Planning Transit Service
Leveraging Better Data
Responding with Action

TTC Board Meeting May 8, 2023

What we'll talk about today:

1. Service planning at the TTC
   - Adjusting planned service
   - Readying for construction season
2. Leveraging better data
   - Tracking crowding differently
3. Responding with action
   - Deploying demand responsive service

TTC's continuous service monitoring and improvement process:

Engage all our communities and act on equity and diversity

- Equity lens to service planning
- Engage youth and priority populations
- Geographic and ridership analysis

Monitor ridership, operations, and service needs

- Capacity Utilization and Crowding
- Customer Feedback and Requests
- Construction and Disruptions coordination

Immediate Action Required?

Deploy demand responsive service

Integrate into future service changes

Keep our customers and front-line staff informed

- Multi-channel communications
- In person pop-ups and meetings
- Service Plan consultations

1 Adjusting planned service

Service frequency and route adjustments

Applying our **Service Standards** and **Equity Lens** to make changes alongside:

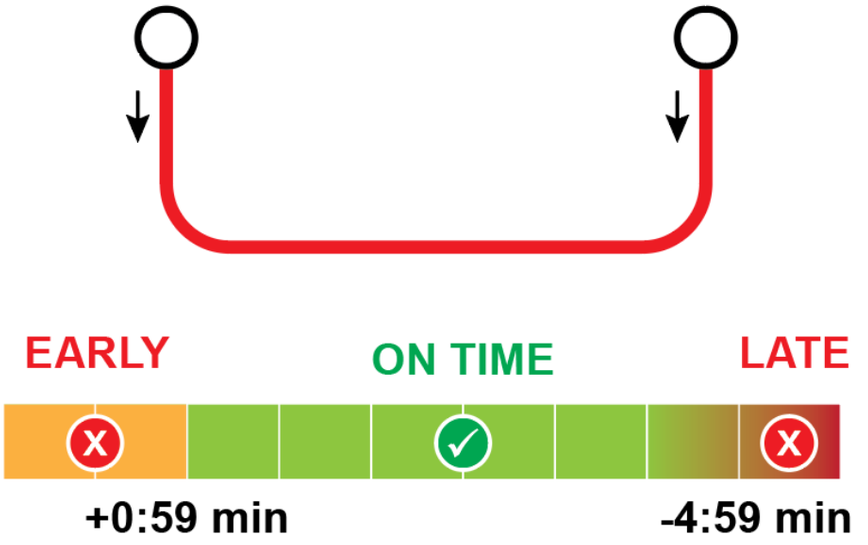
- Monitoring **boardings** to assess trends across all routes and modes
- Analyzing **demand** to adjust capacity by route and period
- Assessing **ridership** to determine performance – ongoing and annual

Seasonal Service Changes

- Ridership to schools, universities, and colleges
- Summer-time destinations

On-Time Performance

- Adjusting on route and recovery time to increase on-time departure from terminals
- Needing to account for increasing variability for buses/streetcars on mixed-traffic routes



TTC's construction and disruption priorities:

