

Identifying the spatial distribution of problems in Sainte-Catherine Street by geolocating citizen's feelings through social media

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**Research
proposal**

BACKGROUND

- **CHRONOLOGICAL CLASSIFICATION**

- First generation: slum clearance and the built environment from 1930s to 1960s in the UK and in the USA
- Second generation: neighborhood rehabilitation and social problems in 1960s.
- Third generation: the revitalization of city centres, emphasizing their economic development between the 1970s and the 1980s.

- **THE SCALE OF THE INTERVENTION**

- Urban, regional, or national.

- **COMPREHENSIVE DESIGNING**

- A major strategic rethinking of their economic, environmental, physical, social and even cultural profile.

■ RESEARCH PROBLEM

Embedding social values is now considered as one of the main challenges in urban regeneration projects.

OUTLINE OF INTENT RESEARCH FIELDS

- **01 The role of social values in urban regeneration process**
 - Comprehending social psychological processes model explained by Heath.
 - Angelidou described this process happens through communication and dialog.

- **02 The role of language & democracy in the urban regeneration process**
 - The ability to negotiate, to search for synergies, to build coalitions and partnerships for action and deliberative democratic system is the key element, described by Fung.

OUTLINE OF INTENT RESEARCH FIELDS

■ 03 Public participation and technology

- A ladder of citizen participation

It is the redistribution of power that enables all citizens, presently excluded from the political and economic processes, to be deliberately included in the future, explained **Alvstein**

- Fung defines a **co-governing partnership**

This allows citizens to experience direct exercise and join officials to make plans and policies.

- **Communicative Action** described by Habermas:

He claims four validity that is the basic elements for ideal discourse and consensus building, which are comprehensibility, sincerity, legitimacy, and truthfulness.

- New forms of participatory by using mobile communication technologies has emerged.

OUTLINE OF INTENT RESEARCH FIELDS

■ 04 Social Media as a tool for communication

- It can increase the thoughtfulness of agreement-reaching efforts, enhance the opportunities to document negotiations, and provide a transparent space during the discussion process, explained by Afzalan.

■ 05 Critical ideas about using technology

(1) Opinions on social media theoretically has a lower threshold for public involvement. (2) Government agencies may lose control of the texts. (3) older, poorer, and illiterate people may not be keen on using new technologies process. (4) It is hard to discuss planning or designing matters in the short text format.

- **What is different with social media is that it could be mobilized by the citizens in spite of the authorities, and sometimes against those. It is empowering in that sense, as citizens could accept the process or alter it if it does not fit with their expectations. This represents a new landscape for citizen's engagement in urban regeneration planning.**

■ OBJECTIVES

- To identify the potential role of information and communication technology in citizen participation as a major contributor toward sustainable urban regeneration beyond the traditional surveys/questionnaires and regular online methods.
- To expand a method, using social media as a mechanism of exchange, that may empower citizens and enable social values to be better integrated into urban projects.

To reach these goals, the Sainte-Catherine Street redevelopment project is chosen as a case study to assess this method.

■ RESEARCH QUESTIONS

- How to assemble an appropriate data set for analysis of people's sentiments using social media?
- **How to identify the spatial distribution of problems in SainteCatherine Street by geolocating citizen's feelings through social media**
- How social media platforms can help influence, collect, or even enable social values for urban regeneration projects in comparison to traditional and online methods?
- What differences are detected about people's perceptions between the new method by social media platforms and traditional methods in SainteCatherine Street?
- How can social media platforms enable citizen's power dynamics to become better integrated into the urban regeneration processes?
- How is power dynamic identified and how can it contribute to the process of SainteCatherine Street project by using social media platforms?

METHOD

■ This research is based upon:


- Retrieving data from different social media platforms API and
- Text mining techniques to extract topics from words that users share on social media.
- And a comparison between the results of traditional public participation activities and social media data for Sainte-Catherin project.

