Transit Executive Committee Agenda

Wednesday, December 7, 2022, 1:30 p.m.
Regional Council Chambers
Regional Headquarters Building
605 Rossland Road East, Whitby

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2097.

Note: This meeting will be held in a hybrid meeting format with electronic and in-person participation. It is encouraged that members of the public view the Committee meeting via live streaming, instead of attending the meeting in-person. If in-person attendance is required, arrangements must be made by emailing clerks@durham.ca prior to the meeting date.

Pages

1. **Roll Call**
2. **Declarations of Interest**
3. **Election of Transit Executive Committee Vice-Chair**
4. **Adoption of Minutes**
   - 4.1 Durham Region Transit Executive Committee meeting - September 7, 2022 — 4
5. **Delegations**
   - 5.1 Jessica Maga, Durham Resident
     Re: Integration of Durham Region Transit and Metrolinx
   - 5.2 Adam Lamplugh, Durham Resident
     Re: Service Changes
   - 5.3 Joshua Sankarlal, Ontario Tech Student Union President
     Re: Student Transit
   - 5.4 *Tien Huynh, Town of Whitby Resident
     Re: Upcoming Service Changes on Durham Region Transit (DRT) Pulse Routes
6. **Presentations**
   - 6.1 Bill Holmes, General Manager, Durham Region Transit
     Re: General Manager’s Verbal Update
7. **Correspondence**

7.1 Memorandum from Regional Clerk-Director of Legislative Services 9
Re: Transit Executive Committee Members for the 2022-2026 Term

Recommendation: Receive for Information

8. Reports

8.1 Report # 2022-DRT-18 10
General Manager's Report - December 7, 2022

8.2 Report # 2022-DRT-19 27
DRT 2022-2026 Data and Analytics Strategy

9. Advisory Committee Resolutions

There are no advisory committee resolutions to be considered

10. Confidential Matters

There are no confidential matters to be considered

11. Other Business

11.1 2023 Transit Executive Committee Schedule
Meetings will be held Wednesday at 1:30 PM on the following dates:

- January 11, 2023
- February 8, 2023
- March 8, 2023
- April 5, 2023
- May 3, 2023
- June 7, 2023
- September 6, 2023
- October 4, 2023
- November 8,2023
- December 6, 2023

11.2 2023 Transit Advisory Committee Schedule
Meetings will be held Tuesday at 7:00 PM on the following dates:

- May 16, 2023
- September 19, 2023
- November 21, 2023

12. Date of Next Meeting

Wednesday, January 11, 2023 at 1:30 PM

13. Adjournment

Notice regarding collection, use and disclosure of personal information:

Written information (either paper or electronic) that you send to Durham Regional Council or Committees, including home address, phone numbers and email addresses, will become part of the public record. This also includes oral submissions at meetings. If you have any questions about the collection of information, please contact the Regional Clerk/Director of Legislative Services.

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2097.

The Regional Municipality of Durham

MINUTES

DURHAM REGION TRANSIT EXECUTIVE COMMITTEE

Wednesday, September 7, 2022

A regular meeting of the Durham Region Transit Executive Committee was held on Wednesday, September 7, 2022 in Meeting Room LL-C, Regional Headquarters Building, 605 Rossland Road East, Whitby, Ontario at 1:31 PM. Electronic participation was offered for this meeting.

1. Roll Call

Present: Commissioner Collier*, Chair
Commissioner Barton*, Vice-Chair
Commissioner Anderson*
Commissioner Carter*
Commissioner Mulcahy*
Commissioner Pickles*
Commissioner Smith*
Regional Chair Henry*
***denotes Commissioners participating electronically**

Also Present: Commissioner Crawford* attended the meeting at 1:52 PM

Absent: Commissioner Drew

Staff Present:
E. Baxter-Trahair, Chief Administrative Officer
W. Holmes, General Manager, Durham Region Transit
J. Austin, Deputy General Manager, Business Services, Durham Region Transit
M. Binetti, Transportation Service Design, Durham Region Transit
A. Burgess, Deputy General Manager, Maintenance, Durham Region Transit
L. Huinink, Director, Rapid Transportation & Transit Oriented Development, Office of the Chief Administration Officer
R. Inacio, Systems Support Specialist, Corporate Services – IT
A. Naeem, Solicitor, Corporate Services – Legal Services
C. Norris, Deputy General Manager, Operations, Durham Region Transit
S. Ciani, Committee Clerk, Corporate Services – Legislative Services
K. Smith, Committee Clerk, Corporate Services – Legislative Services

2. Declarations of Interest

There were no declarations of interest.

3. Adoption of Minutes

Moved by Regional Chair Henry, Seconded by Commissioner Anderson,
(29) That the minutes of the following meetings be adopted:

- Regular Durham Region Transit Executive Committee meeting held on Wednesday, June 8, 2022; and
- Special Durham Region Transit Executive Committee meeting held on Wednesday, August 24, 2022.

CARRIED

4. Delegations

4.1 Tina Henderson, Durham Resident, re: Route 211 Schedule and Durham Region Transit's Response to Ridership Concerns

Tina Henderson, Durham Resident, provided a PowerPoint presentation with regards to Route 211 Schedule and Durham Region Transit's Response to Ridership Concerns.

Highlights of the presentation included:

- New Route 211
- Why I am here?
- Schedule Issues Explanation
- Rider Works at Yonge and Bloor
    - Start Time 07:00
    - Start Time 08:00
    - Start Time 09:00
- Request

T. Henderson provided an overview of her experience with the new route 211 in North West Ajax. She expressed her concerns with the schedule of the new route 222 and provided suggestions to make the route more useable.

T. Henderson outlined the issues with the current schedule and the impact it has on riders by providing examples of the DRT bus time arrivals at Ajax Station and the corresponding GO train departures for individuals who begin work at 07:00, 08:00, and 09:00. She expressed her concern with the DRT buses not aligning with the GO train schedule departures resulting in an extended wait by customers. She stated that the issue does not meet DRT's mandate of providing effective and efficient public transit. She requested that DRT revise the schedule for the new route 211 and adjust the bus times by 10 minutes as this will address all connection issues with GO Transit.

5. Presentations

5.1 Bill Holmes, General Manager, re: General Manager's Verbal Update

B. Holmes, General Manager, Jamie Austin, Deputy General Manager – Business Services, Christopher Norris, Deputy General Manager – Operations, and Allison Burgess, Deputy General Manager – Maintenance, Durham Region Transit, provided a verbal update to the Committee.

Staff recognized Durham Region Transit's accomplishments over the past four years including the leadership and direction of TEC in navigating the COVID-19 pandemic; implementation of the Low Income Transit Assistance Program; adopting a fare strategy; integrating transit stops with the pedestrian networks; updates to the customer-facing policies; guidelines to mitigate social equity barriers; updates to the Advertising Policy, Transit By-law, and U-Pass Agreement; and receiving funding through the Investing in Canada Infrastructure Program.

Staff recognized the programs and activities supported by TEC to ensure Durham Region Transit continues to modernize services for residents including the Emission Zero program; the Whitby Autonomous Electric Vehicle (WAVE) pilot; adopting the fleet electrification plan; adopting the strategy to enhance transit across rural areas of the Region; expanding OnDemand to provide residents in urban areas with 24/7 access to public transit; and contributions to higher increases in ridership.

B. Holmes advised that the updated Surveillance System in DRT Vehicles Policy reflects the experience working with the new surveillance system technology for the past couple years. He indicated that the new service enhancement was successfully launched on September 6, 2022. He also advised there is a temporary fleet availability challenge resulting from delays in receiving Hybrid buses from the manufacturer, and general parts availability and resource challenges.

B. Holmes thanked the Transit Executive Committee for their leadership and support over the past four years to commit to modernization and stated that staff will carry forward a commitment to improve access and enhance the frequency and capacity of transit services for the residents of Durham.

B. Holmes responded to questions with regards to the impact of merging specialized services and OnDemand services to a common platform; and potential options for residents to arrange a bus ride.

6. Correspondence

A) Memorandum from Alexander Harras, Regional Clerk/Director of Legislative Services, re: Cancellation of October 2022 Transit Executive Committee Meeting

Discussion ensued with regards to whether the October 2022 Transit Executive Committee meeting is required.

Moved by Commissioner Smith, Seconded by Commissioner Barton,
(30) That the memorandum from Alexander Harras, Regional Clerk/Director of Legislative Services, regarding Cancellation of October 2022 Transit Executive Committee Meeting, be received for information and that the October 2022 Transit Executive Committee meeting be cancelled.
CARRIED

7. Reports

A) General Manager's Report – September 2022 (2022-DRT-16)

Report #2022-DRT-16 from B. Holmes, General Manager, Durham Region Transit, was received.

Moved by Commissioner Barton, Seconded by Commissioner Anderson,
(31) That Report #2022-DRT-16 of the General Manager, Durham Region Transit, be received for information.
CARRIED

B) Updated Surveillance System in DRT Vehicles Policy (2022-DRT-17)

Report #2022-DRT-17 from B. Holmes, General Manager, Durham Region Transit, was received.

Moved by Commissioner Pickles, Seconded by Commissioner Mulcahy,
(32) That the revised Surveillance System in DRT Vehicles Policy, effective September 7, 2022, be approved.
CARRIED

8. Advisory Committee Resolutions

There were no advisory committee resolutions to be considered.

9. Confidential Matters

There were no confidential matters to be considered.

10. Other Business

10.1 Tina Henderson's Delegation

Discussion ensued with regards to T. Henderson's delegation heard earlier in the meeting regarding the schedule for the new Route 211.

B. Holmes advised that it takes approximately three to six months to plan and implement a service change, such as the recent September service change. Staff consider the best information available or provided, including known GO Train schedules. Changes to schedules have many impacts, to other trips, other routes, and other customers. Any change must be well thought through before implementing. Staff make adjustments when possible, and make adjustments on a regular basis when there are no impacts on other riders or staff.

C. Norris advised that when DRT was developing September route schedules the GO Train was planned to operate more frequently than today. As the media has reported that were changes to train services leaving Durham, resulting in missed connections at the GO stations. DRT generally follow a minimum 12-minute connection time for trips planned to connect with a GO train. The 12 minutes considers the DRT on-time performance standard of zero to five minutes late, and seven minutes for customers to walk between the bus and train platform.

11. Date of Next Meeting

The next regularly scheduled Durham Region Transit Executive Committee meeting will be held on Wednesday, December 7, 2022 at 1:30 PM in the Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby.

