End-to-End Platform to Monetize Personal Assets

Reducing Household Expenditures Through Sharing Economies

SIDE|WALK|LABS

Executive Summary

Problem | **High Living Costs**	*Solution* | **3 Part Plan**	*Outcome* | **Stakeholder Benefits**

As the country's largest housing market, Toronto's housing affordability is still on a drastic decline as prices skyrocket.

All household demographics struggle to meet household expenditures, including:

- Transportation costs
- Utilities and housing costs
- Food expenditures

These three have the greatest contribution to annual household expenditures, after housing and income taxes.

The 3-part plan is comprised of 3 simple improvements that can be integrated with the current MIDP development plan.

#01: Enable consumer ownership and accessibility in small vehicle *transportation*.

#02: Decrease monthly food expenditures by creating a local shared *food* market.

#03 Create a scalable model of the *sharing economy* that can be applied to more industries

Over the next 5-10 years, the unique combination of these innovations will help increase affordability by covering a portion of the down payment, ranging from 14-27%.

Sidewalk Labs: formed strong public and private sector partnerships across Toronto, across many industries.

Torontonians: more affordable living in downtown Toronto and decreased debt.

The affordability crisis extends beyond just housing- the cost of living is extremely high. Toronto is the *world's 10th most expensive city to live in*.

| Top **priorities** in decreasing living costs in household expenses.

Transportation and **purchased food** are the **3rd and 4rth greatest contributors** to household expenditures, ranked after taxes and housing costs

1. Purchased food accounts for 9.91% of expenditures

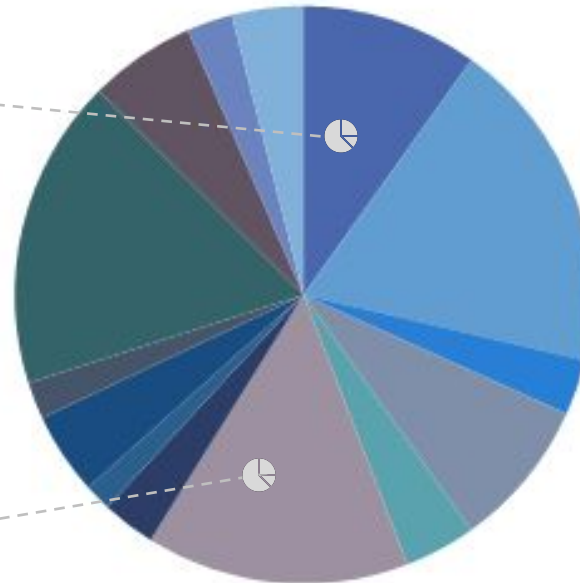**Food / groceries from stores = 6.96%**
Food from restaurants = 2.95%

Food from stores and food from restaurants cost $5924 and $2593, annually. Our solution creates a local market that connects these two areas to create cheaper options.

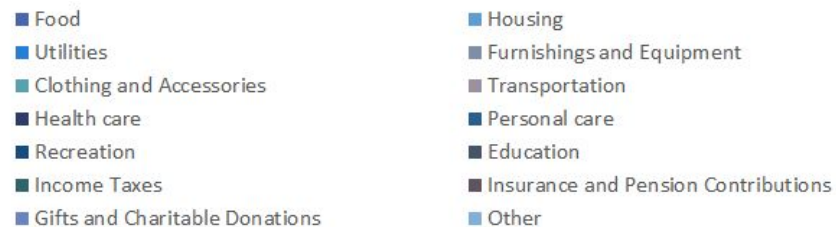## 2. Transportation accounts for 14.80% of expenditures

Private transportation = 90%
Public transportation = 10%

Private transportation and public transportation cost $11433 and $1274, annually. Our solution addresses the costs in both these areas of transportation.

Average Canadian Household's Annual Expenditure Breakdown

Based on data from Statistics Canada, in 2017.
For full data table, click here.

- Food
- Utilities
- Clothing and Accessories
- Health care
- Recreation
- Income Taxes
- Gifts and Charitable Donations
- Housing
- Furnishings and Equipment
- Transportation
- Personal care
- Education
- Insurance and Pension Contributions
- Other

What's the big deal?