Maintain service capacity and reliability

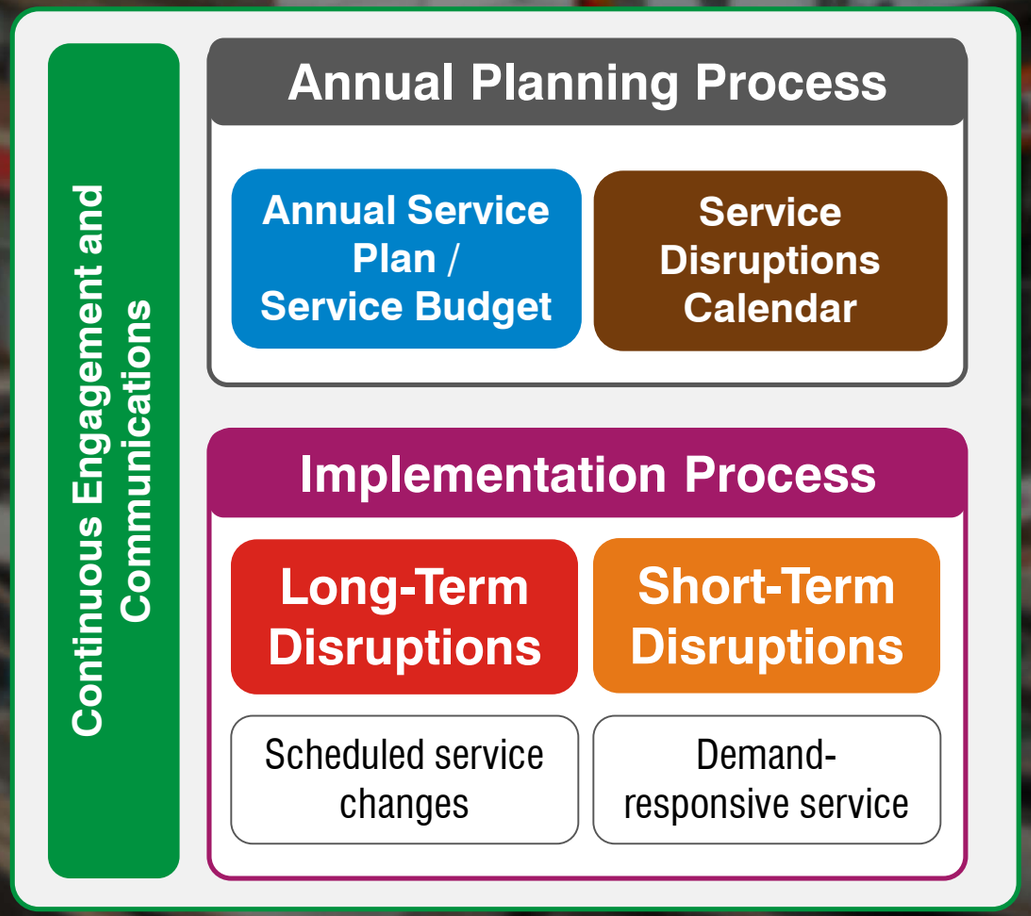
Putting on more buses to account for delays

Plan ahead and coordinate projects

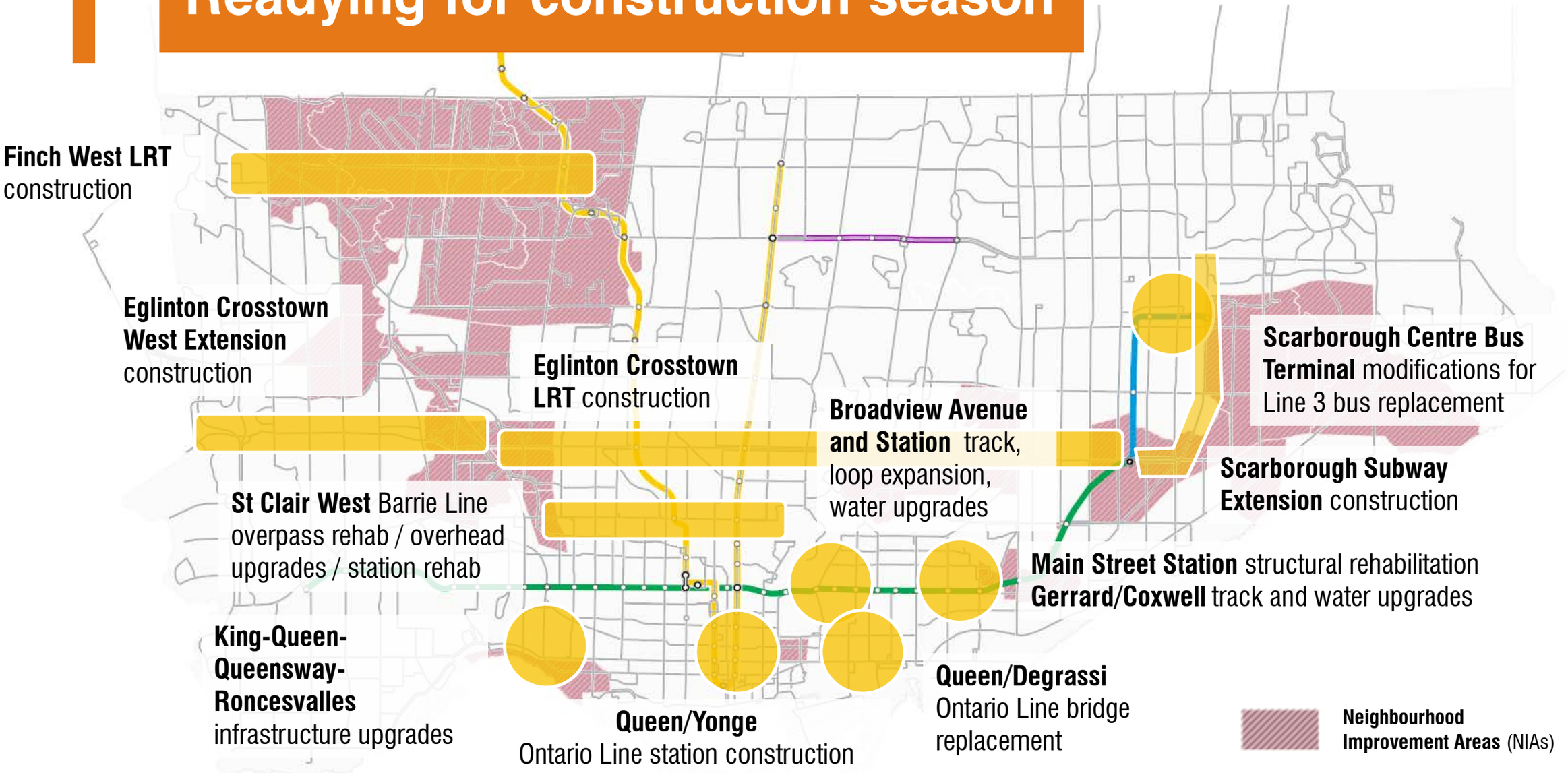
Working with TTC, City, Metrolinx partners