12. Adjournment

Moved by Commissioner Barton, Seconded by Commissioner Pickles,
(33) That the meeting be adjourned.
CARRIED

The meeting adjourned at 2:11 PM

Respectfully submitted,

S. Collier, Chair

K. Smith, Committee Clerk

Interoffice Memorandum

TO: William Holmes, General Manager, Durham Region Transit

FROM: Alexander Harras, Regional Clerk/Director of Legislative Services

DATE: December 7, 2022

RE: **Transit Executive Committee Members for the 2022 – 2026 Term**

On September 29, 2021, Regional Council passed By-law number 27-2021, a new Durham Region Transit Commission By-law, for the purpose of operating the regional transit system known as Durham Region Transit (DRT).

Section 6 of the By-law provides for a nine member Executive Committee consisting of the eight Mayors, or their duly appointed Regional designates, of the lower tier municipalities in Durham Region and the Regional Chair.

Section 15 of the By-law provides that the term of office of members of the Commission shall coincide with their term in office as a Durham Regional Councillor or Chair. In addition, Section 16 of the By-law states that at the discretion of the Mayor, their term of office on the Executive Committee or the term of the duly appointed Regional designate, where applicable, may be a two-year term with the second appointment, if required, to be made in December of the second year of the four year term of Council.

For your reference, the composition of the Transit Executive Committee for the 2022-2026 term is as follows:

Commissioner Henry	Regional Chair and CEO	
Commissioner Crawford	Town of Ajax (designate)	4 year term
Commissioner Schummer	Township of Brock (Mayor)	2 year term
Commissioner Anderson	Municipality of Clarington (designate)	4 year term
Commissioner Carter	City of Oshawa (Mayor)	4 year term
Commissioner Brenner	City of Pickering (designate)	4 year term
Commissioner Wotten	Township of Scugog (Mayor)	2 year term
Commissioner Garrod	Township of Uxbridge (designate)	2 year term
Commissioner Roy	Town of Whitby (Mayor)	2 year term

Alexander Harras
Regional Clerk / Director of Legislative Services

AH/**

"Service Excellence for our Communities"

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3702

The Regional Municipality of Durham Report

To:	Durham Region Transit Executive Committee
From:	General Manager, Durham Region Transit
Report:	#2022-DRT-18
Date:	December 7, 2022

Subject:

General Manager's Report – December 2022

Recommendation:

That the Transit Executive Committee recommends

That this report be received for information.

Report:

1. Purpose

1.1 This report is submitted at each Transit Executive Committee (TEC), for information.

2. Background

2.1 The General Manager Report provides regular updates on key performance measures and summaries of current activities and transit issues in Attachment #1.

3. Previous Reports and Decisions

3.1 Not applicable

4. Financial

4.1 The General Manager's Report focuses mainly on performance and service standards. There are no financial impacts associated with TEC's receipt of this report.

5. Relationship to Strategic Plan

5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Service Excellence

6. Conclusion

6.1 For additional information, contact: Bill Holmes, General Manager, at 905-668-7711, extension 3700.

7. Attachments

Attachment #1: General Manager's Report – December 2022

Respectfully submitted,

Original Signed by

Bill Holmes
General Manager, DRT

Recommended for Presentation to Committee

Original Signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer

General Manager's Report
December 7, 2022
TEC
Attachment #1

Performance Measures Dashboard

Safety

Key performance indicator	Description	Latest Measure	Current	Target[1]	Current Variance to Target (per cent)	YTD Status[2] (per cent)
Collisions	Number preventable collisions per 100,000 km	October	0.26	0.49	✓ -47.3	✓ -14.6

Ridership

Scheduled						
Ridership (x1,000)	Number passengers	October	811	495	✓ 63.9	✓ 71.4
PRESTO Ridership	Customers paying using PRESTO (per cent)	October	86.3	82.3	✓ 4.0	✓ 4.0
Bus full occurrences	Number operator reported occurrences	October	225	24	NA	NA
Demand Responsive						
Ridership - Specialized	Number customer trips	October	8,221	6,740	✓ 22.0	✓ 52.3
Unaccommodated Rate - Specialized	Trip requests not scheduled (per cent)	October	NA[3]	NA[3]	NA	NA
Ridership – On Demand	Number customer trips	October	7,846	10,499	✗ -25.3	✓ 20.2

Service Delivery

Scheduled						
On time performance	On-time departures from all stops (per cent)	Service Period 2[4]	72.4	79.9	✗ -7.5	✗ -6.0
Service availability	Scheduled service delivered (per cent)	Service Period 2[4]	97.6	99.0	✗ -1.4	⚑ -1.0
Mean Distance Between Failure (MDBF)	Average number of revenue service kilometres between occurrences of vehicle defects impacting service (revenue service kilometers)	October	36,782	NA	NA	NA

[1]Target is 2021 measure for the same period

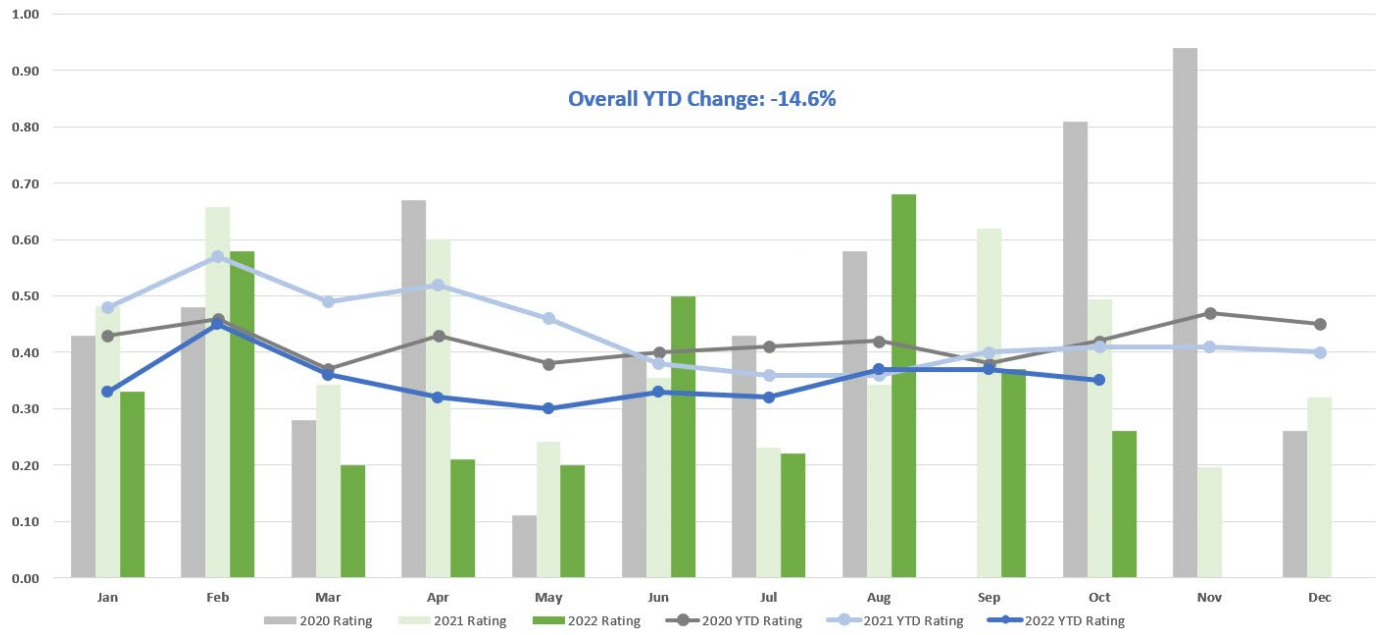
[2]Year to Date (YTD) compared to previous year

[3]Demand response platform currently not reporting unaccommodated rate

[4]June 20, 2022 through September 5, 2022

Safety

Preventable collisions rate per 100,000 km



Definition: A preventable collision is one in which the driver failed to do everything reasonable to avoid the collision. The preventable collision rate is the number of preventable collisions per 100,000 kilometres of travel for all Durham Region Transit (DRT) vehicles.

A collision may not be reportable to police based on the Highway Traffic Act, but for DRT purposes all collisions are documented and investigated. DRT's objective is to reduce annual preventable collisions by ten per cent relative to the previous year.

Analysis

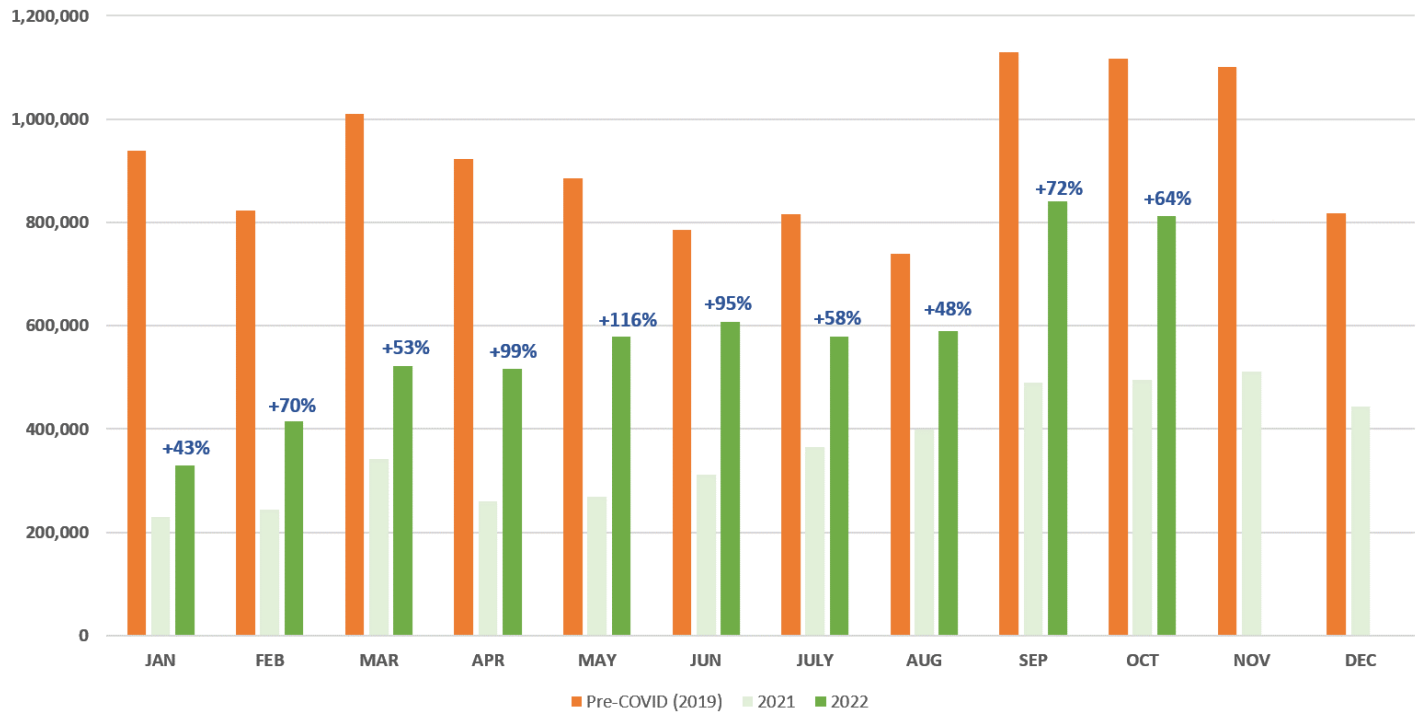
The October preventable collision rate was 0.26 per cent compared to a rate of 0.49 per cent for the same period in 2021. Year to date, the preventable collision rate is 14.6 per cent lower than the previous year.

