RTM Update

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RTM is the main tool until ABM is ready.

June 2023 – Spring 2024
RTM 3.6.x

- Pandemic Adjustment

- Base Network Updates

- Transit mode specific behavior adjustment

- Differentiate between short-term vs long-term impact

- Analytics Tools

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RTM 3.6.x **Pandemic Adjustment**

- Focus on long term impact to commute behaviors
  - work from home decision is at person level, we will address it in ABM
  - reduce trip rates in RTM to approximate the impact
    - by income & employment categories

- Recommended for 2022
  - peak for work from home policies?
- Sensitivity test for future horizon years

- Parsons is going to present an application in a later presentation

Base Network Updates

- 2022 Base Network + Land Use
  - Keep up with the latest infrastructure and transit service changes

- Access for Everyone Plan Scenario
  - The version that reflects the Ten-Year Priority Plan (TenYrP)
  - As the project moves on, the assumption could be superseded by new information as it becomes available

Transport 2050: 10-Year Priorities for TransLink

Approved on June 30, 2022

RTM 3.6.x

Reflect benefits of different types of bus services

- renewed focus on buses in Access for Everyone Plan

- reflect service specific elements beyond travel time and cost, such as **comfort and reliability**

- refines previous implementation to transit segment level

  https://github.com/TransLinkForecasting/rtm-workshops/blob/master/2022-Nov/05_RTM_Bus_Service_Type.pdf

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Differentiate short-term vs long-term mode shift impact

- Short/Medium term construction analysis
- Day 1 changes vs long-term changes
  - For example, if you close a road, what is the mode share impact

- People are not changing jobs or relocating home in the near term
  - Evergreen line opened in Dec 2016, difficult to model its opening-day behavior in 2017
- Mechanism to disable trip distribution step and import the existing trip pattern into mode choice

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Fall 2024
RTM 3.7

- 2023 Base Network
- Enhance Park and Ride Feature
- Active mode distance improvement
- Base Network QC Tool

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Base Network QC Tool

- Detect network coding errors early
  - link attributes tpf am/md/pm coding error

- Automatic network fixes
  - ban u-turn movements
  - allow alighting at the last transit stops (hidden links)

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Improve Active Mode Distance Estimates

Issue:
Active distance skims traverse the auto links, distances are overestimated in the model.

Example

From TAZ 22560 to TAZ 22580:

- Google distance = 350m

- Auto AON distance = 700m
  Over-estimated by 100%

- Two reasons:

  1. U-turn banned at destination centroid connector 🔍

  2. Dunsmuir St is one-way ↖

Legend

| Traffic Zone ID (TAZ) |
| Auto AON Distance [m] |

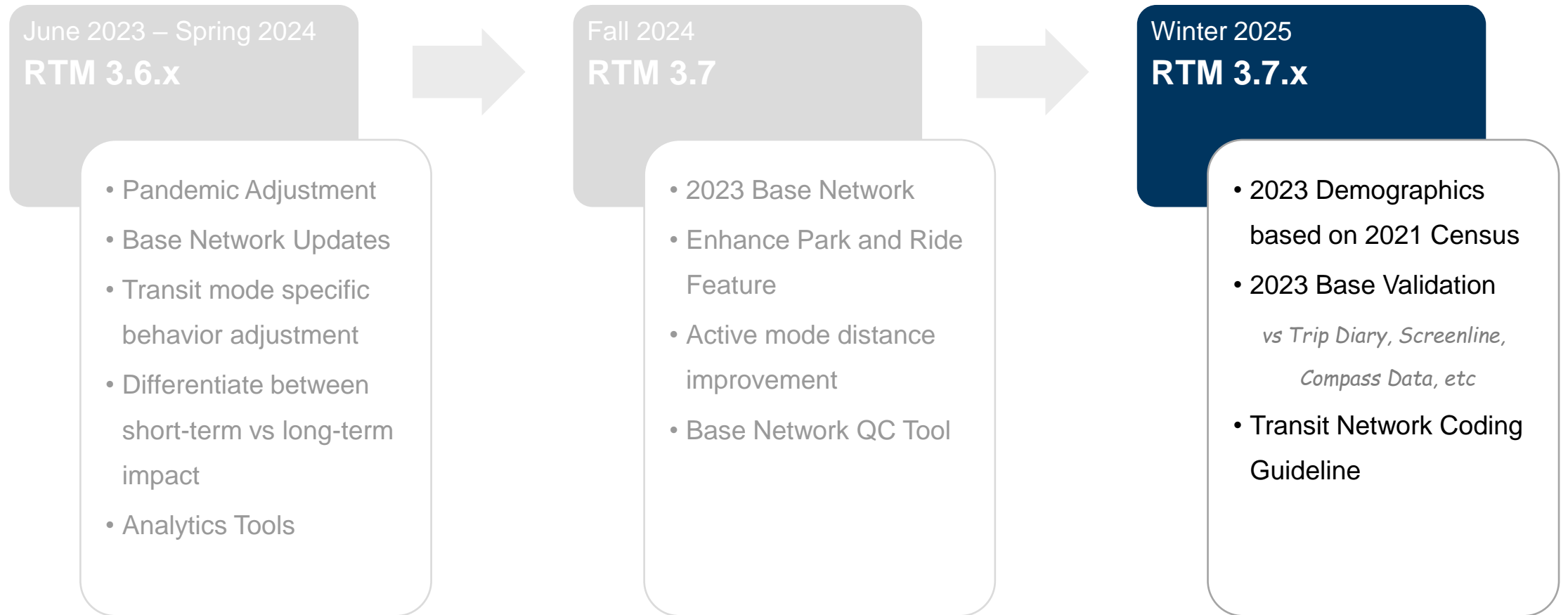— Auto Link Length [m]
— Centroid Connector
···· Auto AON Skim
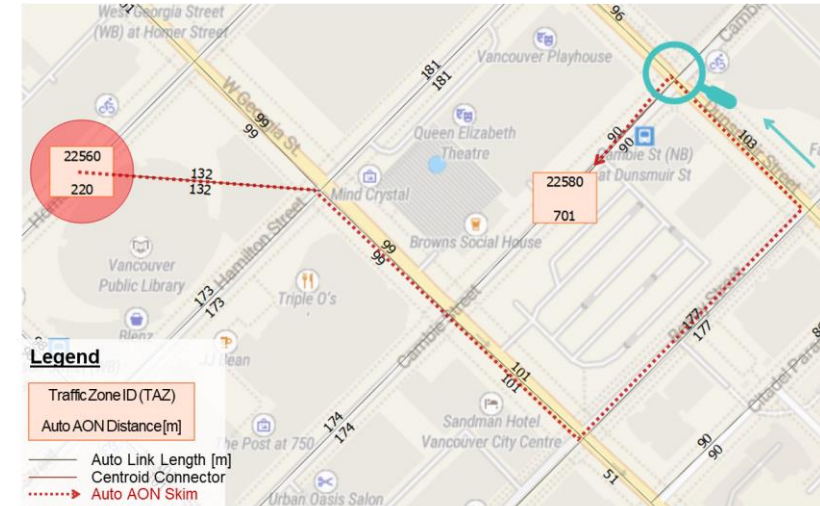
- Implemented an algorithm at OD level for walk/bike mode choice

- Additional pedestrian access links for transit assignment

- Primarily for ABM development

- Decision to be made for RTM:
  - validate against the Trip Diary mode share
  - highly likely we need to re-estimate mode choice in RTM

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RTM 3.7.x **Enhance Park and Ride**

- Policy question: what if we close a park and ride lot for development opportunity?

- RTM limitations:
  - Park and Ride lot is not capacity constrained
  - All-or-nothing lot assignment does not work well when generalized costs are almost identical for neighboring lots

- Solution*:
  - Apply shadow pricing to suppress demand at overcrowded lots

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*delve into details in the next presentation

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Winter 2025
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- 2023 Demographics based on 2021 Census
- 2023 Base Validation

  vs Trip Diary, Screenline, Compass Data, etc

- Transit Network Coding Guideline

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Stay tuned for upcoming updates

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We will continue to:

1. update the networks

2. respond to emerging forecasting needs