Identify resource and cost implications

Ensuring we can deliver the service



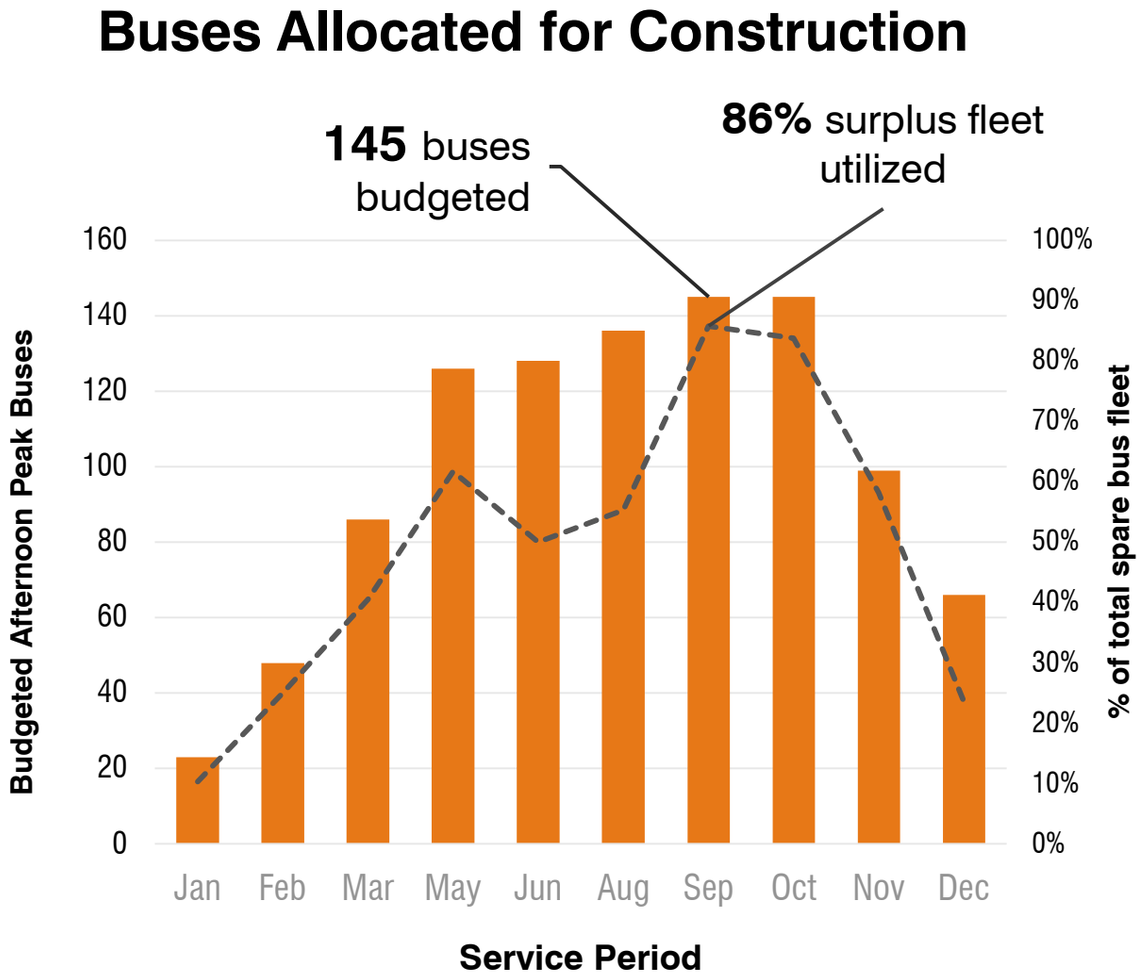
1 Readying for construction season



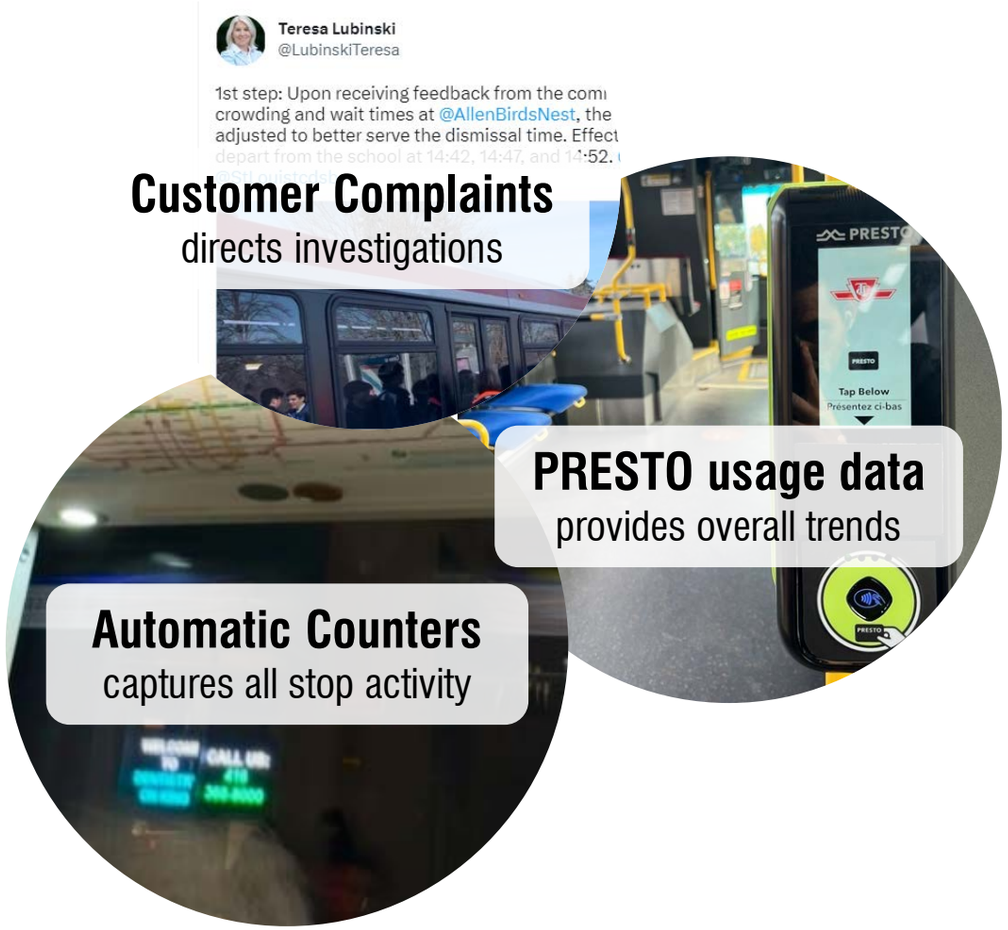
1 Readying for construction season

We plan for the buses needed through annual budget:

- Buses accommodate diversions, mitigate delays, replace streetcar service, support subway closures
- Service changes coordinated between projects where possible
- Project scope and schedule changes result in variations, contributes to surplus



2 Leveraging better data: monitoring ridership



Monitoring Bus Occupancy Trends

Service standard capacities are a measure of *average* passengers per vehicle over one hour. Planning to this number protects for variability in demand at busiest times.