Action Plan

In addition to established processes to identify and resolve root causes of collisions, the DRT Safety and Training team has implemented the first multi-year safety plan including specific actions to realize the objective to reduce annual preventable collisions. The plan includes annual cyclical training, prioritizing defensive driving practices, mandatory refresher training for staff involved in a preventable collision prior to returning to service, and cognitive assessment and driving skills screening during the recruitment process.

Ridership

Scheduled transit



Definition: Ridership is the sum of all passenger trips. A passenger trip is a one-way trip from origin to destination regardless of the number of transfers that may be required. Ridership data is calculated from fare box data and data from PRESTO and demand response.

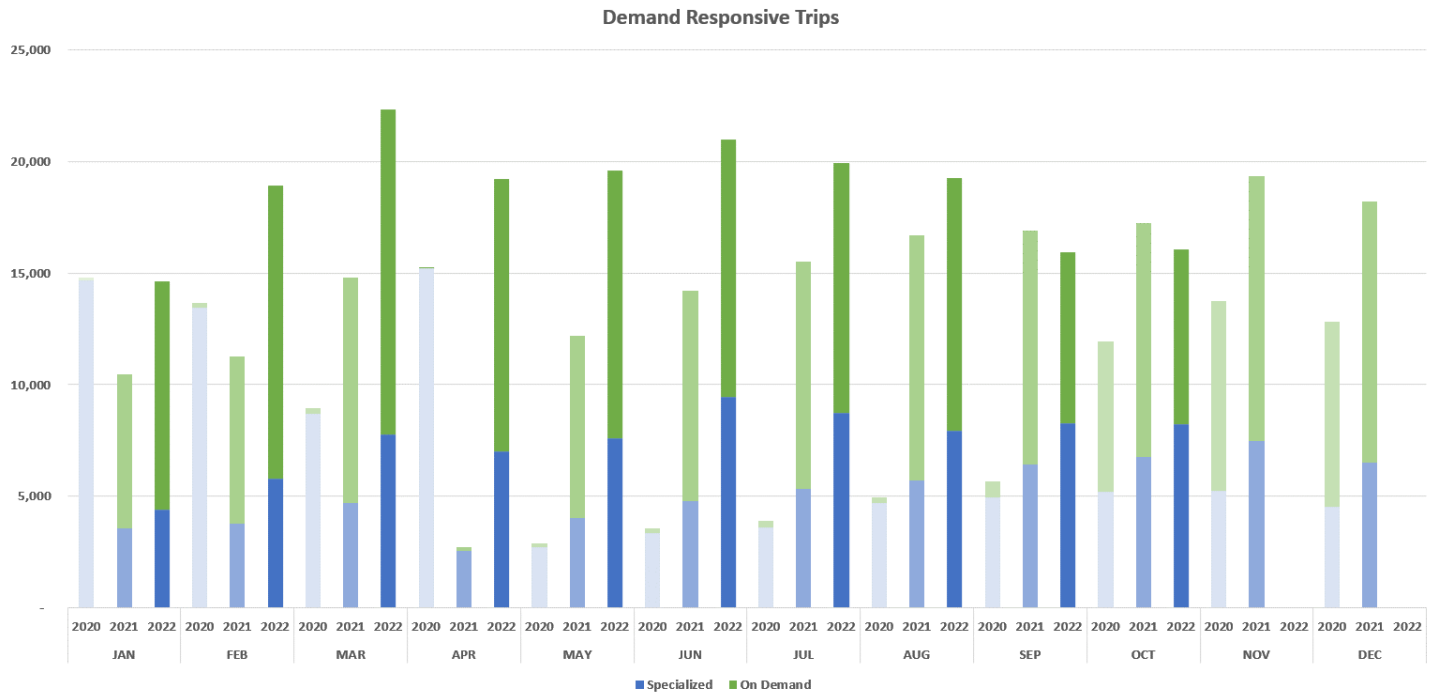
Results

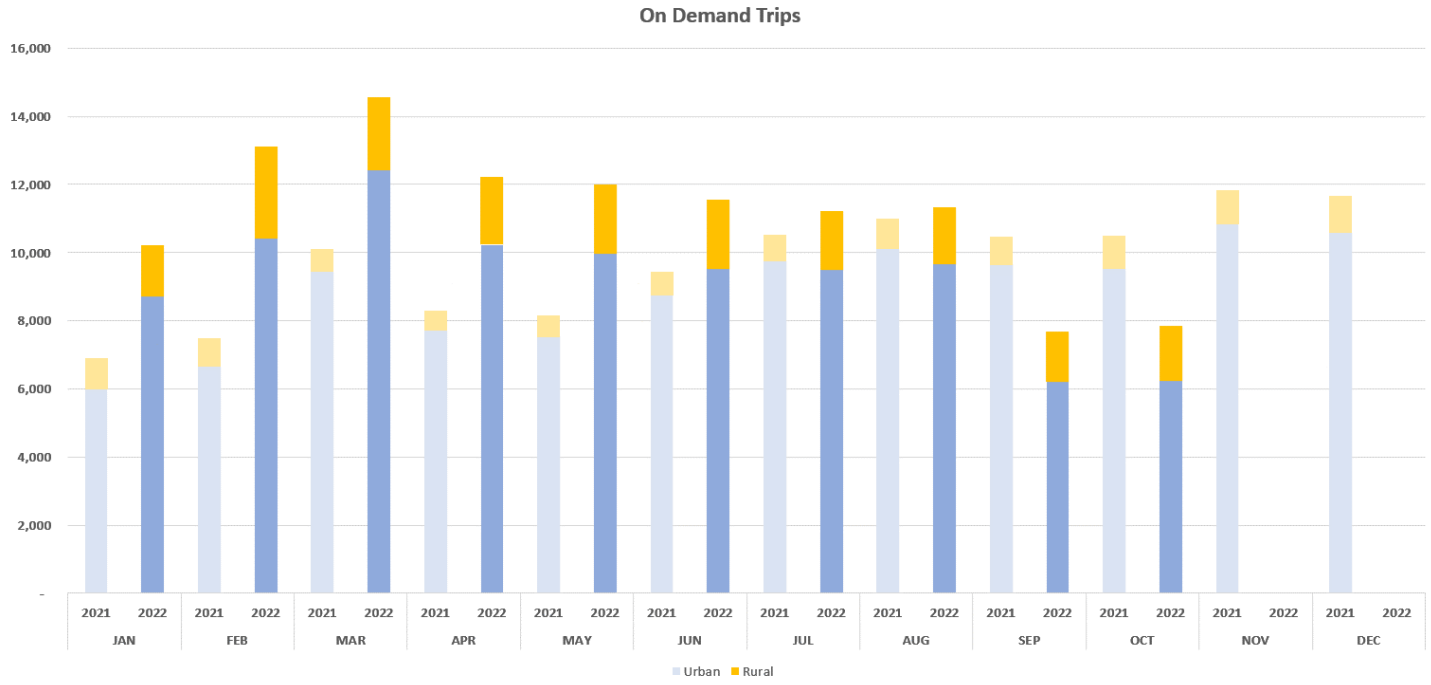
October ridership was 64 per cent higher than 2021 and approximately 75 per cent of pre-pandemic (2019) ridership for the same period.

Action Plan

To support the return of students to secondary school and post secondary institutions, approximately 10 per cent more service was introduced in September. With five new local routes, two new PULSE routes, and enhanced frequency throughout the network, the September 2022 network provided 60% more residents direct service to post-secondary institutions in Durham Region. Commuter ridership to and from the GO Train, which historically accounted for 25 per cent of overall ridership, continues to improve but is not expected to rebound in the near future as commuters continue to work remotely, either full time or as part of hybrid work.

Demand Response Transit

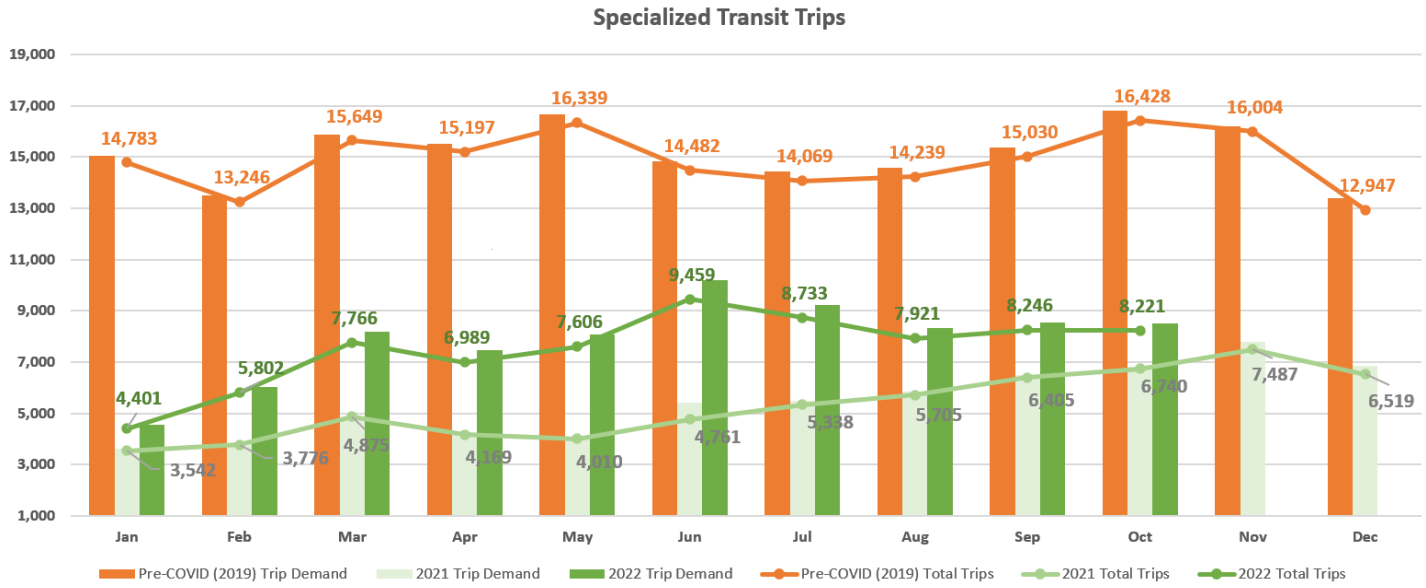




		OCT 2022	YTD 2022
R U R A L	Uxbridge	751	6,207
	Brock	373	4,452
	Scugog	618	5,135
	Pickering	88	1,160
	Whitby	63	325
	Oshawa	-	-
	Clarington	1,947	20,239

		OCT 2022	YTD 2022
U R B A N	Pickering	1,067	16,129
	Ajax	759	13,541
	Whitby	965	14,535
	Oshawa	538	14,246
	Clarington	673	14,950

Note: Rural Uxbridge and Scugog figures include trip pickups within urban Uxbridge and Port Perry areas.



