North Shore E-Bike Share Pilot Program

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North Shore Mobility Options Coordinator

Presentation to
City of North Vancouver Council
2023-10-16
Today’s Goals

- Background
- End-of-Pilot Evaluation
- Future Considerations
<table>
<thead>
<tr>
<th>Policy Context</th>
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<tbody>
<tr>
<td><strong>PROVINCE OF BRITISH COLUMBIA</strong></td>
<td><strong>CITY OF NORTH VANCOUVER (CNV)</strong></td>
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<tr>
<td>• Clean Transportation Action Plan (CTAP) - Emission Reduction Strategies</td>
<td>• Official Community Plan (2014)</td>
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<tr>
<td>• B.C.’s Active Transportation Strategy - Move Commute Connect</td>
<td>• 2022-2026 Council Strategic Plan priorities</td>
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<tr>
<td><strong>METRO VANCOUVER REGION</strong></td>
<td>• Mobility Strategy (2022)</td>
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<td>• TransLink Transport 2050</td>
<td><strong>DISTRICT OF NORTH VANCOUVER (DNV)</strong></td>
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<tr>
<td><strong>NORTH SHORE</strong></td>
<td>• Official Community Plan (2021)</td>
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<tr>
<td>• Integrated North Shore Transportation Planning Project (INSTPP)</td>
<td>• Transportation Plan (2012)</td>
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<td>• Community Energy and Emissions Plan (2019)</td>
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<td><strong>DISTRICT OF WEST VANCOUVER (DWV)</strong></td>
<td><strong>DISTRICT OF WEST VANCOUVER (DWV)</strong></td>
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<tr>
<td>• Official Community Plan (2018)</td>
<td>• Council’s Strategic Objectives</td>
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Program Timeline

2 Years of Strategic Planning, 2.5 Years of Successful Pilot Execution, and Looking Ahead

Planning

- Collaboration & Initiation
- Initial Vendor Search
- Framework Development
- Council Endorsement

- May 2021
- 2021

Pilot

- Lime Selected as Operator
- Mobility Strategy Approval
- Program Launch in CNV & DNV
- DWV Involvement

- July 2022
- July 2023
- May 2023
Program Evaluation

- Ridership
- Fleet
- User experience
- Parking
- Social Equity
- Public Outreach
- Safety & Operations
- Environmental Impact
North Shore Ridership
becoming a widely accepted mode of transportation on the North Shore

156,000+
Trip Completed

319,000 km
E-bike Travelled

Total Trips Completed
across North Shore since program launched

2021
2022
2023
Qtr1
Qtr2
Qtr3
Qtr4
Qtr1
Qtr2
Qtr3
Qtr4
Qtr1
Qtr2
Qtr3

 Thousand Trips

21k
14k
7k
17k
28k
29k
13k
8k
31k
2 km per trip
Median Trip Distance

12 mins per trip
Median Trip Duration

✓ E-bike Share is attractive for short-distance trips.

✓ About 1/3 of trips occur on weekends
and 2/3 of the trips occur on weekdays.
E-bike Share User

11% of frequent user accounts for 60% of trips

- **High-Frequency Users (50+ Trips)**
  1% loyal user base

- **Frequent Users (10-49 Trips):**
  10% strong local riding population

- **Regular Users (2-9 Trips):**
  34% casual or occasional riders.

- **Single-Trip Users:**
  55% visitors or tourists

### Ridership

- **Total Unique User:** 35,000+
- **Frequent User (10 Trips+):** 3,400 +

### Trips Frequency by Unique Users

- 50+ Trips: 440
- 10-49 Trips: 60k
- 2-9 Trips: 44k
- 1 Trip: 3k

- **E-bike Share User:** 11% of frequent user accounts for 60% of trips
Fleet Size

Consistent growth in average E-Bike availability.

2021: Launch faced issues in fleet size due to COVID-19's impact on supply chain.
2022: Operator met summer and winter minimums.
2023: Not only met, but exceeded requirements; peak deployment in August, with **435 E-bikes**.