■ EXPECTED OUTCOME

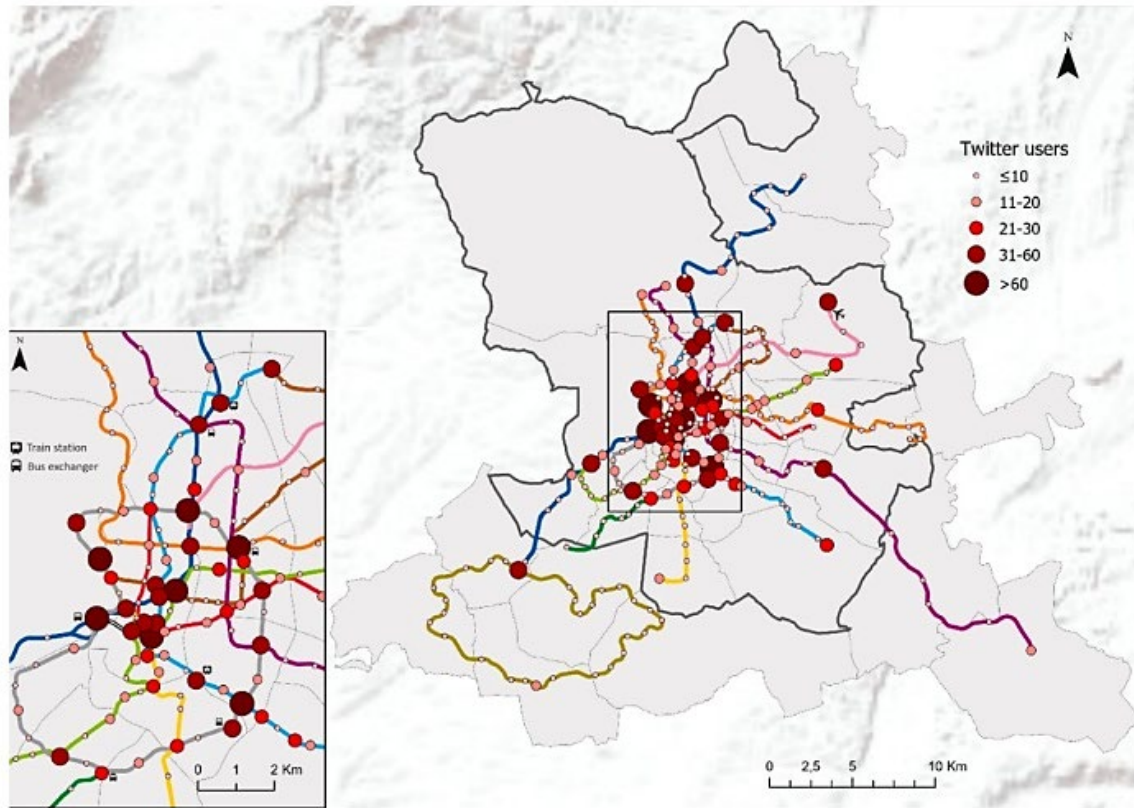
- This novel method, besides the traditional and online methods, aims to contribute to a better understanding of citizen's expectations, which eventually helps to improve how social values can be integrated in urban regeneration projects.

02

**Research on
precedent
examples of
urban projects**

Paper	Authors	Case study	Objective	Methods	Findings	How to use it for my Project
<p>Can social media support large scale public participation in urban planning? The case of the #MySydney digital engagement campaign</p>	<p>Williamson, W., & Ruming, K. (2020). International Planning Studies, 25(4), 355-371.</p>	<p>New South Wales in the east coast of Australia</p> 	<p>-To invite the citizens of Sydney to talk about their local area, in particular, why they love where they live, and what they would change, if they had the chance.</p>	<p>-The #MySydney campaign was initially run from the 25 June to 22 July 2015 and was launched on Facebook, Twitter and Instagram and requested social media users to 'join the conversation' by telling the Department what 'you love about your suburb'. -Citizens' comments were retrieved and topics directly derived from textual data. Keywords or themes were easily identified in the text and their frequency was recorded.</p>	<p>-Facebook may be the most appropriate social media platform for an open engagement at the beginning of a project as its structure allows contextual information, in various formats, to be made available on the Facebook page.</p>	<p>-The process of data collection, -It is necessary to generate discussions. -It is very difficult to keep comments on topic, so Maybe branding strategy is necessary to be used. -Comments just copied directly to text file. (Red flag)</p>

Social media semantic perceptions on Madrid Metro system: Using Twitter data to link complaints to space.



Distribution of Twitter users with a negative sentiment score in the Madrid metro network.

-The process of data collection,

-How many users each platform has (in Montreal).

--Topics were categorized.

