travel Training or Companion</td>
<td>780</td>
</tr>
<tr>
<td>Conditional Family of Services</td>
<td>210</td>
</tr>
</tbody>
</table>

• Step 5 – Determine potential trips for the market of 210 new registrants
  • For this purpose, potential trips were calculated based on a series of assumptions for work travel, day program travel and Other travel.
  • Total trip potential was calculated, then a high and low range of modal split was established to estimate potential ridership:
    - Work Travel assumptions
      - Participation rate: 15 percent of working age adults
      - Trip rate: 2 trips per day, 3 days per week, minus 10 percent for absenteeism
      - Total: 9,000 annual trips
- Day Program Travel
  o Participation rate: 60 percent of adults, 25 percent of seniors
  o Trip rate: 2 trips per day, 5 days per week, minus 10 percent for absenteeism
  o Total: 55,000 annual trips
- Other Travel
  o Participation rate: 100 percent
  o Trip rate: 2 trips per day, 1.5 days per week
  o Total: 34,000 annual trips

• Step 6 – Apply high and low estimates of modal split for MobilityPLUS
  • High Range Assumptions:
    - Work trips: 25 percent
    - Day program trips: 90 percent
    - Other trips: 10 percent
  • Low Range Assumptions
    - Work trips: 20 percent
    - Day program trips: 75 percent
    - Other trips: 10 percent

Table 6-5 shows the summary of these calculations, with a forecast ranging from a low of about 46,500 annual trips to 55,150 annual trips.

Table 6-5: Potential Market Demand from people with cognitive disabilities

<table>
<thead>
<tr>
<th></th>
<th>Work Trips</th>
<th>Day Program Trips</th>
<th>Other Trips</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Range</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modal Split</td>
<td>25%</td>
<td>90%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Annual Trips</td>
<td>2,250</td>
<td>49,500</td>
<td>3,400</td>
<td>55,150</td>
</tr>
<tr>
<td><strong>Low Range</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modal Split</td>
<td>20%</td>
<td>75%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Annual Trips</td>
<td>1,800</td>
<td>41,250</td>
<td>3,400</td>
<td>46,450</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9,000</td>
<td>55,000</td>
<td>34,000</td>
<td>97,000</td>
</tr>
</tbody>
</table>

Using an average value of this range gives a forecast of 50,800 for MobilityPLUS; increasing the Kiwanis Transit ridership at the average growth rate results in a projection of 15,800 trips.

Seniors

For Kiwanis Transit, the projection for seniors’ trip (based on age criteria only) was based on the 4 percent projected seniors’ growth rate, resulting in a future forecast of 3,350 trips by 2021.

TaxiSCRIP

Current TaxiSCRIP ridership is limited by the budget established for the program. In recent years, this has been sufficient to fund approximately 69,000 annual trips at an annual cost of approximately $320,000 ($4.60 per trip).
The TaxiSCRIP has proven to be an effective and popular program. Considerations for budget increases for this program are presented in the following chapter.

Conventional Accessible Transit Service

The use of accessible conventional transit services by MobilityPLUS registrants has shown a varying trend over the last several years. From 2009 through 2013, use of these services grew steadily from just more than 90,000 annual trips to almost 144,000 trips – an average of more than 12 per cent annually. In 2014, however, conventional ridership declined by about 12 percent, then declined by another 2 percent in 2015. This trend has reversed again in 2016, with estimated ridership up a little more than 10 percent.

A significant factor in this ridership will be the introduction of the ION LRT service beginning in 2018. With this high quality, very accessible service serving major destinations throughout Kitchener and Waterloo, MobilityPLUS registrants are expected to increase the service. With this in mind, and assuming that the recent reversal in the ridership trend holds, use of conventional accessible transit is projected to grow by 60 percent over the next five years. This represents annual increases of eight to ten percent in most years, and about 15 percent in 2018 with the introduction of ION.

For the Rural area, use of conventional transit represents a potential new market area. With Route 21 now serving Elmira with connections to Conestogo Mall and Route 77 serving Wilmot, there is the opportunity to begin using these services as part of a combined trip. A nominal value of 5 percent of trips was used, resulting in 2,500 trips. This represents about 10 rides per day, including the near-term potential for additional routes serving Wellesley Township. This does not include trips where Kiwanis Transit would take riders to a transfer to ION.

6.2.3 Forecast Summary

Table 6-6 shows a summary of the projected 2021 ridership, with a total of 555,000 for MobilityPLUS, increasing from 415,675 in 2015 and 56,650 for Kiwanis Transit, increasing from 50,000 in 2015.

