

Toronto Transit Commission CEO's Report

March 2019














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Performance scorecard

TTC performance scorecard – March 2019

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
Safety and security							
Lost-time injuries	Injuries per 100 employees	Q4 2018	4.85	4.75*			12
Customer injury incidents	Injury incidents per 1M boardings	Q4 2018	0.95	1.06*			13
Offences against customers	Offences per 1M boardings	Q4 2018	0.64	1.00			14
Offences against staff	Offences per 100 employees	Q4 2018	4.11	3.88			15
Fitness for duty	Cumulative total of random drug and alcohol test results	Q4 2018	NA	NA			16
Ridership							
Ridership	Monthly ridership	Jan 2019	45.8M	46.4M			17
Ridership	Year-to-date ridership	2019 YTD (to Jan)	45.8M	46.4M		NA	17

Ongoing trend indicators:  Favourable  Mixed  Unfavourable

*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
PRESTO ridership	Monthly ridership	Jan 2019	35.3M	35.5M	⊖	✓	19
PRESTO ridership	Year-to-date ridership	2019 YTD (to Jan)	35.3M	35.5M	⊖	NA	19
Wheel-Trans ridership	Monthly ridership	Jan 2018	332K	363K	⊖	✓	20
Wheel-Trans ridership	Year-to-date ridership	2019 YTD (to Jan)	332K	363K	⊖	NA	20

Customer experience

Customer satisfaction	Customer satisfaction score	Q4 2018	79%	80%	✗	✓	21
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Subway services

1	On-time performance Line 1	Scheduled headway performance at end terminals	Jan 2019	88.7%	90%	✗	⊖	22
2	On-time performance Line 2	Scheduled headway performance at end terminals	Jan 2019	87%	90%	✗	⊖	23
3	On-time performance Line 3	Scheduled headway performance at end terminals	Jan 2019	94.1%	90%	✓	⊖	24


Ongoing trend indicators: ✓ Favourable ⊖ Mixed ✗ Unfavourable

*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
4 On-time performance Line 4	Scheduled headway performance at end terminals	Jan 2019	98.8%	90%	✓	✓	25
1 Capacity Line 1	Trains per hour during peak	Jan 2019	90.1%	96%	✗	✓	26
1 Capacity Bloor Station	Trains per hour – 8am to 9am	Jan 2019	92.9%	96%	✗	NA	26
1 Capacity St George Station	Trains per hour – 8am to 9am	Jan 2019	90.2%	96%	✗	NA	26
2 Capacity Line 2	Trains per hour during peak	Jan 2019	89%	96%	✗	✗	27
3 Capacity Line 3	Trains per hour during peak	Jan 2019	84%	98%	✗	✓	28
4 Capacity Line 4	Trains per hour during peak	Jan 2019	100%	98%	✓	✓	29
Amount of service	Average weekly service hours delivered	Dec 2018	10.8K	11K	✗	✓	30
Vehicle reliability T1 trains	Mean distance between failures	Jan 2019	306,277 km	300,000 km	✓	✓	31
Vehicle reliability TR trains	Mean distance between failures	Jan 2019	596,315 km	600,000 km	✗	✓	32

Ongoing trend indicators:  Favourable  Mixed  Unfavourable

*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
Service availability	Daily average service delivered	Jan 2019	100%	100%	✓	✓	33
Subway cleanliness	Audit score	Q4 2018	92.7%	90%	✓	✓	34
 Streetcar services							
On-time performance	On-time departures from end terminals	Jan 2019	57.8%	90%	✗	✓	35
Short turns	Monthly total short turns	Jan 2019	1,153	1,074	✗	✓	36
Amount of service	Average weekly service hours	Dec 2018	18.8K	18.3K	✓	✓	37
Vehicle reliability LFLRV <i>(Low-Floor Light Rail Vehicle)</i>	Mean distance between failures	Jan 2019	7,577 km	35,000 km	✗	✓	38
Vehicle reliability CLRV <i>(Canadian Light Rail Vehicle)</i>	Mean distance between failures	Jan 2019	3,647 km	6,000 km	✗	–	39
Vehicle reliability ALRV <i>(Articulated Light Rail Vehicle)</i>	Mean distance between failures	Jan 2019	6,187 km	6,000 km	✓	✗	40
Road calls and change offs	Average daily road calls or vehicle change offs	Jan 2019	13	2	✗	✗	41



















Ongoing trend indicators:  Favourable  Mixed  Unfavourable

*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
Service availability	Daily number of vehicles available for service	Jan 2019	94.5%	100%			42
Streetcar cleanliness	Audit score	Q4 2018	91.8%	90%			43
Bus services							
On-time performance	On-time departures from end Terminals	Jan 2019	72.4%	90%			44
Short turns	Monthly total short turns	Jan 2019	2,195	1,590			45
Amount of service	Average weekly service hours	Dec 2018	145.3k	144.9K			46
Vehicle reliability	Mean distance between failures	Jan 2019	20,000 km	12,000 km			47
Road calls and change offs	Average daily road calls or vehicle change offs	Jan 2019	34	24			48
Service availability	Daily average service delivered	Jan 2019	103.3%	100%			49
Bus cleanliness	Audit score	Q4 2018	94%	90%			50




Ongoing trend indicators: Favourable Mixed Unfavourable




*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
 Wheel-Trans services							
On-time performance	% within 20 minutes of schedule	Jan 2019	92.8%	90%			51
Vehicle reliability	Mean distance between failures	Jan 2019	16,210 km	12,000 km			52
Accommodation rate	Percentage of requested trips completed	Jan 2019	99.9%	99%			53
 Station services							
Station cleanliness	Audit score	Q4 2018	76.2%	75%			54
Elevator availability	Percent available	Jan 2019	98.1%	98%			55
Escalator availability	Percent available	Jan 2019	97.4%	97%			56
Fare gates equipped with PRESTO	Percent available	Dec 2018	97.7%	99%			57
PRESTO Fare Card Reader	Percent available	Jan 2019	98.8%	99.9%			58

Ongoing trend indicators:  Favourable  Mixed  Unfavourable

*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
PRESTO Fare Vending machine (FVM)	Percent available	Jan 2019	96.4%	99.9%		NA	59
PRESTO Self-serve Reload Machine (SSRM)	Percent available	Jan 2019	99.6%	99.9%		NA	60
PRESTO Fares and Transfer Machines	Percent available	Jan 2019	97%	99.9%		NA	61

Ongoing trend indicators:  Favourable  Mixed  Unfavourable

*Represents four-quarter average of actual results

CEO's commentary

I would like to begin this month's commentary by wishing a happy 65th anniversary to Canada's First Subway. The Yonge subway line officially opened on March 30, 1954, a day that altered the course of Toronto's history.

The original Yonge line stretched 7.4 kilometres and included 12 stations: Eglinton, Davisville, St Clair, Summerhill, Rosedale, Bloor, Wellesley, College, Dundas, Queen, King and Union.

The Yonge line was Canada's first subway, and the first subway to be built in North America after WWII. Among the materials required to build the line were: 10,000 tons of structural steel, 14,000 tons of reinforcing steel, 4,200 tons of rail steel, 1.4 million bags of cement and 15 million feet of lumber.

And speaking of anniversaries, congratulations also to the City of Toronto from all of us at the TTC on 185 years since its incorporation in

March 1834. Toronto and the TTC's history go hand-in-hand. As Toronto has grown and evolved, so has the TTC expanded and developed into an integral part of life in the city.

On March 7, Toronto City Council approved the TTC Operating, Wheel-Trans and Capital Budgets, as recommended by the TTC Board:

- 2019 TTC Operating Budget with gross expenditures of \$1.9 billion, revenues of \$1.3 billion and a net subsidy requirement of \$622 million. The Operating Budget includes a 10-cent fare increase, effective April 1, which will generate \$25.8 million in passenger revenues.
- 2019 Wheel-Trans Budget with gross expenditures of \$149 million, revenues of \$8.1 million and net subsidy requirement of \$140.9 million.

- 2019-2028 TTC Capital Budget and Plan of \$6.453 billion, with expenditures of \$1.5 billion in 2019.

After a very tough winter, I think I can speak on behalf of our entire workforce when I say we are all looking forward to springtime. From the end of January all through February, it seemed like Toronto was hit with one storm after another, and our employees worked through frigid temperatures and brutal winds, blowing snow and freezing rain to keep Toronto moving safely through often treacherous conditions.

With the new season comes new service improvements on numerous bus routes across the city. Most notably, at the end of March, we are improving service reliability on 10 bus routes, introducing new weekday midday express service on the 995 York Mills Express and increasing service on the 37 Islington on Saturday mornings.

The new season will also see the arrival of our first all-electric bus. The first TTC eBus, which at the time of this writing is scheduled to be delivered from New Flyer Group Industries by the end of March, will be the first of 60 battery electric buses planned for delivery by year's end. The first bus, as all new vehicles do at the TTC, will undergo thorough testing and commissioning before it hits the streets.

The TTC is the first to buy eBuses from each of the three manufactures: BYD, New Flyer Industries and Proterra. Each manufacturer offers unique technology with respect to its propulsion systems (i.e. batteries, energy management systems, motors) as well as many of the other systems, such as the vehicle structure, doors, heating and cooling systems and suspension.

TTC staff will be monitoring these systems and comparing overall performance as part of our comprehensive head-to-head eBus testing program. While one to two buses from each manufacturer will be used for testing over a period of two

years, the majority of the 60 eBuses will be placed into normal revenue service, since the ultimate test is in how well they serve our customers and how well they survive the rigour of day-to-day operations on Toronto streets and through all seasons.

In accordance with the TTC Board-approved Green Bus Procurement Plan, the last clean diesel bus was received in 2018, and we will be purchasing a mix of hybrid electric and fully electric buses from 2019 to 2024. In 2025, the TTC will transition to a steady-state procurement of solely fossil fuel free buses. By 2040 our entire bus fleet would be zero emissions.

The TTC is the operator of the largest bus fleet in the country and third largest in the U.S. and Canada. A fossil fuel free bus fleet offers the promise of lower cost of ownership, improved local air quality, and will go a long way to assist the City of Toronto in reaching its ambitious greenhouse gas (GHG) reduction targets.

In addition to an ambitious schedule of weekend subway closures, over the

course of three weeks in March, we closed portions of the subway at 11 p.m. on a number of weeknights to perform vital track work, maintenance and signal upgrades. Initial customer feedback indicates that customers are in favour of early weeknight closures if it means that important work is progressing.

On March 1, the TTC was honoured as one of Canada's Best Diversity Employers, recognizing leaders that create inclusive workplaces for employees, by cultivating diversity of thought and creating an environment in which individuals have an equal opportunity to contribute, advance and voice their opinions and perspectives. Though we recognize that we have a long way to go to ensure that our workforce fully reflects the city we serve, we are proud to receive recognition of our achievements in promoting and supporting diversity and inclusion in all corporate policies, programs and services.

On March 5, Mayor John Tory, TTC Chair Jaye Robinson, Toronto Centre Councillor Kristyn Wong-Tam and Mazin Aribi, Chair of the TTC's

Advisory Committee on Accessible Transit, gathered at St Patrick Station to celebrate that station becoming the TTC's 45th accessible station.

The event was a chance to extend thanks to project partners for the elevator at 480 University: developer Amexon Property Management, Core Architects and 2 By 4 Design. The TTC worked closely with our private-sector partners to build an integrated elevator between the new condominium and the station. They also built the accessible street-level entrance and connection to the subway.

Elevator construction continues at Royal York, Dupont, Yorkdale, Wellesley, Wilson, Runnymede and Chester stations. And this year, construction is scheduled to start at Sherbourne, Bay, Keele and Lansdowne stations. In all, 11 stations will see easier access construction happening in 2019. Our Easier Access program will make the remaining subway stations accessible by 2025.