**Monthly Average of Daily Operational E-bikes**

Across North Shore since launched

- Summer months min. 200 E-bikes
- Winter months min. 120 E-bikes

**Peak Deployment 435**

DWV joined

Spike in Summer

2021: Launch faced issues in fleet size due to COVID-19's impact on supply chain.
2022: Operator met summer and winter minimums.
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User Experience

73% of surveyed users expressed that they were **satisfied** with the E-bike Share program.

**Survey**

**Trip Purpose**

Social Outings was the #1 reason

<table>
<thead>
<tr>
<th>Purpose</th>
<th>% Selecting</th>
<th>% of Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social outings</td>
<td></td>
<td>144 (32%)</td>
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<tr>
<td>Recreational</td>
<td></td>
<td>89 (20%)</td>
</tr>
<tr>
<td>Personal business</td>
<td></td>
<td>75 (17%)</td>
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<tr>
<td>To/from work</td>
<td></td>
<td>58 (13%)</td>
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<tr>
<td>Shopping</td>
<td></td>
<td>44 (10%)</td>
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<tr>
<td>Work-related</td>
<td></td>
<td>22 (5%)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>18 (4%)</td>
</tr>
<tr>
<td>Attending school</td>
<td></td>
<td>4 (1%)</td>
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**Top reasons to use E-bike Share**

- Efficiency and direct connections (26%)
- Enjoyment (16%)
- Avoid Traffic congestion (12%)
- Parking concerns (12%)

**The most appreciated features among E-bike Share users are...**

- User-friendly app (24%)
- Environmental benefits (23%)
- Program convenience (23%)
### Motivators and Barriers to use E-bike Share

**Common Themes:** Pricing, Parking Availability, Cycling infrastructures

#### Top 5 Motivators

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<tr>
<th>Motivator</th>
<th>User (%)</th>
<th>Non-User (%)</th>
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<tbody>
<tr>
<td>Lower pricing</td>
<td>164 (19%)</td>
<td>60 (18%)</td>
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<tr>
<td>More Lime Groves</td>
<td>125 (15%)</td>
<td>30 (9%)</td>
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<td>Improved cycling infrastructure</td>
<td>97 (11%)</td>
<td>49 (14%)</td>
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<td>Expansion of the service area</td>
<td>110 (13%)</td>
<td>32 (9%)</td>
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<td>Greater number of e-bikes available</td>
<td>106 (13%)</td>
<td>24 (7%)</td>
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#### Top 5 Barriers

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<th>Barrier</th>
<th>User (%)</th>
<th>Non-User (%)</th>
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<tr>
<td>It’s too expensive</td>
<td>129 (21%)</td>
<td>53 (16%)</td>
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<tr>
<td>Not enough Lime Groves</td>
<td>105 (17%)</td>
<td>16 (5%)</td>
</tr>
<tr>
<td>Not enough e-bikes available</td>
<td>102 (17%)</td>
<td>4 (1%)</td>
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<tr>
<td>There aren’t enough protected bike lanes</td>
<td>61 (10%)</td>
<td>25 (7%)</td>
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<tr>
<td>I don’t feel safe riding on the road with cars</td>
<td>41 (7%)</td>
<td>36 (11%)</td>
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% selecting given attribute
Lime Groves

*Designated parking for E-bike share*

**Total of 96** Lime Groves across North Shore

- **City of North Vancouver**: 60
- **District of West Vancouver**: 13
- **District of North Vancouver**: 23

**CNV & DWV**: Lime Groves parking only

**DNV**: Primarily Lime Groves parking and support free floating

*In 2023, parking violations per total trips have remained below 5%, with a decreasing trend.*

- End-Trip Photo
- Parking Fines
- Regular In-app, email communications
Lime Groves

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Current Lime Grove Location Map
Most Popular Lime Groves

Key destinations for E-bike share users

Top 5 Lime Groves
1. Lonsdale Quay-Chadwick Court - CNV
2. Lonsdale - Carrie Cates Court – CNV
3. Lonsdale Avenue & E 13th St – CNV
4. Marine Drive & Hanes Avenue – CNV
5. Spirit Trail & Argyle Avenue – DWV

Most Popular Areas
- The Shipyards Common – CNV
- Lower Lonsdale – CNV
- Central Lonsdale – CNV
- Ambleside – DWV
- Marine-Hamilton – DNV
- Moodyville – CNV
Mode Shift

Reducing vehicle usage and support public transit use, contributing to GHG reduction targets

Survey

1 in 3 E-Bike share trips replace a car trip.