Total annual expenditure is $86 070 yet the *average annual Canadian* salary (before taxes) is *only $55 806.*

That means people are gaining *more debt* every single year.

Debt to Income Level

The debt to disposable income level is incredibly high, around 177.6 % during Q3 of 2019 (according to CBC news)

$ 1 spent

$ 1.78 in debt
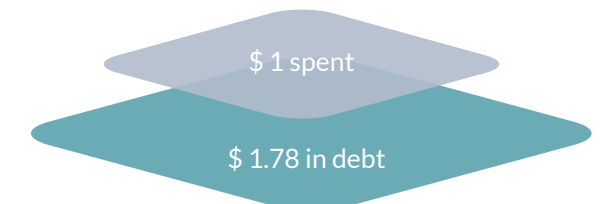
For every $1 spent, the household owe almost $1.78

Data from right table:
https://www.cbc.ca/news/business/statscan-debt-data-1.5173538

| Our solution leverages the shared economy, an accessible market.

Collaboration consumption and monetized sharing in the 21st century market

Toronto's housing market is the 12th[1] most expensive in the world. All households, regardless of income, are struggling:

Toronto's **homeless population** has nearly doubled from 4969, in 2006, to 8715 in 2018. Shelters are operating at almost 98% capacity, *every night*.

In October of 2019, an apartment **rental** in the city costed around $2515 a month on average. That's a 6.1% increase from Q3 of 2018.

Toronto requires an average of 66.3% of a household's income to cover **ownership** costs – 15% over the national average of 51.3%.

The **sharing economy** can *address the entire* housing continuum and provide immense benefits to low income families. It will help them *save money, increase disposable income, and increase savings.*
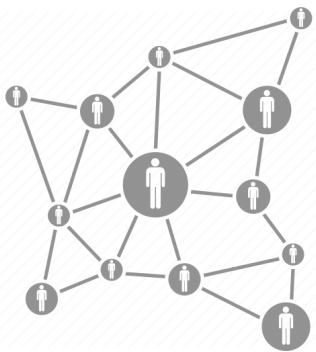
By creating *strong P2P networks* based in Toronto, Sidewalk Labs can leverage **Toronto's digital infrastructure** to implement, streamline, and *scale* the shared economy model on a **mobile platform.** It's *accessible* for all, including the homeless population (which 80% of owns a phone).

Why implement the shared or 'access' economy to create P2P networks across markets in Toronto?
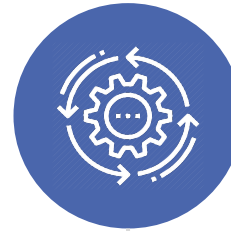
1) Enable better usage of resources

The sharing economy turns private goods into common commodities in the P2P network. In terms of affordability, access may be prefered over ownership. Commodities are crowdsourced, based on consumer demand and P2P interaction.
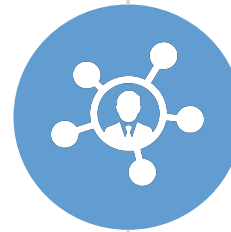
2) Build social capital

The sharing economy facilitates the accumulation and use of social capital, which creates robust communities that not only contribute to economy growth by allowing more members to participate but also facilitating social empowerment and welfare.

3) Boost economic productivity

Revenue for top 10 sectors in the US in 2013 was $255 billion and the 5 sharing economy sectors only accounted for 5% at $15 billion. In 2025, it's projected that the sharing economy will make up 50% at $355 billion with a market revenue of $670 billion.