Definitions:

Trips: A trip is considered a one-way passenger trip from origin to destination, regardless of the number of transfers that may be required.

Unaccommodated Rate (Specialized): An unaccommodated Specialized transit trip is one where DRT is unable to schedule a trip for the specific requirement requested by the customer, the customer declined to accept the trip option provided by the booking agent, or DRT did not have available capacity to accommodate the trip request.

Results

As part of service enhancements in September, new schedule service routes replaced On Demand in several urban areas of the Region. Consequently, On Demand ridership dropped by approximately 28% from August, with 7,846 trips delivered in October.

On Demand delivered 8,221 Specialized transit trips in October 2022, a 22 per cent improvement compared to October 2021 and a 52.3 per cent increase year to date compared to 2021. Capacity for Specialized Services customers remained consistent since August, delivering 7,921 trips in August, 8,246 trips in September, and 8,221 trips in October.

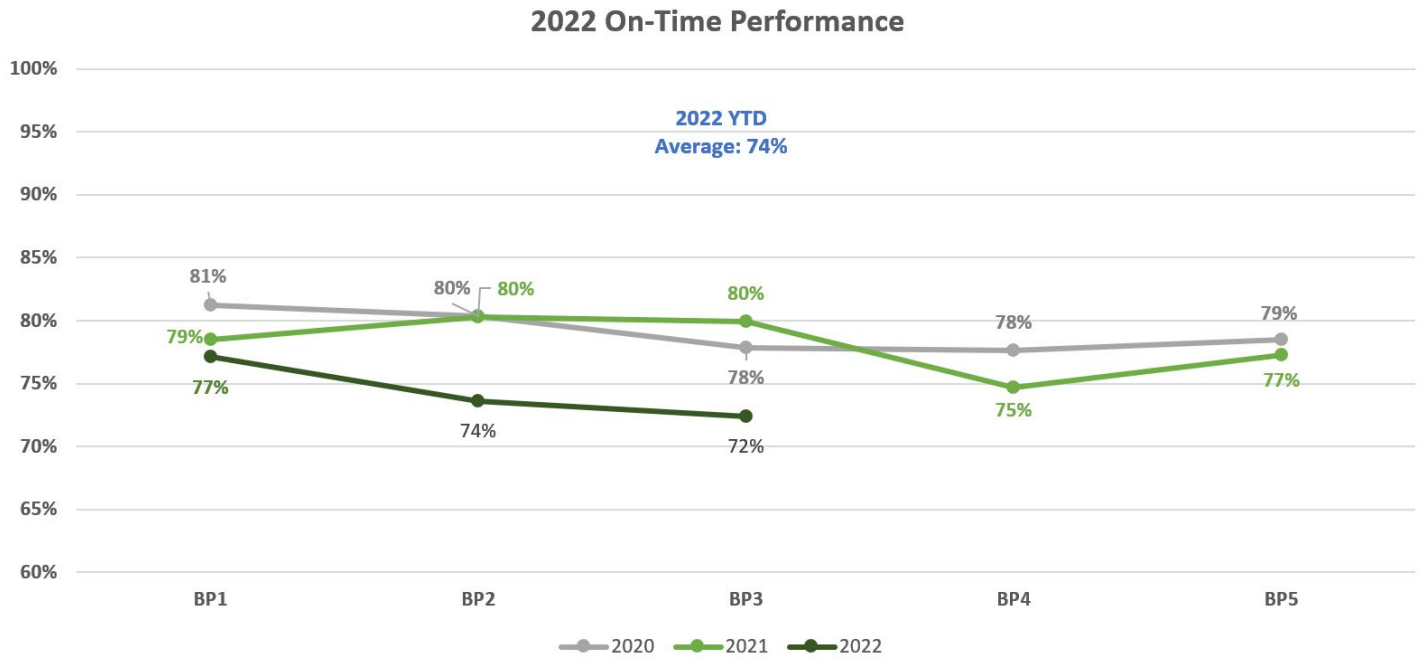
On Demand and Specialized Services were merged in September and trips were scheduled through the demand response platform. The current platform is unable to report unaccommodated trips.

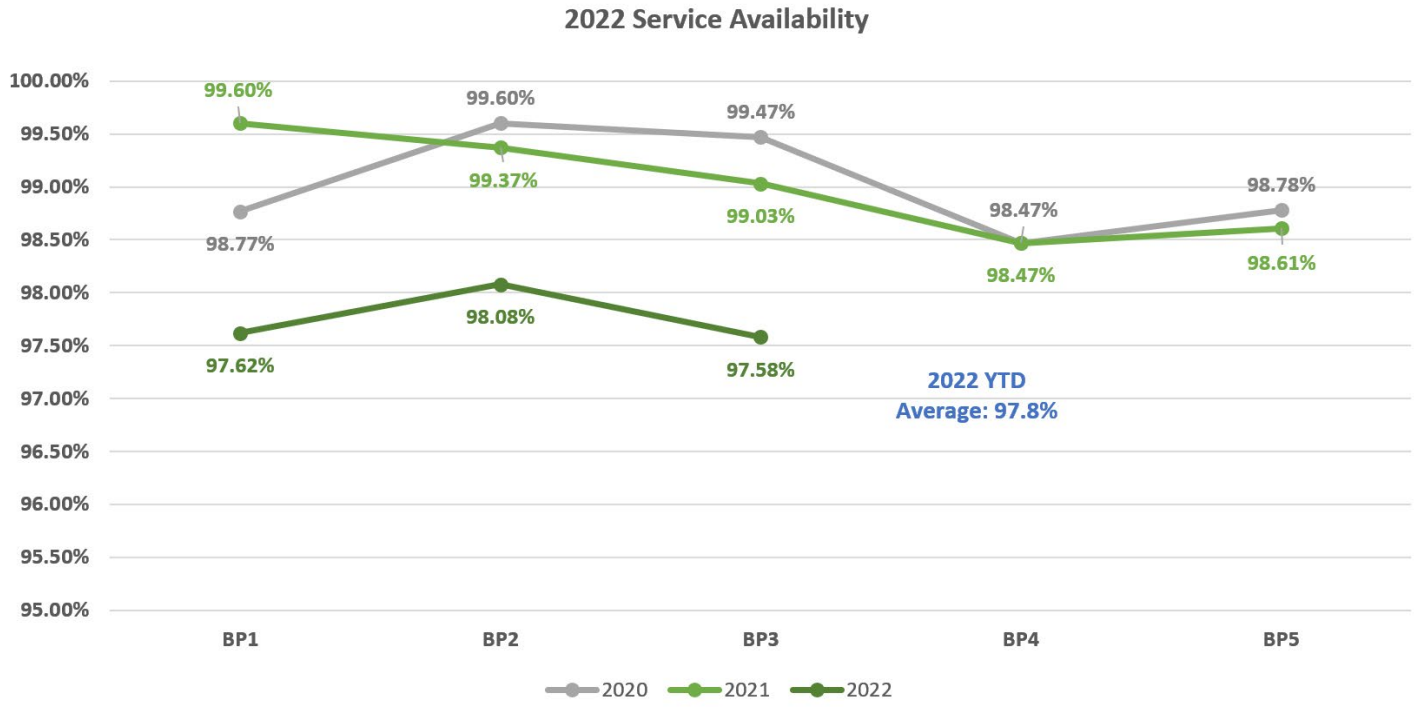
Further details are explained on page 14 (Service Reliability, On Demand).

Action Plan

Initial challenges with the scheduling platform have been resolved, however, the platform will be replaced over the coming months with a new platform procured to meet DRT's requirements for an integrated demand response service.

On Time Performance and Availability (conventional)





Definition

On Time Performance (OTP) is a measure of the percentage of buses departing a bus stop no more than zero minutes early and five minutes late. The annual OTP target is 80 per cent. OTP is reported for each service period.

Service availability is a measure of the actual service delivered by DRT as a percentage of scheduled revenue service. The service availability target is 99.5 per cent. Service availability is reported for each service period.

Results

OTP for the 2022 service period 3 (BP3 spans June 20, 2022 – September 5, 2022) was 72.4 per cent, down from 74 per cent for BP 2 and below the 80 per cent recorded for the same period in 2021.

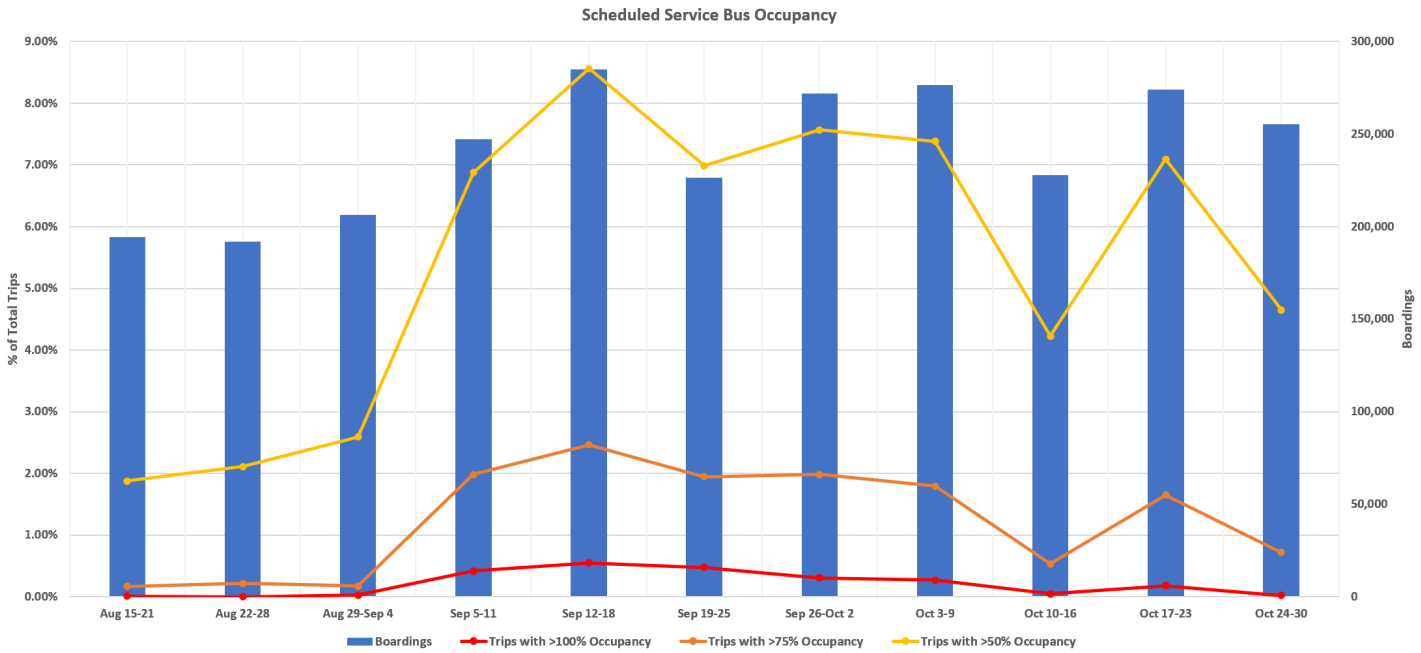
Service availability was 97.6 per cent compared to 98.1 per cent for BP 2 and lower than the 99.0 per cent recorded for the same period in 2021.