Trips over 100% planning standard — **50** per bus

→ **Monitor trends** for future service reallocation

Action: add a bus between 6am and 9am to reduce wait times

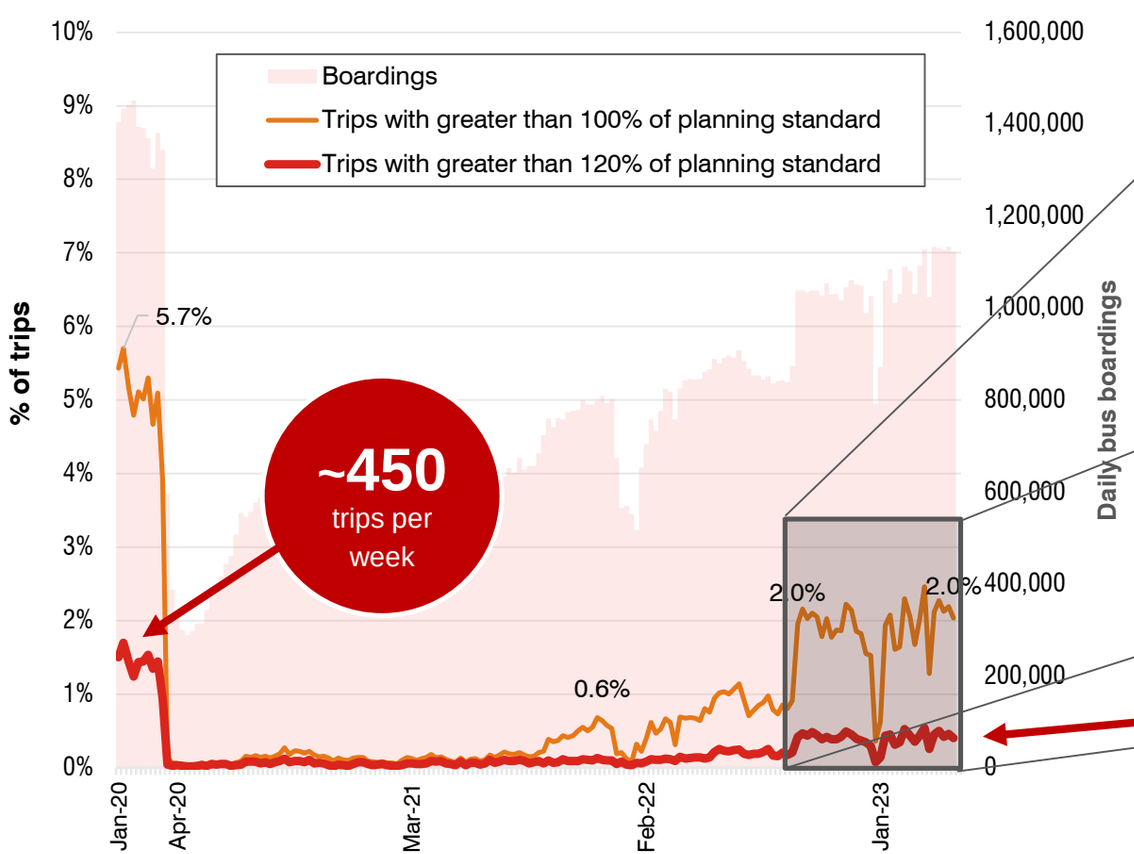
Trips over 120% planning standard — **60** per bus