Table 6-6: Projected Ridership by Market (Urban and Rural area)

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Clients</td>
<td>Inc.</td>
<td>15,750</td>
<td>15,750</td>
</tr>
<tr>
<td>General Population</td>
<td>210,000</td>
<td>13,250</td>
<td>223,250</td>
</tr>
<tr>
<td>Dialysis</td>
<td>44,600</td>
<td>3,500</td>
<td>48,100</td>
</tr>
<tr>
<td>People with cognitive disabilities</td>
<td>50,800</td>
<td>15,800</td>
<td>66,600</td>
</tr>
<tr>
<td>Seniors</td>
<td>0</td>
<td>3,350</td>
<td>3,350</td>
</tr>
<tr>
<td>Taxi Scrip</td>
<td>69,300</td>
<td>0</td>
<td>69,300</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>374,700</strong></td>
<td><strong>51,650</strong></td>
<td><strong>426,350</strong></td>
</tr>
<tr>
<td>Conventional Transit</td>
<td>180,300</td>
<td>5,000</td>
<td>185,300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>555,000</strong></td>
<td><strong>56,650</strong></td>
<td><strong>611,650</strong></td>
</tr>
</tbody>
</table>
Excluding conventional transit trips, MobilityPLUS is projected to grow from 292,960 trips in 2015 to 374,700 – an overall increase of about 28 percent. For Kiwanis Transit, the increase is about 8.5 percent. The difference in these values is largely attributable to the introduction of the new market of people with cognitive disabilities on MobilityPLUS, which alone accounts for a 17 percent increase.

6.3 Asset Requirements

Using the values from Table 6-6 and average annual trips per vehicle and trips per hour, a simple estimate of the additional costs with status quo service delivery is possible.

For MobilityPLUS, with 53 percent of trips accommodated on dedicated vans and 47 percent on contracted taxis, approximately 44,000 additional van trips can be expected. At approximately 2.7 trips per hour (2015), this would equate to an additional 16,300 vehicle hours of service. At approximately 2,300 annual hours per active vehicle, this equates to an additional seven vehicles by 2021. On this basis, at least one new vehicle would be required in each year of the plan. This would also require another 8 to ten drivers over the life of the plan.

For Kiwanis Transit, with 75 percent of trips accommodated on dedicated vans and 25 percent on contracted taxis, approximately 3,000 additional van trips can be expected. At approximately 2.6 trips per hour (2015), this would equate to an additional 1,100 vehicle hours of service. At approximately 3,000 annual hours per active vehicle, this equates to an additional half vehicle by 2021. On this basis, one new vehicle and one new driver would be necessary for the fleet during this time.
7 Service Development and Support Initiatives

7.1 Family of Services Concept

Traditionally, transit services have been provided with two main elements: fixed route service and specialized transit for people with disabilities. With traditional high-floor transit vehicles, the need for specialized transit was clear since anyone with any kind of physical disability was almost certainly precluded from using the fixed route service.

With the emergence of accessible transit coaches, and transit systems’ desire to tailor vehicle assignments to particular needs, the concept of a “family of services” developed. This began simply with the addition of taxi services to the suite of resources available to operators, then expanded into a wider range of vehicles and service delivery types.

New members of the family of service include:

- Accessible fixed route services, particularly BRT and LRT services with the enhanced accessibility offered at stops and on-board vehicles.
- New approaches to service delivery, including:
  - Semi-fixed routes for paratransit services following consistent patterns;
  - Transfer options to link trips between different communities or to consolidate trips to common destination; and
  - Variable vehicle assignments suited to different capacity requirements.

The principle of the family of services is to tailor the vehicle and service to the needs of the individual, sometimes on a trip by trip basis, to ensure that the customer get where they need to go, with a service that meets their accessibility needs, and in a way that is most efficient for the service provider.

7.2 Region of Waterloo Family of Services Development

Currently, MobilityPLUS has several elements that could comprise a family of services, but steps are necessary to formalize the relationship between each element and its role in the system and ensure that eligibility assessment is geared to identifying the proper service for the customer at the appropriate time.
7.2.1 ION and Conventional Fixed Route Service

The ION LRT system, scheduled to begin service early in 2018, represents a significant opportunity to continue to accommodate trips by eligible riders on system elements other than the door-to-door van service. The accessibility of the ION stops and vehicles removes a number of barriers from people with disabilities, including riders with cognitive disabilities, where the simplicity of the system makes it easier for many to use effectively.

To maximize the advantage of ION, both MobilityPLUS and Kiwanis Transit should work with their customers to orient them to the advantages of using the LRT service and accessing destinations close to stops. This means that a rider might use MobilityPLUS or Kiwanis Transit to ride to an LRT stop, and then complete their journey on the LRT. Conversely on the return trip, the rider would use the LRT to reach a transfer point and continue their trip with specialized transit.

During the assessment, there was discussion of the opportunity to connect trips at both ends of the LRT trip – delivering a passenger from home to the LRT, and then having a separate van meet them at the LRT destination to continue their trip to the final destination. This could be necessary for passengers whose origin and destination are not accessible from the LRT. While this is possible, it is not considered a priority for the strategy. The additional coordination required to make the transfers at both ends of the LRT trip makes the process more complex, and given the relative short length of the LRT, it would likely only be effective for longer LRT trips. For shorter trips, it is likely more effective just to carry the passenger directly from origin to destination.