Action Plan

OTP was impacted by three factors; traffic disruptions related to road construction activities, the introduction of new routes with best estimates for running time, and postponement of running time validation studies due to a lack of staff capacity. Staff continue to collaborate with the various traffic groups at the Region and local area municipalities to ensure traffic impacts for construction projects are communicated to DRT in advance of the annual budget cycle to enable DRT to budget revenue service hours and schedule realistic running times and service capacity.

Service availability continued to decline and remained below the 99.5 per cent target. Service availability continued to be affected by traffic impacts and a reduced ability to backfill operator absences.

Scheduled Service Maximum Bus Occupancy



Definition

Maximum bus occupancy is a measure of the maximum number of riders on a scheduled service vehicle at any point of a trip, currently expressed as a percentage of the overall vehicle capacity. The data accounts for the differences in capacity for regular and articulated buses.

Results

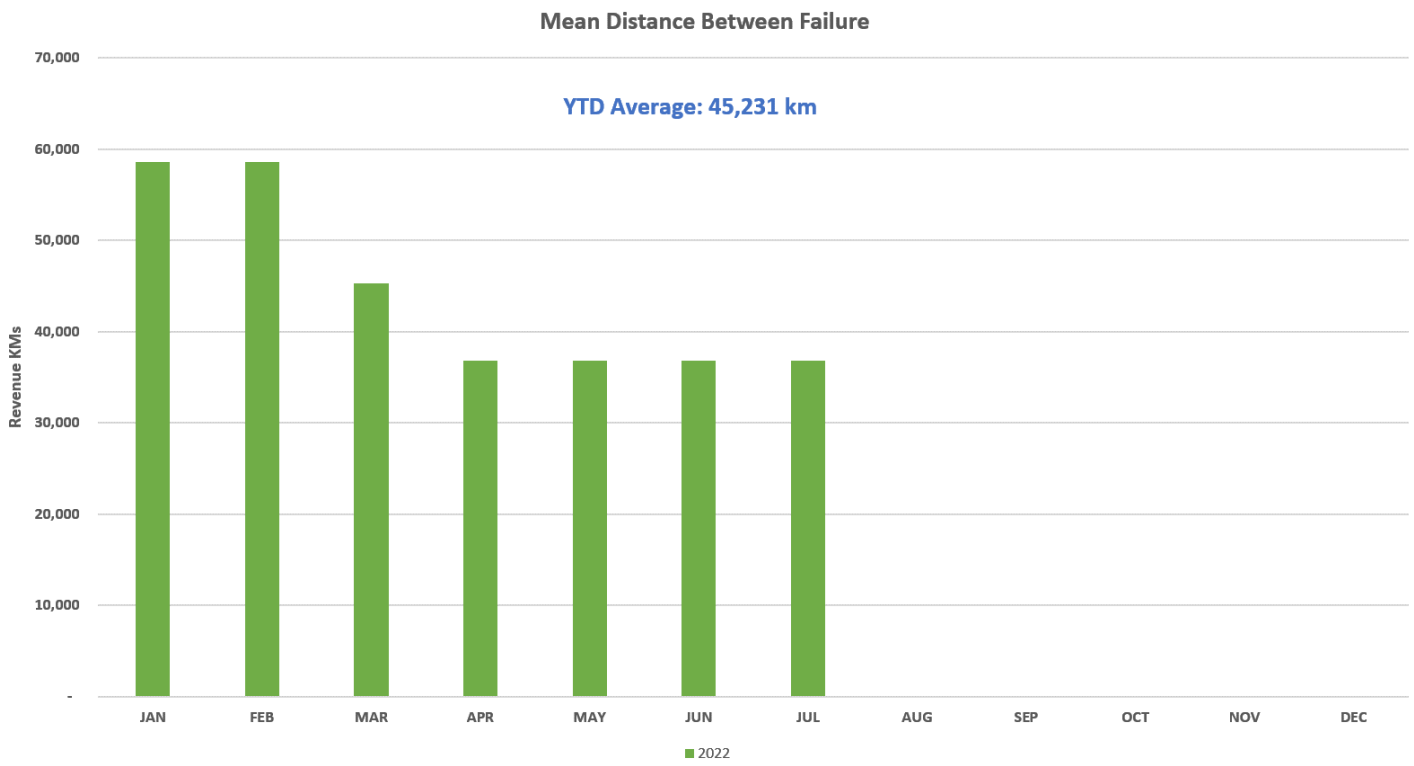
During the last week of October (October 24 - 30), approximately 95 per cent of all trips were below 50 per cent of maximum occupancy, with less than one per cent of trips exceeding 75 per cent maximum occupancy.

There were 225 bus full occurrences reported in October 2022.

Action Plan

The transit network continued to provide adequate capacity for current customer demand.

Mean Distance Between Failure (conventional)



Definition

Mean Distance Between Failure (MDBF) measures the reliability of the fleet by tracking the mean distance between bus breakdowns or mechanical failures that result in cancelled or missed service. A bus breakdown or mechanical failure is any incident that precludes a revenue vehicle from completing its trip or beginning its next scheduled trip and is measured by the total number of revenue vehicle kilometers (conventional service fleet) divided by the total number of chargeable vehicle defects during the reporting period.

Chargeable vehicle defects (or chargeable mechanical failures) are consistent with guidelines from the Ontario Public Transit Association (OPTA) which does not consider failures resulting from passenger-related events (i.e., sickness on the bus), farebox or other technology defects such as PRESTO readers.

In consideration of MDBF outcomes in 2021, DRT has established the 2022 average MDBF target at 40,000 km. Moving forward, the objective is to realize an annual improvement in MDBF performance as a result of continuous enhancements to preventative maintenance practices.

Results

MDBF data has not been available recently.

Action Plan

Not applicable

Updates

1. Hybrid Buses

On Monday, October 31, 2022, the first of 10 hybrid buses were introduced into the conventional fleet. The inclusion of hybrid buses is part of DRT's E-Mission Zero strategy, an ambitious and co-ordinated suite of emission-reducing initiatives to introduce a more sustainable network of vehicles, infrastructure and facilities over the next 25 years.

The hybrid buses will reduce fuel consumption and emissions by up to 30 per cent compared to conventional diesel buses. They also feature regenerative braking which will save on costs for brakes and engine maintenance.

2. Service Change, December 5, 2022

The following service changes will be in effect beginning December 5, 2022, including modified service levels during the holiday period from December 25 to 31, 2022.

Route	Days	Description
		Seasonal service reduction due to lower demand.
905	Monday to Friday	Peak 15-minute service will operate southbound only, northbound service will operate every 30 minutes.
917	Monday to Friday	Seasonal service reduction due to lower demand.

3. Service hours during holiday period

Date	Holiday	Service level
Saturday, December 24	Christmas Eve	Saturday schedule
Sunday, December 25	Christmas Day	Special schedule (see below)
Monday, December 26	Boxing Day	Sunday schedule
Tuesday, December 27	N/A	Saturday schedule
Wednesday, December 28	N/A	Saturday schedule
Thursday, December 29	N/A	Saturday schedule
Friday, December 30	N/A	Saturday schedule
Saturday, December 31	N/A	Saturday schedule (see below)
Sunday, January 1, 2023	New Year's Day	Sunday schedule

December 25

A special schedule will operate on Sunday, December 25, 2022.

- **Routes 902, 915, 916** Will operate hourly between 9:30 to 17:30
- **N1/N2** Will operate all day (24 hours) every 30 minutes
- On Demand
    - Urban areas Overnight On Demand will operate all day (24 hours)
    - Rural areas Will operate on a Sunday schedule between 7:00 to 21:00

December 31 (New Year's Eve)

- Blue Night service will operate overnight
- Service will be fare free after 19:00 until 4 AM on January 1

4. January 2, 2023, Service Change

Durham Region Transit (DRT) is implementing service changes beginning January 2, 2023. These changes are intended to improve service reliability, on-time performance, service availability, and new services to accommodate growth.

Route	Days	Service update
103 Routing extension	Monday to Friday	• AM / PM peak trips extended to the Finch and Altona area
112 Routing extension	Monday to Friday	• AM / PM peak trips extended to the Taunton and Burkholder area of Seaton
222 Schedule change	Monday to Friday	• Service will operate every 45 minutes
392B Additional trips	Monday to Friday	• Service will operate every 30 minutes all day
410 Routing change	Monday to Sunday	• Route will now travel via Centre Street / Fairbanks Street and Simcoe Street, instead of Celina and Albert Streets
411 Routing change	Monday to Friday	• Trips departing Oshawa Centre Terminal at 07:18 and 13:51 will operate as 411C via Avondale Drive Trips towards Farewell/Raleigh will end one hour later

423 Additional trips	Monday to Friday	• Service will now operate every 30 minutes all day
502 Routing and schedule change	Monday to Sunday	**Weekdays:** • Routing in the Clarington Centre area will be modified to operate via Green Road and Stevens Road • New evening service to 23:45 **Saturday and Sunday** • New service between 09:30 and 19:30
PULSE 900 Schedule change	Monday to Friday	• Service to Scarborough will now operate every 30 minutes
PULSE 901 Schedule change	Monday to Friday	• Service will operate every 30 minutes to and from Oshawa Centre, every 30 minutes to and from Lakeview, and every 30 minutes to Windfields Farm
905 Additional trips	Monday to Friday	• Additional 905A trips between Whitby Station and Harmony Terminal during midday
PULSE 915 Schedule change	Monday to Sunday	**Weekdays** • Service will operate every 20 minutes between 06:00 and 20:00, and every 30 minutes after 20:00 • Service towards Harmony Terminal will begin at 3:45 • Service towards Ajax Station will now end at 23:30 **Saturday and Sunday**

PULSE 916 Additional trips	Monday to Friday	• Service towards Harmony Terminal will now end at 22:25
917 Schedule change	Monday to Friday	• Additional trips will operate between Whitby Station and Oshawa Centre Terminal during peak travel periods
920 Routing change	Monday to Friday	• Routing will operate via Stevenson Road and Conlin Road, between Taunton and Thornton and Conlin and Simcoe

5. Service Reliability, Demand Response

DRT is committed to customers; offering a flexible service model that allows people to access service whenever and wherever it's needed.

