

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

From: Kelly Scherr, P.Eng., MBA, FEC
Deputy City Manager, Environment & Infrastructure

Subject: Downtown Bike Locker Pilot Project Results

Date: May 24, 2023

Recommendation

That, on the on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions be taken with respect to the downtown bike locker pilot project:

- a. Civic Administration **BE DIRECTED** to end the current pilot project phase and continue to offer secure bike parking services with the existing bike lockers in the three existing locations;
- b. Civic Administration **BE DIRECTED** to move the Clarence Street lockers for re-installation at Central Avenue and Richmond Street in early Fall;
- c. Civic Administration **BE DIRECTED** to provide recommendations for bike locker rental fees in 2024 for inclusion in the Fees and Charges By-Law; and
- d. Civic Administration **BE DIRECTED** to include learnings from the bike locker pilot project and a financial analysis of additional secure bike parking options as part of the development of London's Bike Parking Plan as input into the Mobility Master Plan.

Executive Summary

This report provides Civic Works Committee and Council with an analysis of the downtown bike locker pilot project that ran from August 2021 to December 2022. It also includes recommendations for next steps. Highlights of the analysis for the hourly locker rentals include:

- 1,115 hourly rentals were recorded throughout the pilot, with 2.3 hours being the average duration of all rentals;
- Based on the data on number of hourly rentals at each location, the Covent Garden Market and Dundas and Wellington streets intersection locations were the most used locations;
- The total number of registrants of the service throughout the pilot was 296: 41 joining in 2021 and 255 joining in 2022;
- The service usage rate grew throughout the pilot, averaging 85 hourly rentals per month in 2022 compared to 17 in 2021. This reflected a five-fold growth of registrants in 2022; and
- 73 per cent of hourly rentals occurred during the cycling peak season (May – October 2022) and nearly 75 per cent of hourly rentals lasted over one hour.

The full analysis of hourly locker usage is in Appendix A.

The monthly lockers did not have much uptake. Four monthly users took advantage of the monthly rental option over the pilot period. This low rental rate could be due to a number of factors, including limited targeted promotion, the cost, in-person process for renting a monthly locker, many employees working from home during 2021 and 2022, a lack of need for monthly locker parking, or locker locations. Additional focused promotion is planned for 2023.

Bike locker users were encouraged to get in touch with City staff regarding any issue or concern. City staff had several communications with users through email, the Movatic administrative website, and phone calls. Over 90 per cent of rental sessions were issue-free. The top three concern that were brought to City staff attention were:

1. Locker did not open after multiple attempts by the user;
2. Locker was too small for user's bike and/or bike did not fit in; and
3. User was charged more than expected and/or user forgot to end their session.

To determine the next steps with the current bike lockers, the following options were examined by City staff:

Option 1: End the pilot project phase and make the existing bike lockers permanent, noting that current Clarence Street location will move 50 metres north to Richmond Street and Central Avenue.

Option 2: Extend the current pilot project through to the end of December 2023, with findings reported back to the Civic Works Committee in the first quarter of 2024.

Option 3: Extend the current pilot project through to the end of September 2024 and add in one new bike locker station in Fall 2023, with findings reported back to the Civic Works Committee in the third quarter of 2024.

All three options include the further development of London's Bike Parking Plan as input into the Mobility Master Plan.

City staff recommend Option 1, given the overall positive feedback that has been received to date. City staff also recommend deferring fee review and recommended increases in fees for inclusion in the Fees and Charges By-Law annual review in 2023 for implementation in 2024.

Linkage to the Corporate Strategic Plan

Municipal Council continues to recognize the importance of transportation demand management and the need for a more sustainable and resilient city in the development of its 2023-2027 Strategic Plan for the City of London. Specifically, London's efforts in transportation demand management address the following areas of focus:

- Wellbeing and Safety
- Safe London for Women, Girls, and Gender-Diverse and Trans People
- Economic Growth, Culture and Prosperity
- Mobility and Transportation
- Climate Action and Sustainable Growth
- Well-Run City

On April 23, 2019, the following was approved by Municipal Council with respect to climate change:

Therefore, a climate emergency be declared by the City of London for the purposes of naming, framing, and deepening our commitment to protecting our economy, our eco systems, and our community from climate change.

On April 12, 2022, Municipal Council approved the Climate Emergency Action Plan which includes Area of Focus 4, Transforming Transportation and Mobility.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

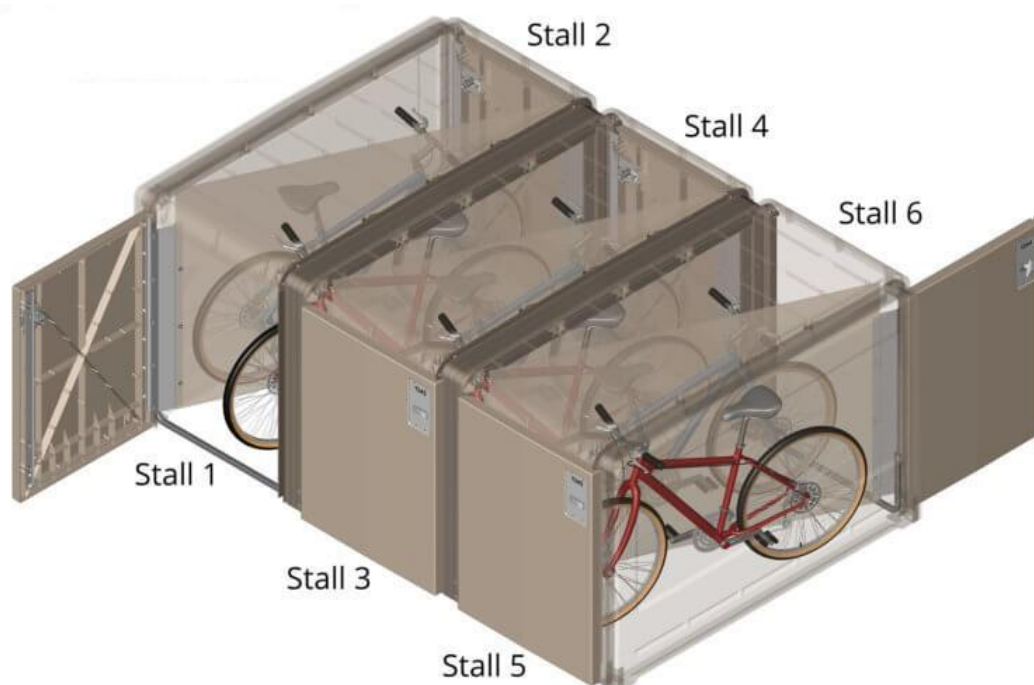
Relevant reports that can be found at www.london.ca under Council meetings include:

- Strategic Plan Variance Report (July 26, 2022 meeting of CWC, Agenda Item # 2.10)
- Public Participation Meeting - Amendments to Consolidated Fees and Charges By-law (May 10, 2022 meeting of CWC, Agenda Item # 3.1)
- Public Participation Meeting - Amendments to Consolidated Fees and Charges By-law (April 20, 2021 meeting of CWC, Agenda Item # 3.2)
- Cycling and Transportation Demand Management Upcoming Projects (March 30, 2021 meeting of CWC, Agenda Item # 2.12)
- Sign By-law Amendment (February 9, 2021 meeting of the CSCP, Agenda Item # 2.3)

1.2 Background

A bike locker is a large box in which up to two bicycles can be locked separately. They provide a higher level of security and convenience for Londoners riding a bike. Bike lockers help prevent theft, provide weather protection, and deter casual vandalism. The Pilot Project included three banks of lockers, each with four Movatic hourly lockers and two keyed monthly lockers (Figure 1). There are 18 lockers in total. The Movatic hourly lockers are accessed by a free Movatic smartphone app, and the keyed monthly lockers are accessed by key by completing a rental agreement and placing a deposit at City Hall.