This St. Patrick's Day, for the second year in a row, the TTC was able to provide free streetcar service on the

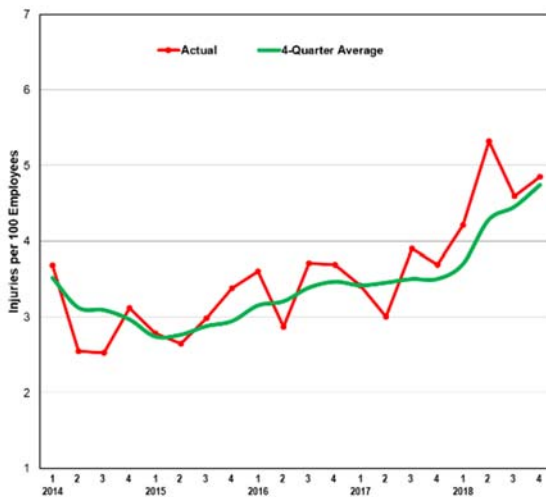
501 Queen and 504 King routes between 4 p.m. and 2:30 a.m., courtesy of Jameson Irish Whiskey, helping us ensure those out celebrating got around safely.



Richard J. Leary
Chief Executive Officer

Safety and security

Lost-time injuries rate (LTIR)



Definition

Number of lost-time injuries reported per 100 employees.

Contact

John O'Grady,
Chief Safety Officer

Note: Q1 2019 data will be available in the June 2019 CEO's Report.

Results

The LTIR for Q4 2018 was 4.85 injuries per 100 employees.

Analysis

The LTIR for Q4 was 2% higher than the four-quarter average of 4.75 injuries per 100 employees. This increase is mainly attributed to the rise in reach/bend/twist, and acute emotional event (AEE) injuries in this quarter. There has been an upward trend in the LTIR since 2015.

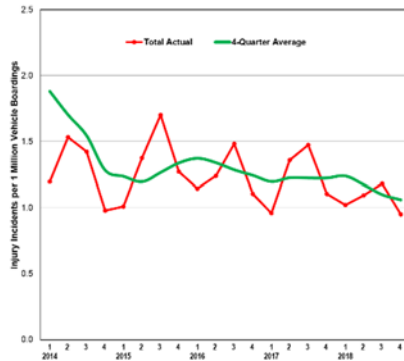
Action plan

Musculoskeletal injuries (e.g. overexertion, reach/bend/twist and repetition) account for 23% of all lost-time injuries and continue to represent the highest injury event type since 2014. The Ergonomic Musculoskeletal

Disorder Prevention Program, currently being implemented, focuses on preventing such injuries and resolving ergonomic concerns. The program is expected to be fully in place by the end of 2019.

AEE injuries caused by sudden traumatic events continue to represent the second highest injury type and account for 17% of all lost-time injuries since 2014. In January 2018, under the Workplace Safety and Insurance Board Act, the Province introduced two legislative changes: 1) The new policy on Chronic Mental Stress allows for compensation due to work-related stressors such as harassment; 2) The policy on Traumatic Mental Stress was revised to broaden the spectrum of psychological claims. These changes have created an opportunity for an increase in the reporting of claims related to emotional trauma injuries.

Customer injury incidents rate (CIIR)



Definition

Number of customer injuries per one million boardings.

Contact

John O'Grady,
Chief Safety Officer

Results

The CIIR for Q4 2018 was 0.95 injury incidents per one million vehicle boardings.

Analysis

The CIIR for Q4 was 10% lower than the four-quarter average rate of 1.06 injury incidents per one million vehicle boardings.

The four-quarter average line shows there has been a continued downward trend in CIIRs since 2014. This decrease is mainly attributed to a reduction in customer injury incident rates in the subway.

Action plan

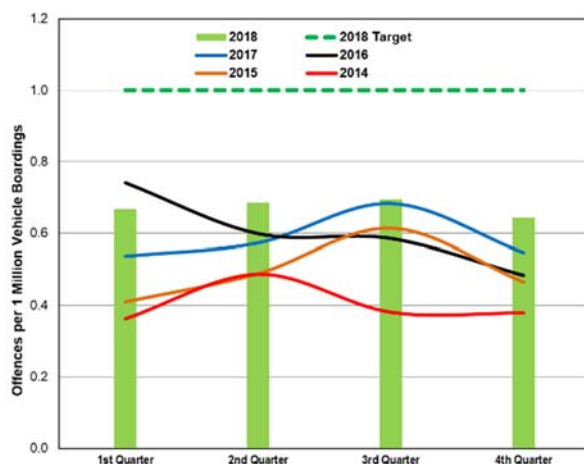
The continuous reduction in station-related subway injuries since 2015 is partly attributed to a reduction in elevator/escalator injury incidents compared to previous years. Since March 2018, elevator and escalator safety videos play hourly on most

TTC platform video screens and station information screens.

In addition, the reduction in station-related subway injuries over the years is partly attributed to the reduction in slip/trip injury incidents due to the application of slip resistant coating on selected station floor areas, regular mopping of stairways, and the roll out of the *Slips, Trips, and Falls* prevention campaign.

Note: Q1 2019 data will be available in the June 2019 CEO's Report.

Offences against customers



Definition

Number of offences against customers per one million vehicle boardings.

Contact

Collie Greenwood,
Chief Service Officer

Results

Total offences against customers decreased in Q4 2018 to 0.64 offences per one million vehicle boardings. The current rate is 16.4% higher than the corresponding rate of 0.55 in Q4 2017.

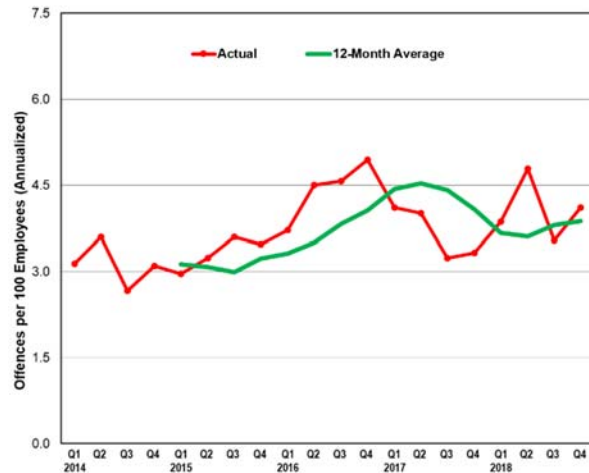
Analysis

An increase in the *Assaults* category was observed in Q4. A slight increase in the *Customer thefts* and *Other* categories, as well as decreases in the *Robberies* and *Sexual assaults* categories were observed compared to the previous quarter.

Action plan

Transit Enforcement Special Constables continue to engage with the public to provide a visible presence across the system with a specific focus on areas identified as being high-risk for offences.

Offences against staff



Definition

Number of offences per 100 employees.

Contact

Collie Greenwood,
Chief Service Officer

Results

Total offences against staff increased in Q4 2018 to 4.11 offences per 100 employees. The current rate is 23.8% higher than the corresponding rate of 3.32 in Q4 2017. A slight decrease was observed in the moving annual rate of offences against staff, with Q4 2018 being 3.88, lower than the corresponding moving annual rate of 4.08 in Q4 2017.

Analysis

Increases were observed in all crime types - *Assaults*, *Threats* and *Other* compared to Q3 2018.

Action plan

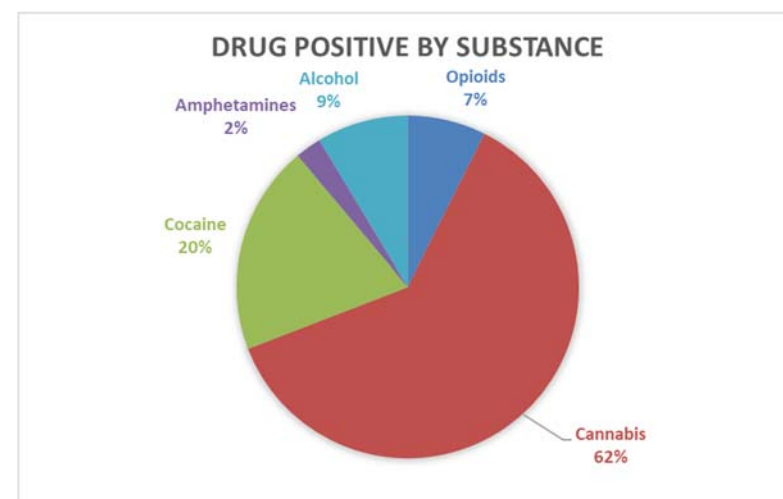
Transit Enforcement Special Constables will continue to increase support to surface personnel via the BUS STOP (Bringing Uniform Support to Surface Operating Personnel) initiative, and conduct special details and initiatives to assist with ongoing and emerging issues identified by staff across the system.

Fitness for duty

A total of 82 employees were non-compliant or refused to test under the random program from May 8, 2017 to December 31, 2018. During the same period, 4,299 employees (98.1%) tested under the random program were compliant. Data reflects the period through the end of Q4 2018.

Random Testing Summary - Q4 2018				
	2018	2017	Total *	%
Compliant Tests	2672	1627	4299	98.1%
Unionized Employee Non-Compliant Test Results (Drug, alcohol, refusal)	50	29	79	1.8%
Staff Employee (non-unionized) Non-Compliant Test Results (Drug, alcohol, refusal)	0	3	3	0.1%
Total	2722	1659	4381	100.0%

Non-Compliance Breakdown				
Category	2018	2017	Total	Percentage
Drug	47	24	71	86.6%
Alcohol	2	5	7	8.5%
Refusals	1	3	4	4.9%
Total	50	32	82	100.0%



The data shows the number of random tests conducted on designated TTC employees (safety sensitive, specified management, and designated executive) in the specified period of time. *(Data is provided by DriverCheck Inc., the TTC's third party provider)*

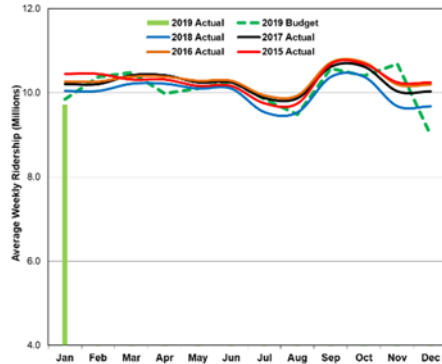
Note: The next quarterly update will be provided in the May 2019 CEO's Report.

Contact

Megan MacRae,
Executive Director of
Human Resources

Ridership

Ridership



Definition

Average number of journeys per week, including paid and free journeys (e.g. two-hour transfers and children 12 and under). A journey with transfers is counted as one journey. The total is derived from cash, tickets and token counts, Metropass and PRESTO data, diary studies and ridership analytics.

Contact

Dan Wright,
Chief Financial Officer

Results

Period 1 (January 1 to February 2, 2019) revenue ridership was at 45.8 million or 9.7 million passengers per week. This was approximately 0.6 million (1.3%) below the budget of 46.4 million rides and 0.4 million (0.8%) below the same period in 2018.

Analysis

After increasing steadily for 12 years, revenue ridership stabilized in 2016 and declined in 2017, 2018 and continues to decline in 2019. This trend is similar to other large mature North American transit systems, many of which are experiencing falling ridership on one or more of their transit modes. Ongoing analysis is required, but contributors could include changes in demographics, travel behaviour and technology that is changing how people travel in cities. Transit systems are also finding that revenue control measures (e.g. monitoring fare payment) are required to a greater

extent than in the past, which in turn affects measured ridership. The TTC likely experienced some revenue (and measured ridership) loss during the PRESTO introductory period. Weekend subway closures may also be affecting weekend ridership.