The recent merge of Specialized and On Demand has created a seamless and equitable service for all customers. This model reflects our dedication to service excellence. While we are proud of this award-winning service, we've heard from customers and staff that there have been challenges.

Since September 2022, transit demand has increased, the scheduling platform experienced initial growing pains, and DRT is experiencing staffing challenges. Unfortunately, service reliability has been affected. We understand that there have been difficulties and we apologize to customers for On Demand trips that were not available when requested or delivered late and/or cancelled.

We are doing everything we can to help improve the situation, such as resolving scheduling platform issues and hiring staff to increase capacity to move us closer to our goal of more fulsome services by January 2023.

Thank you to all of our customers for their patience and understanding. We look forward to continuing to serve the residents of our communities; offering seamless connections to destinations across the region.

6. Service Reliability, scheduled service

DRT implemented significant service enhancements in September. The enhancements were planned and developed in June 2022 in consideration of anticipated ridership demand and projected staff resource availability.

Based on available data for the week of October 17, approximately three percent of scheduled service was not delivered. Over 40 per cent of service not delivered was attributed to traffic-related factors, with 15 per cent attributed to a lack of operator resources.

Based on transportation data for Taunton Road at Simcoe Street, traffic volumes are comparable to pre-pandemic levels. Unplanned service disruptions resulting from factors including traffic volume, road construction and lane restrictions, and other disruptions such as collisions that require DRT to detour, have increased transit travel times. Transit Control has been minimizing service impacts to the network by implementing mitigation measures such as reassigning buses to cover a trip, or as a last result, cancelling a scheduled trip to regain the service. To resolve service delays and enhance service reliability, additional running time will be added to routes on key corridors experiencing delays. The additional running time will be reallocated from adjusted frequency of service during lower demand periods. Cancelled and new service will be implemented when we can ensure service reliability for customers.

A combination of increasing attrition and a lower-than-expected number of operators successfully completing mandatory training has resulted in reduced operator resources. While all scheduled work is covered, there is currently a reduced ability to backfill open work when staff are absent. Training capacity will be increased by January 2023, with new employee class size increasing from eight to 12 in February 2023.

7. TAP Program: Transition of ACCESS to PRESTO

DRT's Transit Assistance Program (TAP) provides eligible Ontario Disability Support Program (ODSP) and Ontario Works (OW) clients with lower DRT fares and the security benefits of the PRESTO card. Further to the GM Report in September 2022, DRT discontinued the paper ACCESS Pass in October 2022 and eligible customers have now transitioned to TAP. The transition to PRESTO was implemented over a period of six months starting in May 2022 to build awareness and support ODSP clients through this change.

In 2019 and before TAP was implemented, ACCESS pass sales were approximately 1,850 per month. For November 2022, approximately 1,930 TAP passes were sold; roughly 104 per cent of pre-pandemic pass volumes. Although overall commuter ridership continues to be low, local ridership has returned strong in the fall of 2022, consistent with the full return ODSP and OW clients.

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3702

The Regional Municipality of Durham Report

To:	Durham Region Transit Executive Committee
From:	General Manager, Durham Region Transit
Report:	#2022-DRT-19
Date:	December 7, 2022

Subject:

DRT 2022-2026 Data and Analytics Strategy

Recommendation:

That Report #2022-DRT-19 be received for information.

Report:

1. Purpose

1.1 This report outlines the five-year strategic approach to advance DRT's Analytics Program, in line with, and in support of, DRT's "Route Ahead" service strategy and the goals of the Durham Transportation Master Plan for elevating the modal shift of public transit in the Region.

2. Background

2.1 As part of Durham Region Transit's commitment to the continuous improvement of service delivery and customer service, DRT's Analytics Program was established in 2018 to leverage the power and benefits of applied data and analytics as a leader among its peers.

2.2 Leveraging data assets has enabled DRT to accurately assess service maturity, performance and improvement opportunities. As the organization matures and advances the use of technologies and innovations across all business lines, expanding DRT's data and analytics infrastructure and capabilities is critical to successfully monitoring, evaluating and reporting on system performance in a manner that enables effective decision making to achieve service and strategic objectives.

2.3 DRT's Analytics Program's mission is to fuel continuous improvement and innovation across DRT by delivering trusted, timely and accessible insights through robust and holistic analytics practices. The program is a key business function that intersects with the interests of all functional teams and stakeholders across the organization at all levels, guided by the following key principles:

a. Accessibility: Democratizing data science and empowering all levels of staff to participate in and benefit from data and analytics
b. Quality: Leveraging accurate data to provide relevant, reliable and actionable insights
c. Timeliness: Providing the right insights at the right time to the right audience
d. Integrity: Maintaining uncompromising protection for all data assets and respect for privacy rights
e. Continuous Improvement: Actively identifying and acting on opportunities for accomplishing data and analytics goals better, faster and more cost effectively over time

2.4 DRT's Analytics Program has developed and executed tools and processes to standardize, refine and innovate the delivery of DRT's current reporting needs across all business areas. This includes reporting on key performance metrics provided as part of the General Manager's report at each meeting of the Transit Executive Committee.

2.5 In addition to meeting DRT-specific data and reporting needs, DRT's Analytics Program also collaborates with other Regional business teams and other external or community stakeholders to assess and advance new and innovative data and analytics resources that benefit DRT and Regional interests. Examples include:

a. On Time Performance data lake and interactive dashboard with Corporate Information Technology to standardize and make available data and trends on transit service reliability to operational managers, supervisors and staff; and
b. Vehicle incident data dashboard with Durham College's AIHub supporting the tracking and key trends associated with on-road incidents involving DRT vehicles.

2.6 The DRT Data and Analytics Strategy will guide the program's development over the next five years following a structured and methodical approach. A foundational element of DRT's strategy is the utilization of a maturity model to clearly identify key goalposts and meaningful objectives in DRT's data and analytics journey. This maturity model is an adaptation of the Maturity Model for Data and Analytics

established by the global technological and research firm Gartner for DRT and the Region's specific context and needs.

2.7 Maturity models are common and useful tools used by various government and private sector organizations across a wide spectrum of fields and industry to aid in performing organizational self-assessment of their current levels of capability in specific functional, strategic or organizational areas. The assessment outcomes are then used to establish a common understanding of the changes desired or required to achieve higher levels of maturity over a specified period of time, which are then often used to drive or inform strategic planning.

2.8 Variations of Data and Analytics maturity models, similar to that outlined by Gartner, have been promoted and/or are in active use by various organizations around the world, such as the OECD (Organisation for Economic Co-operation and Development), INTEL and Forbes. As an example, the OECD recently published the data and analytics maturity self-assessment results of 41 tax administrations from the Americas, the Asia-Pacific region and Europe based on the organization's Analytics Maturity Model, in June 2022. The OECD is encouraging tax administration regions across the world to utilize these self-assessment outcomes as a useful tool in developing and progressing on strategic analytics objectives and will be tracking their progress and development in the ongoing digital transformation of tax administrations.

3. Strategic Goals and Objectives

3.1 The DRT Data and Analytics Strategy outlines key goals and objectives to elevate DRT from its current data and analytics maturity level ("Aware" and "Reactive") to the next logical maturity level ("Proactive").

3.2 An organization at the "Aware" and "Reactive" maturity phase recognizes the value of its data assets in place and has made a commitment to moving towards data-driven decision-making at all levels as an organizational norm. However, there remains a limited depth and breadth of resources and expertise in place to fully realize benefits and efficiencies from data insights. Reporting is supported by basic, standard tools and often managed and executed on an ad hoc and "as needed" basis, with a focus on a limited set of key or priority measures and indicators. Insights from reporting and data analysis typically serve as a "hindsight" approach to determine or assess the root cause of events that have occurred. There may be staff on hand with specialized skills in data and analysis, but they often occupy other primary roles in the organization and are few and far between.

3.3 An organization that reaches a “Proactive” level of maturity has fully embraced a data-driven culture, promoting and advancing a norm of data literacy across the organization through tailored training and resourcing strategies. Data and analytics represent a key business function playing an active role in driving innovation and continuous business improvement. More advanced tools and technology that are customised to the organization’s specific needs – like interactive dashboards that are fuelled by automated data processes – are developed or made available through careful investments and targeted collaborations with other progressive stakeholders. The cross-functional collection, management and utilization of data is typically centralized and more efficient and effective with an established operating model of best practices. Insights from reporting and data analysis strive to be more predictive in nature, identifying issues before they occur and identifying needs for future and continued advancements.

3.4 To guide DRT’s planned approach for progressing through the maturity phases, distinct capabilities and traits to be achieved or improved are identified for each progressive maturity level.

3.5 Key goals and objectives are then developed to focus on addressing existing data and analytics gaps in business and technological capabilities across the following areas:

a. Organizational Talent and Development
b. Strategy and Governance
c. Policy and Process
d. Technology and Data Architecture
e. Culture and Data Literacy

3.6 The identified goals and objectives are laid out chronologically as part of a proposed “roadmap” for the next five years. The proposed roadmap items help to coordinate the accomplishment of key objectives while taking into account important pre-requisites or dependencies that may be shared between one or more objectives.

3.7 Key outcomes and targets for strategic performance measures and metrics are established and measured against 2021 as the “base year”. Outcomes and performance results will be regularly tracked and assessed and inform ongoing refinement of the strategy.

3.8 DRT’s five year Data Analytics Strategy is included in Attachment 1 to this report.

4. Next Steps

4.1 Funding for specific initiatives that advance DRT's data analytics strategy will be included as part of the annual budget and business plan process.

4.2 Where it is possible or beneficial to do so, DRT data and analytics strategic initiatives will be managed and executed in line and/or in step with other related Region data and analytics initiatives to leverage broader benefits and efficiencies.