The introduction of ION in 2018 is also likely to have a one-time moderating effect on other MobilityPLUS ridership, as a new alternative is added to the family.

Growth in the use of conventional accessible bus services by people with disabilities has already begun to lead to capacity problems on some routes in peak periods. MobilityPLUS and GRT should monitor this situation closely to ensure that the customer experience is not unduly affected by these capacity issues.

7.2.2 Dialysis Trips

As noted in Section 6, the growth in dialysis is expected to continue throughout the period of this Business Plan, and continue to be pressure on the system. The projected growth in dialysis trips of more than 20 percent over the life of the plan is a warning to adjust the way dialysis trips are served, if at all.

One alternative for discussion is to transition out of the dialysis transportation business. Dialysis transportation is unique among any other patient requirements and though other systems do offer dialysis transportation, it is by no means the norm. Often in other Municipalities the transportation of passengers who need dialysis is tied to whether they have a disability, and qualify on that basis for specialized transit. Otherwise, the person would not be offered transit services for dialysis. Additionally, in some municipalities the bulk of the dialysis transportation rests with the Non-Emergency Medical Transportation (NEMT) provider(s). Given that Kitchener Waterloo has a NEMT provider, this would be a possible alternative to be explored, by GRT.
Given the history of providing this service, eliminating it would be a significant step and one that would require political support to achieve. Grandfathering existing clients may be one way of easing the transition.

If MobilityPLUS decides to stay in the dialysis transportation market, it will need to change the way it provides the service, funds it, or both. During the course of this study, the team met with representatives of the renal unit at Grand River Hospital who outlined some of the growth information used in the future demand assessment. As part of that discussion, it was made clear that the renal unit, and even the hospital, has no available funding for transportation, and even no mechanism to provide that funding. In other municipalities, this is not the case. The question and discussion in Kitchener Waterloo needs to be: is this a health care issue or a transportation/transit issue?

Remaining in the transportation business will require additional funding to prevent the service from becoming too much of a strain on existing resources. Regional representatives should approach the Local Health Integration Network (LHIN) to explore alternative funding sources. In addition to this process, Regional Council should be fully aware of the magnitude of funding and the portion of trips that are dedicated to health transportation. A decision to continue providing the service must be an informed one, within this context.

The introduction of dialysis facilities at the Cambridge hospital site could be a significant advantage for residents in Cambridge, and improving the efficiency of trips for Cambridge dialysis patients. As the development of this facility moves forward, GRT should work closely with GRH representatives to ensure the most effective allocation of patients to facilities. From a technical perspective, MobilityPLUS should establish a polygon zone in the scheduling system for Cambridge patients and the hospital site, to maximize the effectiveness of trip scheduling.

For Kiwanis Transit, the small absolute number of trips likely does not warrant any new approach to dialysis service in the short-term. However, Kiwanis Transit should participate in any discussions with the LHIN or other potential funding partners to ensure its longer term interests are represented.

7.2.3 Trips for people with cognitive disabilities

As noted in Section 6, this group represent a new market for MobilityPLUS, with a potential for perhaps 50,000 new annual trips by 2021. The methodology used suggests that more than 40,000 of these new trips could be to day programs (up to 80 individuals daily over time).

Accommodating these trips on taxis, as the current commuter bus program, is likely not the most cost-effective method of delivering these trips as they grow, although this could continue in the short-term and for some number of hard-to-serve trips in the long-term. As numbers of riders grow, MobilityPLUS should work to consolidate trips on fixed or semi-fixed routes with vans.

It will be important for MobilityPLUS to work with day program agencies and staff to develop an effective and efficient transition and growth management plan for these trips. It will also be important to discuss service delivery options early in the process, even if these alternatives are not required in the short-term. This could include agreeing on ride times for individuals, or developing a transfer system to consolidate smaller area fixed route trips onto larger vehicles.
For Kiwanis Transit, the fact that this market is already served by the system means that no change is necessary.

7.2.4 Travel Training

Travel Training is a program that allows people who are new to transit, to gain the knowledge and confidence to travel more independently. It may also be useful for people who once used transit, but for a variety of possible reasons, feel they cannot any longer. Travel Training can also be useful to assist people when new services come into effect, such as ION. Additionally, effects from changes to existing programs (such as Dialysis) can be greatly diminished by offering Travel Training. Travel Training provides a passenger with a wider range of travel options.

For GRT the travel training benefits are:

- It ensures that people who want to use GRT services are prepared and know what to expect while using transit; and
- It encourages people to use GRT conventional transit whenever possible so that the specialized transit, MobilityPLUS, which is more expensive to provide than conventional transit, can be offered to passengers who need them the most, by freeing up space on MobilityPLUS.

GRT MobilityPLUS already offer a travel training program to facilitate as many trips as possible on the conventional accessible system. As noted in Section 6, the new eligibility criteria may create a surge in demand for this training, once the eligibility and assessment process is fully implemented. In 2017, MobilityPLUS should update their program to incorporate features of the ION LRT and build some short-term capacity for handling increases in demand.