The conversion from Metropass to e-purse, to take advantage of the 2-hour transfer and co-fare, is also likely affecting measured ridership to the extent that customers switching to e-purse ride less often than the average of 71 rides used for each adult monthly Metropass sold.

While ridership continues to trend down, January ridership was below our reduced target in large part due to increased weather events in 2019 (2 severe snow storms in 2019 versus nil in 2018 and 16 days of extremely cold temperature alerts compared to 13 days in 2018).

Although measured revenue ridership continues to drop, the average fare increased as some

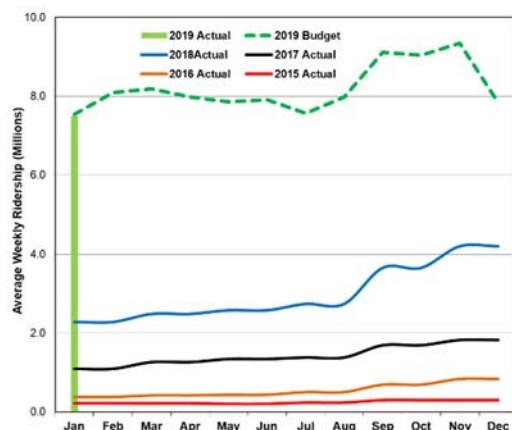
customers converted from monthly passes (e.g. Metropass) to single fares (e.g. PRESTO e-purse). As a result, the total revenue for 2018 was essentially flat despite the change in measured revenue ridership. However, the moving annual average fare has decreased slightly in recent months, from \$2.2328 at the end of 2018 to \$2.2123 as of period 1, 2019, which, in addition to the decreasing ridership, contributed to a decrease in YTD 2019 revenue compared to the same period in 2018.

payment and implement additional controls to prevent fare evasion.

Action plan

To re-establish sustained ridership growth, the Ridership Growth Strategy, an extension of the 2018-2022 TTC Corporate Plan, is being implemented with three main objectives: 1) Retain current customers; 2) Increase transit rides per current customer; and 3) Attract new customers to the system. With the discontinuation of the monthly Metropass in December 2018, during 2019 we plan to increase the monitoring of fare payment with PRESTO or otherwise via proof-of-

PRESTO ridership



Definition

Average number of journeys per week using PRESTO fare media, including PRESTO taps and PRESTO pass rides.

Note: PRESTO ridership is included in TTC ridership totals.

Contact

Dan Wright,
Chief Financial Officer

Results

Period 1 (January 1 to February 2, 2019) PRESTO ridership was 35.3 million or 7.5 million passengers per week. This was relatively flat to budget and 24.7 million (231%) higher than January 2018 ridership of 10.7 million.

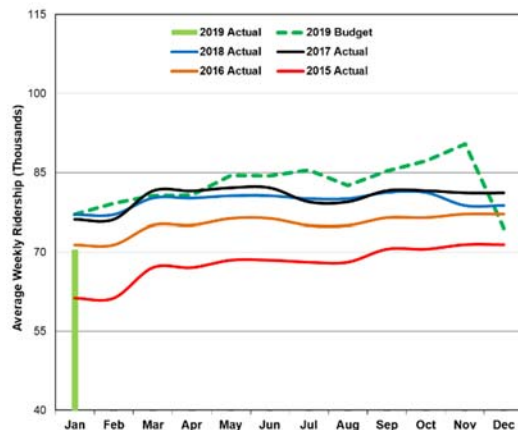
Analysis

Substantial progress has been made over the last year with numerous fare products now available on PRESTO. PRESTO fare card readers have been installed on all buses and streetcars and fare gates equipped with PRESTO and fare vending machines are at all subway entrances. The retirement of the Metropass on December 31, 2018 encouraged a significant move of customers to PRESTO in January 2019, driving the increase of more than 160,000 unique PRESTO cards using the system. This resulted in an increase in PRESTO adoption from 45.5% in December 2018 to 77.1% in January 2019.

Action plan

PRESTO adoption will continue to increase with the phasing out of legacy fare media, more fare options made available under PRESTO and a number of marketing and communication activities aimed at boosting PRESTO adoption. The PRESTO adoption rate is expected to continue to increase significantly during 2019, reaching approximately 95% once legacy fare media are no longer sold.

Wheel-Trans ridership



Definition

Average number of journeys per week using both Wheel-Trans dedicated services and contracted services.

Note: Wheel-Trans ridership is not included in the TTC ridership totals.

Contact

Dan Wright,
Chief Financial Officer

Results

Ridership in Period 1 (January 1 to February 2, 2019) was 332,117 (or 70,500 passengers per week). This figure was 8.5% lower than the budgeted 77,000 customers per week. In terms of year-over-year growth, the January ridership of 332,117 is 9.5% lower compared to the same period in 2018.

Analysis

Wheel-Trans ridership was lower than expected for Period 1. The cancellation rate was considerably higher for this time frame when compared to the same period last year. There were 50,000 more trips cancelled in Period 1 2019 compared to Period 1 2018. Ridership numbers fell short of the target due to the spike in trip cancellations. Without this abnormally high number of cancellations, the ridership rate would have been up 4% over the previous year.

Action plan

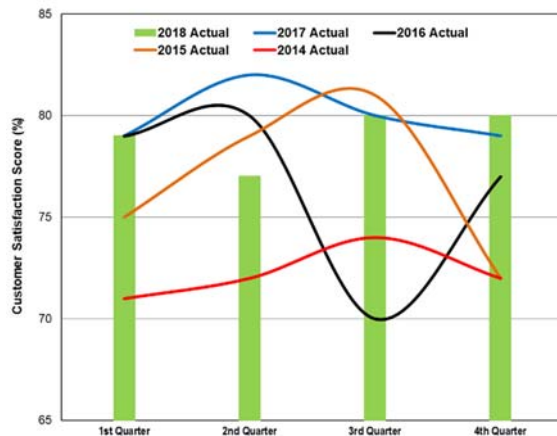
We will continue to monitor customer trips and volume of trips booked,

through reservations and online, to better understand new travel trends and forecast demand.

The way bookings are confirmed, scheduled, and subsequently communicated to customers has changed, which could also be partly responsible for the high volume of cancellations if customers believe they are not going to get the trip they require. In an effort to schedule more efficiently, trips that normally would have been granted upon booking are put on a waiting list to be scheduled the day before. Despite the high accommodation rate of 99.5%, it is possible that customers cancel their trip and make other arrangements to attain a higher degree of certainty for their journey. A customer survey is currently being completed regarding diverted trips in order to incorporate this information into the ridership trend analysis. We will continue to monitor the trip cancellation rate to determine if this is a new trend or if it is due to severe weather issues experienced during this period. We are also developing improved ways of communicating the confirmed booking to better reassure customers that their trip request will be fulfilled.

Customer experience

Customer satisfaction score



Definition

Overall satisfaction: How satisfied were you overall with the quality of the TTC's service on the last TTC trip you took?

Contact

*Kathleen Llewellyn-Thomas,
Chief Customer Officer*

Results

Four-in-five (80%) customers had high perceptions of overall satisfaction in Q4 2018, which is consistent with last quarter (80%) and last year's overall satisfaction scores (80%). We had another strong year in terms of overall customer satisfaction, averaging 79%.

Analysis

Streetcar customers expressed a significant increase in perceptions of overall satisfaction this quarter (81%) compared to the same time last year (71%). Satisfaction was boosted by improvement in key drivers, such as trip length, helpfulness of staff and overall comfort of ride.

Line 2 customers were more satisfied (69%) with levels of crowding compared to last quarter (66%) and the same time last year (59%). Line 1 customer satisfaction with crowding dipped to 58%, down from 66% last quarter, but up from the same time last year (52%).

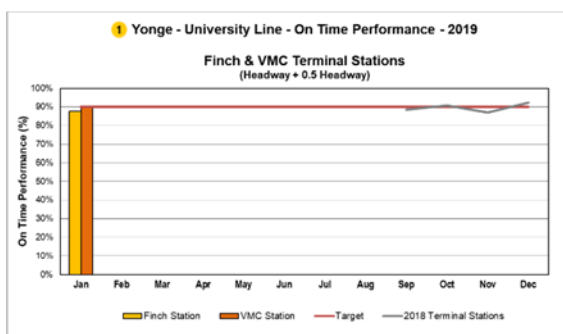
Action plan

Rising streetcar customer satisfaction suggests that the delivery of new low-floor streetcars and adjustments to service, including the King Street Transit Pilot and adding Run-As-Directed vehicles, are having a positive impact on customer perceptions.

This year we saw an overall improvement in perceptions of crowding on Line 1 compared to 2017 thanks to various relief initiatives, including adding more trains and the commissioning of the north hostler platform at Wilson Yard, which makes it easier for trains to enter service.

Subway services

Line 1 (Finch and Vaughan Metropolitan Centre terminal stations): On-time performance (OTP)



Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6 a.m. and 2 a.m. To be on time a train must be within 1.5 times of its scheduled headway.

Contact

James Ross,
Chief Operating Officer

Results

In January, performance decreased from 92.6% to 87.7% at Finch and from 91.7% to 89.8% at Vaughan.

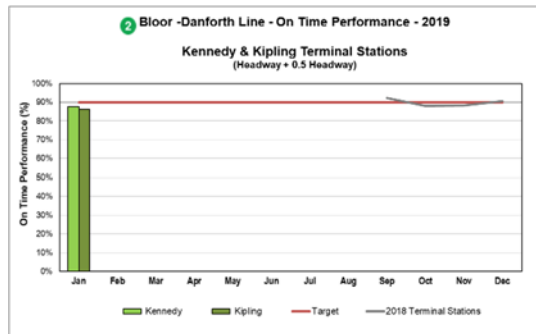
Analysis

The Automatic Train Control (ATC) signaling system is now in service from Vaughan to Dupont, and signal issues have decreased in this area. However, inclement weather conditions negated any gains, with weather-related signal incidents increasing from one in December to 38 in January, and track switch failures increasing from zero in December to 14 in January. Overall, delay minutes impacting service increased by 20.4% when compared to December.

Action plan

The implementation of ATC will have a positive effect on weather-related signal delays as common issues are eliminated with ATC. The ATC area will extend to St Patrick Station in Q2 2019.

Line 2 (Kennedy and Kipling terminal stations): On-time performance (OTP)



Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6 a.m. and 2 a.m. To be on time a train must be within 1.5 times of its scheduled headway.

Contact

James Ross,
Chief Operating Officer

Results

In January, performance decreased from 90.4% to 87.7% at Kennedy, and from 90.6% to 86.3% at Kipling. Both terminals did not achieve target.

Analysis

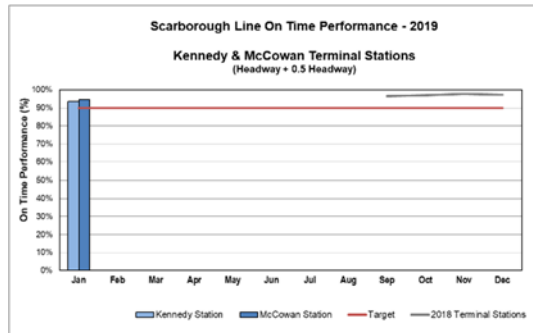
Inclement weather caused many of the issues on Line 2 during January. Weather-related signal incidents increased from one in December to 43 in January. Rail Cars and Shops incidents increased by 15.8%. Speed control incidents increased by 29.1%. Passenger-related incidents increased by 15.5%. Delay minutes overall increased by 62.2% mostly due to equipment and passenger-related issues.

Action plan

Speed restrictions in open areas of the line, part of the effort to reduce wheel flats and resulting noise and vibration issues, were removed on February 4, and service has improved as a result.