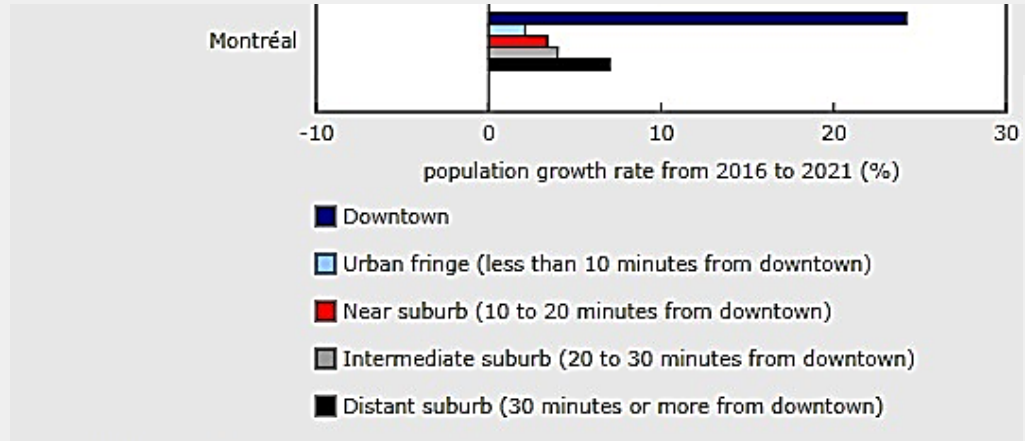
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**Justification of
Sainte Catherine
Project**

Montreal

POPULATION

- The current population of Montreal= 1.7 million
- The wider population of the Montreal metropolitan area= 4.9 million
- Population of the islands of Montreal= 2 million



population growth rate from 2016 to 2021 (%)

	Downtown	Urban fringe (less than 10 minutes from downtown)	Near suburb (10 to 20 minutes from downtown)	Intermediate suburb (20 to 30 minutes from downtown)	Distant suburb (30 minutes or more from downtown)
Montréal	24.2	2.1	3.4	4.0	7.0

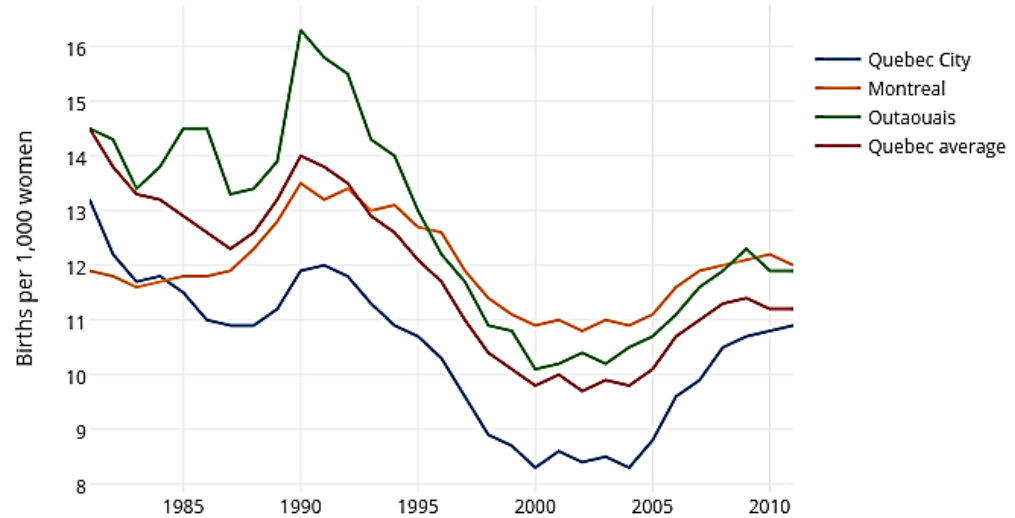
THE SOCIAL CHANGE

■ To explore the social changes:

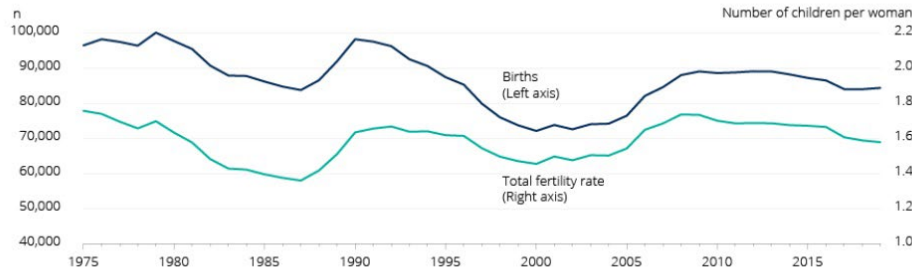
- Birth rate
- The Gini coefficient
- Rates of income

BIRTHRATES

In 2020, there has been a 3% decline from 2019. The total fertility rate was 1.52 children per woman, lower than in 2019 (1.57 children per woman)