7.2.5 Other Efficiencies

Internal discussions with, and observations of operations staff, point to a potential opportunity to enhance the efficiency of the operations through improved use of the software. The specific objective of a more comprehensive operational review in this area would be to improve the overall capacity of the system, especially to provide some same-day trips capacity, and to reduce the ad hoc used of taxis.

7.3 Service Delivery Supports

There are several areas where additional initiatives can support the effective delivery of service over the next five years, for both MobilityPLUS and Kiwanis Transit.

7.3.1 Kiwanis Transit

Based on discussions with Kiwanis Transit staff and the team’s internal assessment, there are three key areas for Kiwanis Transit to consider:

- Staffing addition;
- Vehicle life cycle; and
- Farecard deployment.
**Staffing additions**

To relieve current pressures and help manage succession planning, the hiring of a new operations manager is recommended. In the previous plan, an assistant manager position was recommended, but not implemented. This current recommendation is for similar reasons, but the position has been changed to operations manager to provide clarity on the division of responsibilities. The operations manager would be responsible for:

- Day-to-day operations supervision, including supervision of drivers and dispatch. This function will require the person to be mobile, to be able to respond to on-street incidents or emergencies;
- IT development and deployment; and
- Training management (not delivery).

This would leave the manager’s function to be able to focus more on elements such as:

- Administration and management;
- Financial management; and
- Strategic planning.

**Vehicle Life Cycle**

Currently, Kiwanis Transit leases vehicles from the Region of Waterloo for $12 annually per vehicle. Vehicles are routinely eligible for replacement after six years, though in the past, this period has been as low as five years.

Given the long distances that Kiwanis Transit vehicles travel, (91,000 km/vehicle in 2015 compared to 47,000 km/vehicle at MobilityPLUS), it is recommended that the replacement period for Kiwanis Transit vehicles be formally reduced to five years. This will improve the overall condition of the vehicles near the end of their life, improving the customer experience and perhaps reducing maintenance costs slightly. Currently, with six vehicles and a six-year replacement, an average of one vehicle is replaced each year at an annual cost of about $100,000. With the shorter replacement plan, this would increase to 1.2 vehicles per year (at an additional annual cost of $20,000. With a seventh vehicle added before the end of the plan, this additional cost would increase to $40,000 annually. This does not account for any reduction in maintenance cost in the last year of the vehicle’s life.

**Kiwanis Transit Elmira Community loop**

At the suggestion of Kiwanis Transit, a community loop for Elmira was investigated, using a concept where an accessible vehicle would be used to provide a connector to and from Route 21 in part of each hour, providing first-mile / last-mile trips in the area. In the remaining portion of the hour, the vehicle could be used to increase accessible door-to-door trips in the community.

Option 1 in Figure 7-1 shows a route concept that leaves the existing Route 21 unchanged, and uses the community route to fill in the remaining Urban area west of the downtown. Option 2 in Figure 7-2 modifies existing Route 21 to keep the service (which uses a standard 40-foot bus) on
Arthur Street as much as possible, and using the community route to cover the area formerly covered by Route 21 as well as expands to the west.

It is not the role of the Master Plan to specifically examine turn-by-turn options. Both of these options are presented as a proof of concept, and the specific route should be developed in consultation with GRT, the Township and public consultation.

The preferred option may well be a combination of the two, or neither. As an example, a third option would be to cover a larger area with zone bus type of service, where riders phone (much like Route 77) to be picked up. Boarding passengers from Route 21 or in the downtown area need only board the bus and tell the driver their destination. Each trip the route would take customers to the fixed stop location nearest their home. Eligible passengers would receive door-to-door service.

Figure 7-1: Elmira Community Route – Option 1

**KT Elmira Community Route – Routing Option 1**

- Maintain existing Route 21
- 15 minute loop / 20 minute cycle
- Route 21:
  - Peak 30-minute service
  - Midday 60-minute service
  - Saturday: 40-minute service
- Leaves balance of Rte 21 cycle for other service
  - 10 minutes peak
  - 40 minutes in midday (0945-1330)
  - 20 minutes Saturdays
- Arrival and departure connections cannot both be coordinated with Route 21
7.3.2 GRT MobilityPLUS

Family of Services Eligibility and Assessment

Combined with the change in eligibility criteria effective January 1, 2017, MobilityPLUS needs to develop a comprehensive new eligibility application and assessment process. This process must cover the wider range of eligibility now to be considered, but also be geared towards identifying specific conditional eligibilities.

The objective of these eligibility criteria is to establish clear and transparent procedures to ensure that as many rides as possible are accommodated, and that riders are provided with the level of accessible service they need.

With conditional eligibility, paratransit service providers are not required to accommodate all riders on all trips. In instances where a rider is able to use an element of the service other than the door-to-door service, and that service meets the riders’ travel needs and functional ability, then the system is free to offer that trip. With the advent of ION, and the introduction of the community of people with a cognitive disability but not a physical disability, there is a clear role for the family of services in accommodating passengers’ needs.