The pilot use of Run-As-Directed trains, especially during the p.m. peak period, is having a positive impact on line performance and is being made permanent.

Line 3 (Kennedy and McCowan terminal stations): On-time performance (OTP)



Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6 a.m. and 2 a.m. To be on time a train must be within 1.5 times of its scheduled headway.

Contact

James Ross,
Chief Operating Officer

Results

The target for Line 3 schedule performance is 90%. In January, this target was exceeded with 94.1% of trains leaving the departure location within the specified parameters.

Analysis

This performance indicator declined from 97.2% in December mostly due to weather issues that suspended service for the majority of the last work week in January.

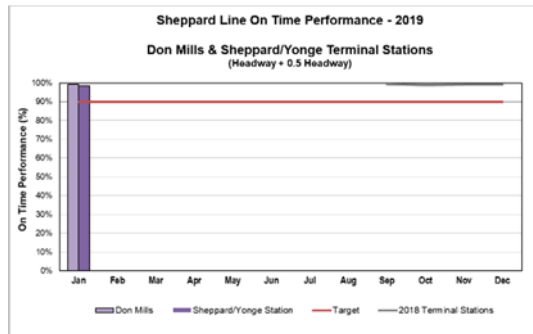
There were 106.3% more delay minutes and 55.3% more incidents in January, mostly due to vehicle and track-related delays.

There was also a service suspension due to an employee injury at track level.

Action plan

For improved overall service, the service schedule for Line 3 is being amended to have peak level service on the line for longer periods throughout the day.

Line 4 (Don Mills and Sheppard terminal stations): On-time performance (OTP)



Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6:00am and 2:00am. To be on time a train must be within 1.5 times of its scheduled headway.

Contact

James Ross,
Chief Operating Officer

Results

Line 4 OTP met target and remained very stable at 98.8% in January.

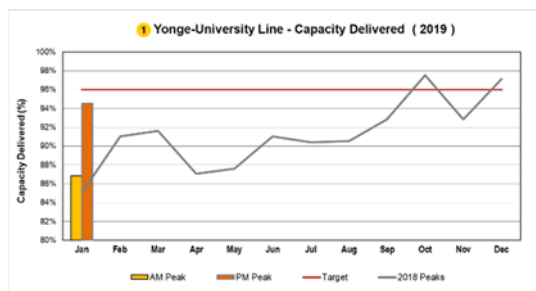
Analysis

There was an increase of 13 incidents mostly due to equipment issues and this caused the slight drop from 99.2% in December.

Action plan

Line 4 will continue to be managed in the same, effective manner providing consistent service to our customers.

Line 1: Capacity



Definition

Total number of trains that travelled through 12 key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data is based on Monday-to-Friday service.

Peak periods: 6 am to 9 a.m. and 3 p.m. to 7 p.m.

Contact

James Ross,
Chief Operating Officer

Results

The average peak capacity for Line 1 in January for both a.m. and p.m. peak times was 90.1%, falling short of the 96% target, but up from the same time last year (85.1%). Performance on this line failed to meet target with 86.9% in the a.m. and 94.5% in the p.m. across all measurement points. These results are down significantly from December 2018 when the a.m. peak was 96.1% and the p.m. peak was 98.3%. Results for the peak of the peak, southbound Bloor and southbound St George, were also below target, achieving 92.9% and 90.2% respectively.

Analysis

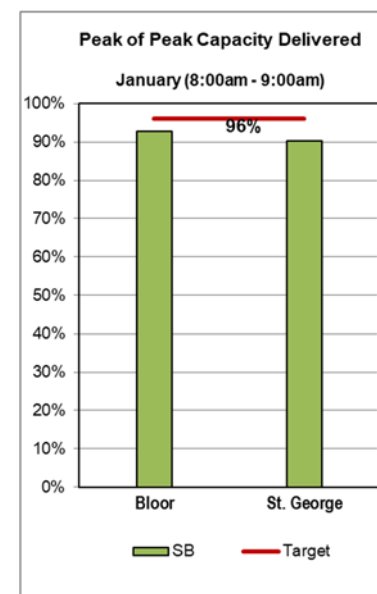
Overall performance was hampered by a number of days of inclement weather that resulted in signal problems in open areas of the line, as well as a significant failure at Museum Station on January 24 that impacted the entire a.m. peak period.

The issue at Museum Station created a false occupancy for the signal system, slowing the passage of trains

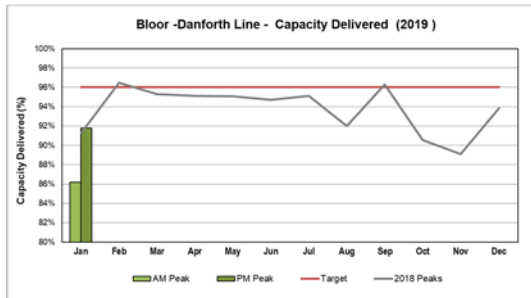
southbound from St George so significantly that trains were, at its worst, backed up southbound to Yorkdale.

Action plan

Whether the issue was a false occupancy as at Museum or one of several trainstop faults in the open areas of the line, many of these issues will be eliminated completely by the ATC system currently in service from Vaughan to Dupont stations and continuing further to St Patrick Station in Q2 2019.



Line 2: Capacity



Definition

Total number of trains that travelled through 10 key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data based on Monday-to-Friday service.

Peak periods: 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.

Note: Capacity delivered is the actual train count divided by the scheduled train count for each hour at sampled locations. Data is based on weekday service from Monday to Friday.

Contact

James Ross,
Chief Operating Officer

Results

The average peak capacity for Line 2 in January 2019 for both a.m. and p.m. peak times was 89%, falling short of the 96% target. Performance on this line failed to meet target with 86.2% in the a.m. and 91.8% in the p.m. across all measurement points. Capacity delivered is down from the previous month (93.9%) and the same time last year (91.3%).

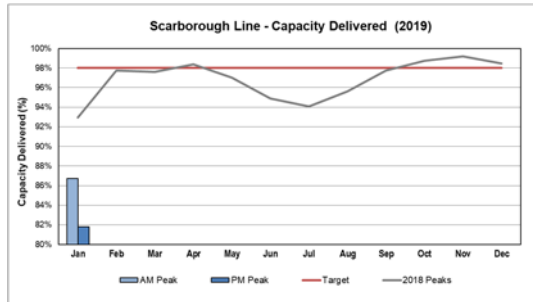
Analysis

Extreme weather conditions impacted performance on the line, in addition to a speed restriction in open areas of the line to prevent the incidence of wheel flats. An iced over power rail section east of Victoria Park Station resulted in service being suspended on January 29 for 174 minutes, while crews worked to clear the ice.

Action plan

The speed restriction that had been in place along Line 2 was lifted as of February 4, and service levels began to improve immediately.

Line 3: Capacity



Definition

Total number of trains that travelled through two key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data is based on Monday to Friday service.

Peak periods: 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.

Contact

James Ross,
Chief Operating Officer

Results

The average peak capacity for Line 3 in January 2019 for both a.m. and p.m. peak times was 84%, falling short of the 96% target. Performance on this line failed to meet target with 86.7% in the a.m. and 81.8% in the p.m. across the measurement points. This is down from December 2018 (98.5%) and the same time last year (93%).

Analysis

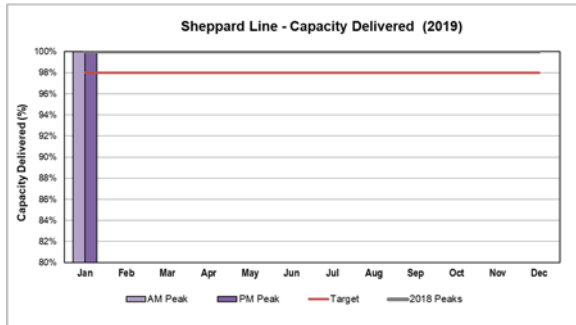
Delivered capacity was down significantly in January due to weather-related issues and an employee injury at track level that resulted in several service suspensions. The severe weather resulted in poor performance for the entire week of January 28, when all service was suspended for two-and-a-half days, and did not return to normal levels until the afternoon of February 1.

Action plan

Subway Infrastructure has a robust maintenance program to improve

winter weather resilience on Line 3, however, the extreme weather during the week of January 28 overwhelmed the equipment and prevented operations.

Line 4: Capacity



Definition

Total number of trains that travelled through two key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data is based on Monday to Friday service.

Peak periods: 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.

Contact

James Ross,
Chief Operating Officer

Results

The capacity on Line 4 exceeded the target and achieved 100% capacity for the 13th consecutive month.

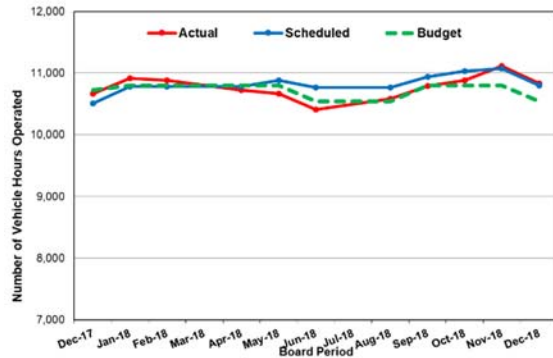
Analysis

There was only one significant delay that lasted 22 minutes, due to a security issue.

Action plan

This line continues to run as scheduled. Proactive maintenance continues to be an important tool in delivering service.

Subway: Weekly service hours



Definition

Calculated duration of time that all revenue trains are in service.

Contact

Kathleen Llewellyn-Thomas,
Chief Customer Officer

Results

In the December Board Period, 10,540 subway weekly hours were budgeted for service while 10,800 subway weekly hours were scheduled to operate, representing a variance of 2.47%.

Of the 10,800 subway weekly hours scheduled to operate, 10,834 weekly hours were actually delivered, representing a variance of 0.31%.

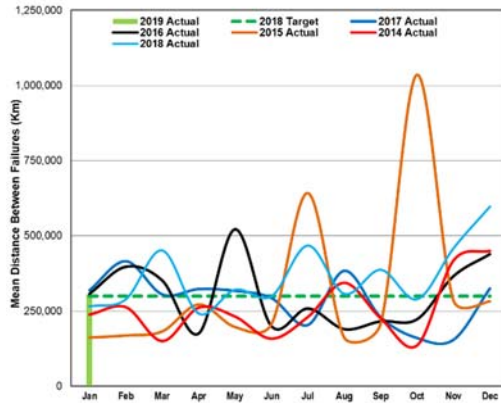
Analysis

The variance between budgeted and scheduled is the result of an in-year Board-approved service enhancement to modify the Line 1 schedule.

Action Plan

No action required at this time.

Subway T1 train: Mean distance between failures (MDBF)



Definition

Total kilometres travelled in month compared to the number of rolling stock equipment incidents resulting in delays of five minutes or more. Includes all seven days of service.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The MDBF in January was 306,277 kilometres, exceeding the target of 300,000 kilometres and the January 2018 total of 265,831 kilometres.

Analysis

In January, there were 11 delay incidents greater than or equal to five minutes. The top offending system was the passenger door system with five delay incidents greater than or equal to five minutes. This was followed by the brake system with three incidents, the coupler system with two incidents, and the propulsion inverter system with one incident.