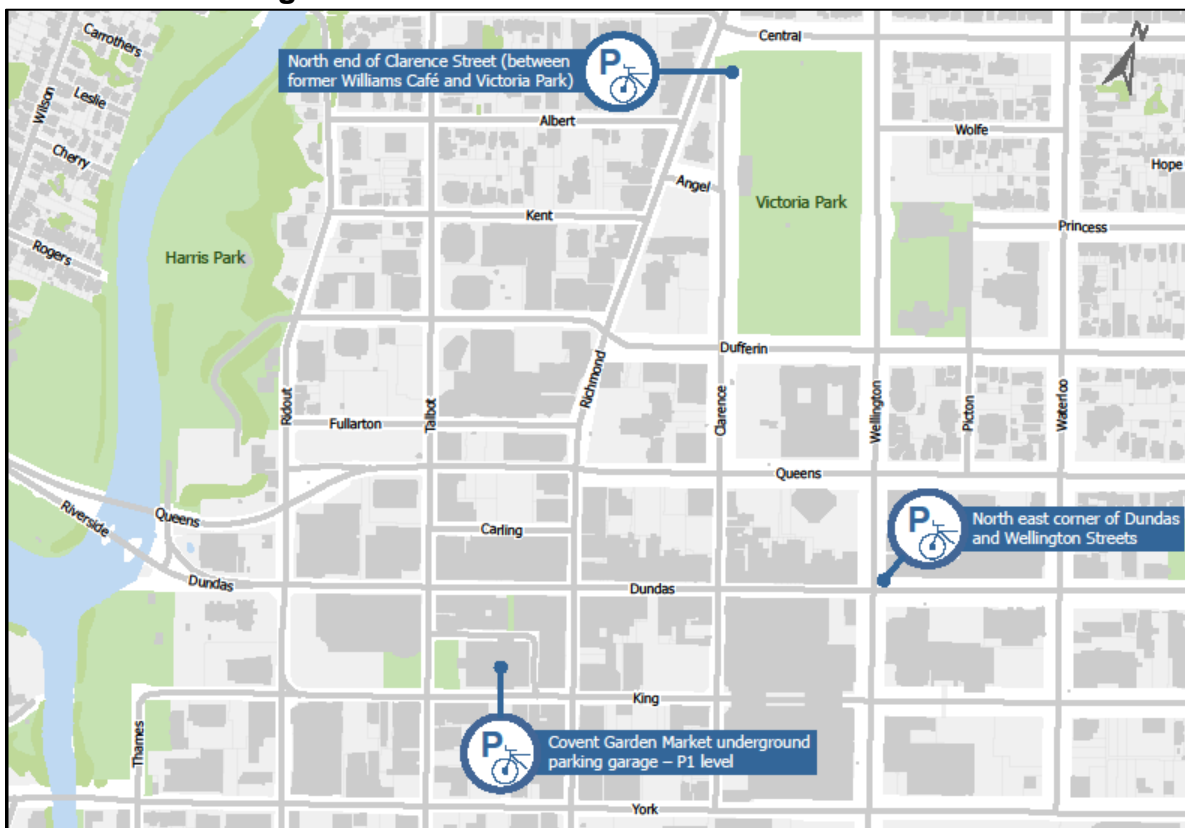
Figure 1: One Bank of Six Lockers Consisted of Four Hourly Lockers and Two Monthly Lockers with Six Separate Compartments



The pilot ran from August 26, 2021 through December 31, 2022. The City tested both monthly and hourly locker rentals in three different locations downtown (Figure 2):

- Covent Garden Market underground parking garage – P1 level around the corner from the entrance/exit ramps;
- Northeast corner of Dundas Street and Wellington Street; and
- North end of Clarence Street (beside Victoria Park).

Figure 2: Three Downtown Bike Locker Locations



The City worked closely with both the manufacturer, CycleSafe, and the distributor, Spacesaver to install and resolve issues as they arose. Just before the official launch in late August 2021, London Cycle Link board members, a local community group, tested the lockers and provided feedback to City staff.

The contract with Spacesaver included two-year promotion of the company on posters on the side of each bank of lockers in exchange for three free poster frames.

The cost for three sets of the bike (ProPark) lockers was \$80,000. This included delivery and installation. The budget came from the Canada Community Building Fund (formerly the Gas Tax Fund).

1.3 Rental Fees

The rental fees for the Pilot Project were based on approximately half the price of motor vehicle parking rates downtown and a review of lockers used elsewhere. The locker fees remained the same for the entire duration of the pilot.

Movatic Hourly Locker Rental Rate (accessed by the Movatic app on the smartphone):

- Free for the first two hours, then \$0.50 per hour; and
- Maximum 24 hours. Then resets for new rental period.

Keyed Monthly Locker Rental Rate (accessed by key):

- \$20 per month (about \$0.65 per day); and
- \$100 deposit to obtain key, refundable upon return.

2.0 Discussion and Considerations

2.1 Common Terms Used in the Analysis

The following terms are used in this report and the pilot project analysis:

- (Movatic) hourly lockers: the secure bike lockers accessed by the Movatic app on a smartphone. Four out of the six lockers in each bank at each location are Movatic hourly lockers;

- (Keyed) monthly lockers: the secure bike lockers accessed by a key. Two out of the six lockers in each bank of lockers at each location are keyed monthly lockers;
- Hourly rental: a rental session for a Movatic hourly locker;
- Monthly rental: a rental session for a keyed monthly locker;
- Hourly user: a user who rented a Movatic hourly locker;
- Monthly user: a user who rented a keyed monthly locker;
- Registrant: a person who created an account and is registered on the Movatic app on their smartphone. A registrant may or may not have used the service after being registered on the Movatic app; and
- Movatic app: a smartphone app that enables registrants of the app to rent a Movatic hourly locker.

Movatic hourly lockers and keyed monthly lockers presented two distinct sets of learnings. They are detailed separately in the following sections and further details are provided in Appendices A through F.