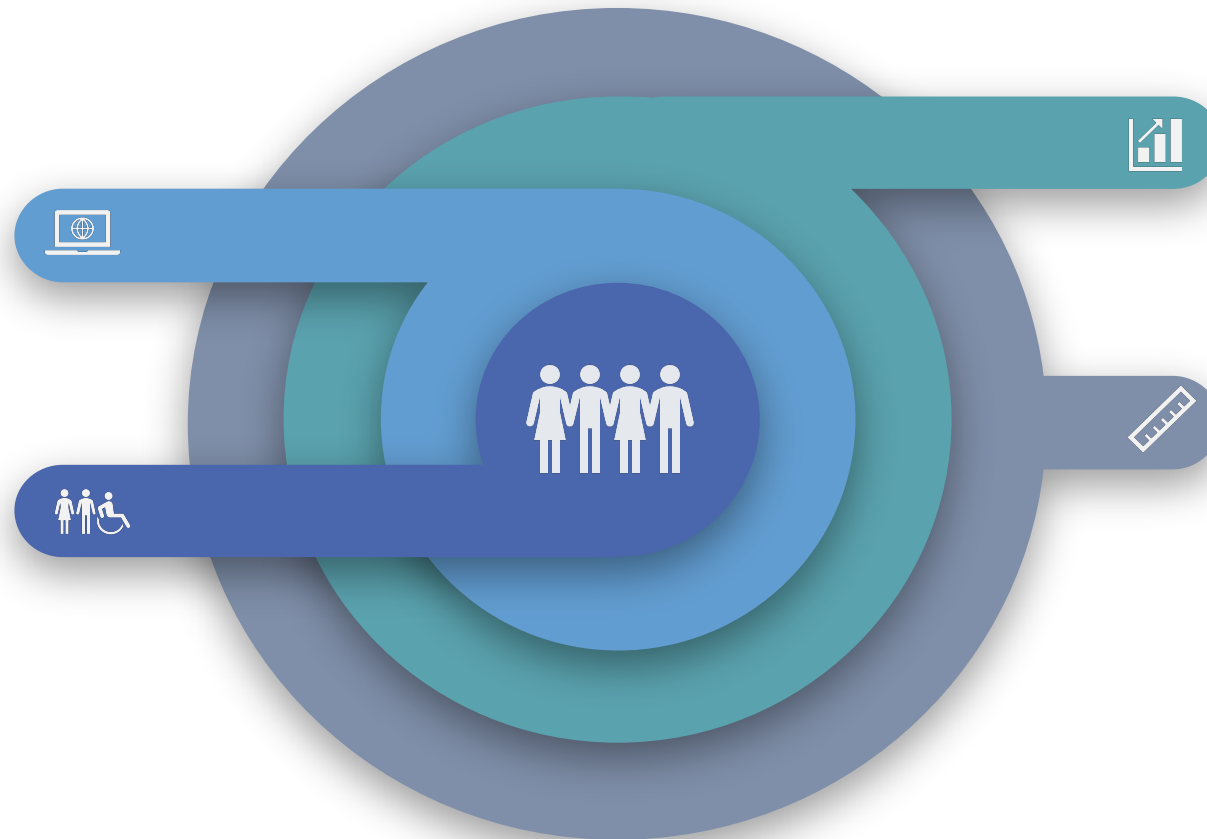# | Enabling human centric design in a shared economy.

Our solutions **tackles current inefficiencies** in the following processes of transportation and food. We have applied and implemented *human centered design principles* in order to create a **highly accessible**, but also **innovative**, **solution** that *caters to multiple demographics* residing in the downtown Toronto region. *Affordability by design, across all household expenditures that contribute to the cost of living.*

Design + Business

To ensure reliability and scalability, we created an easily scalable approach that **leverages data analytics** to ensure optimal design.

Technology + People

We have integrated all the solutions onto **one, central user platform** that is highly accessible and easy to use.

Technology + Business

To optimize for efficiency, our solution looks at the **individual and social considerations**, on top of technological innovation.

Design + People

Our solution takes into account all the **possible stakeholders,** with an emphasis on the end user.

PART ONE

TRANSPORTATION

Saving 74.38% of annual transportation expenses.

Affordability breakdown with the bike-sharing platform.

