

WHO WILL MOST BENEFIT FROM BUS ROUTE CHANGES?

BACKGROUND

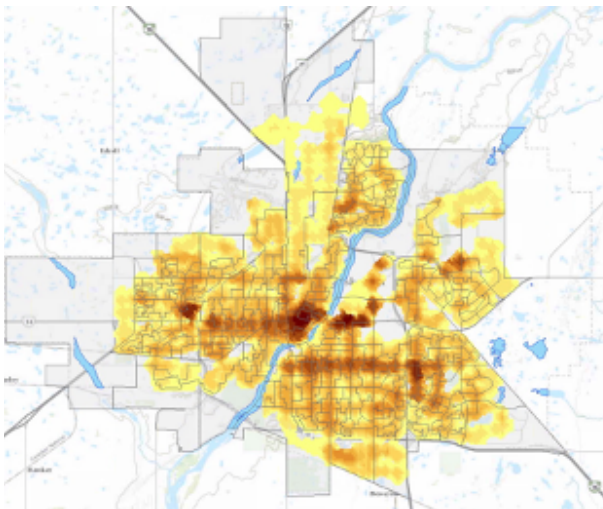
Saskatoon's network configuration proposes increased service along 22nd Street, 3rd Avenue, 25th Street, College Drive, Preston Avenue, Broadway Avenue, 8th Street, Idylwyd Drive, 33rd Street, and Warman Road. The BRT system will have fewer stops, but the system will offer a higher frequency service. Some areas of the city will experience increased temporal accessibility, other areas will have decreased geographical accessibility.

Local Transit Accessibility Measures

Transit accessibility measures refer to what you can reach within your neighbourhood. Professionals and academics use a wide array of measures range from a basic stop count (e.g., The number of bus stops within 400m from a specific location), to gravity-based measures which use distance decay functions (to give a higher value to nearby locations). We used several land use and transit service datasets, including data collected from the on-bus fare collection systems of Saskatoon Transit buses to investigate which accessibility measure matches best users behaviour in Saskatoon. The results suggested one measure (e.g., Filtered frequency 400m network buffer & 250m Butterworth distance decay function) best fit the variation in public transit ridership.

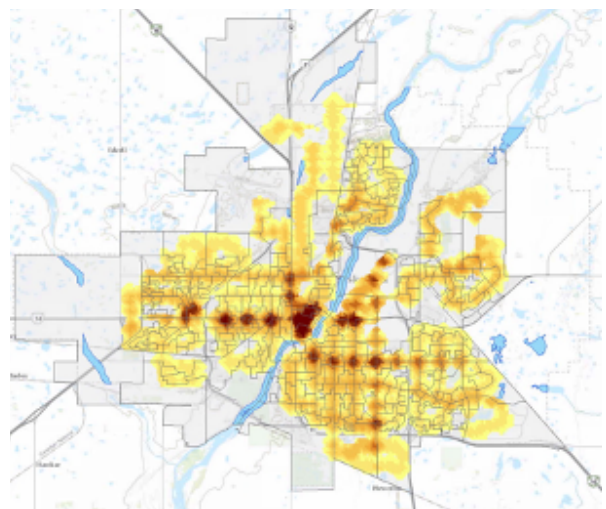
We applied various measures to Saskatoon's transit changes (see 'Local Transit Accessibility Measures' box). Below are heat maps showing the magnitude of accessibility using walking distances of 250m and 400m (using the filtered frequency 400m network buffer and the 250m Butterworth distance decay function). The darker colour means higher accessibility.

September 2018 Network



Map of accessibility score for the September 2018 configuration

2026 BRT Network



Map of accessibility score for the new BRT system

IMPACTS

Higher frequency of service in lower income areas. The areas that will see the highest change in service frequency using the new BRT system tend to be those that have a lower median income.

Higher frequency of service in areas with a higher proportion of Indigenous populations. For areas with the highest increase of bus service frequency, 15.2% of the population is Indigenous, which is higher than the average Indigenous population for the City of Saskatoon (11.3%).

No major change for areas where people already take the bus to commute to work. There will be minimal changes in the frequency of bus service for residents who live in areas with a high proportion of people who take the bus to work.

IMPLICATIONS

- From end to end of any line, a customer will save anywhere from five to ten minutes roundtrip with the BRT compared to a similar route without the BRT.
- Saskatoon's bus network reconfiguration will improve accessibility for lower income areas and areas with a higher proportion of Indigenous peoples.
- Saskatoon Transit's decision to focus on frequency using a hub and spoke transit model will increase service frequency in key areas and provides a grid-like system with more direct routes that all intersect with the BRT at one or multiple stations.

The logo for INTERACT, featuring the word "INTERACT" in a bold, sans-serif font. The letters "INTER" are white and "ACT" is green, all set against a dark grey rectangular background.

The INTERventions, Research, and Action in Cities Team (INTERACT) is a pan-Canadian collaboration of scientists, urban planners, and citizens uncovering the impact of urban changes on health and equity.