Calgary Transit: Key Performance Indicators

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January 2025

OBJECTIVE:

- **Reduce** the average commuter wait time to **10%**

- **Increase** on-time arrival rate to **85%**

for peak-hour bus services in the NW Calgary Area within the next 12 months.

Key Performance Indicators:

1. On-time Arrival Rate
2. Average Customer Wait Time
3. Ridership
4. Vehicle Availability Ratio
5. Passenger perception on wait time

On-Time Arrival Rate

Six Sigma Strategy
Improve operational efficiency and customer satisfaction

KPI Importance
Measures reliability, impacting commuter satisfaction and wait times.

Measurement
Percentage of buses arriving within a specified time window

$$\text{Arrival percentage} = \left(\frac{\text{On−time Buses}}{\text{Total Buses}}\right) \times 100\%$$

Target
85% or Higher

Cost/Effort
Moderate to High

Average Wait Time

Six Sigma Strategy
Process improvement and reducing variability in bus arrival times.

KPI Importance
Directly measures the effectiveness of interventions to reduce wait times.

Measurement
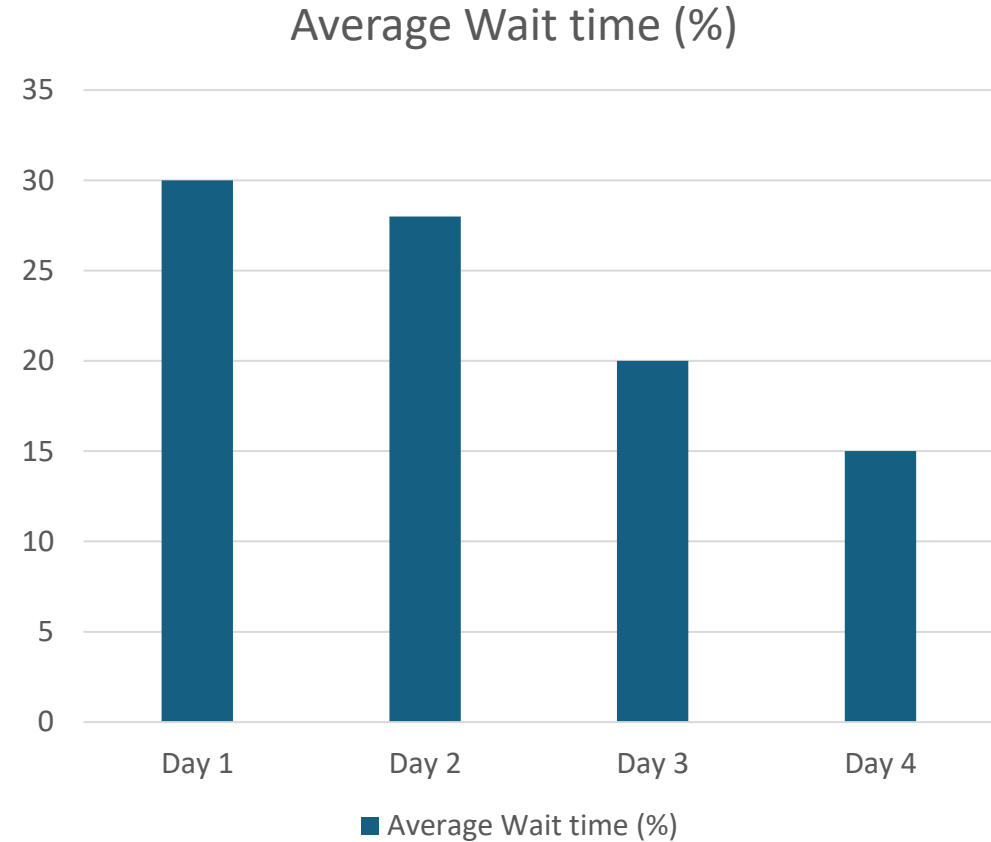The average of all routes in terms of Delay time against planned time.