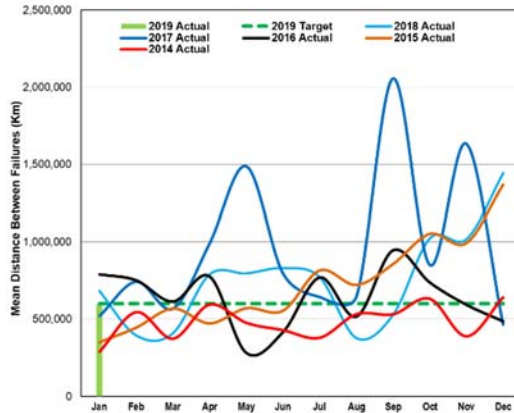
Action plan

The five passenger door system related failures were a result of: out of adjustment staff switch, defective open magnetic valve (OMV), faulty door control relay panel (DCRP), loose spring on door lock assembly (DLA) and a worn out door roller. The staff switch was readjusted and tested working positively. The OMV, DCRP and DLAs were all repaired and replaced and tested to be

working. The door rollers were replaced, and door tested with no further issues. A program implemented in 2018 to install remanufactured door lock assemblies (91% completed) will help restore reliability to the passenger door system.

The brake-related incidents were a result of two faulty friction brake electronic control unit (FBECU) and a defective pneumatic valve. Both FBECU units and pneumatic valves were all removed and replaced and affected vehicle tested working positively.

Subway TR train: Mean distance between failures (MDBF)



Definition

Total kilometres travelled in month compared to the number of rolling stock equipment incidents resulting in delays of five minutes or more. Includes all seven days of service.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The MDBF in January is 596,315 kilometres, coming in below the target of 600,000 kilometres and the January 2018 total of 683,549 kilometres.

Analysis

In January there were eight delay incidents. The top offending system was the passenger door system with five delay incidents. This was followed by the body, compressed air and train line systems each with one delay incident greater than or equal to five minutes.

Action plan

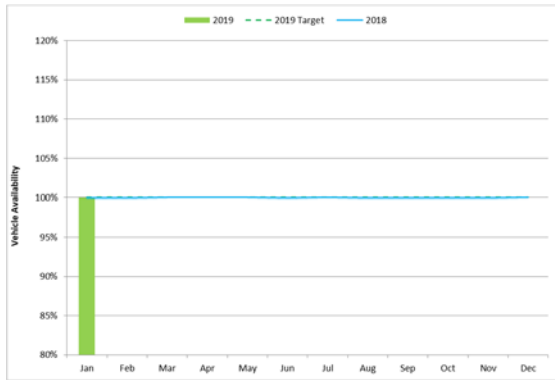
The passenger door-related incidents were due to: a broken clevis and cotter pin, faulty S2 door switch, defective door control unit, broken door rollers and a defective door electronic control unit. The broken clevis and cotter pins were replaced and doors were tested as operating with no further issues. The faulty S2 door switch, door rollers, door control unit and door electronic control unit

were repaired and replaced and affected vehicle tested to be working properly.

The body-related incident was due to a loose cab seat hose, which was secured tightly and tested. The compressed air system was impacted by the extreme cold weather in January, which caused the compressor control pressure switch to fail. The switch has since been replaced and main reservoir pressure tested. The train line-related issue was a result of a dropped network. All train network-related issues have since been resolved.

The passenger door system has received numerous modifications to the control units. Fleet retrofits of the new modifications are in progress. The Carhouse and Reliability, Availability, Maintainability and Safety (RAMS) technical staff are closely monitoring all door-related failures while the Equipment Control Desk along with Transit Control are working towards ensuring the incident recovery times are achieved to below the five-minute threshold.

Subway: Service availability



Definition

Daily average number of trains put into service (including RADs) compared to the number of trains scheduled for the a.m. peak period. Data represents Monday to Friday only. Holidays excluded.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The vehicle availability percentage for the month of January was 100%.

Analysis

We continue to meet the target of 100% vehicle availability. All vehicles were available for service when required.

Action plan

Continue with the delivery of safe, reliable and clean vehicles to service on all subway lines.

Subway: Vehicle cleanliness



Definition

Average results of third party audit conducted each quarter. Average of “prior” “mid-day” and “end of service” results. Audits conducted weekdays only, excluding holidays.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The average rating of 92.7% in Q4 2018 represents a slight increase of 0.3% from Q4 2017. It is above the target of 90%. We have recorded a score of greater than 90% since Q4 2016.

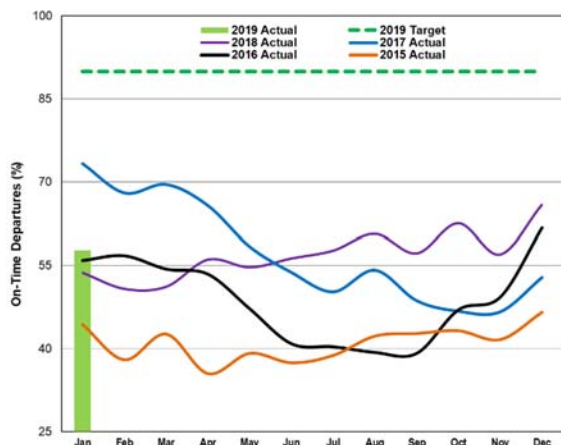
Analysis

Areas of strength in vehicle cleanliness across all fleets and lines were the ceilings, mandatory decals, lights, passenger seat conditions and walls. Major factors affecting the quarter-over-quarter cleanliness scores in Q4 2018, were the floors, the exterior cleanliness of the vehicle and the windows. The scores were lower than the previous quarter due to the winter weather.

Action plan

Exterior vehicle washes were limited due to winter weather conditions in Q4 2018. Focused exterior programs will be picked up in the spring and summer months of 2019. The floors are addressed every 14 days during the floor wash cycle.

Streetcar: On-time performance (OTP)



Definition

On-time performance measures vehicle departures from end terminals. Vehicles are considered on time if they depart within 59 seconds earlier or five minutes later than their scheduled departure time. Includes all seven days of service. Night routes are excluded.

Contact

Collie Greenwood,
Chief Service Officer

Results

OTP for January 2019 (57.80%) decreased over December 2018 (65.88%), but was above the January 2018 figure (53.70%).

Analysis

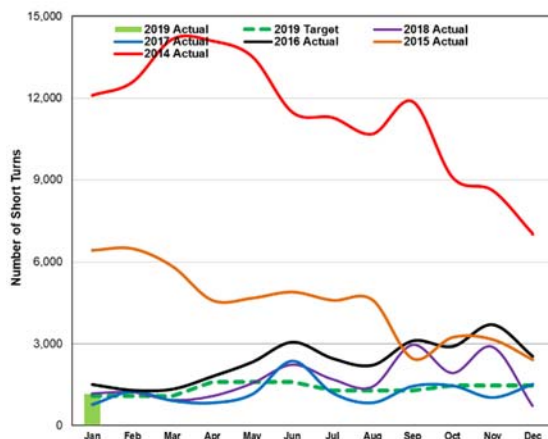
The first three weeks of January were trending relatively well in terms of OTP on the streetcar network. However, severe cold weather throughout much of weeks four and five negatively impacted the performance score for the month. The cold weather in these final two weeks of the period led to numerous instances of frozen switches at Leslie Barns, and a need to temporarily store LFLRV streetcars overnight at Exhibition Loop. This negatively impacted performance due to pull-out delays and the need to shuttle operators to various start locations. The cold weather also had a serious impact on the CLRV fleet. For several days during week four, the entire CLRV fleet was not able to operate and a mix of available LFLRVs and shuttle buses replaced the grounded legacy fleet. This negatively impacted most of the

network, in particular, the 501 Queen and the 506 Carlton routes.

Action Plan

The performance results highlight a need for continued improvement of network schedules and route management on a day-to-day basis. Further, a severe weather streetcar service replacement plan will be developed to help reduce the impact of a major degradation of streetcar service to our customers.

Streetcar: Short turns



Definition

Total short turns per month. Includes all seven days of service, excluding night routes.

Contact

Collie Greenwood,
Chief Service Officer

Results

Short turns in January (1,153) increased over December 2018 (719), but were slightly lower than in January 2018 (1,172).

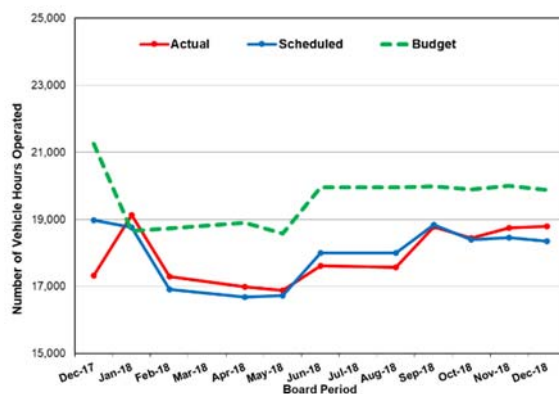
Analysis

The January figures were up slightly over the December 2018 figures largely due to the inclement weather in weeks four and five of the period. The extreme cold weather conditions had a serious impact on the CLRV fleet. This resulted in a mix of available LFLRVs and shuttle buses replacing all or portions of the legacy fleet during this time. With this, the additional extra and Run-As-Directed (RAD) streetcars that had been available since the end of November, were not available during the last two weeks of January. Lastly, the extreme weather conditions required extra care and attention by our Operators in terms of travel speeds and observing/checking switches. These factors increased the need to short turn streetcars to help maintain a consistent service.

Action plan

Efforts will continue to be made to provide for the extra and RAD vehicles moving forward. As each month passes, with the delivery of new LFLRVs, our reliance on the legacy CLRV fleet will continue to decrease. Minimizing our reliance on the CLRVs is also a part of our ongoing schedule review process.

Streetcar: Weekly service hours



Definition

Service hours are calculated from the time a streetcar leaves the yard to when it returns to the yard.

Measured daily.

Contact

Kathleen Llewellyn-Thomas,
Chief Customer Officer

Results

In the December 2018 Board Period, 19,877 streetcar weekly hours were budgeted for service while 18,347 streetcar weekly hours were scheduled to operate, representing a variance of -7.7.

Of the 18,347 streetcar weekly hours scheduled to operate, 18,794 streetcar weekly hours were actually delivered, representing a variance of 2.44%.

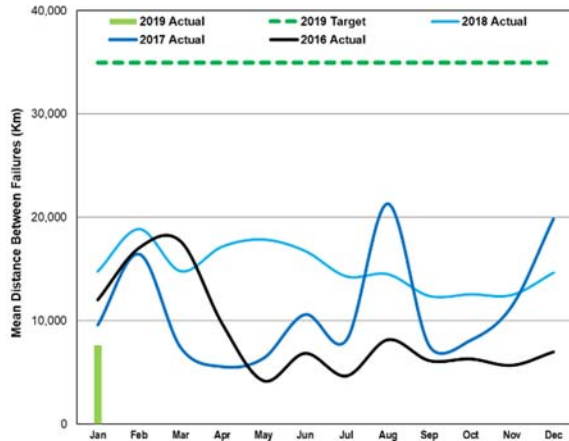
Analysis

The variance between budgeted hours and scheduled hours is a result of the streetcar fleet shortage. Streetcars have been removed from the 505 Dundas and 511 Bathurst routes and replaced with bus service. The introduction of six run-as-directed, low-floor streetcars to weekday service, resulted in the variance between scheduled and delivered.

Action plan

Staff continue to monitor the Bombardier delivery schedule. At the end of 2018, 117 new low-floor streetcars were available for service.

LFLRV streetcar: Mean distance between failures (MDBF)



Definition

Total kilometres travelled by the Low-Floor Light Rail Vehicle (LFLRV) compared to the number of mechanical incidents resulting in delays of five minutes or more. Includes all seven days of service. A threshold of 35,000 km was established to reflect the manufacturer's obligations for reliability.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The MDBF for the LFLRV fleet in January 2019 was 7,577 kilometres. This is a decrease of 7,171 kilometres when compared to January 2018 and a decrease of 7,069 kilometres compared to December 2018.

The overall LFLRV MDBF remains below the 35,000 kilometre target.