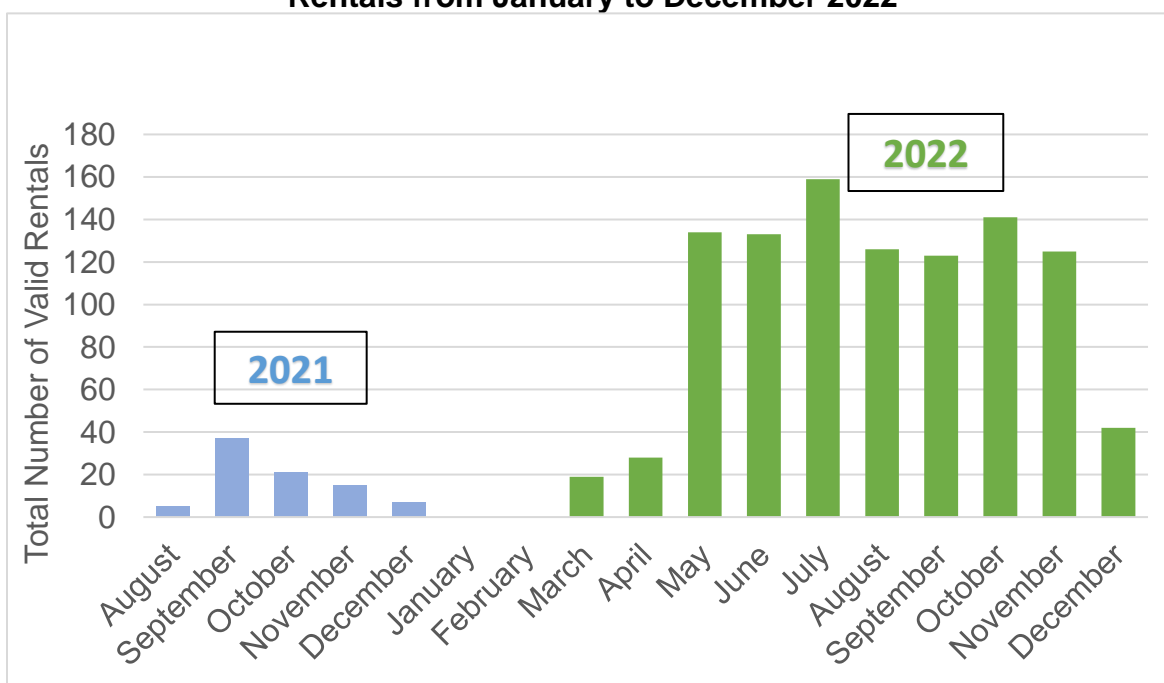
2.2 Results from Pilot Project

2.2.1 Hourly Locker Rental

This section provides a summary of the analysis of the Movatic hourly lockers. For the full analysis, see Appendix A. During the pilot, a total of 1,471 hourly rental attempts were recorded from August 26, 2021 to December 31, 2022. Some of these rental attempts (356, or 24 per cent) were under two minutes duration, including registrants who may have been testing out the use of the lockers. However, 76 per cent (1,115) of rentals lasted between two minutes and 24 hours. The data analysis in this report was built upon rental sessions that lasted for over two minutes.

Figure 3 shows the continuous growth of hourly rentals throughout 2021 and 2022, averaging 85 hourly rentals per month in 2022 compared to 17 in 2021.

Figure 3: Total Hourly Rentals from August to December 2021 and Total Hourly Rentals from January to December 2022



The peak hourly locker use was observed to be from May to October 2022, which can relate to overall favourable weather conditions for bike trips. The results showed that 76 per cent of new registrants and 73 per cent of total hourly rentals were recorded during this period. The average duration of hourly rentals throughout the pilot was 2.3 hours.

No rentals were recorded for the months of January and February 2022. This is likely due to colder weather conditions and generally lower cycling trip mode share during these months.

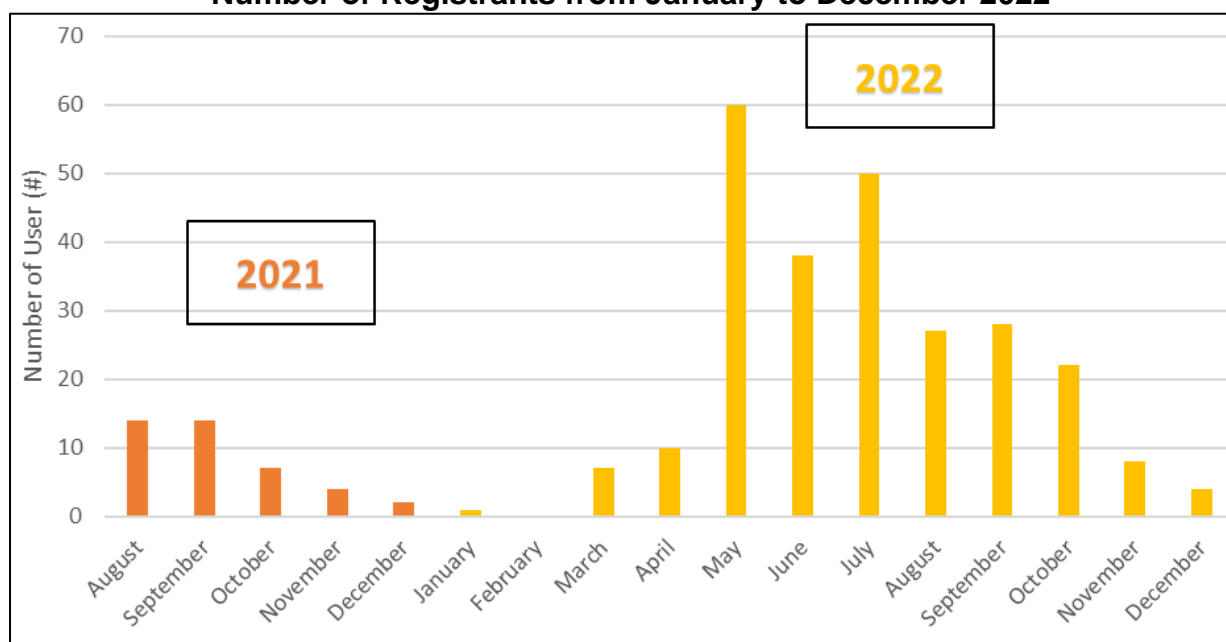
Nearly 75 per cent of hourly rentals lasted for more than one hour. Given the first two hours free before the \$0.50 per hour fee began, this indicates an increased revenue potential in future years.

Although this is beyond the timeframe of the pilot project's analysis, it is important to note that there were 88 hourly rentals during the first three months (January through March) of 2023, with an average duration of 3.2 hours. This illustrates that this winter's warm weather conditions and corresponding lack of snow and ice likely led to increase in cycling trips as well as increase in the locker service usage. Staff also observed that 99 per cent of rentals were issue-free, indicating that hourly users are now having a better understanding of the bike locker system.

2.2.2 Number of Registrants

Analysis of the registrant's growth illustrates that the service usage rate grew throughout the pilot (Figure 4). Forty-one new registrants joined in 2021 with an average of eight new registrants per month, while 255 new registrants joined in 2022 with an average of 21 new registrants per month.

Figure 4: Total Number of Registrants from August to December 2021 and Total Number of Registrants from January to December 2022



Out of the total of 299 registrants, 262 registrants rented the hourly locker at least once. The analysis indicated that the average number of hourly rentals per registrant was 3.7 rentals.

2.2.3 Promoting the Pilot Project

Due to the time of year of the launch, the COVID-19 Pandemic, and City staff learning how the lockers and Movatic app worked, the first few months became a learning experience for cyclists and City staff. However, usage continued to grow over the course of the pilot.

City staff also built on the August 2021 launch promotion to roll out several new means of communicating about the lockers in the Spring 2022. Items included posters for bike shops and other locations, wayfinding signage, Social Media messaging, newsletter information, and how-to stickers for the locker doors. This helped raise awareness among cyclists and potential locker users (Appendices B-E).

2.2.4 Fees and Revenues

The monthly lockers did not see much uptake. Four monthly users took advantage of the monthly option over the pilot period and all four rented for multiple months. This low uptake could be due to several factors, including limited targeted promotion, the cost or

process for renting a monthly locker, a lack of need for monthly locker parking, or locker locations.

The net revenue generated from the monthly lockers was \$130. Monthly users were given the option to have the equivalent of one-month rental fee (\$20) reimbursed if they completed a feedback form about their experience. Two forms were completed.