3% of trips are new trips that wouldn’t have been taken otherwise.

63% of survey respondents use the E-bike Share program to connect to transit.

72% of survey respondents are more likely to use public transit when E-bike Share is available.

Lime

25 Metric Tons CO₂ Avoided

36,973 Car Trips Replaced

9,727 Liters Fuel Consumption Avoided
Pilot Operations

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<th>Safety</th>
<th>Ridership</th>
<th>Fleet</th>
<th>User Exp</th>
<th>Parking</th>
<th>Env Impact</th>
<th>Parking</th>
<th>Safety</th>
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| Major Injuries | Moderate to Severe Vandalism | Minor Incidents | All-Electric Transition
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<tr>
<td>0</td>
<td>60</td>
<td>28</td>
<td>By Fall 2023</td>
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| Operations Staff | Customer Services | Response Time | Full Maintenance
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<td>6</td>
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<td>&lt; 6 hours</td>
<td>Every 45 Days</td>
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- Major Injuries: 0
- Moderate to Severe Vandalism: 60
- Minor Incidents: 28
- All-Electric Transition: By Fall 2023
- Operations Staff: 6
- Customer Services: Email, In-App, Phone, Help Centre
- Response Time: < 6 hours
- Full Maintenance: Every 45 Days
Helmet Usage

*Initial compliance was low, but the Operator took proactive steps to enhance it*

46% Always/Sometimes wear helmets

1 in 3 respondents Never wear helmets

1 in 5 respondents opt for shared helmets

Reasons for not using shared helmets:
- Hygienic Concerns: 40%
- Helmets unavailability: 35%

**Effort to Helmet Compliance:**

- **Helmet Giveaway:** Provided *over 2,000* helmets
- **Helmet Brackets:** Installed on *over 60%* of E-bike fleet.
- **Helmet Lock:** To prevent theft or loss.
- **In-App Prompts:** Reminding riders of helmet requirements
- **Helmet Selfie Incentive:** Incentivizing riders with discounts for showcasing helmet usage.
Rider Education & Awareness

Through community events, in-app modules, social media, email campaigns

- Let's Talk expo @ Civic Plaza, CNV
- Orientation Week @ Cap U, DNV
- Go by Bike Week @ Ambleside Park, DWV
- Shared Mobility Rocks Conference @ Shipyards, CNV
- In-app Safety Message

Skip the sidewalk. The bike lane is all yours.
Sidewalk riding is not allowed - ride in the bike lane or safely on the road.

Understood

E-bike XXX-QUA
19 km range
C$1.15 to start, then C$0.35/min + tax

Reserve
Free for 10 minutes
Equity Programs

**LIME ASSIST-ADAPTIVE VEHICLES**

- Company wide program from Lime but not yet implemented on the North Shore
- Enhance the accessibility of shared electric vehicles for persons with varying abilities
- Available to the community on demand at no cost.

**LIME ACCESS – DISCOUNTED PROGRAM**

- Company wide program from Lime but not yet implemented on the North Shore
- Offers discounts to eligible applicants who are identified through community group partners

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4-Wheel Mobility Scooter
Future Considerations

- Expand service area
- Boost fleet availability and reliability
- Strengthen parking management
- Enhance social equity and accessibility
- Emphasize on rider education and awareness
Recommendations

• Conclude the pilot program, reflecting on learnings
• Formalize the City’s commitment to Shared Micromobility by transitioning to a more permanent E-bike Share operation with North Shore partners
• License & Permit extensions with Lime for up to 12 months beginning Jan 1, 2024

Next Steps

• Refine vendor evaluation criteria and undertake market sounding
• Consider additional/alternative vendors
• Continue to reflect on findings from other shared micromobility programs in the region
• Explore partnership opportunities with North Shore First Nations
Questions?