5. Attachments

Attachment #1: DRT Data and Analytics Strategy 2022-2026

Respectfully submitted,

Original Signed by

Bill Holmes
General Manager, DRT

Recommended for Presentation to Committee

Original Signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer

DATA AND ANALYTICS STRATEGY

(2022 – 2026)

Fueling the Route Ahead

Table of Contents

INTRODUCTION

Durham Region Transit (DRT) is one of Ontario's largest regional transit systems, serving eight unique area municipalities (Ajax, Brock, Clarington, Oshawa, Pickering, Scugog, Uxbridge, and Whitby) by offering seamless connections to destinations across Durham Region and The Greater Toronto Hamilton Area through an innovative suite of services, including scheduled, On Demand and Specialized.

As part of Durham Region Transit's commitment to the continuous enhancement of its service offerings and customer service, DRT's Analytics Program was established in late 2018. In recent years, applied data and analytics have gradually become a cornerstone of improving and evolving public sector operations across Canada and the world. Valuable insights from a robust analytics program dramatically transform business decision-making and is an invaluable and indispensable resource that should be in every organization's toolbox.

DRT has continually strived to implement year-over-year improvements and innovation to its offered services, even amidst the unique challenges of a global pandemic for the last two years. In fact, it was during the height of the early pandemic period (late 2020 to early 2021) that DRT has seen impressive growth in its new On Demand service that was introduced in September 2020. Building on continued healthy uptake of this new service and encouraging responses to other system-wide service adjustments, efforts further streamlining DRT's "Demand Responsive" services (Specialized and On Demand) are currently underway.

The ability to leverage our data assets has been and continues to be a key driving force in enabling DRT to accurately assess service maturity, performance and opportunities. Expansion of DRT's data and analytics infrastructure and capabilities is a critical success factor for DRT's service and strategic objectives to bring more transit availability and benefits to our all residents in the Region. There is no better time than "now" to proceed with a comprehensive plan to further advance the maturity and capabilities of DRT's Analytics Program. A proactive approach will ensure that DRT continues the journey as a leader and not a late-to-game follower in this area, and stay ahead of exponential growth in the Region's increasingly complex and demanding transit needs.

This document outlines the initial iteration of a five-year strategic approach for the continued development and evolution of DRT's Analytics Program, in line with, and in support of, DRT's current five-year "Route Ahead" service strategy and recovery plan, as well as the goals of the Durham Transportation Master Plan for elevating the role of integrated public transit.

The strategic approach to DRT's Analytics Program provides a "blueprint" for achieving key outputs and milestones within a five-year timeframe that is specific to DRT's key objectives, prevailing priorities and guiding principles.

DRT's Analytics Program

Vision and Mission

To fuel continuous improvement and innovation of the Durham Region Transit experience and unrivalled service excellence by delivering trusted, timely and accessible insights through robust and holistic analytics practices.

Guiding Principles

The goals and activities of DRT's Analytics program are guided by and centered around the following five guiding principles:

ACCESSIBILITY	Democratizing data science and empowering all levels of staff to participate in and benefit from data and analytics
QUALITY	Leveraging accurate data to provide relevant, reliable and actionable insights
TIMELINESS	Providing the right insights at the right time to the right audience
INTEGRITY	Maintaining uncompromising protection for all data assets and respect for privacy rights
CONTINUOUS IMPROVEMENT	Actively identifying and acting on opportunities for accomplishing data and analytics goals better, faster and cheaper over time

Mandate and Function

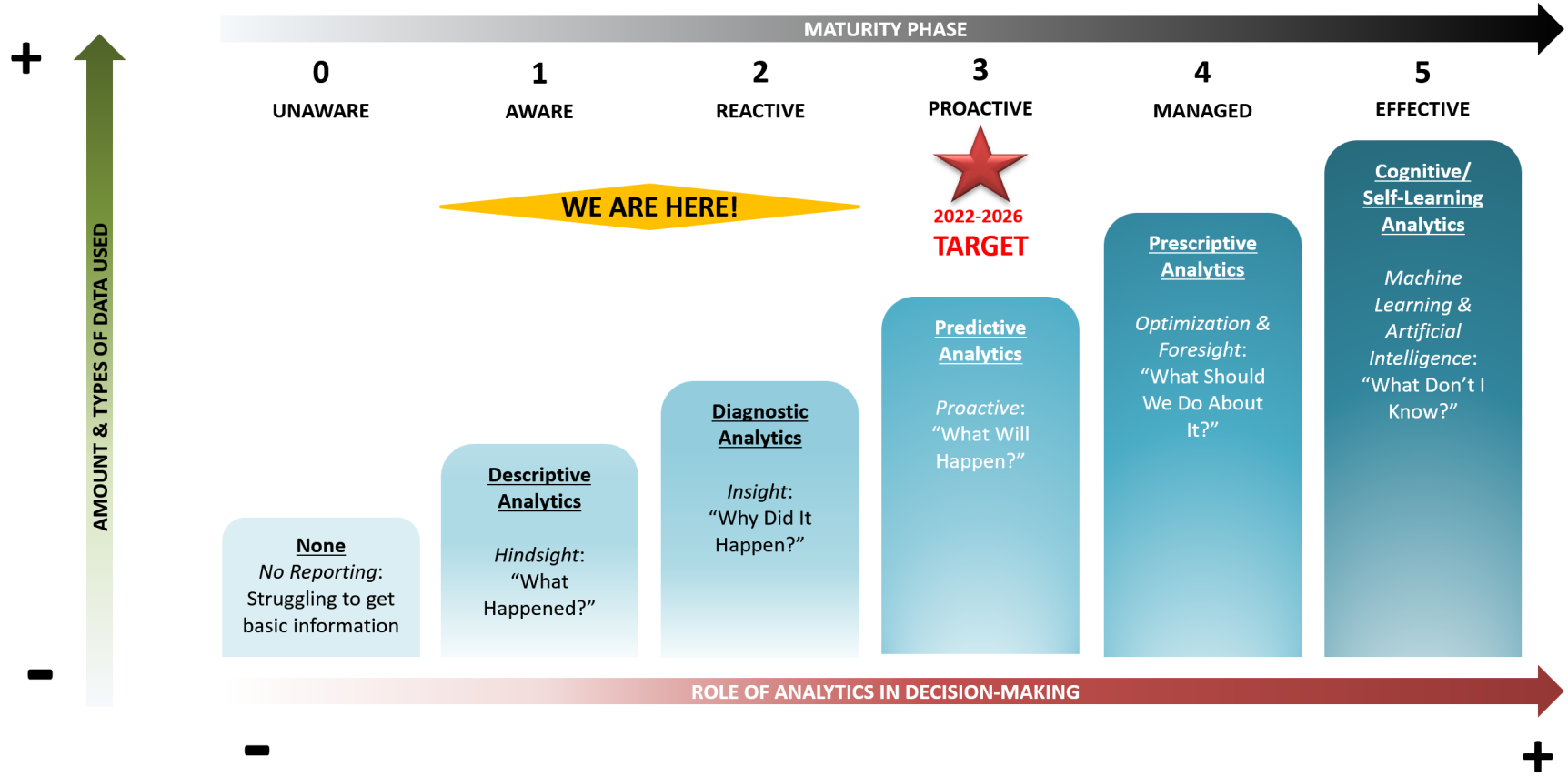
DRT's Analytics Program represents a key business function with objectives and work that intersects with the interests of all functional teams and stakeholders across the organization at all levels. The Program:

- plays key roles in leading and contributing to DRT's strategic interests in data and analytics
- provides key operational support for developing and producing important reporting and other analytics deliverables
- collaborates with internal and corporate partners to advance DRT's data and analytics technological and technical capabilities and competencies
- champions a culture of data literacy and citizen science

BASELINE MATURITY SNAPSHOT

The baseline maturity snapshot for DRT's Analytics Program establishes an initial benchmark of the program's current capabilities against a fixed scale of progress. This then provides DRT with a systematic approach to establish goals for and measure against desired progress over a period of time.

The following represents a high-level self-assessment of DRT's overall Data and Analytics maturity, based on current-day resources, practices and capabilities:



GAPS AND GOALS

✓ Accomplished
🚩 5-Year Strategy Goal
⏩ Future Goal

The following table outlines various key characteristics and capabilities for each maturity stage against DRT's current state. Items labelled with a 🚩 symbol denotes criteria and capabilities informing the goals identified for this 5-year plan:

	1 – AWARE	2 – REACTIVE (Descriptive Analytics)	3 – PROACTIVE (Predictive Analytics)	4 – MANAGED (Prescriptive Analytics)	5 – EFFECTIVE (Self-Learning Analytics)
Organizational Talent & Development	✓ Additional training specific to data-related skills and competencies provided only as required/relevant for specific job positions	🚩 Distinct job classification(s) requiring specific data-centric competencies and skillsets exist for Data and Analytics positions ✓ Data-focused job positions receive additional additional/advanced training in data-related skills and competencies 🚩 Data and Analytics roles recruited/upskilled at a minimum: - Data and Analytics Program Manager - Business Intelligence/Data Analyst(s)	🚩 Job classification(s) for Data and Analytics positions are continuously expanded and/or refined to meet and support organization's evolving data and analytics needs 🚩 Data-focused job positions receive ongoing cyclical training in data-related skills and competencies, including certifications where relevant and appropriate ⏩ Data and Analytics roles recruited/upskilled at a minimum: - Data and Analytics Program Manager - Data Analyst - Data Scientist	⏩ Additional/ advanced training in data-related skills and competencies are available to all staff, and support the cultivation of "Citizen Data Scientists" ⏩ Data and Analytics roles recruited/upskill at a minimum: - Data and Analytics Program Manager - Data Analyst - Data Scientist - Data Engineer/Architect ⏩ DRT Data and Analytics staff participate in or contribute through general Data and Analytics initiatives at the enterprise level	⏩ Key Data and Analytics staff have specialist training and certifications ⏩ Data and Analytics roles recruited/upskilled at a minimum: - Data and Analytics Program Manager - Data Analyst - Data Scientist - Data Engineer/Architect - AI (Artificial Intelligence)/ML (Machine Learning) Developer/Engineer ⏩ DRT is a leader in the development and recruitment of Data and Analytics talent and emerging roles

Attachment #1

	1 – AWARE	2 – REACTIVE (Descriptive Analytics)	3 – PROACTIVE (Predictive Analytics)	4 – MANAGED (Prescriptive Analytics)	5 – EFFECTIVE (Self-Learning Analytics)
Strategy & Governance	✓ Distinct but informal roles for supporting data-related tasks and responsibilities exist within teams to meet team- or function-specific business needs	✓ There is a functional Data and Analytics Team or Program in place with a clear mandate and roles and responsibilities ⚑ There is a Data and Analytics Strategy for DRT that aligns with and contributes to corporate strategic goals and priorities ⚑ There is a time-bound action plan for Data and Analytics objectives and initiatives aligned with the overall Data and Analytics Strategy in the Organization	⚑ There are standing Data and Analytics Strategy and Action Plans that are reviewed, assessed, and refined on a cyclical and as needed basis, and serves as a key input into corporate/regional strategic planning ⚑ Data and Analytics is a core business function in DRT with an established budget ⚑ There is an established Operating Model for Data Processes » Business roles for data and analytics (Data owners, Data Stewards, Stakeholders) are clearly defined and allocated throughout DRT	Traits and capabilities should be aligned with, and in support of, general maturity and direction at the enterprise/corporate level	