The net revenue generated from the hourly lockers was \$225.86. For hourly rentals, Movatic charges a fee of 3.1 per cent for each transaction. Stripe, the payment processing company, also charges a fee of 2.9 per cent plus \$0.30 for each transaction. The 2.9 per cent charge is refunded. Movatic fees and Stripe fees were processed separately for each transaction. The City covered these fees during the pilot. Reviewing the hourly rental fees, including covering these processing fees is one option presented subsequently in this report.

2.2.5 Locker Locations

Based on the results of the analysis for locker locations, the Clarence Street lockers had relatively fewer hourly rentals and shorter rental periods compared to the other two locations in both 2021 and 2022.

The maximum number of rentals at Covent Garden Market was recorded in 2022 as 405. The maximum number of rentals at Dundas and Wellington was recorded in 2022 as 356. In comparison, the maximum number of rentals at Clarence was recorded in 2022 as 269.

The maximum average rental duration at Covent Garden Market was recorded in 2022 as 2.4 hours. The maximum average duration at Dundas and Wellington was recorded in 2022 as 2.6 hours. In comparison, the maximum average duration at Clarence was recorded in 2022 as 1.9 hours. See Appendix A for more information.

2.2.6 Locker Maintenance

The hourly lockers are powered by batteries which need to be replaced annually. Aside from changing the batteries, other maintenance during the pilot has included some graffiti removal and repairs to some locker components. The Road Operations early morning crews have added in regular checks of the lockers to their existing rounds.

Winter maintenance around the lockers is key. For the winter season, Road Operations staff incorporated snow removal from in front of the locker doors into their existing schedules.

For the Clarence Street lockers, there has also been a higher rate of incidents with the storage of personal items for Londoners living unsheltered in or around the bike lockers.

Moving forward, a bi-annual schedule of both hardware and software maintenance practices needs to be developed in coordination with affected City service areas.

2.2.7 User Concerns and Issues with Lockers

Over the course of the pilot, cyclists were encouraged to provide feedback, including concerns, through both the Movatic app and cycling@london.ca (Appendix F). Both the app and email were monitored by City staff and responses were provided.

Users who contacted City staff regarding the issues with the lockers mentioned that the customer service and support was very positive. Another common input from users was requesting the service in more locations. Many users also pointed out that the pilot project provided peace of mind riding their bikes and not being worried about theft or damage.

The top three issues raised for hourly lockers were:

1. Locker did not open after multiple attempts by the user - There were several issues where a user's smart phone would not unlock the locker door. Possible reasons were water damage to the hardware (which was fixed), or a poor signal connection. Some issues persist and these are included in the options for moving forward.
2. Locker was too small for user's bike and/or bike did not fit in – The size of locker chosen for the pilot had enough space to hold one adult-size traditional bike. The size was too small for cargo bikes, long-tail bikes, most e-bikes, and in general bikes with larger frames and tall handlebars. This is a consideration for future use of lockers as an option for secure bike parking.
3. User was charged more than expected and/or user forgot to end their session - Each rental session required a one-time hold of \$25 on the user's credit card or debit card. The service was free for the first two hours and then \$0.50 per hour starting from the third rental hour. The \$25 hold was taken regardless of duration of rental and was only released once the user ended their rental session.

To end a rental session, the user must hit a large, blue button in the Movatic app that says: "End Rental". Several users did not hit the button. Even though they could retrieve their bike and ride away, the system assumed they were still renting and so kept charging them for the locker rental. This issue has been shared with Movatic to consider for app improvements. Staff issued refunds to users who forgot to end their rental. The number of issued refunds due to this reason decreased as the pilot progressed as users got familiar with how to end their rentals.

3.0 Next Steps

3.1 Bike Locker Pilot Project

The current Dundas and Wellington and Covent Garden Market bike locker locations should continue to be available to cyclists. To improve visibility and access for the Clarence Street bike lockers, the relocation 50 metres north to Central Avenue and Richmond Street in early Fall is recommended. Feedback on locations has been overall positive. To determine the next steps with the current bike lockers, the following options were examined by City staff:

- Option 1: End the pilot project phase and make the existing bike lockers permanent, noting that current Clarence Street location will move 50 metres north to Richmond Street and Central Avenue. Updated information and promotion would inform existing and potential locker users of this change. Option 1 also includes addressing the ongoing technology issues with some locker doors being difficult to unlock using the app. Locker usage in 2023 would continue to be reported as part of the Transportation Demand Management Performance Measures Program under development.
- Option 2: Extend the current pilot project through to the end of December 2023. Like Option 1, this option would include trying to address ongoing technical issues with the app access, relocate the Clarence Street lockers, as well as conduct a targeted survey of monthly and hourly locker users. This Phase 2 would allow for analysis from January to December 2023 to compare to the first pilot phase (August 2021 to December 2022) to see if users' growing familiarity with how the lockers operate and software technical issues have been improved. Findings would be reported back to the Civic Works Committee in the first quarter of 2024.
- Option 3: Extend the current pilot project through to the end of September 2024 and add in one new bike locker station in Fall 2023. The rest would be similar to Option 2. Findings reported back to the Civic Works Committee in the third quarter of 2024.

All three options include the further development of London's Bike Parking Plan as input into the Mobility Master Plan.

City staff recommend Option 1, given the overall positive feedback that has been received to date, noting that there are technical issues associated with unlocking the bike locker doors that will need to be resolved to improve this service. City staff also recommend deferring fee review including hourly versus monthly rentals, and recommended increases in fees for inclusion in the Fees and Charges By-Law annual review in 2023 for implementation in 2024,

Education and promotion of the existing bike lockers will continue in 2023 including focused promotion on monthly rentals.

3.2 Other Related Projects

There are several projects and plans in development that complement the bike locker pilot. Short-term bike posts and racks on public property are added as part of roadway projects. Posts and racks are also added at other locations as resources allow. Additional secure bike parking is being examined at City Hall along with opportunities for secure bike parking at cycling destinations in other parts of London (e.g., shopping destinations, multi-modal rapid transit locations, etc.).

In addition, City staff are working on a Bike Parking Plan that has a city-wide scope. It builds on the bike locker pilot project and past bike parking projects, including the Neighbourhood Bike Parking Guidelines and the inventory of bike parking at City community centres and arenas. The Plan will include engaging Londoners on what types of bike parking facilities they need and a financial analysis of secure bike parking options. Findings can help inform how bike lockers are applied in the future. The Plan is expected to be completed in late 2023 or early 2024.

London employers and businesses may also be interested in providing their own bike lockers, or similar arrangements, to address both their employee and visitor parking needs. City staff can provide assistance to these employers as part of the City's commuter option supports that are currently available or under development.

4.0 Financial Impact/Considerations

4.1 Net Operating Costs

The net annual operating costs for the three current bike locker locations will be between \$3,000 and \$5,000 per year assuming an annual revenue of between \$300 and \$1,000 per year depending upon potential future changes in locker rental fees. This amount is available within existing budgets.

The annual operating cost covers maintenance (e.g., winter, removing graffiti, etc.) and minor repairs, as well as ongoing operating costs associated with the Movatic app and the payment processing fee.