Increasing the affordability for first-time buyers

$189
Monthly income by monetizing bikes

74.38%
Total savings in transportation costs

14.28%
Down payment reduction (10 yrs)

The average cost of a home & the minimum down payment:

is about **$929,633** [1] and a **minimum of 20%** [2], **which is around $185,926.60**. If you were to rent your bike(s) for 324 days (excluding snow days [3]) everyday for $7 per day (day price of Bike Share [4]), you would make **$189 per month or $2268 per year.**

Breaking down the transportation expenses - reducing them:

The average Canadian spends **7.6%** [5] of their **annual income** on transportation, which is equivalent to $3049.20. Making $2268 annually from bike sharing, **saves them 74.38% annually** from transportation expenses**.**

Investing into a savings account to save up in the long term:

If we chose to go with a TD Savings Account [6] that gives us a 1.05% interest rate, and invest $2268 for **the next ten years**, by the end, we would earn **$1,602, ending our investment with $26,550** [7]. That's about **14.28% of the minimum down payment covered.**

* Number of riders vary with about 6760 daily riders and over 338,000 riders in Toronto. Additionally, with a minimum increase of 15% of potential riders, the market exists to rent at least one bike for about a year.

1 Government of Canada, 2 Toronto Urbanized "Toronto crept closer to $1 million in October", 3 Weather Atlas, 4 Bike Share Pricing, 5 Low Rates Toronto, 6 TD Personal Banking, 7 Rate Supermarket Calculator

The Inefficiencies of the Bikeshare Platforms

Companies like Bikeshare are already implementing solutions to optimize for this opportunity, However, there are numerous inefficiencies with Bikeshare that limit their market penetration and positive-user experience

01

Accessibility and Convenience

Unequal ride patterns often results in unequal bike distribution. The entertainment district is saturated with majority of the 465 stations and 15% of riders reported that stations remain empty for days. Additionally, bikes are low-quality; 13% of people that have tried bikeshare prefer riding their own bike.

02

Conducive to Traffic Congestion

22% of bikeshare users have expressed frustration with the Toronto traffic situation - Bikeshare toronto lacks the technology and service that indicates optimal travel route. Additionally, 13% of riders are annoyed that some bikeshare stations are placed far from bike lanes.

03

Time Limits and High Prices

Bikeshare prices are optimal for 30-minute rides- they are only feasible for riders that desire quick leisure rides. Full-day rentals are high-cost and unrealistic, thus limiting the user population. 11% first-time Bikeshare users cancelled their bikeshare account for that reason.

An app that simply connects you to any bike.

An End-to-End Mobile Platform

* Logistics to consider: Sellers have to provide a minimum of 4 pictures and additional pictures of damaged areas. Furthermore description and history of the seller is provided to ensure transparency and only 4.5+/5 ratings will be considered. Additional damages caused by rider will be charged on the rider's account, if only if, the damages were not disclosed on the seller's listing. At the moment, the platform is only designed for Sidewalk community, where residents are assigned a unique Sidewalk ID to login to the platform.

Pickup/Dropout Anywhere

Reducing the amount of space that parking locations for bikes take up. Instead, we suggest to create a **bike lending system**, where you simply return the bike to the person (typically your neighbor) that you borrowed it from.

Profit Sharing

From the seller's point of view, it would make sense for them to **keep all the profits** made from each transaction. The intention behind this is to create potential opportunities to increase the diversity of one's income. This will allow people to set aside greater funds to account for the rising market prices in GTA Toronto.

PART TWO | **FOOD PURCHASES**
Leveraging the Shared Economy in the Local Food Market

Affordability breakdown with the food-sharing platform.

Reassessing affordability with food sharing and zero-waste groceries

8.08%
Earnings on food that would be wasted

8.90%
Total savings in food expenditure

3.40%
Down payment reduction (10 yrs)

Food-sharing reduces money wasted on food waste

If you spent $283.60 on food every month, **$91.66 of that expenditure is wasted.** If on average, people sell their foods for 75% less than what they would normally sell it for, they can retain **$22.92** of the money. At the end of the year, **they can earn back 8.08%** of what they could have wasted on food.

Zero-waste groceries reduces money spent on one-use packaging

9% of your food expenditure is spent on one-use packaging that you would eventually throw away. **That is $25.52 of the $283.60** that an average Canadian spends on food. If we take away the amount of money spent on packaging completely, we can **save 8.9%** of their total expenditure.