Analysis

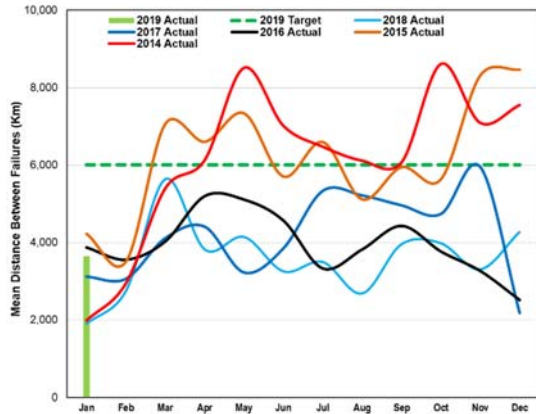
The reliability of the LFLRV streetcars in January was significantly impacted by an increase in the number of brake system-related issues. Numerous other vehicle systems, including communications, propulsion and power collection also contributed to the decrease in reliability.

Action plan

Bombardier is aware of the brake system, communication, propulsion and power collection system failures and is working with staff to identify and implement technical solutions.

Various system modification programs by Bombardier and its sub-contractors are being implemented in an attempt to improve system reliability. We are dedicating staff to work in specific areas of concern, including the braking system, to assist Bombardier in finding solutions to improve reliability performance.

CLRV streetcar: Mean distance between failures (MDBF)



Definition

Total kilometres travelled by the Canadian Light Rail Vehicle (CLRV) compared to the number of mechanical incidents resulting in delays of five minutes or more. Includes all seven days of service.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The MDBF of the CLRV Fleet for January was 3,647 kilometres.

This is an increase of 1,738 kilometres from the same period last year and a decrease of 623 kilometers from the prior month of December 2018. The MDBF continues to remain below the target of 6,000 kilometres

Analysis

CLRV fleet reliability decreased in January due to a high number of HVAC and door equipment-related delays of five minutes or greater, caused by the inclement weather during the period of the ice storm. Although a select number of blown fuses/heatlinks caused HVAC failures, there were also multiple incidents where the heating systems, although operating as intended, were not able to heat the streetcars adequately due to the severe temperatures. Door motor faults during the same period were the cause of the door-related delays. The failures in those two systems were offset by a reduction in the number of

propulsion-related failures throughout the month.

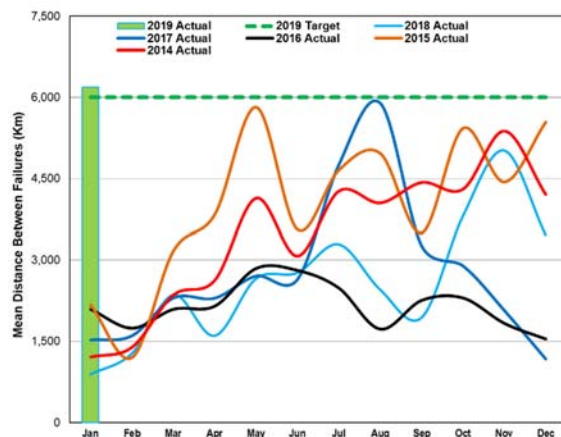
Action plan

We will continue to perform preventative maintenance activities on the CLRV fleet to be proactive on potential failures. At the same time, staff will continue to decommission the CLRV fleet as deliveries of the LFLRV become available.

Streetcar Decommissioning Schedule

Year	CLRV	ALRV	Total
2015	7	4	11
2016	16	4	20
2017	30	0	30
2018	28	33	61
2019	113	10	123
Total	194	51	245

ALRV streetcar: Mean distance between failures (MDBF)



Definition

Total kilometres travelled by Articulated Light Rail Vehicles (ALRVs) compared to the number of mechanical incidents resulting in delays of five minutes or more. Data includes all seven days of service.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The MDBF of the ALRV Fleet for January 2019 was 6,187 kilometres. This was an increase of 5,297 kilometres from the same time last year and an increase of 2,723 kilometres when compared to the previous period of December 2018.

Analysis

The increase in MDBF is the result of staff limiting the ALRV fleet to short distance routes and service time. This reduces the chances of the vehicle becoming disabled in service and provides maintenance staff additional time to perform preventative maintenance routines. In addition, technical staff have identified the most reliable vehicles in the fleet, which are then provided for service.

Action plan

The ALRV fleet continues to be decommissioned. Staff will also continue to limit the service time and service kilometers of the ALRV fleet to prevent service delays.

Streetcar: Road calls and change offs (RCCOs)



Definition

Average daily number of vehicle-equipment failures requiring a road call for service repair or a change off to a repair facility for a replacement vehicle. Includes Monday to Friday only.

Contact

Rich Wong
Chief Vehicle Officer

Results

The target for the maximum number of RCCOs is 1.5% of peak daily service. In January, 7.9 % or 13 of 163 vehicles of the peak daily service, including Run-As-Directed (RAD) vehicles, resulted in a RCCO. This was a decrease of 0.2% from the previous month and a decrease of 2.1% from the same time last year.

Analysis

For the month of January 2019, the average number of RCCOs remained the same as December 2018. The total number of vehicles in peak service, including RAD requirements, however, increased in January. The greater requirement of vehicles in January with no increase in RCCO resulted in the lower percentage of streetcar change offs.

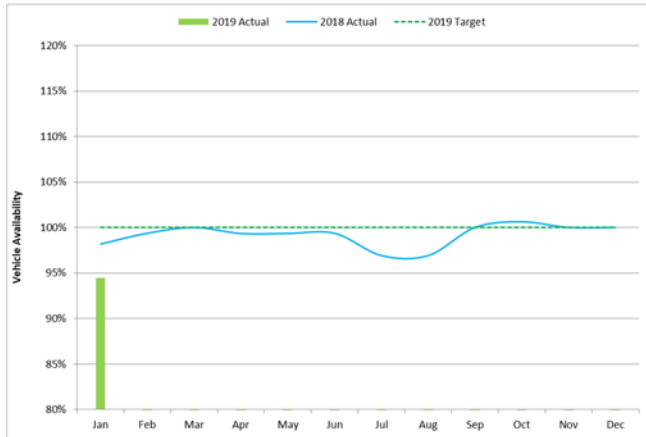
Action plan

We will continue to prevent failures through improving inspection performance. Failures, including weather-related, will be monitored

and maintenance focus will shift accordingly.

Bombardier is aware of the issues affecting vehicle reliability and continues to address them through various modification programs. TTC staff will continue to work with Bombardier to improve overall vehicle reliability and decrease the number of RCCOs.

Streetcar: Service availability



Definition

Daily average number of streetcars put into service (including RADs) compared to the number of streetcars scheduled for the a.m. peak period. Data represents Monday-to-Friday only. Holidays excluded.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The target for streetcar availability is 100% of peak daily service, including Run-As-Directed (RAD) vehicles. In January, only 94.5% or 154 of the required 163 vehicles were provided for service. This is a decrease of 3.7% compared to the same time last year.

Analysis

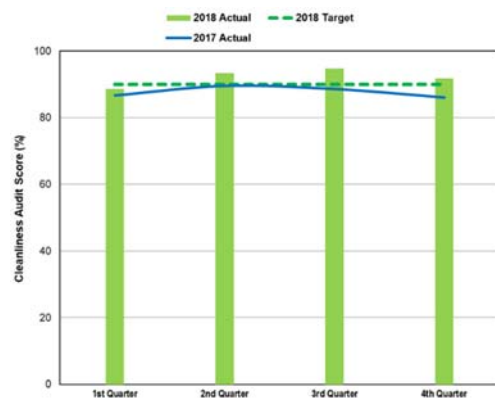
Low temperatures in January resulted in the freezing of yard switches. The freezing of yard switches was due to a combination of ice build-up and defective switch heaters. As a result, the provision of vehicles was late for service over several days, which reduced overall vehicle availability.

Action plan

Mainline storage will be introduced to minimize delays from the yard during freezing temperatures and snow/ice storms. In addition, Infrastructure Engineering is investigating alternative switch heaters and switch components with the goal of

improving reliability under extreme weather conditions.

Streetcar: Cleanliness



Definition

Average results of third-party audit conducted each quarter. Average of “prior,” “mid-day” and “end of service” results. Audits conducted weekdays only, excluding holidays.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The audit score for streetcar cleanliness for Q4 2018 was 91.8%. This is an increase from Q4 2017, but a decrease from Q3 2018. Streetcar cleanliness remains above the target of 90%.

Analysis

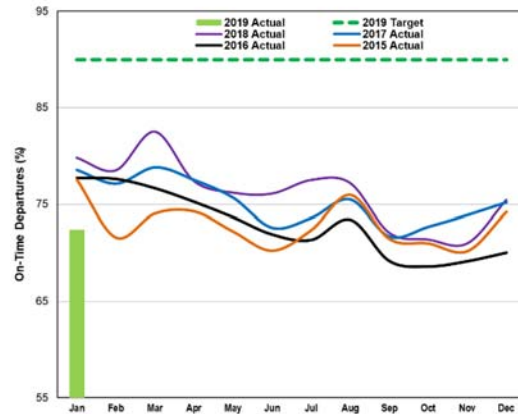
High demand for service vehicles limits availability for exterior/interior wash scheduling. Inclement weather has also affected cleanliness results, particularly flooring.

Action plan

Staff continue to investigate and identify further improvements, including additional equipment to make cleaning more efficient.

Bus Services

Bus: On-time performance (OTP)



Definition

OTP measures vehicle departures from end terminals. Vehicles are considered on time if they depart within 59 seconds earlier or up to five minutes later than their scheduled departure time. Includes all seven days of service. Night routes are excluded.

Contact

Collie Greenwood,
Chief Service Officer

Results

OTP for January 2019 was 72.4%, a decrease compared to December 2018 (75.44%) and the same time last year (79.80%).

Despite results below the target of 90%, there has been year-over-year improvement in Bus OTP since 2015.

Analysis

On-time departures for the month of January were negatively affected by a severe snow storm on January 28, followed by extreme cold temperatures, which resulted in significant challenges to service delivery. While performance for the first four weeks of the month trended above 2018 levels, only half of our service operated on time during the last week of the month as the city recovered from the record setting snowfall.

The following schedule changes were implemented in the January board period (effective January 6):

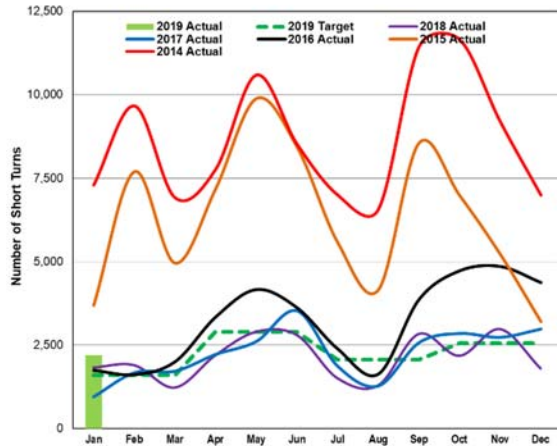
Service Reliability Improvements: 5 Avenue Rd, 26 Dupont, 34 Eglinton

East, 38 Highland Creek, 65 Parliament, 68 Warden and 985 Sheppard Express.

Action plan

We continue to place emphasis on conducting employee interviews for schedule irregularities. Since March 2017, 2,420 employee interviews (including 497 in January) have been conducted for schedule adherence irregularities and occurrences continue to decrease as a result of this initiative.

Bus: Short turns



Definition

Total short turns per month. Includes all seven days of service, night routes excluded.

Contact

Collie Greenwood,
Chief Service Officer

Results

Short turns for January increased (unfavourable) to 2,195, compared to 1,796 in December 2018 and 1,825 in the same time last year. The monthly target is 1,590.