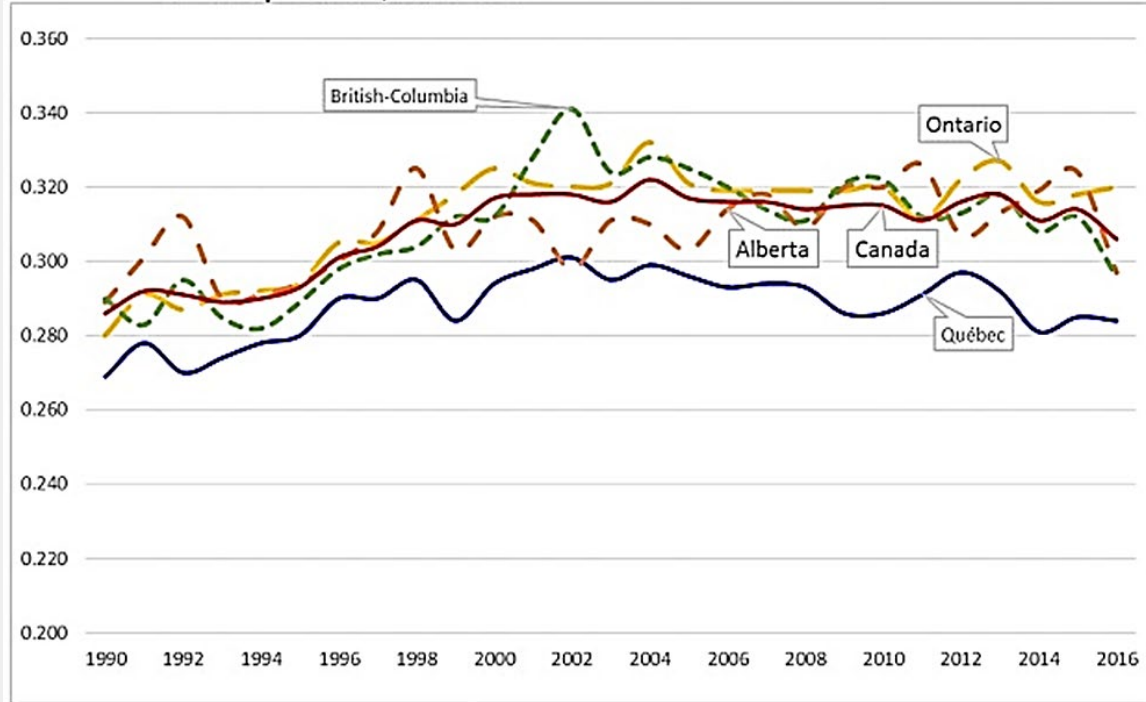
Number of births and total fertility rate, Québec, 1975-2019



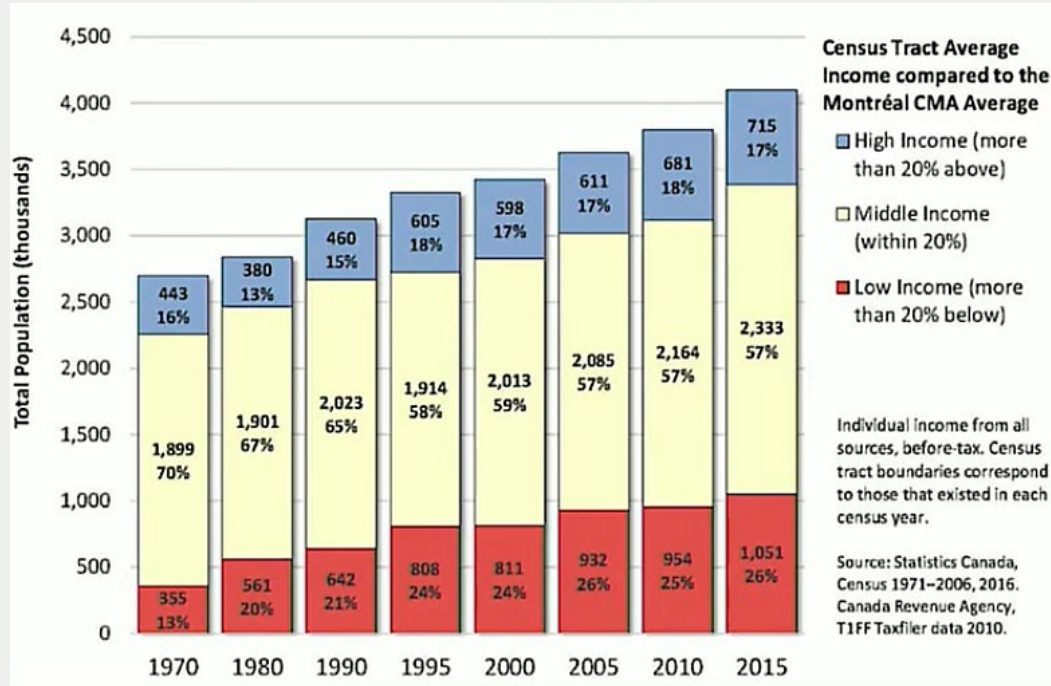
Source: Institut de la statistique du Québec.