Investing into a savings account to save up in the long term:

If we chose to go with a TD Savings Account that gives us a 1.05% interest rate, and invest $581.28 for the next ten years, we would **earn $410.49**, ending our investment with $6,804.57 That's about **3.4% of** *the minimum down payment* **covered**. Help residents *make a dent* in their down payment.

1 According to study done by the University of Florida, three-quarters of all finished goods require a package and ninety percent of that packaging market is within the food and drink industry. Although this cost ranges from 1.4 percent to 40 percent, the average cost of packaging is $1 for every $11 spent. Nine percent of the amount you spend on any product is probably the cost of its packaging.

| Current solutions are not scalable and sustainable.

Why we need to reduce food waste:

Up to 9% of all food expenditure goes to unsustainable one-use packaging. $91.66 of the $283.60 we spend per month money spent goes to waste when we throw away the food we don't need.

In 2018, 35.5 MM tonnes of food in Canada go to waste. 11.2MM tonnes of it could be rescued. If we spend $283.60 on food every month, $25.52 of the food is wasted on one-use packaging.

Current Food-Sharing Apps:

Fees range from **15% to 35%.** Current food-sharing apps are harming restaurants as many restaurant owners are resentful that these food delivery apps are expensive.

Food Banks
Regular customers pay **5 times more** than a non-profit employee would.

1) Improving food affordability and accessibility
Our goal is to create a platform that allows food sharing so local restaurants and bakeries can give out food for cheaper without wasting it. By providing a monthly subscription to their favourite foods while supporting local businesses and being sustainable, we can reduce food waste by selling unsold inventory at cheaper prices which they can have delivered or picked up from the location.

2) Making groceries sustainable by going 0 waste
The average Canadian generates 668 kg of waste that they have spent money on every year. Up to 9% of money spent on groceries goes to one-use packaging that is thrown away. We want to eradicate this by using reducing the need for one-use packaging by replacing it with reusable packaging.

Unboxed market goes reduces packaging use and food waste. Without pre-packaging, it reduces the additional waste produced by food consumption.

Loop is working on re-envisioning the way we approach groceries. Once the customers are done with the products, Loop will pick up the products from the customer in the Loop Tote provided to clean the reusable packaging and refill it.

PART THREE | **THE FUTURE**

Leveraging the Shared Economy Across all Expenditures

| Scaling 1.0: Home sharing platform solution

Building an end-to-end sharing platform by targeting first-time renters/immigrants

For existing homeowners in the Sidewalk Community

Develop a enlisting feature on the Sidewalk platform for owners who leave their house vacant for a period of time. From Wellesley Institute, **146,000** of the households surveyed, **58%** are already renting their personal homes.
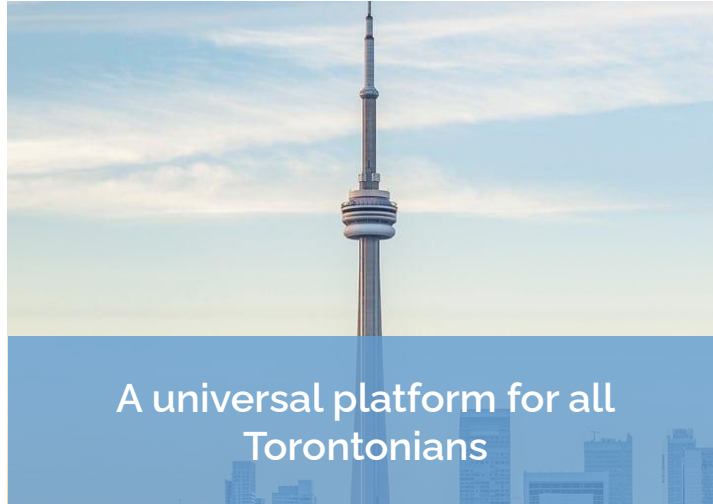
A universal platform for all Torontonians

According to The Global and Mail, the renting experience has allowed people "**to realize Toronto will not be a forever place for me**". With a similar approach, building a more transparent renting community for people by introducing the Sidewalk platform for everyday Torontonians.

