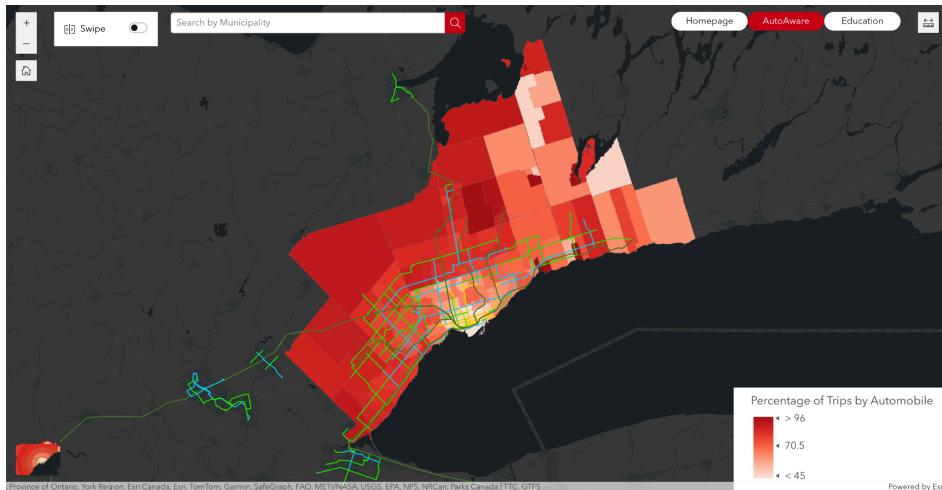


AutoAware Statement of Application Characteristics

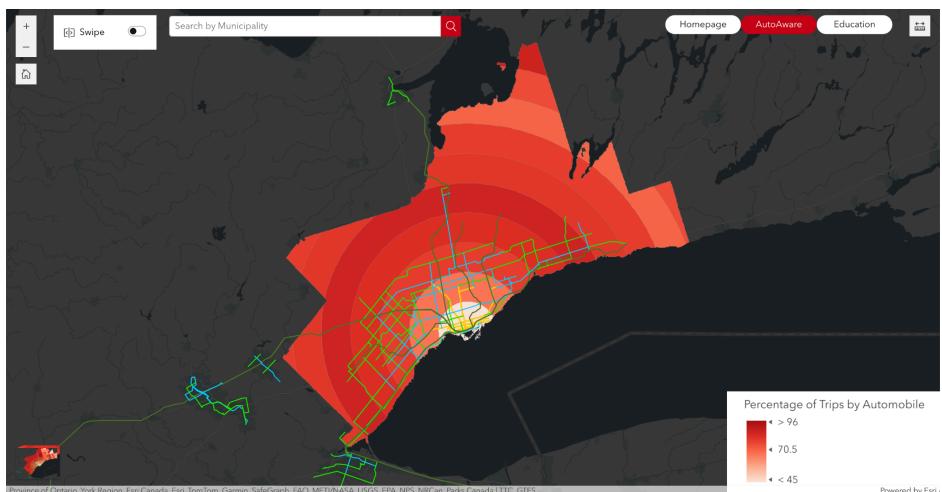
AutoAware, created by team Sprawl Stoppers is an application created for the 2024 Esri Canada Centre of Excellence App Challenge. In line with this year's theme of urban sprawl, the application visualizes levels of sprawl in Ontario, Canada's Greater Toronto Area. The intended purpose of the app is to educate a broad audience about how low density expansion of cities beyond their borders contributes to automobile dependence, and concomitant air pollution. Transportation Tomorrow Survey data is used for the proportion of trips taken by automobile for each ward in the Greater Toronto Area.