Analysis

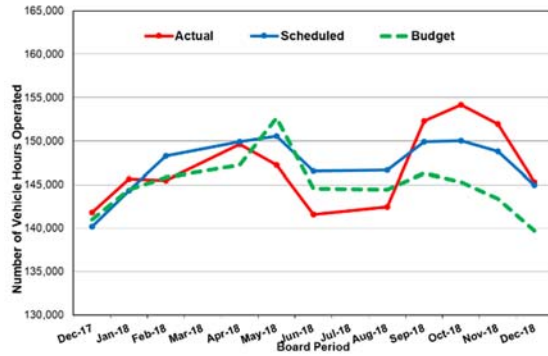
The number of short turns was negatively impacted by severe weather events resulting in one third of January's short turns.

The top six routes for short turns were: 60 Steeles West (5.0 %), 36 Finch West (4.6 %), 35 Jane (3.9 %), 29 Dufferin (3.7 %) 63 Ossington (3.7 %), and 52 Lawrence West (3.4%), representing a quarter of all short turns.

Action plan

Review and implement schedule changes to target high incident routes where increased traffic congestion has resulted in unreliable service and schedules that no longer reflect actual operating conditions.

Bus: Weekly service hours



Definition

Service hours are calculated from the time a bus leaves a garage to the time it returns to the garage. Measured daily. Board Period total calculated using a weekly average.

Contact

Kathleen Llewellyn-Thomas,
Chief Customer Officer

Results

In the December 2018 Board Period, 139,692 bus weekly hours were budgeted for service while 144,929 bus weekly hours were scheduled to operate, representing a variance of 3.75%.

Of the 144,929 bus weekly hours scheduled to operate, 145,299 weekly hours were actually delivered, representing a variance of 0.26% (favourable).

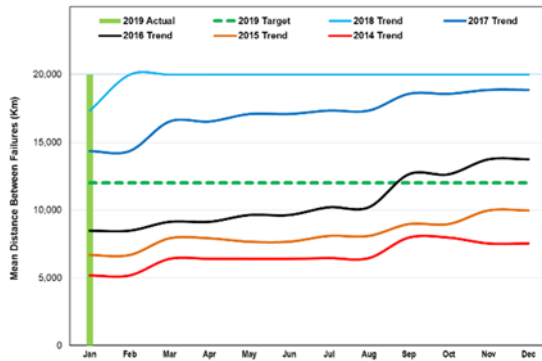
Analysis

The variance between budgeted and scheduled is a result of buses operating on streetcar routes and TTC Board-approved service initiatives to address overcrowding (e.g. expanded Express bus network).

Action plan

No action required at this time.

Bus: Mean distance between failures (MDBF)



Definition

Total kilometres accumulated over the entire fleet compared to the total number of chargeable mechanical road calls. Data included for all seven days of service.

Contact

Rich Wong
Chief Vehicle Officer

Results

The January 2018 MDBF of 20,000 kilometres exceeded the target of 12,000 kilometres.

Analysis

In 2018, 420 new Nova buses entered revenue service.

In January 2019, 44 new generation hybrid buses entered revenue service.

29% of all chargeable road calls were linked to coolant-related systems. This is the most prominent failure mode affecting our fleet.

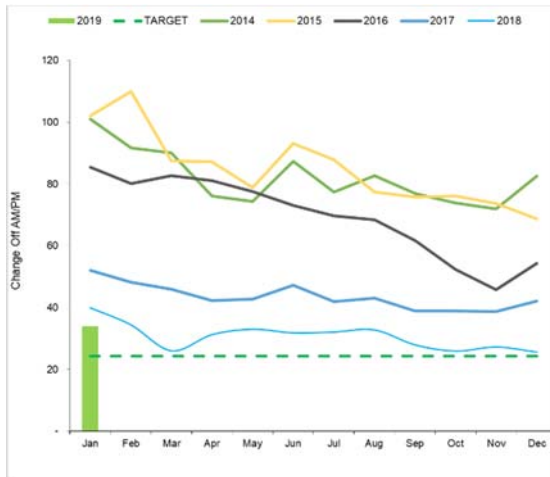
Another 10% of chargeable road calls were related to complaints regarding the exhaust after-treatment system.

Action plan

Technical packages are being prepared by the Technical Support Services (TSS) section to remedy coolant-related issues.

Technical staff is prototyping new testing methods for analyzing the integrity of the exhaust system. The tests will help to identify areas where potential leaks in the exhaust system may occur.

Bus: Road calls and change offs (RCCOs)



Definition

Average daily number of vehicle-equipment failures requiring a road call for service repair or a change off to a repair facility for a replacement vehicle. Monday to Friday data only.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The average number of RCCOs in January 2019 was 34 per day, this was an increase of eight from the previous month and a decrease of six from the same time last year. Peak revenue service was 1,650 buses per day, including Run-As-Directed buses (RADs) in January 2019. The average number of change offs per day equates to 2.06% of service.

Analysis

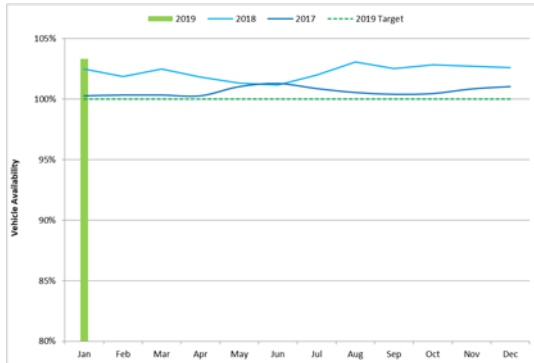
Two extreme weather events occurred in January of 2019. Both events caused above average interruptions to service, mainly due to buses being stuck in snow and frozen ramps.

Action plan

The use of glycol de-icer is being analyzed to mitigate freezing during extreme cold weather. Areas of concern are the driver side window and ramps.

Snow tires have been ordered for the articulated bus drive axles to improve traction.

Bus: Service availability



Definition

Daily average number of buses put into service (including RADs) compared to the number of buses scheduled for the a.m. peak period. Data represents Monday to Friday only. Holidays excluded.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The average number of buses provided for a.m. peak service in January was 1,650 per day or 103.3% of planned service. This is well above the target of 1,597 buses.

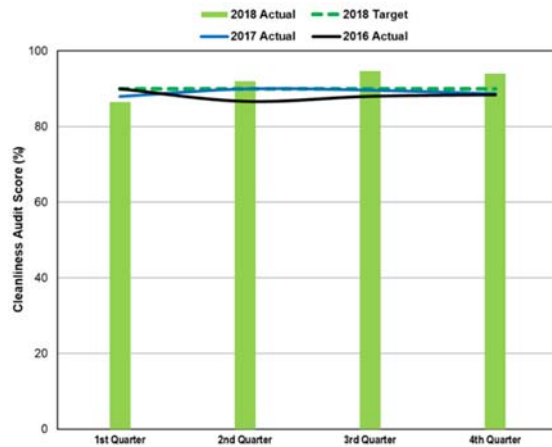
Analysis

The average daily number of buses provided in the past year is 1,600 or 102.3% of the average planned service of 1,564 buses. The significant number of new bus procurements from 2016 to 2018 has boosted the fleet performance and permitted a lower than projected spare ratio, allowing extra buses to be placed into service to help supplement subway closures and streetcar diversions. In January 2019, bus availability peaked at 103.3%

Action plan

Continue to monitor and control all aspects of maintenance that support continuous improvement initiatives.

Bus: Cleanliness



Definition

Average results of third party audit conducted each quarter. Average of “prior,” “mid-day” and “end of service” results. Audits conducted weekdays only, excluding holidays.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The bus cleanliness audit score in Q4 2018 was 94.0%, which is above the target of 90%. The Q4 2018 score is slightly below Q3 2018 score of 94.7%, but higher than Q4 2017 score of 88.7%.

Analysis

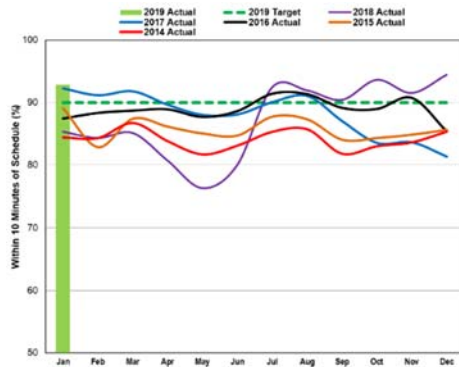
The performance score takes into account pre-service, in-service and post-service audit results. Scores are impacted by changes in in-service operating conditions. Q1 2019 results are likely to have a minor negative variance due to inclement weather conditions.

Action plan

Continue manually cleaning the front and back of the bus exteriors. The mid-day cleaning trial continues to the end of Q1 2019 and will then be evaluated.

Wheel-Trans Services

Wheel-Trans: On-time performance (OTP)



Definition

Measures on-time performance of all trips conducted by Wheel-Trans buses. Seven days a week, all time periods included. To be on time, the trip must arrive within 20 minutes of its scheduled arrival.

Contact

Collie Greenwood,
Chief Service Officer

Results

OTP in January decreased by 1.6% from the previous period to 92.8%, and is 7.5% above the same period in 2018.

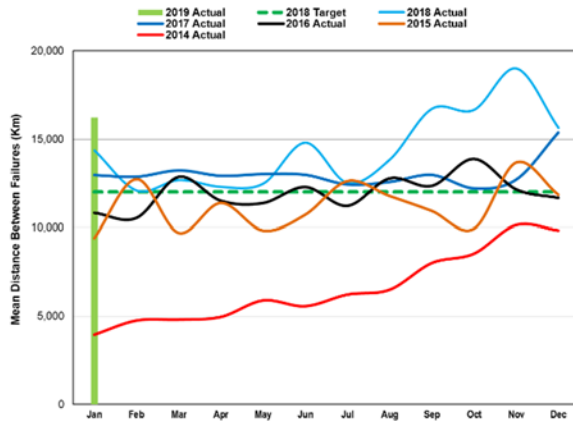
Analysis

Our focus on delivering on-time service has allowed Wheel-Trans to increase its OTP over last year. Strategic vehicle placement assists the Dispatch team in making effective service adjustments, thus reducing late vehicles.

Action plan

Vehicle monitoring continues to be our priority to maintain and improve the service delivery performance, and ensure that all customer trips are managed proficiently.

Wheel-Trans: Mean distance between failures (MDBF)



Definition

Total kilometres accumulated over the entire fleet compared to the total number of chargeable mechanical road calls. Data included for all seven days of service.

Contact

Rich Wong,
Chief Vehicle Officer

Results

The January MDBF of 16,210 kilometres exceeded the target of 12,000 kilometres, and is above the January 2018 average of 14,355 kilometres.

Analysis

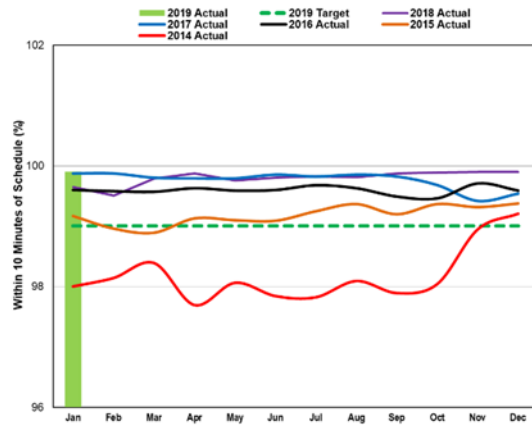
All 80 of the recently purchased ProMaster buses are now available for service. This new fleet is a key contributor to improved performance.