4.2 Preliminary Findings – Bike Parking Capital Costs

Bike lockers have a significant upfront cost per bicycle and a larger footprint per bicycle compared to standard bike racks or secure bike shelters. The Downtown Bike Locker Pilot Project cost roughly \$4,150 per bicycle parking spot upfront. This is \$415 annually per bike over a ten-year period. A new bike locker station designed for six traditional bikes or four larger bikes (e.g., most e-bikes, cargo bikes, long-tail bikes, bikes with tall handlebars) would cost between \$30,000 and \$40,000.

This information will be used when comparing against other bike parking solutions ranging from traditional bike racks and corrals through to larger scale, secure bike parking facilities as part of the Bike Parking Plan.

5.0 Key Issues and Considerations

The need for long-term secure bike parking should be recognized alongside the need for short-term bike parking. Secure bike parking is an important aspect of increasing cycling mode share and a proactive approach for increasing appropriate bike parking facilities in different types of locations (e.g., commercial buildings, major corporations, downtown, etc.) is critical.

Based on the learnings of the pilot project, secure bike lockers are useful but they are not the only solution for bike parking downtown or in other areas of London. Other options include indoor bike parking rooms, secure bike shelters, covered bike racks, bicycle corrals, and or conventional well-designed bike racks in high-visibility locations. The appropriate option depends on the specific settings and contexts. A user-focused approach can help determine the best bike parking option to eliminate barriers to cycling.

Conclusion

The aim of the Downtown Bike Locker Pilot Project was to help fill a gap in bike parking need for residents, employees, and visitors to downtown. In accomplishing this, many learnings were also gained.

Moving forward, City staff recommend making the pilot a permanent program including trying to address ongoing technology issues and moving the Clarence Street location 50 metres north to Central and Richmond when the separated bike lanes project is complete. Recommended considerations also include deferring a review of fees to early 2024 for inclusion in the Fees and Charges By-Law annual review in 2023.

The next steps in providing bike lockers and other forms of secure bike parking will continue to encourage and make it easier for Londoners to choose to ride for more trips. Providing different types of bike parking supports an increase in cycling ridership and can provide a real option for first-last mile trips. Downtown locker pilot learnings will be considered as part of the Mobility Master Plan and the development of the City's Bike Parking Plan.

Prepared by: Allison Miller, M.C.P., MCIP, RPP, Senior Coordinator,
Transportation Demand Management

Helya Oghabi, MES, Coordinator,
Transportation Demand Management

Jamie Skimming, P.Eng., Manager,
Energy and Climate Change

Prepared and Submitted by: Jay Stanford, M.A., M.P.A. Director, Climate Change,
Environment, and Waste Management

Recommended by: Kelly Scherr, P.Eng., MBA, FEC, Deputy City Manager,
Environment & Infrastructure

c. Doug MacRae, Director, Transportation and Mobility

- Appendix A Detailed Data Analysis of Movatic Hourly Lockers
- Appendix B Bike Locker Poster
- Appendix C Wayfinding Signage
- Appendix D Analytics and Examples of Social Media Posts
- Appendix E Reminder Sticker for Hourly Lockers
- Appendix F Types of Issues and Feedback Examples

APPENDIX A

Detailed Data Analysis of Movatic Hourly Lockers

The following terms are used in this report and the pilot project analysis:

- (Movatic) hourly lockers: the secure bike lockers accessed using the Movatic app on a smartphone. Four out of the six lockers in each bank at each location are Movatic hourly lockers.
- (Keyed) monthly lockers: the secure bike lockers accessed by a key. Two out of the six lockers in each bank of lockers at each location are keyed monthly lockers.
- Hourly rental: a rental session for a Movatic hourly locker.
- Monthly rental: a rental session for a keyed monthly locker.
- Hourly user: a user who rented a Movatic hourly locker.
- Monthly user: a user who rented a keyed monthly locker.
- Registrant: a person who created an account and is registered on the Movatic app on their smartphone. A registrant may or may not have used the service after being registered on the Movatic app.
- Movatic app: a smartphone app that enables registrants to rent a Movatic hourly locker.

Hourly Rental Analysis

The pilot project was launched on August 26, 2021. This analysis covers the period from launch to December 31, 2022. City staff have access to Movatic’s administration website that tracks usage and allows for data analysis.

During the pilot, a total of 1,471 hourly rentals were recorded using the Movatic smartphone app (Figure A-1 and Table A-1). Of these hourly rentals, 76 per cent (1,115) lasted between two minutes and 24 hours. The remaining rentals (356) consisted of test sessions by City staff running tests on the system, registrants trying the service for the first time, as well as users who forgot to end their rental and whose sessions lasted for more than 24 hours. Therefore, the results of the following analysis are based on the hourly rentals sessions that lasted over two minutes and up to 24 hours (1,115 rentals).

Figure A-1: Total Number of Hourly Rentals from August to December 2021, and Total Number of Hourly Rentals from January to December 2022