This means that if a person’s origin and destination are accessible to and from an ION stop, and the person is capable of using ION, with its advance eligibility features, then MobilityPLUS is not required to carry that passenger on the door-to-door service but can direct the passenger to ION, or alternatively, carry the passenger for the first-mile of the last-mile trip on the door-to-door service, combined with an ION trip, as discussed earlier.
If semi-fixed route services are established as part of the commuter bus or dialysis services, these can also form part of the conditional eligibility trip allocation process.

Figure 7-3 shows the decision flow for this type of eligibility assessment. Generally, while maintaining the need to accommodate the passengers’ functional abilities to use a particular service, it should be the objective to accommodate passengers on the most efficient trip/mode that meets their travel requirements.

Understanding the details of a person’s functional abilities to be able to effectively apply conditional eligibility decisions on a trip-by-trip basis, requires detailed information about the rider’s functional abilities, and this requires a more detailed assessment form.

It should be a priority of MobilityPLUS to implement this detailed assessment process as soon as possible. As noted earlier, until this process is in place, MobilityPLUS may have to grant temporary eligibility to applicants that cannot be properly assessed.

**Figure 7-3: Eligibility Assessment Process**

---

**Cross-boundary Coordination**

AODA requires cross-boundary coordination between adjacent systems with contiguous urban areas. While most boundary areas between Urban and Rural zone are not contiguous, it is recommended that this coordination continue and be enhanced in the spirit of the legislation and the expectation of regional customers. Kiwanis Transit already provides cross-boundary trips to its customers to destination anywhere in Kitchener and Waterloo. Trips further into Cambridge are available to those who are able to transfer to the conventional accessible system, or who coordinate a transfer trip with MobilityPLUS.
MobilityPLUS should:

• Establish a cross-boundary zone in the Rural area (including North Dumfries) where MobilityPLUS will provide direct trips to its customers;

• Work with Kiwanis Transit to establish convenient safe transfer locations for trips beyond the cross-boundary zone; and

• Revisit these locations on a periodic basis to ensure they continue to meet customer needs.

Kiwanis Transit should:

• Continue to monitor the cost of its current cross-boundary trip policy and consider additional transfer trips for cross-boundary trips in the future, if warranted by potential cost savings.

7.4 Recommendations Summary - Family of Services Development and Service Delivery Supports

7.4.1 Family of Services Development

Use of Conventional Fixed Route Services

• To maximize the advantage of ION, both MobilityPLUS and Kiwanis Transit should work with their customers to orient them to the advantages of using the LRT service and accessing destinations close to stops

• MobilityPLUS and GRT should monitor the growth in use of conventional accessible bus services by people with disabilities, to ensure that the customer experience is not unduly affected by capacity issues.

Dialysis Trips

• MobilityPLUS and GRT should fully examine the implications of and support for a transition out of the dialysis transportation business, to be consistent with other communities in the Province. Dialysis transportation could be delegated to the Non-Emergency Medical Transportation service.

• Remaining in the transportation business will require additional capital and operating funds to accommodate projected growth.
  • Regional representatives should approach the Local Health Integration Network (LHIN) to explore alternative funding sources.
  • Regional Council should also be fully aware of the magnitude of funding and the portion of trips that are dedicated to health transportation. Annual budget requests could specifically identify the growth in these amounts.

Serving the Community of People with Cognitive Disabilities

• MobilityPLUS should work with day program agencies and staff to develop an effective and efficient transition and growth management plan for these trips.
  • This should discussion of alternative service delivery options early in the process, even if these alternatives are not required in the short-term, including establishing ride times for
individuals, or developing a transfer system to consolidate smaller area fixed route trips onto larger vehicles.

**Travel Training**

- In 2017, MobilityPLUS should update their program to incorporate features of the ION LRT and build some short-term capacity for handling increases in demand.

**Operational Effectiveness**

- MobilityPLUS should work to enhance the efficiency of the operations through improved use of the software.
  - This will require a more comprehensive operational review in this area to improve the overall capacity of the system, especially to provide some same-day trips capacity, and to reduce the ad hoc use of taxis.

7.4.2 **Service Delivery Supports**

**Staffing**

- Kiwanis Transit should hire a new operations manager, as recommended in the previous plan, to relieve current pressures and help manage succession planning.

**Vehicle Life Cycle**

- The replacement period for Kiwanis Transit vehicles should be formally reduced to five years. This will improve the overall condition of the vehicles near the end of their life, improving the customer experience and perhaps reducing maintenance costs slightly.

**Kiwanis Transit Elmira Community loop**

- Kiwanis Transit should further develop the concept for a community connector route in Elmira. This includes:
  - Refining and confirming route a preferred route option
  - Working with GRT, the Township and the Region to confirm the concept and identify cost/resource sharing arrangements

**Eligibility**

- MobilityPLUS needs to develop a comprehensive new eligibility application and assessment process.
  - This process must cover the wider range of eligibility now to be considered, but also be geared towards identifying specific conditional eligibilities.
  - MobilityPLUS should implement this detailed assessment process as soon as possible to minimize cost impacts
  - Until the process is implemented, MobilityPLUS must grant temporary eligibility to applicants that cannot be properly assessed.