→ **Immediate action** through demand-responsive service

Action: add a bus to run an extra trip at that specific time

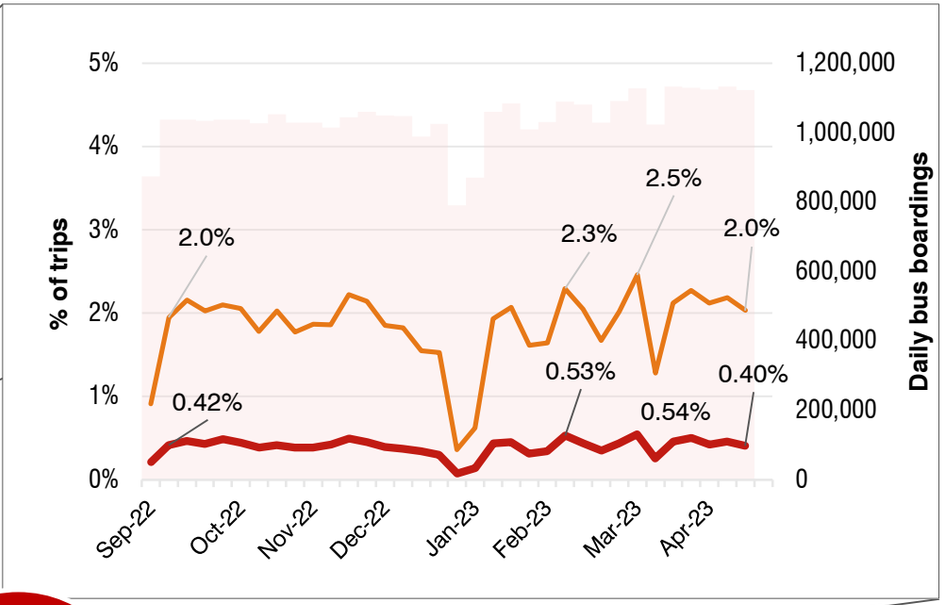
2 Leveraging better data: assessing trends

Bus Occupancy Trends (2020 to present)



~450 trips per week

Fall 2022 to Current



~130 trips per week

of **30,500** trips

Number & proportion of busy trips remaining steady even as ridership grows

3 Responding with action: deploying demand responsive service

What is demand-responsive service?

Extra vehicles

Scheduled extras if needs are known, like construction

Additional vehicles when resources available

How do we plan and deploy the service?

Identify Weekly Priorities

Ridership Monitoring and Overcrowding Reports

Customer Feedback and Requests

Construction and Special Events

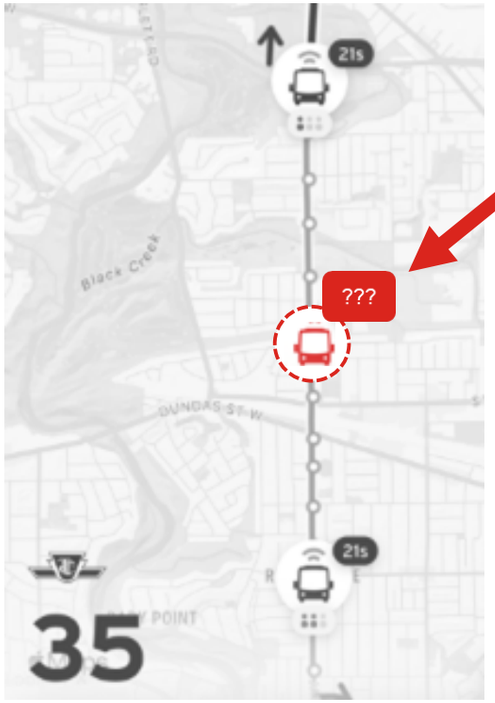
Deploy demand responsive service

Day-to-Day Priorities Take Precedence

Daily monitoring and adjustment

3 Responding with action: deploying demand responsive service

Known Challenges of Unscheduled Service



Customers cannot see unscheduled vehicles in apps or real-time data

Testing tool in VISION to **add vehicles to real-time feed**

Exploring **operational approaches** such as doubling up an existing scheduled trip