	1 – AWARE	2 – REACTIVE (Descriptive Analytics)	3 – PROACTIVE (Predictive Analytics)	4 – MANAGED (Prescriptive Analytics)	5 – EFFECTIVE (Self-Learning Analytics)
Policy & Process	✓ Data is tracked and maintained through informal and formal methods across the organization as a byproduct of established processes and operating procedures. ✓ Reporting is decentralized, unstandard and typically performed on an ad hoc or "as needed" basis. Reporting scope is typically team- or function-specific	✓ Certain data with immediate relevance to operations is purposefully recorded, maintained and reported/consulted as required to answer or address business questions. ✓ There are standard static reports established and produced for key strategic and operation metrics and measures. ✓ Basic data management and reporting processes are documented and streamlined.	⚑ Any data that can be captured is recorded, stored, and organized in a systematic fashion. ⚑ Interactive dashboards and other dynamic reporting tools allow data to be assessed and reviewed "on demand", as close to real-time as possible. ⚑ Standard processes for data lineage, metadata, data processing, data refinement and data analysis are established, documented, and refined on a regular basis. ⚑ Established data standards guide and govern the use and management of data	⏩ Data is managed as an asset, with Master Data Management in place either independently within DRT or in collaboration with/as an active supporter at the corporate level ⏩ A completed Inventory/Catalogue and Dictionary are in place for all data assets ⏩ Data and Analytics standards, procedures and considerations are embedded in all relevant business processes ⏩ Clear change Management process and protocols exist for Data and Analytics initiatives	

Technology & Data Architecture	✓ Standard/existing office productivity tools and applications are leveraged to extract, process, compile and present data and reports ✓ Basic and/or native query and reporting tools exist and are utilized as needed within existing applications ✓ Reporting typically consist of pre-packaged reporting resources ✓ There is an awareness of gaps and limitations in data quality and availability.	✓ Online Analytical Processing (OLAP) and visualization tools are commonly used to support reporting needs and tasks, but still generally under-utilized ✓ Structured data extracts utilizing in-house technologies are available and rely on manual ETL (Extract, Transform, Load) services for data quality and exception processes ⚑ Working mechanisms or workarounds exist to correct data quality issues at the source ✓ Available data are hosted and managed in silos or distinct/separate vendor systems ✓ Requirements for addressing data limitations and constraints are shaped by immediate business needs and priorities ✓ Insights from analytics are focused on problem-solving and "fire-fighting"	⚑ Dashboards and scorecards support performance monitoring and management, complemented by self-service Business Intelligence ⚑ Available data is stored and managed in a central data repository or repositories owned and managed by DRT, or with the support of corporate resources ⚑ Routine and automated ETL (Extract, Transform, Load) and exception handling processes are in place, with data enrichment through data-processing algorithms ⚑ There are early efforts at layering multi-dimensional data on a small scale and incorporating unstructured data ⚑ Requirements for addressing data limitations and constraints are increasingly influenced by future data needs and forward-looking business objectives.	⏩ There is real-time analysis of data and availability of operational intelligence ⏩ Data architecture in place supports data structures with multi-dimensionality, with layering of data reflecting considerable breadth and depth ⏩ Infrastructure enabling and supporting robust master data management is in place ⏩ Simulations and scenario development are common tools to aid business considerations ⏩ The incorporation and of unstructured data into analysis tasks is substantial and sophisticated ⏩ Insights from analytics drive decisions and help to shape business strategy and direction	⏩ There is minimal human intervention in routine data processing and analysis tasks (autonomous analytics), which are enhanced by machine learning algorithms ⏩ Artificial Intelligence is operationalized or plays a role in augmenting, refining, and enhancing analytics outputs and insights ⏩ Infrastructure and tools in place support a data science sandbox environment and approach to Data and Analytics ⏩ AI-driven analytics automate key business decisions

	1 – AWARE	2 – REACTIVE (Descriptive Analytics)	3 – PROACTIVE (Predictive Analytics)	4 – MANAGED (Prescriptive Analytics)	5 – EFFECTIVE (Self-Learning Analytics)
Culture & Data Literacy	✓ The organization places increasing value on, and preference for, data-driven decision-making ✓ Tracking and monitoring various operational and business metrics gradually becomes more commonplace across the organization	⚑ Staff working indirectly or directly with data or in data-related roles receive basic data literacy training and education ⚑ Data-driven decision-making is the norm ✓ Metrics and measures are identified for key business outputs and objectives	⚑ All staff across the organization have basic data literacy training and education ⚑ There are well-established, efficient, and effective cross-functional data collaboration and workflows within the organization	⏩ All staff have access to advanced data training ⏩ There is an established and comprehensive DRT-specific in-house data training program and/or community of practice ⏩ "Data Heroes" across business units and teams actively lead and champion Data and Analytics initiatives at all levels ⏩ There are well-established, efficient, and effective cross-functional data collaboration and workflows within the organization, with corporate partners and other external peer agencies and community organizations	⏩ DRT's analytics excellence is a differentiator in the field ⏩ A "citizen data scientist" mentality and approach is prevalent in the organization ⏩ Rapid and iterative Data and Analytics initiatives are supported and encouraged ⏩ There are expanded community and industry networking and collaboration on Data and Analytics interests

A few important notes about the table above:

- The pace of new technologies and approaches in the field of data and analytics have been growing exponentially in recent years. As such, any references to specific tools, technology and competencies in the table above and throughout this document is meant to be a snapshot in time given current considerations and criteria, to be revised and updated as appropriate over the span of the plan. Tools, technology and competencies documented in this plan are not intended to be an exhaustive list.
- Progression from phase to phase will not necessarily advance in a linear fashion (ie. take the same amount of time, effort or investment) depending on various factors and other dependencies.
- The table above represent criteria tailored to DRT's Analytics Program, and has not incorporated wider corporate objectives or any elements from a broader enterprise roadmap.

PROPOSED ROADMAP OF OBJECTIVES

The table below proposes key strategic goals to be achieved to arrive at the target Data and Analytics maturity phase for DRT, within the context of a high-level suggested order and timeline until the next update of DRT's Data and Analytics Strategy.

Please note that the table below does not represent a detailed list of individual planned initiatives and their key milestones – information that should be contained in a detailed action or project plan.

<table>
<tr><th></th><th>2022</th><th>2023</th><th>2024</th><th>2025</th><th>2026</th></tr>
<tr><td rowspan="2">Organizational Talent & Development</td><td>Recruit second Data Analyst</td><td></td><td colspan="2">Recruit additional generalist and/or specialist Data Analysts</td><td>Create new job classification for Data Scientist role</td></tr>
<tr><td></td><td></td><td colspan="2">Establish cyclical training program and requirements for DRT Analytics roles</td><td></td></tr>
<tr><td rowspan="2">Strategy & Governance</td><td>Establish and execute first multi-year DRT Data and Analytics Strategy</td><td colspan="2">Establish framework for DRT Analytics Governance and Operating Model (potential for partnership with corporate teams, eg. CSIT, Innovation etc.)</td><td>Establish DRT Analytics Working Committee</td><td>Generate 5-year "Report Card" and Update DRT Data and Analytics Strategy</td></tr>
<tr><td>Establish capital and operational budget for DRT's Analytics Program</td><td colspan="2">Secure additional required funding for planned Analytics initiatives and expanding data storage and processing needs</td><td colspan="2"></td></tr>
<tr><td>Policy & Process</td><td colspan="2">Ensure documentation is created for all Analytics team reporting outputs and a process for ongoing maintenance and updates is established</td><td colspan="3">Data catalogue and dictionary of all DRT data inputs and outputs is compiled</td></tr>
<tr><td rowspan="3">Technology & Data Architecture*</td><td>Deploy self-serve, interactive Business Intelligence dashboards for On Time Performance and Collisions</td><td colspan="4">Deploy additional self-serve, interactive Business Intelligence dashboards for other DRT key performance measures</td></tr>
<tr><td>Develop initial DRT Data Lake for On Time Performance Data (Scheduled Service)</td><td colspan="2">Augment DRT Data Lake with On Time Peformance data for Specialized and On Demand services</td><td colspan="2"></td></tr>
<tr><td colspan="2"></td><td colspan="3">Augment DRT Data Lake with other Performance data for all DRT services</td></tr>
<tr><td>Culture and Data Literacy</td><td></td><td colspan="2">Establish and roll-out basic data literacy course and cyclical training program for all DRT staff</td><td colspan="2"></td></tr>
</table>

*Note: Scope and timing for technology and Data Architecture initiatives will be dependent on available/secured funding, as well as the availability of qualified in-house, partnered or vendor resources.

KEY OUTCOMES AND MEASURES

The following table outlines key desired and expected outcomes as a result of completing planned objectives and their accompanying performance measures and targets.

Outcomes	Measures	Target	Current Estimated Performance/Status
DRT's Analytics team is appropriately staffed for current and expected operational and strategic demands	# of Data Analysts (Generalists and Specialists)	4 by 2026	2
DRT's Analytics program maintains relevant skills and competencies that are up-to-date and progressive	# of annual cyclical training hours per individual (specific to data and analytics competencies) completed	15 annual total	0
Notable improvements to the effectiveness, efficiency, and productivity of DRT's Analytics Program	% overall increase in standing/scheduled data and analytics deliverables produced	20% by 2026	18
	% overall reduction in manual processing effort for data and analytics deliverables	30% by 2026	Average 3 days
	% overall reduction in request-to-output time for data and analytics deliverables	20% by 2026	Average 3 days
	% overall increase in active and completed data and analytics initiatives for innovation or service enhancement	100% by 2026	Average 3 annually
An increase in the awareness of, and proficiency with, data and analytics concepts, principles, and tools across DRT	% overall increase in requests for data and analytics outputs and deliverables	15% year-over-year	Average 2 daily
	% overall increase in use of self-serve data and analytics tools	15% year-over-year	N/A
	# of DRT employees that have completed basic data literacy training	25-200 by 2026	0
	# of active and completed data and analytics process improvement initiatives specific to a business unit or functional area	4 annually	Average 1 annually

2021 will be used as the "base year" for relevant measures that require a "base year" for the determination and comparison of measure results.

Both measures and targets will be assessed over time as work progresses towards established objectives. As a result of such assessments, adjustments may be made to measures and targets as appropriate.