**Cross-boundary Coordination**

- To improve trips connecting between the Urban and Rural Service areas, MobilityPLUS should:
• Establish a cross-boundary zone in the Rural area (including North Dumfries) where MobilityPLUS will provide direct trips to its customers;
• Work with Kiwanis Transit to establish convenient safe transfer locations for trips beyond the cross-boundary zone; and
• Revisit these locations on a periodic basis to ensure they continue to meet customer needs.

• To improve trips connecting between the Urban and Rural Service areas, Kiwanis Transit should:
  • Continue to monitor the cost of its current cross-boundary trip policy and consider additional transfer trips for cross-boundary trips in the future, if warranted by potential cost savings.
8 Technology Assessment and Options

8.1 Introduction
This section provides a brief overview of the current state of technology deployment for both MobilityPLUS and Kiwanis Transit, and examines options for enhancements that can improve the customer experience, increase operational productivity, or both.

8.2 In-house Review
Both MobilityPLUS and Kiwanis Transit use variations of Trapeze paratransit scheduling software linked with on-board Mobile Data Terminals (MDT) to communicate with van drivers. Contracted vehicles do not have the same MDT capability.

A brief in-house review of the day-to-day use of the software at MobilityPLUS was completed as part of this assignment. This review indicated that the software is well-suited to the needs of GRT MobilityPLUS, but as described in the next section, could be enhanced with available add-ons.

At Kiwanis Transit, the deployment of TripSpark scheduling service is a recent development, and staff have recently completed training with the service. TripSpark offers many of the features of the Trapeze PASS system, in a web-based bureau service that does not require Kiwanis Transit to maintain any software in-house. This system is designed for smaller community services and based on discussions with staff and their initial experiences, appears ideally suited to the needs of Kiwanis Transit.

8.3 Deployment Opportunities

8.3.1 IVR / Web Booking
Both systems used by MobilityPLUS and Kiwanis Transit support interactive voice recognition (IVR) booking, as well as web booking. Throughout the consultation process, there was unanimous support for the deployment of automated trip booking, either through IVR or the web.

Current plans for MobilityPLUS include a launch of the system in the short-term. Specific launch plans are subject to budget availability.

Such a system should reduce call center activity and costs (or increase capacity (reducing wait times) with the same resources, and provide increased convenience for customers and agency caretakers.

The convenience of the system also has the potential to reduce no-shows since the system is easy and quick to use. Riders are much more likely to uses an automated system to cancel a trip than
wait on hold to do the same. Increased notice of cancellations can improve overall efficiency as well as free up same day trip capacity.

Online booking also facilitates the coordination of cross-boundary trips, since reservationists at each system can access the other systems on the rider’s behalf and book the on-going trip

8.3.2 Trip Notification

Both systems used by MobilityPLUS and Kiwanis Transit support trip reminder notifications. This means that riders receive a reminder or confirmation of their booking activity along them to confirm or adjust their schedules. Trip notifications are available via text messages, email or traditional voice call, depending on the needs of the individual rider. This type of serve can have a significant impact on no-shows and late cancels and help the systems optimize the deployment of resources.

Deploying this service is highly recommended, based on its ability to improve the customer experience and reduce costs through reducing no-shows and late cancels.

8.3.3 Trip Arrival Notification

Combined with automatic vehicle location, these systems can also provide advance notification of the arrival of a vehicle. The intent of this type of service is to minimize the wait time for the customer, while potentially reducing the vehicle time spent waiting for the customer to arrive. However, the experience of other jurisdictions indicates that advance call times need to be tailored to the individual to ensure effectiveness, and feedback from customers is not always positive.

This system is available as an add-on module for both systems used by MobilityPLUS and Kiwanis Transit, however, the MDTs currently used by Kiwanis do not support the feature, so replacement of these units would be required, in addition to the add-on software costs.

In this regard, the proposed recommendation is for MobilityPLUS to work with Trapeze to install the module on a test basis and conduct a pilot study with a small market group of volunteers from among eligible riders. Based on the results of this pilot, the effectiveness of the system could be assessed for wider deployment. For Kiwanis Transit, the recommended course of action is to monitor the MobilityPLUS pilot, and make appropriate future decisions.

8.3.4 Fixed Route Interoperability

Exchange of data between specialized transit and fixed route transit scheduling systems can provide an advantage in dealing with trips requested by riders with conditional eligibility. Where a particular origin and destination requested by a specialized transit rider can be accommodated by the fixed route system, and the particular rider is able to access those stops, links between the fixed route and specialized transit systems can be used by the reservationist to suggest an alternative trip to the rider, promoting the use of the fixed route system.

