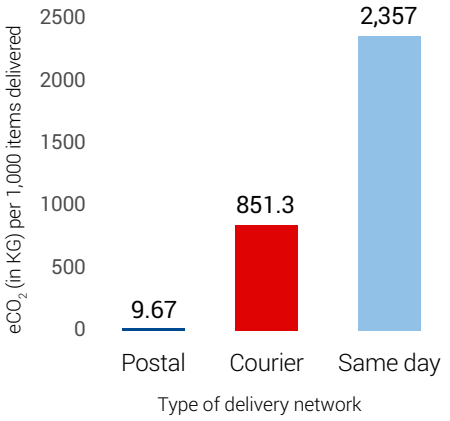
How can last-mile e-commerce delivery be made more sustainable?

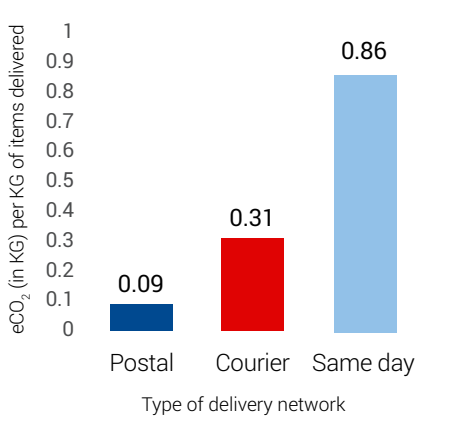
Soaring demand for e-commerce delivery is fuelling considerable increases in greenhouse gas emissions and congestion in Canadian cities. Canadians expect Canada Post demonstrate leadership on the environment and help the country transition to a low carbon future and to play a role in alleviating congestion in Canadian communities. The Corporation commissioned Deloitte for a traffic simulation study aimed at helping municipal leaders understand how last-mile delivery impacts their communities, from their citizens' mobility to the air they breathe.

Key findings:

E-commerce delivery and the environment

Postal delivery has the lowest carbon footprint per delivery, while same-day delivery has the highest.





Three key contributing factors:

- √ Co-delivery of parcels and mail increases delivery density.
- √ Comprehensive depot network minimizes route distance.
- √ Park-and-loop routes involve foot delivery of small items (mail, packets).

E-commerce delivery and urban congestion

Postal delivery requires 20 fewer vehicles, on average, for every 1,000 parcels delivered than other last-mile delivery models.

- Key takeaway: When each vehicle on the road is optimized to carry as much volume as possible, fewer vehicles are needed to meet delivery demand in a region.

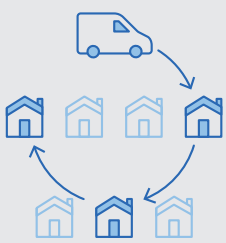
What types of last-mile delivery models operate in Canada?

Park-and-loop routes
(postal delivery)

Postal delivery

- National coverage
- Mail and parcel delivery
- Static, park-and-loop routes

Park-and-loop routes involve foot delivery of mail and small parcels, and motorized delivery of larger parcels.



Motorized routes
(courier and same-day delivery)

Courier delivery

- National or international coverage
- Parcel delivery
- Dynamic, motorized routes

Same-day delivery

- Local coverage
- Parcel delivery
- Dynamic, motorized routes

Courier and same-day delivery routes are predominantly motorized and designed daily using dynamic routing technologies.