AutoAware Map

The application allows the user to choose between two different visualization scales. The default is to view the trip data at the ward scale, as shown below:



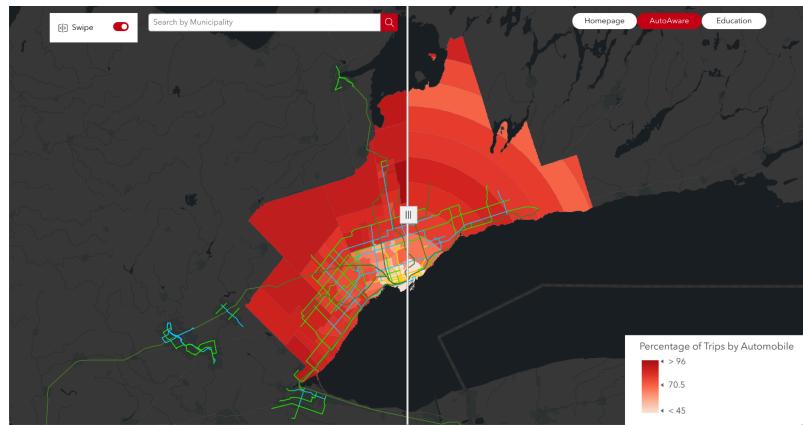
However, the application also intuitively allows the user to toggle to viewing the data at the concentric ring level. Presenting the data at this custom geographic scale emphasizes the role of urban sprawl on automobile dependence, and highlights how it increases with sprawl away from the City of Toronto's dense urban core. The concentric ring view is shown below:



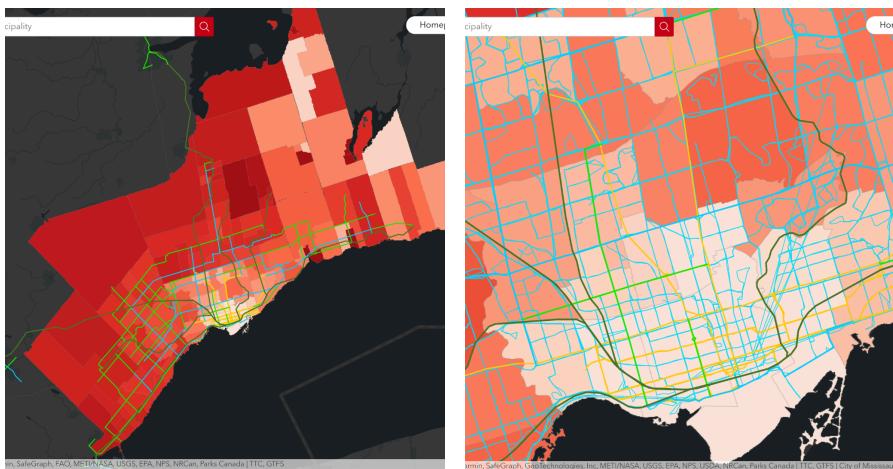
Both views have popups configured, which display more information for users about the data at the scale at which they are viewing:



A swipe widget has also been included in the application, to allow users to more easily visualize the two different views available:



To emphasize the role of transit in curbing automobile use, transit lines at two different scales are overlaid onto the map. At the regional zoom level, higher-order transit (train, BRT, LRT, and subway) are shown. When the user zooms closer to the ground, lower-order transit becomes visible:



Education Component

The screenshot shows a web-based application interface. At the top, there is a navigation bar with three buttons: "Homepage" (gray), "AutoAware" (white), and "Education" (red). Below the navigation bar, there is a text block and a heading. In the bottom left corner, there is a small label "Health".

Text Block:

The Greater Toronto Area (GTA) is notorious for its sprawling, car-oriented development, characterized by extensive highways, suburban sprawl, and limited public transportation options. Despite efforts to promote alternative modes of transportation, such as biking and public transit, the dominance of the automobile remains entrenched, contributing to traffic congestion, air pollution, and urban sprawl challenges in the region.

Section Header:

Impacts of Car-Oriented Development

Image:

The application is also equipped with an educational story map, which can inform users of the link between automobile use and air pollution, as well as its harmful effects. The story map covers the negative impacts of car-oriented development, the positive impacts of transit-oriented development, and how municipalities are making the transition to more sustainable modes of transportation planning.