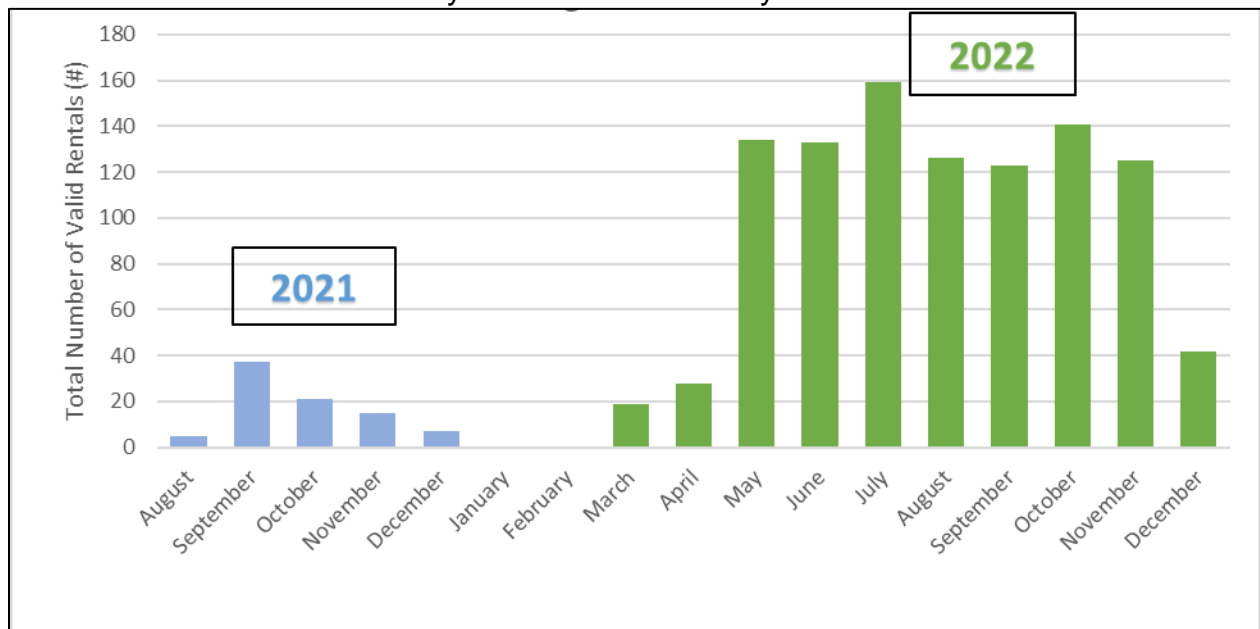


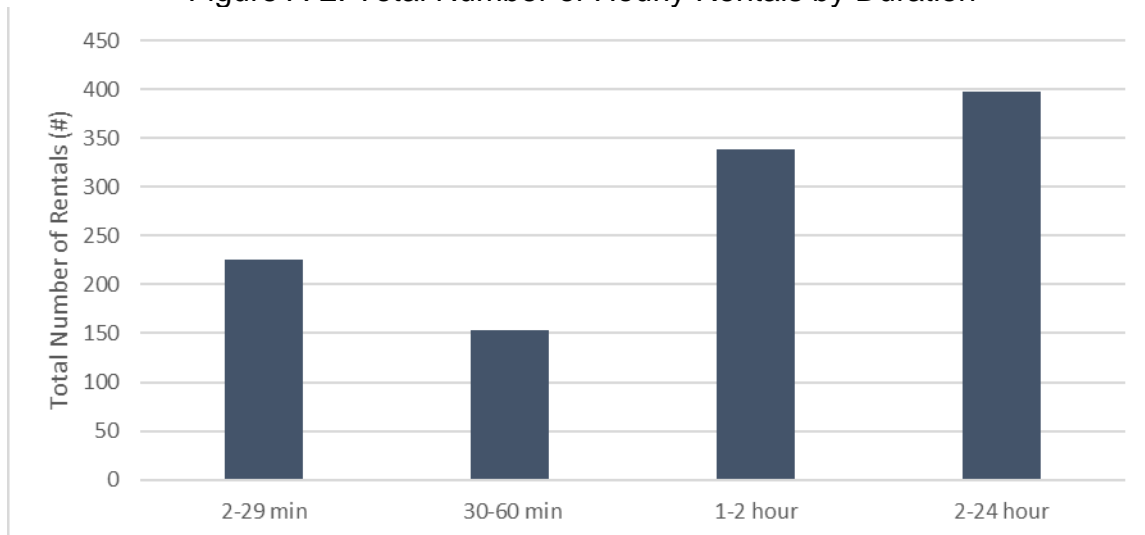
Table A-1: Highlight Statistics of the Monthly Total Number of Hourly Rentals

Total Number of Hourly Rentals Over the Course of Pilot	1,115
Average Duration of Hourly Rentals Over the Course of Pilot (hour)	2.3

Further analysis was conducted of the peak cycling season (May to October 2022). This analysis showed that 76 per cent of registrants and 73 per cent of total hourly rentals were recorded during this period. The average duration of hourly rentals throughout the pilot was 2.3 hours. There were no hourly rentals recorded for the months of January and February 2022. This is likely due to lower cycling trip mode share associated with colder weather conditions and associated road conditions (i.e., snow and ice).

An analysis was conducted to understanding the predominant duration of hourly rentals. Based on the results, nearly 400 hourly rentals (35 per cent) lasted between two to 24 hours, with another 30 per cent or 339 rentals lasted from one to two hours (Figure A-2). This means 65 per cent of hourly rentals lasted for more than one hour.

Figure A-2: Total Number of Hourly Rentals by Duration



Registrant Analysis

According to the rentals data, the service usage rate grew substantially throughout the pilot, averaging 85 hourly rentals per month in 2022 compared to 17 in 2021. This change can be attributed to the learning curve experienced by users. In addition, there were media stories about the bike locker pilot project which increased awareness.

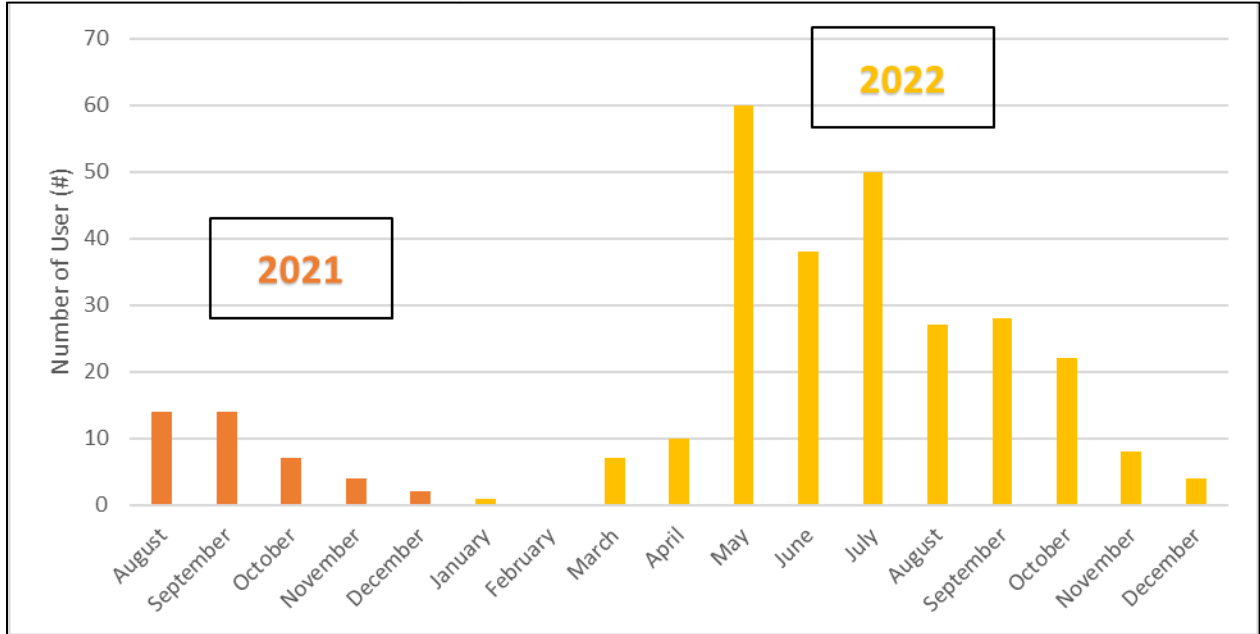
The total number of registrants of the service throughout the pilot project was 299 (Table A-2). Forty-four registered in 2021 with an average of nine new registrants per month, while 255 joined in 2022 with an average of 21 new registrants per month. This indicates a substantial increase in the number of registrants who joined the service reaching a peak of registration growth in May 2022. The statistics reflected a five-fold growth of registration in 2022 compared to 2021 (Figure A-3).

The registrant analysis indicated that each registrant rented hourly lockers an average of 3.7 times, with a maximum of 54. Some users reported that the size of the locker was incompatible with the size of their bike, lacking enough space for larger handlebars or frames. This is a major contributing factor towards the 37 registrants with no hourly rental sessions.

Table A-2: Highlights of Statistics of Registrants During the Pilot

Total Registrants	299
Registrants with No Rental Sessions	37
Average Number of Rentals Per Registrant	3.7
Maximum Number of Rentals by a Registrant	54
Number of Registrants with 1 Rental Session	100
Number of Registrants with 2-5 Rental Sessions	108
Number of Registrants with 6-10 Rental Sessions	33
Number of Registrants with more than 10 Rental Sessions	21

Figure A-3: Total Number of Registrants from August-December 2021, and the Total Number of Registrants from January-December 2022



Comparison of Locker Locations

Figure A-4 shows that in 2021, a total of 85 hourly rental sessions were recorded, with the Dundas at Wellington Street intersection lockers having the most hourly rentals (41 times) and the Clarence Street lockers having the fewest (5 times). In 2022 however, 1,030 hourly rental sessions were recorded with the Clarence Street lockers having the lowest rentals (269 times) and the Covent Garden Market lockers rented the highest number of times (405 times). Clarence Street lockers had the fewest hourly rentals and shorter rental periods both in 2021 and 2022.