Targeting first-time renters and/or immigrants

Having Sidewalk as the go-to platform, similar to other platforms like Kijiji and Airbnb, but **more personalized and catered towards a smaller target demographic**. This idea will be feasible and easier to maintain the development lifecycle for Sidewalk.

| Next steps: scaling the mobile platform.

Creating an end-to-end urbanization platform available for all Torontonians

Sidewalk labs can integrate this with the already proposed monthly subscription model for public transportation. By subscribing, users can gain additional perks like *exclusive discounts* across all the sharing platforms. *The problem* for first-time buyers and immigrants is that they don't know where to start. By having Sidewalk Labs *combine applications* such as Uber and Airbnb into one platform, the vision is to streamline this process and create an **end-to-end platform** available for all Torontonians.

Next steps and timeline for scaling:

01

Quickly integrate platform into the Sidewalk Community

Release the beta version to onboard as many users as possible and collect data/feedback to meet the needs of the users.

02

Target first-time buyers and/or immigrants

Focusing on a larger but measurable demographic would be ideal to validate and iterate further on the product, while generating passive income to accommodating for the down payment .

03

Scale to creating an end-to-end platform for all Torontonians

Create an accessible community by establishing digital and social infrastructure, allowing citizens to be connected, essentially creating an 'all-in-one' platform for Torontonians.
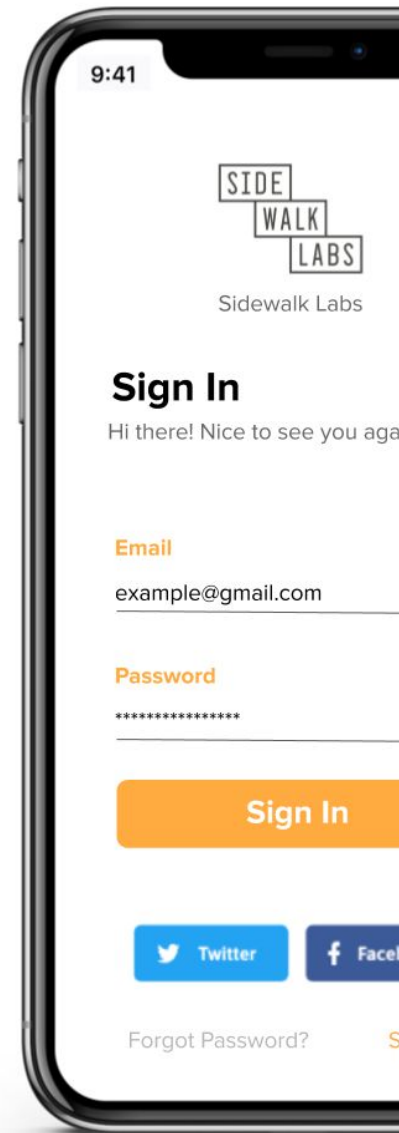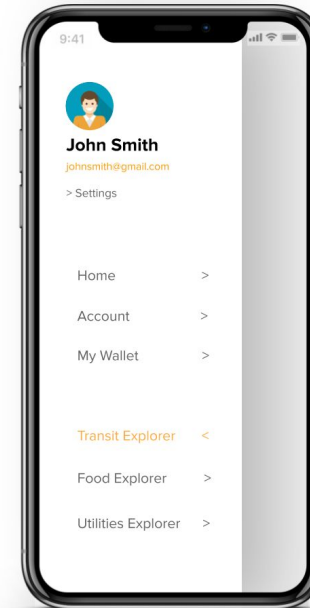
ON A MORE PERSONAL NOTE

We'd like to personally thank you for this wonderful opportunity to contribute to Sidewalk Labs' mission of improving housing affordability.

Through this project, we have learned new skills and knowledge that we can apply to future consulting projects. We hope we were able to help Sidewalk Labs and create an impact towards increasing the affordability of housing.

Feel free to contact us at any time via LinkedIn, if you have any questions or comments in regards to our recommendation. We would love to help Sidewalk Labs in the future! We hope to see Sidewalk Labs' vision in the near future and create a city that's powered by connectivity.

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Best Regards,
Maggie, Suraj, William & Sara

MAGGIE LI
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SURAJ BANSAL
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Linked in