Sending e-alerts onto routes where extra buses are running

Trial Results

22 buses deployed on 6 routes

Prioritized routes where scheduled trips had **55 to 65 people** on the bus

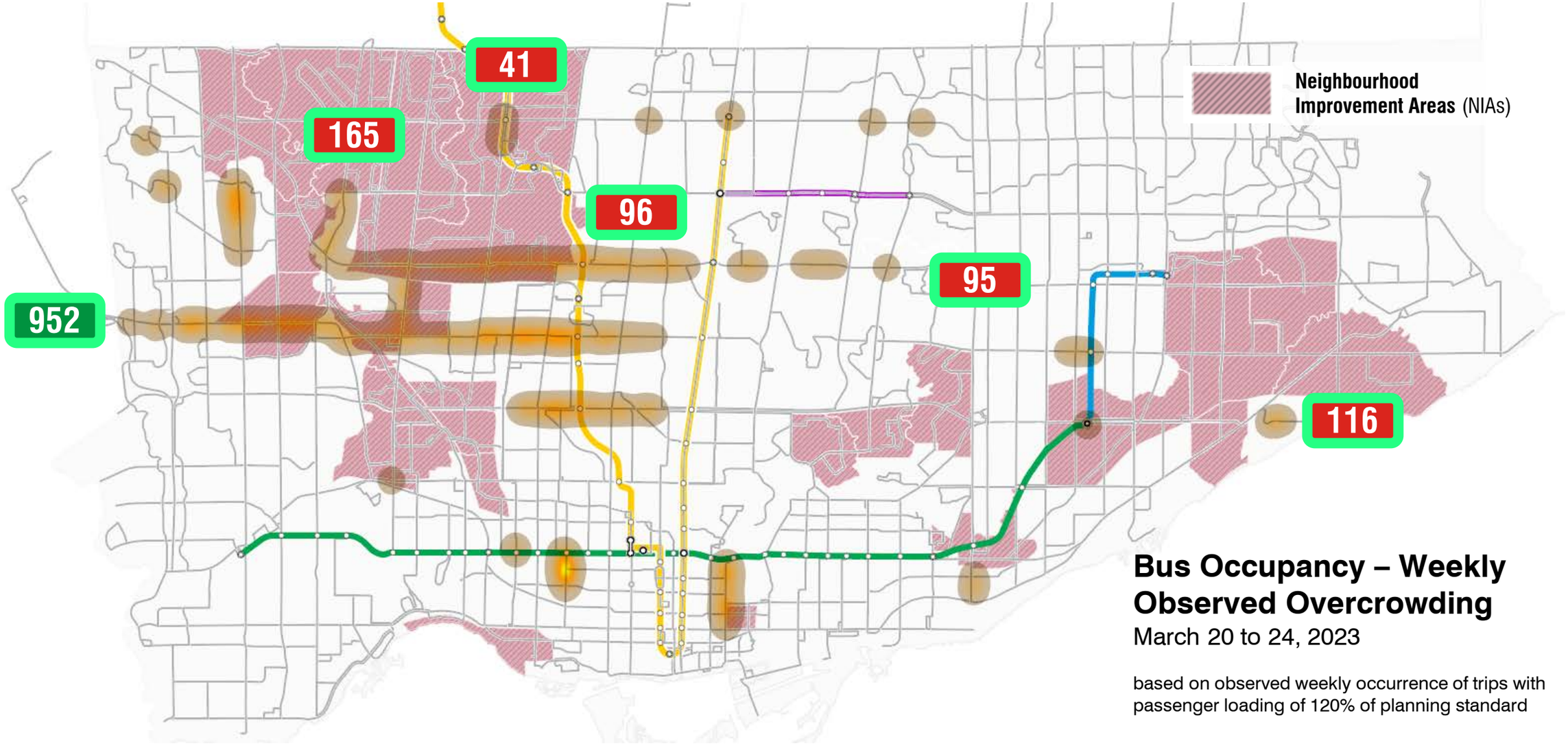
Added extra trips on top of base schedule where it is most needed