The highest average of hourly rental duration was 2.2 hours at Covent Garden Market in 2021 and 2.6 hours at Dundas and Wellington streets in 2022 (Figure A-5).

Figure A-4: Total Number of Hourly Rentals at Each Location, including Comparison of Total Hourly Rentals in 2021 and 2022

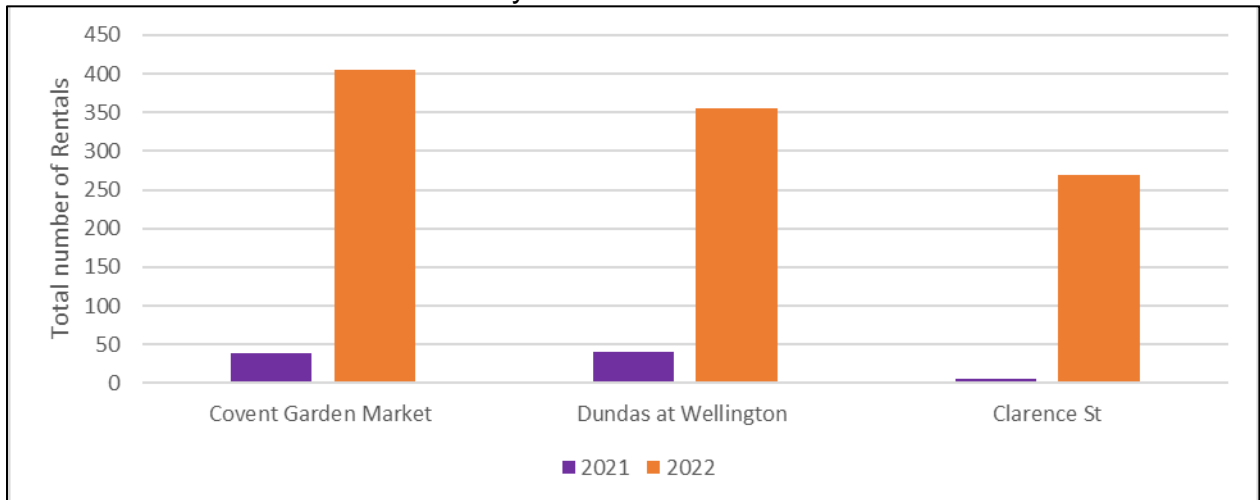
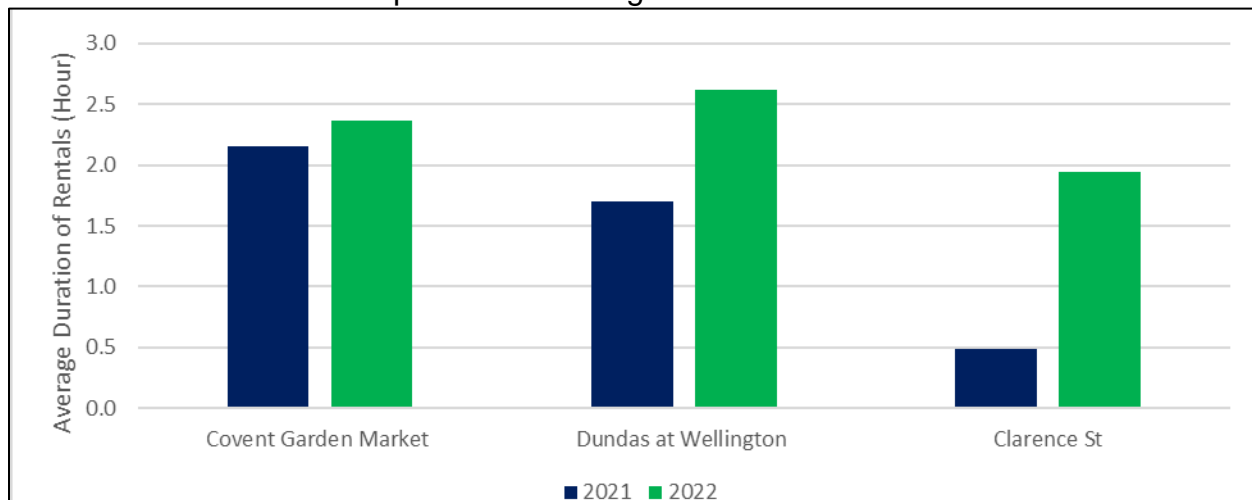


Figure A-5: Average Duration of Hourly Rentals at Each Location of the Pilot, including Comparison of Averages in 2021 and 2022



Analysis of Service Usage by Days of the Week

The following analysis evaluates the usage rate by days of the week and average duration of rental for each day. This analysis was conducted based on the aggregated data throughout the course of the pilot. Figure A-6 and Table A-3 show the total number of hourly rentals. According to the analysis, Fridays and Saturdays had the highest number of hourly rentals with 226 and 221 total rentals respectively. However, the highest average duration of hourly rental was on Thursdays and Mondays, at 2.6 and 2.43 hours respectively.

Figure A-6: Total Number of Hourly Rentals throughout the Pilot on Each Day of the Week

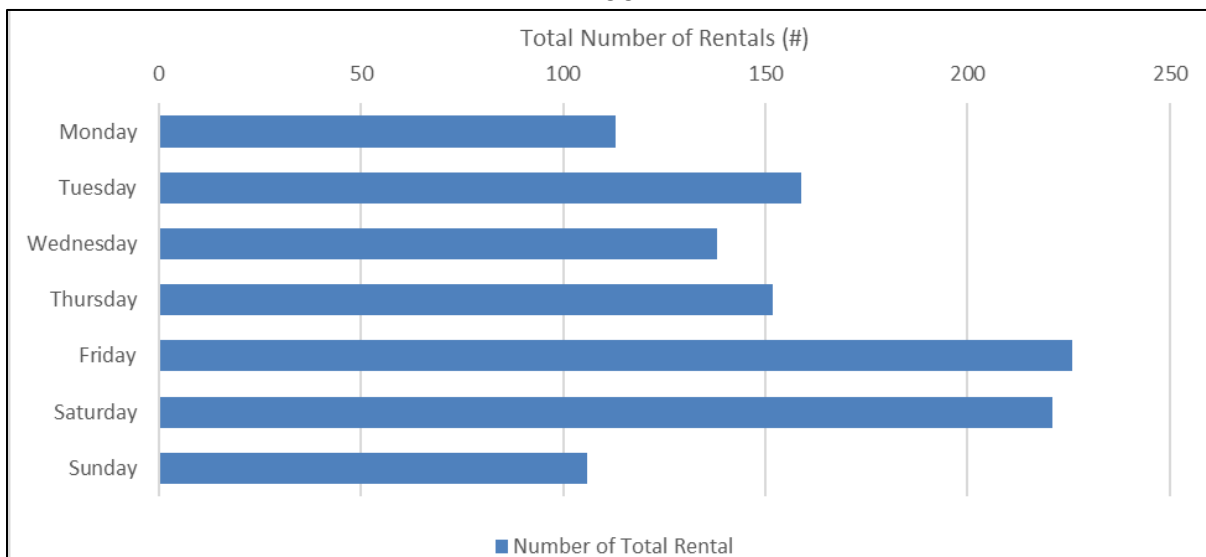


Table A-3: Statistics on the Total Number of Rentals and the Average Duration of Hourly Rentals on Each Day of the Week.