While attractive in theory, there are two significant barriers for MobilityPLUS. First, GRT uses a separate system for its conventional fixed route scheduling, which precludes automatic transfer of data between the two systems. This could be overcome by developing a data transfer procedure that would transfer data between the two systems. Second, the amount of data and information
required to make reasonable suggestions to the rider requesting a ride is enormous, and requires constant maintenance; for example, for the system to propose an alternative fixed route trip to the reservationist, the system must first have data regarding the fixed route schedules relative to the rider’s desired travel. This is the most straightforward part of the process.

In addition to these data, the system must also have data regarding the accessibility of the stop at both the origin and destination, the neighborhood environment between the stops and the origin and destination and the ability of the rider to navigate that environment.

These data must also be constantly maintained as physical conditions in the neighborhoods change and as the ability of the rider changes. On balance, the effort required to maintain this database in the current technology environment is untenable, and a more suitable recommendation is to continue to promote the accessibility of the fixed route network to MobilityPLUS riders. Periodically, travel patterns of riders could be examined for these marketing and communication opportunities.

8.4 **Electronic Fare Management System**

GRT is in the process of implementing an electronic fare management system (EFMS), which includes a smartcard for users to riders their fare. In the initial deployment through 2017, GRT has decided that the fare structure under the new system will be identical to the current system. In future adjustments to the system, different fare models may be deployed to enhance the customer experience and maximize the potential for ridership and revenue.

As part of this transition, GRT has examined different options for use of the smartcard for MobilityPLUS riders, with implications for Kiwanis Transit rides as well.

8.4.1 **Current System**

Currently, MobilityPLUS riders use the same fare media as GRT conventional routes, as do Kiwanis Transit riders. When completing a trip, riders present their eligibility ID card and pay their fare with cash, tickets or monthly pass.

When using conventional transit, MobilityPLUS riders show their ID to the transit operator who keys the appropriate entry on the farebox.

8.4.2 **Planned EasyGo Farecard Environment**

With the introduction of EasyGo farecards, current plans are to use hand-held validators on-board each MobilityPLUS vehicle. Drivers will be able to take these to the passenger and:

- Record cash payment, accept card payment, and issue and accept transfers; and
- Hand-held validators will be mounted in the vehicle and automatically transfer data to the back-office system upon arrival at the garage.
8.4.3 Issues with Current System in EasyGO Environment

With this planned system, there are some considerations for MobilityPLUS and Kiwanis Transit with respect to the farecards.

• Particularly for MobilityPLUS, a very large percentage of trips are taken on taxi vehicles, and taxis are not equipped with the interoperable technology to accept GRT passes and adequately relay the data to the GRT systems;

• Farecards need to be able to identify the MobilityPLUS eligible rider, for the purposes of providing fare-free rides on conventional accessible service; and

• MobilityPLUS And Kiwanis Transit should operate with the same procedures.

8.4.4 Farecard Options

A separate workshop with MobilityPLUS staff was held to review the issues, and develop potential solutions. Part of the focus of this workshop was the longer-term development of the farecard and validation technology, which is uncertain.

Taxi Deployment Option

An option was considered to require all taxis, as a function of their contract with the Region, to acquire and use handheld validators. This presented several issues:

• Current hardware costs are about $3,000 per unit. While this was not considered completely prohibitive, given the size of the taxi contracts, it was not considered practical in the short-term; and

• Even with hand-held validators, secure data collection and transmission systems would need to be developed to transfer data from taxi operators to GRT. Again, this was not considered, insurmountable, but impractical in the short-term and with unknown costs.

Given these considerations, full deployment for the taxi fleet was considered impractical, but as a potential longer-term solution should be monitored along with developments in card and validation technology and open payment systems.

Prepaid Account Option

The second option was to move to a pre-paid account option, similar to that used in Peel Region. In this system, the user maintains an account with a positive balance, and trips are deducted when booked. Funds for trips cancelled in accordance with the trip cancellation policy are refunded; funds for late cancellations or no-shows, as well as completed trips, are debited.

In this discussion, it was noted that this account system is not dissimilar to the farecard option. With farecards, an account with a positive balance is maintained for each rider, and funds are debited when the trip is completed. Transactions are recorded through the card so the riders have access to the account information via card query devices. This query feature is the only differentiating factor.

Using the prepaid account option would require MobilityPLUS to establish and account and maintain a positive balance through periodic or automatic reloads – just like the farecard account.
The only difference is that the transaction is handled at the time of booking rather than when the trip is completed. This is possible for the specialized transit trip, since prebooking is required. It also gives the advantage for the system of automatically collecting fares for late cancels and no-shows.

One conclusion of the workshop was that riders should still maintain the option of paying cash for their trip. Beyond the convenience factor, this is also a requirement of the AODA fare parity regulations, since cash will still be accepted as payment on buses and ION trains.

### 8.4.5 Recommended Fare Payment Procedures – Prepaid Account Options

Under this system, there are several procedures which will need to be developed and confirmed to ensure simple payment procedures for the rider, as well as accurate and secure revenue management for GRT and Kiwanis Transit.