Average wait time percentage= Average $[(\frac{Delay}{Planned})\times100\%]$

Target
10% or Lower

Cost/Effort
Moderate

Average Wait time (%)

Ridership

Balanced Scorecard
Focuses on customer growth and service utilization.

KPI Importance
Fundamental measure of public transit system's success.

Measurement
Total Number of passengers.

Automatic Passenger Counters (APCs)

Target
At least 10% increase

Cost/Effort
Low to Moderate

Vehicle Availability Percentage

Balanced Scorecard
Focuses on operational efficiency and ensuring reliable service delivery.

KPI Importance
Tracks the proportion of scheduled services available, ensuring reliability and reducing commuter wait times.

Target

80% or Higher

Measurement
The ratio of available operational buses against scheduled buses at a given time of day.

Formula: Service Availability Ratio = $(\frac{\text{Operational Buses}}{\text{Scheduled Buses}}) \times 100\%$

Cost/Effort

Moderate

Passenger Average Wait Time

Balanced Scorecard
Focuses on improving customer experience and satisfaction.

KPI Importance
It assesses whether commuters feel their wait times have improved, influencing satisfaction.

Measurement
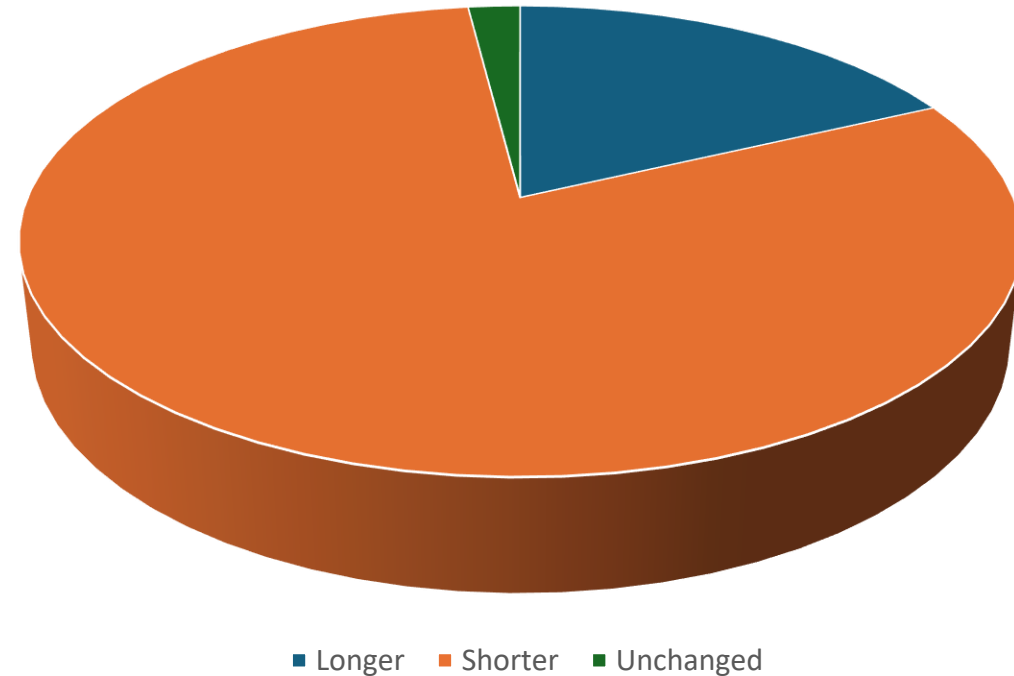Survey results asking passengers to rate their perceived wait times (e.g., shorter, longer, or unchanged).

Target
80% or higher

Cost/Effort
Moderate

Wait Time Perception

■ Longer ■ Shorter ■ Unchanged

Data Collection

Calgary Transit Operation Records, City of Calgary Open Data Portal, industry benchmarks, and passenger surveys.

Conclusion

By tracking these KPIs, Calgary Transit can effectively monitor and improve service quality, enhance customer satisfaction, and ultimately, create a more efficient and reliable public transportation system for the city.