Diesel exhaust fumes detected by operators accounted for the most failures in the Friendly bus fleet. The Friendly vehicles have trouble completing the regeneration process required to clean the exhaust filters in service as they never reach exhaust regeneration driving speeds. Lakeshore Garage maintenance is manually engaging the exhaust regeneration on property during servicing to mitigate road calls.

Action plan

To help mitigate fume issues caused by the diesel exhaust system on the Friendly bus fleet, operators will perform a “Regeneration Run,” a self-cleaning automated system to clean the after-treatment filters.

Wheel-Trans: Accommodated service



Definition

Accommodated rate is the percentage of passengers requesting Wheel-Trans services that are actually provided trips by either a Wheel-Trans bus, accessible taxi or sedan taxi.

Contact

Collie Greenwood,
Chief Service Officer

Results

The accommodated rate in January was 99.9%. This is 0.9% higher than the target, and 0.2% over the same period last year.

Analysis

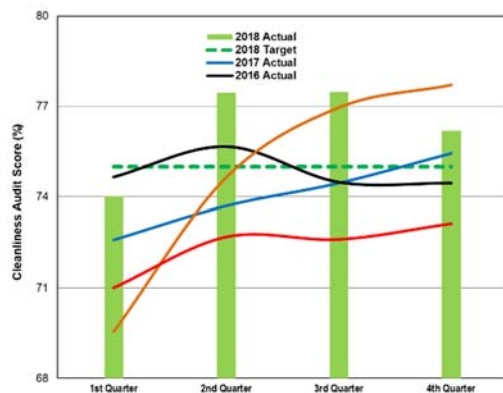
Our delivery goal is to ensure that virtually all trips are accommodated. In January, we operated above the 99% target, indicating that we are consistently able to achieve this goal for our customers.

Action plan

Ensuring that all customers receive their trips that are requested takes precedence, and continued strategic scheduling will always be the approach in order to accommodate all requested trips.

Station services

Station cleanliness



Definition

Average results of a third party audit conducted each quarter of all 75 stations. Audits are conducted weekdays only, excluding holidays.

Contact

James Ross,
Chief Operating Officer

Results

The average station cleanliness score for Q4 2018 was 76.2%, exceeding the target of 75%.

Analysis

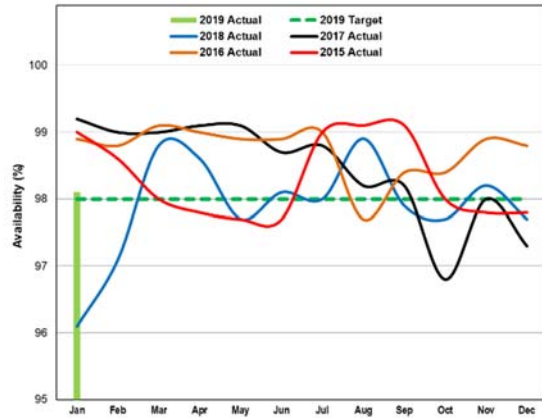
Enhanced cleaning projects, such as the accelerated re-lamping, Luxalon cleaning, station enhancement and blitz will run again, starting in March 2019.

Action plan

We continue to schedule extra cleaning projects during weekend closures, where possible, to ensure that stations are in top condition when reopened following the closure work.

Note: The Q1 2019 audit score will be available in the May 2019 CEO's Report.

Elevator availability



Definition

Percentage of total available subway elevator service hours during subway revenue service in a given month.

Contact

Fort Monaco,
Chief Infrastructure and Engineering
Officer

Results

Elevator availability was 98.1% in January, which represents an increase of 0.4% from December 2018 and an increase of 2% from the same time last year. Performance was above the target of 98%.

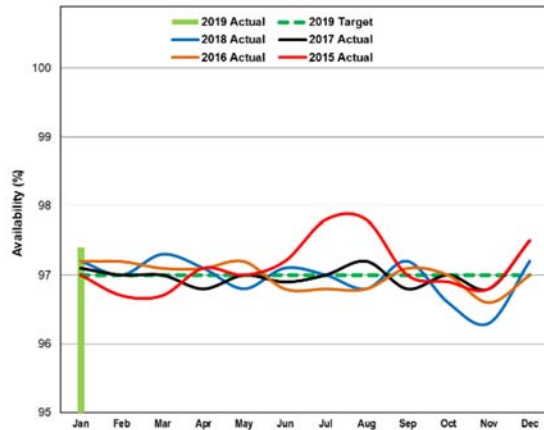
Analysis

Performance improved in January 2019 as an elevator previously closed for construction at Victoria Park Station was returned to service.

Action plan

Continue performing preventative maintenance to meet reliability and availability targets.

Escalator availability



Definition

Percentage of total available escalator service hours during subway revenue service in a given month.

Contact

Fort Monaco,
Chief Infrastructure and Engineering
Officer

Results

Escalator availability was 97.4% in January, which represents an increase of 0.2% from both December 2018 and the same time last year. Availability was above the target of 97%.

Analysis

Fewer emergency calls in January compared to December 2018 contributed to the increase in performance.

Action plan

Continue performing preventative maintenance to meet reliability and availability targets.

Fare Gates Equipped with PRESTO



Definition

Percentage of time fare gates are available for use. Availability data provided by manufacturer for 24 hours a day, seven days a week.

Contact

James Ross,
Chief Operating Officer

Results

Fare gate availability averaged 98.12% in December 2018, which represents an increase of 10.48% from the same time last year and an increase of 0.38% from December 2018. The average remains below the target of 99.5%.

Analysis

The increase reflects the continued ongoing efforts by the TTC and fare gate supplier Scheidt and Bachmann (S&B) to address issues with the fare gates. With the current hardware and software modification programs, we expect performance to continue to improve throughout 2019.

Action plan

We continue to work with S&B to address ongoing hardware and software issues. A number of plans have been developed and are currently being implemented. These include:

- The program to replace the industrial computers in the fare gates, which is currently 50% complete and scheduled to be completed in early 2019;
- New software deployments, one of which was completed in January;
- The replacement of current fare gate motors with a modified version.

These plans address the following issues: screen freezing, tap/no entry, card reader failure and motor failures. We have additional software updates scheduled, which will add functionality and provide further fixes to known problems, improving the fare gate availability for customers.

PRESTO Fare Card Readers



Definition

The total percentage of all PRESTO card readers that are in working order and available for customer use.

PRESTO card readers are devices that are installed onboard TTC surface vehicles (buses and streetcars) and allow customers to pay their fare by tapping on the device.

Contact

Kirsten Watson,
Deputy CEO - Operations

Results

PRESTO card reader availability averaged 98.82% in January, which represents an increase of 3.32% from the same time last year and a decrease of 0.08% from December 2018. This is below the target of 99.9%.

Analysis

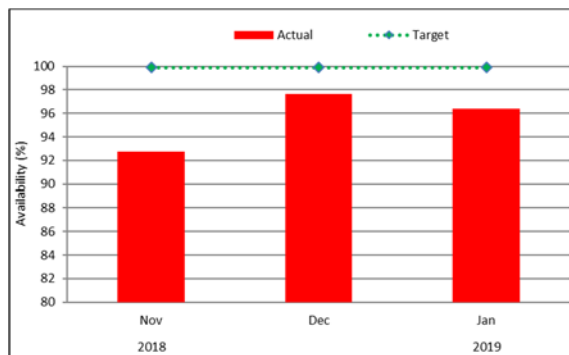
PRESTO made a change to the network (DHCP*), which resulted in connectivity issues impacting availability.

Action plan

We are working with PRESTO to implement additional controls on change process. More robust controls and monitoring should ensure network changes do not impact availability.

* DHCP (Dynamic Host Configuration Protocol) is a network management protocol used to enable communication between devices on a network.

PRESTO Fare Vending Machine (FVM)



Definition

The average percentage of daily availability of PRESTO FVMs based on duration of incidents from open to resolution.

PRESTO FVMs allow customers to load funds onto their PRESTO cards via credit or debit payment, purchase new PRESTO cards, view balance and card history, and activate any products purchased online. The FVMs are installed at station entrances

Contact

Kirsten Watson,
Deputy CEO - Operations

Results

PRESTO FVM availability averaged 96.37% in January, which represents a decrease of 1.23% from December 2018. This is below the target of 99.9%.

Analysis

The decrease in the level of availability for FVMs is due to the following:

- Failures due to high volume of paper currency;
- Improper installation of cash vaults by contracted cash collection service.

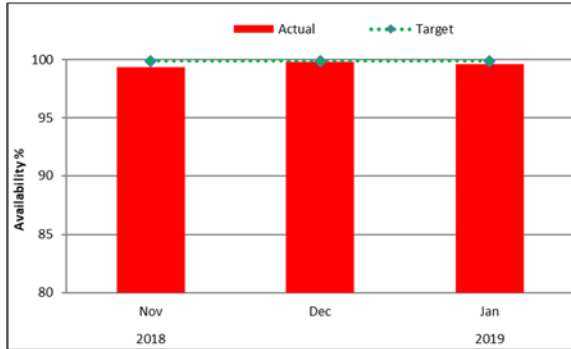
Action plan

Replacement of all degraded banknote acceptor equipment is underway. The maintenance process has been adjusted to include verification of the equipment on a proactive basis. This will alleviate failures to accept banknotes.

Metrolinx has addressed training with contracted services.

Two FVMs were installed at Pearson International Airport Terminals 1 and 3.

PRESTO Self-Serve Reload Machine (SSRM)



Definition

The average percentage of daily PRESTO SSRM availability based on duration of incidents from open to resolution.

PRESTO SSRMs allow customers to load funds onto their PRESTO cards via credit or debit payment. The device also allows customers to view their balance and card history, and activate any products purchased online. The SSRMs are installed at subway station entrances.

Contact

*Kirsten Watson,
Deputy CEO - Operations*

Results

PRESTO SSRM availability averaged 99.59% in January, which represents a decrease of 0.21% from December 2018. This is below the target of 99.9%.

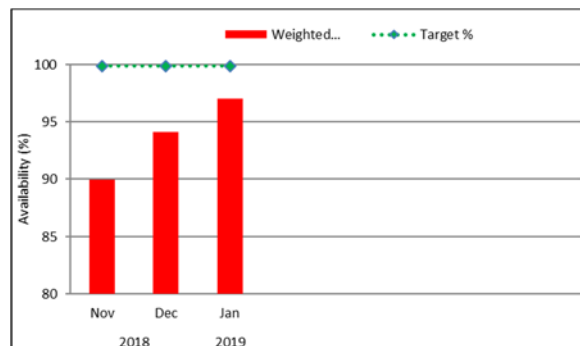
Analysis

Some SSRM card readers may have failed due to increased transaction volumes. Metrolinx is investigating.

Action plan

Metrolinx determined that the fix for these devices was to perform a manual reboot in the field and has applied the fix to all affected devices. Metrolinx continues to monitor.

PRESTO Fares and Transfer Machine (FTM)



Definition

The weighted percentage of all FTMs onboard and off board that are in working order and available for customer use.

The FTMs are Single Ride Vending Machines, installed on the new TTC streetcars and at selected streetcar stops. These allow customers to purchase Proof of Payment tickets.

Contact

*Kirsten Watson,
Deputy CEO - Operations*

Results

PRESTO FTM availability averaged 97.01% in January, which represents an increase of 2.81% from December 2018. This is below the target of 99.9%.

Analysis

The improved availability is consistent with the expected results following the removal of the debit and credit payment feature from all FTMs located onboard streetcars in December.

Action plan

Metrolinx has ordered a new, upgraded version of the machine to be installed in new streetcars as they are delivered. Early results demonstrate improved availability of the new machines. Upgrades are also planned for current hardware. Metrolinx will provide a schedule for the roll-out to all machines.

For further information on TTC
performance, projects and services,
please visit ttc.ca