Day of Week (in 2021 & 2022)	Number of Total Hourly Rental	Average Duration of Hourly Rental (hours)
Monday	113	2.43
Tuesday	159	2.24
Wednesday	138	2.40
Thursday	152	2.60
Friday	226	2.44
Saturday	221	1.92
Sunday	106	2.25
Total	1,115	2.30

APPENDIX B Bike Locker Poster

This poster was disseminated in August 2022 to 27 bike shops and to the Covent Garden Market.



Rent a secure bike locker downtown



Rent a locker any time with the **Movatic App**.

- 

The City provides three bike locker locations:

 - Covent Garden Market underground parking garage – P1 level
 - North east corner of Dundas and Wellington Streets
 - North end of Clarence Street beside Victoria Park
- 

The first two hours are free.
Then pay \$0.50 per hour.
- 

You can reserve a locker from home.
Use the Movatic App to have a locker ready for you.
- 

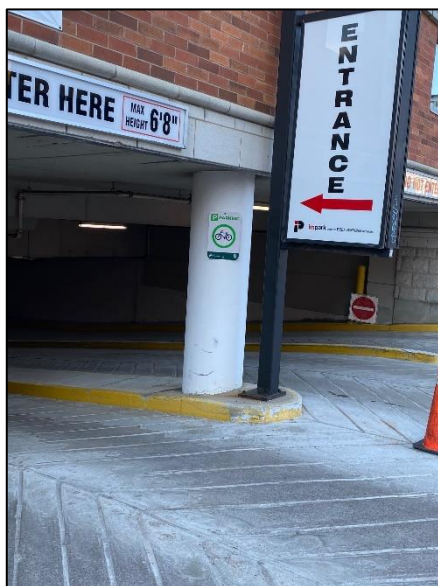
Space for family and friends riding together.
Rent up to 4 lockers at a time.
- 

Monthly rentals are also available.
Email cycling@london.ca to check availability.

london.ca/cycling  #LdnOnt ClimateAction 

APPENDIX C Wayfinding Signage

During the months of April and May 2022, City staff added wayfinding signage to the three locker locations, including working with the Covent Garden Market to improve wayfinding at their parking garage.



APPENDIX D

Analytics and Examples of Social Media Posts

Table E-1: Highlights of social media analytics for bike locker posts.

Total impressions (The number of times content was displayed to users on social media)	103,102
Engagements (Total number of reactions, clicks, likes, shares, comments)	6,646
Link clicks to London.ca/cycling from the posts	393
Number of posts (Total across Twitter, Facebook, and Instagram)	12
Instagram Reel video analytics	viewed 13,800+ times and liked by 452 people.

Examples of Social Media Posts

Figure E-1: A screenshot of City of London's Twitter post for promoting bike lockers downtown



Figure E-2: A screenshot of City of London's Twitter post for promoting bike lockers downtown



APPENDIX E

Reminder Sticker for Hourly Lockers

City staff prepared this sticker to help eliminate accidental prolonged hourly rentals and to remind hourly users to hit the “End Rental” button in the Movatic app when retrieving their bike.



APPENDIX F Types of Issues and Feedback Examples

During the pilot project, City staff received over 200 messages through the Movatic system or by City email from hourly locker users. Table B-1 summarizes the issues raised:

Table B-1: List of locker issues raised by hourly users.

Type of Issue	# of Reported Issues Addressed by the City Staff
Locker does not open	30
Bike size incompatibility	26
Charged more than expected/forgot to end rental	22
Ended before retrieving bike	4
Door was left unlocked	4
App is confusing	3
App issue – used a wrong locker number	3
Need to rent more than four lockers per session (Noting that there are only four hourly per location.)	3
App issue – does not connect to locker	2
Poor signage	1
Snow blocking the door	1
Cleanliness	1

Even with the issues reported, the overall impression expressed by hourly users during the pilot project were positive. Here are some example messages received through the Movatic system or by City email from locker users:

“Thanks for clarity, and replying so fast. I love these lockers, so much that I’m willing to lock up my bike and walk 1 km or a little more just to know my bike is secure. Please install more ie via rail station, Labatt park, gibbon park Masonville Mall, future BRT terminals”

“Bike did not fit even after lowering handlebars. Tried our other bike - wouldn’t fit either.”

“I LOVE these. They definitely make frequenting downtown more likely and you can actually shop around rather than just running into one store while trying to keep an eye on your bike through the window. Currently, I only go downtown if I need something from downtown and I just end up driving because I don’t want my bike stolen. These lockers allow me to bike downtown, shop around, grab something to eat, attend events, etc. The lockers make visiting downtown more enticing.

I hope more awareness can be spread about the program. A lot of people don’t know they are there and I think that’s really going to hurt the results. I passed them multiple times before even realizing they were there.

Please don’t get rid of them. Please introduce more!”

“Hi. I am a student at Western and I’ve lived in London my whole life. I am also a cyclist which can be tough in London as often it’s hard to feel safe about where I leave my bike in the city. Getting a thick chain lock isn’t enough these days as there are many stories I hear of people using power tools to cut through them to steal bikes. I really love the bike lockers downtown and really think the pilot program that will end this fall should become a permanent addition to the downtown core and possibly expanded to more areas of the city. Thank you.”

“I had to hit rental again to get my bike out . I also noted that it put a second charge against my credit card . This is the first time trying this service and I don’t think it works well for getting your bike out.”

“I recently found out about the bike lockers downtown through a CTV News article. I dislike driving and generally avoid going downtown (I live in west London). Since finding out about the lockers in early May, I have ridden my bike to downtown 3 times and used the lockers each time. They were fantastic! It is so nice not having to worry about my bike being stolen! I hope in the future, there are more bike lockers available throughout the city!”

“I just want to thank you for your reply to my problem report via the Movatic app. I’m glad the feedback is useful.

To add a bit more, I love the bike lockers so much when they work! They’ve made me feel much better about going downtown more often. The lockers are great during a festival like Sunfest, but perhaps even more useful when it’s less busy and I want to pop into a store without worrying my bike is locked somewhere where nobody is around to stop a potential thief.

If the technical issues are worked out, I hope the program is expanded and becomes permanent. They could also be in more locations and more prominent; even avid cyclists often don’t know they exist, or don’t know where they are. There’s not even a sign pointing to them!

I hope these issues don’t affect the success of the pilot. I think it could be a game changer if done right and promoted—and getting more people cycling is absolutely necessary in a city that has declared a climate emergency.”

“I think it's an app problem. The app couldn't connect to the locker to unlock it. Then I tried to scan the QR code with the app but it wouldn't scan in the dark.”

“I can’t thank you enough for this program that has been a complete game changer. I’d always struggled to find a safe way to store a bike when downtown, often not wanting to do so at all. I’m not using the lockers regularly and enjoying the core more (including shops and nightlife. Please PLEASE expand the program to Old East. I simply won’t take a bike out that way as it is, but if bike lockers are put by the western fair farmers market, 100 Kellogs st, and right on the main Old East Dundas strip, I’ll frequent that area regularly as well.

I simply can not express enough how important and beneficial this program is. Thank you.”

“I’m continually impressed with the quality of the service of these bike lockers (even helping me through my own mistakes), and I’m so glad the city has this wonderful service.

Thank you again,”

“PLEASE keep these bike lockers! The rate of bike theft is so high in this city. I’m really not comfortable riding downtown unless I have somewhere safe to store my bike.”