-15% in observed crowding

If effective, extra trip **will be added to scheduled service**

If not, **adjust immediately** to a different route or time

Mapping and Addressing Bus Overcrowding

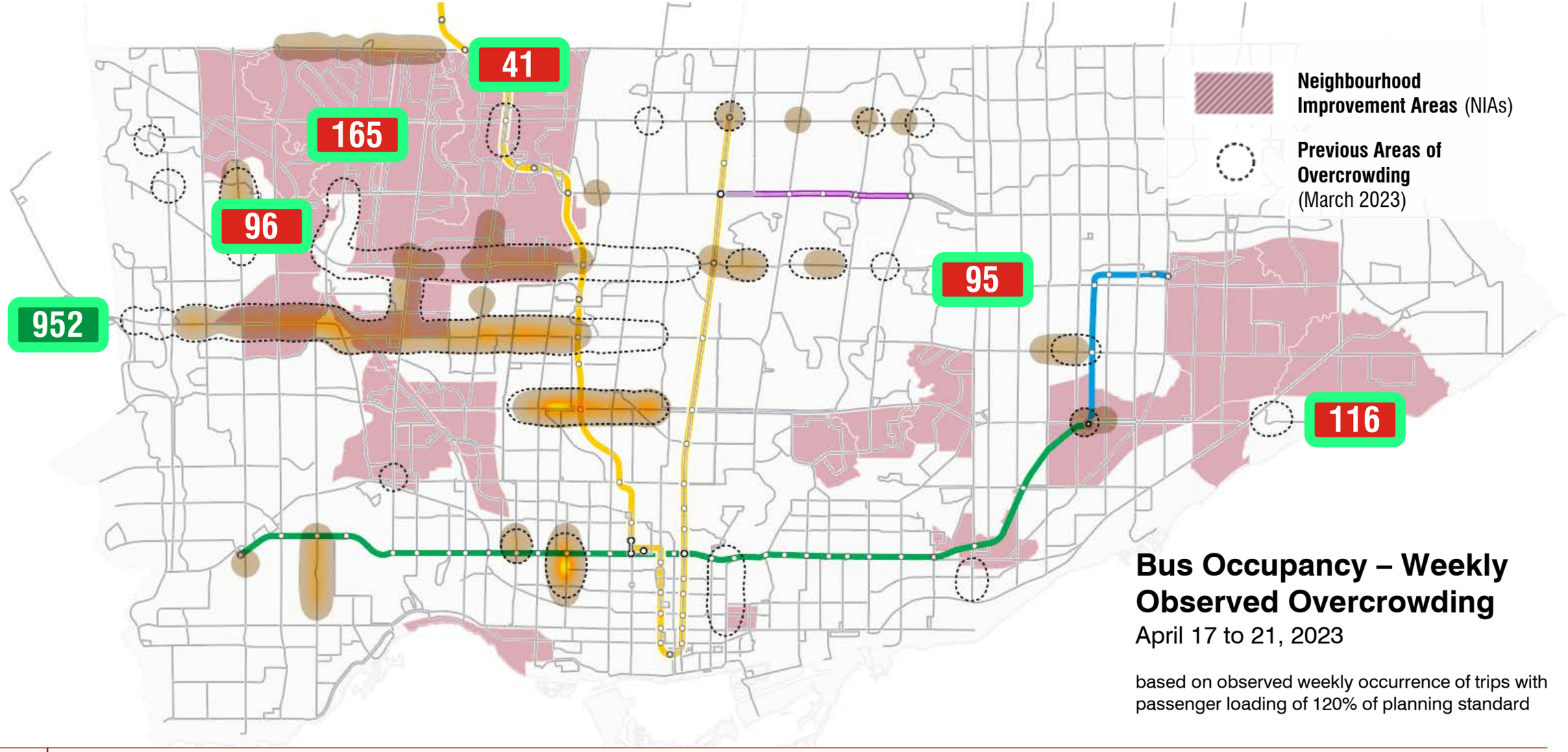


Bus Occupancy – Weekly Observed Overcrowding

March 20 to 24, 2023

based on observed weekly occurrence of trips with passenger loading of 120% of planning standard

Mapping and Addressing Bus Overcrowding



Bus Occupancy – Weekly Observed Overcrowding

April 17 to 21, 2023

based on observed weekly occurrence of trips with passenger loading of 120% of planning standard

Where do we go from here?

Continuously monitoring and adjusting

Readying for fall service changes

Engaging with our customers, communities, and front-line staff:

2024 Annual Service Plan

This Fall

Five-Year Service Plan

Early 2024

Survey online now!

https://ttc5yearplans.ca/