**Trip Booking**

Under the prepaid account system, each trip booked will be debited from the rider’s account, unless they specify that they will pay cash. If a riders’ current account is insufficient to pay for the trip, the option will be available to increase the balance on the account, or pay cash for the trip. If the current balance is negative, greater than the policy (to be established), then the rider will be required to transfer additional funds to the account. This procedure parallels that of the farecard managed system for all riders.

If the trip results in a late cancel or no-show, the debited fare is retained. If the rider has opted to pay cash, the fare will be deducted from the account.

**Taxi Trips**

If the booked trip is assigned to a taxi, the taxi operator will receive the trip information, just as in the current system. The only new element of the information is an indication to the driver and taxi operators, as to whether the fare has been pre-paid. For prepaid trips, the taxi driver will record the trip as complete, and regular reconciliation will transfer funds from MobilityPLUS / Kiwanis Transit to the taxi operator.

If the fare has not been pre-paid, the system works as today, with the taxi driver collecting a cash fare from the rider and recording the trip. Transfers of data and funds proceed as in the current system.

**Dedicated Van Trips**

If the booked trip is assigned to a dedicated van, the van driver will receive the trip information through the MDT, which will also indicate whether the trips has been prepaid or not. If prepaid, the driver will record the trips as complete. If not prepaid, the rider will have the option of paying the fare using any acceptable fare media – cash, tickets (during the transition period), or by tapping a farecard.

Further investigation of the farecard technology is required to ensure that the fare can be debited incrementally for the casual user, versus the trip merely recorded for a rider who maintains a monthly pass account, and recognized as a fare –free ride when tapped on conventional
accessible transit. This will also need to be consistent with the monthly pass structure used for all riders on the system.

Conventional Accessible Trips

For trip by registered riders on conventional transit, the rider will have two choices:

- Show registration ID (if not combined with farecard) – driver records trip on keypad; and
- Tap combined registration ID / farecard – system records fare-free trip.

8.5 Technology Recommendations Summary

In summary, the technology-related recommendations of this plan include:

- MobilityPLUS
  - Continue to plan implementation and use of an IVR and on-line booking system;
  - Once available, implement advance notification system to make day-before reminder calls or notices;
  - Develop a pilot program to pilot advance trip notification call-outs and monitor results; and
  - Develop pre-paid account system (integrated with EasyGo accounts).

- Kiwanis Transit
  - Continue to plan implementation and use of an IVR and on-line booking system;
  - Once available, implement advance notification system to make day-before reminder calls or notices;
  - Monitor MobilityPLUS pilot program to pilot advance trip notification call-outs; and
  - Develop pre-paid account system (integrated with EasyGo accounts).
9 Five-Year Service Plan for MobilityPLUS

9.1 Introduction

Based on all the elements presented in this report, this section presents the overall recommendations in the form of a Business Plan, including recommendations for action and financial implications of each, considering both GRT MobilityPLUS and Kiwanis Transit.

9.2 Proposed Vision Statement for MobilityPLUS

The engagement process developed an new Vision and Mission statement for MobilityPLUS. Kiwanis Transit, as a separate not-for-profit organization with its own governance, is free to consider something similar.

- A renewed draft Vision, to help shape the draft Mission of the new Business Plan and guide the organization for the life of the plan:

  “Universal access, where customers matter and independence is valued.”

- A renewed draft Mission, to guide the development of options, evaluations, and recommendations throughout the remainder of the project and beyond:

  “All eligible riders have safe, reliable, and timely access to the Family of Services to travel to their destinations in the Region of Waterloo.”
### 9.3 Recommended Service Improvement Plan – MobilityPLUS

Table 9-1 shows a summary of the Business Plan elements, and, where relevant, estimates of capital and operating costs to 2021.

**Table 9-1: MobilityPLUS Business Plan Elements and Cost Summary**

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<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Requirement</th>
<th>Timing</th>
<th>Capital Cost</th>
<th>Annual Operating Cost</th>
<th>Total Operating Cost</th>
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<td>Additional Vehicles</td>
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<td>AODA Compliance</td>
<td>Cross-boundary Transfer</td>
<td>New Transfer points (3)</td>
<td>Initiate Year 1, complete Year 2</td>
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<td>Family of Services</td>
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<td>Staff time</td>
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<td>Staff time</td>
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<td>Purchase additional module</td>
<td>Year 3</td>
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* One-time efficiency review cost

** Potential new Wellesley route assumed for Year 3
### 9.4 Recommended Service Improvement Plan – Kiwanis Transit

Table 9-2 shows a summary of the Business Plan elements recommended for Kiwanis Transit.

**Table 9-2: Kiwanis Transit Business Plan Elements and Cost Summary**

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<th>Annual Operating Cost</th>
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<td>Year 1 *</td>
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<td>100,000**</td>
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<td>Asset Management Reduced Life cycle</td>
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* Annualized contribution to capital expressed as operating cost)
** Annual maintenance cost reduction expected from shorter life span
*** Potential new Wellesley route assumed for Year 3
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250 Strasburg Road  
Kitchener, ON N2E 3M6  
Canada |

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<td>Lou Carpentier</td>
<td>Client:</td>
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