GINI COEFFICIENT FOR ALL FAMILY UNITS BASED ON ADJUSTED AFTER TAX INCOME, QUEBEC AND SELECTED PROVINCE, 1990-2016

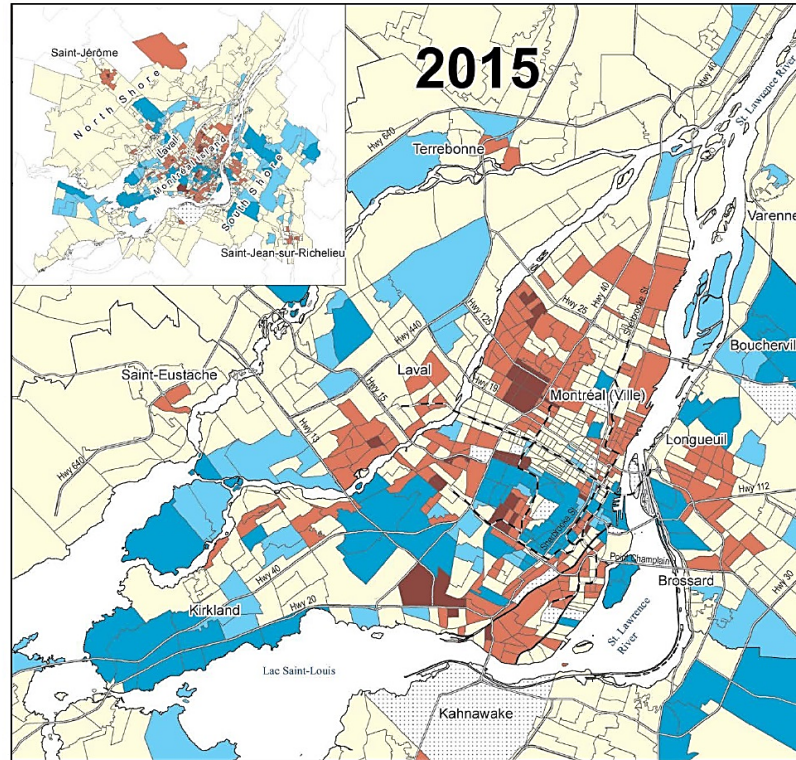
In 2019, the Gini coefficient of QC was 0.28



NEIGHBOURHOOD INCOME & POPULATION MONTREAL CENSUS METROPLITAN AREA, 1970-2015



SPATIAL DISTRIBUTION OF MEAN INDIVIDUAL INCOME, MONTREAL CMA, 2015



Census Tract Average Individual Income compared to the Montréal CMA Average of \$44,742

- Very High - 140% to 956% (86 CTs, 9% of the region)
- High - 120% to 140% (73 CTs, 8% of the region)
- Middle Income - 80% to 120% (535 CTs, 56% of the region)
- Low - 60% to 80% (224 CTs, 24% of the region)
- Very Low - 36% to 60% (33 CTs, 3% of the region)
- Not Available

Average individual income from all sources, before-tax.

Census tract boundaries are for 2016.

November 2017

Source: Statistics Canada, Census Profile Series, 2016



www.NeighbourhoodChange.ca

Sainte-Catherine Project

Phase 1
Sainte-Catherine
Ouest

Phase 2
Sainte-Catherine
Ouest

Phase 3
McGill College



Phase 2 et subséquentes
de Atwater à Mansfield

Phase 3
McGill de Sherbrooke à Cathcart

Phase 1
de Mansfield à De Bleury



**Interview with Head of
Division - Development
of Parks and Real
Estate Assets
(Christiane Rail)**

■ **MAIN MOTIVATION**

- The first reason: old underground infrastructure & Accident happened because of a broken pipe in 2013.
- Bringing people back downtown
- Designing a nicer street
- Bringing more tourists

■ ACTIVITIES TO REACH DIFFERENT GROUPS OF PEOPLE

- Communicating with resident and stores' managers by Knocking on the door
- Putting a tent on site and talking with people for a full day at the corner of McGill and Sainte Catherine
- Online survey
- Workshop

■ OUTCOMES OF THESE ACTIVITIES ARE AS FOLLOWS:

- Discussion always went back to sidewalks
 - They did not want to make it too clean
 - Removing the cars but having a bus like a transit mall
 - Making a big skating ring for weekend
 - The biggest complain was about benches
-

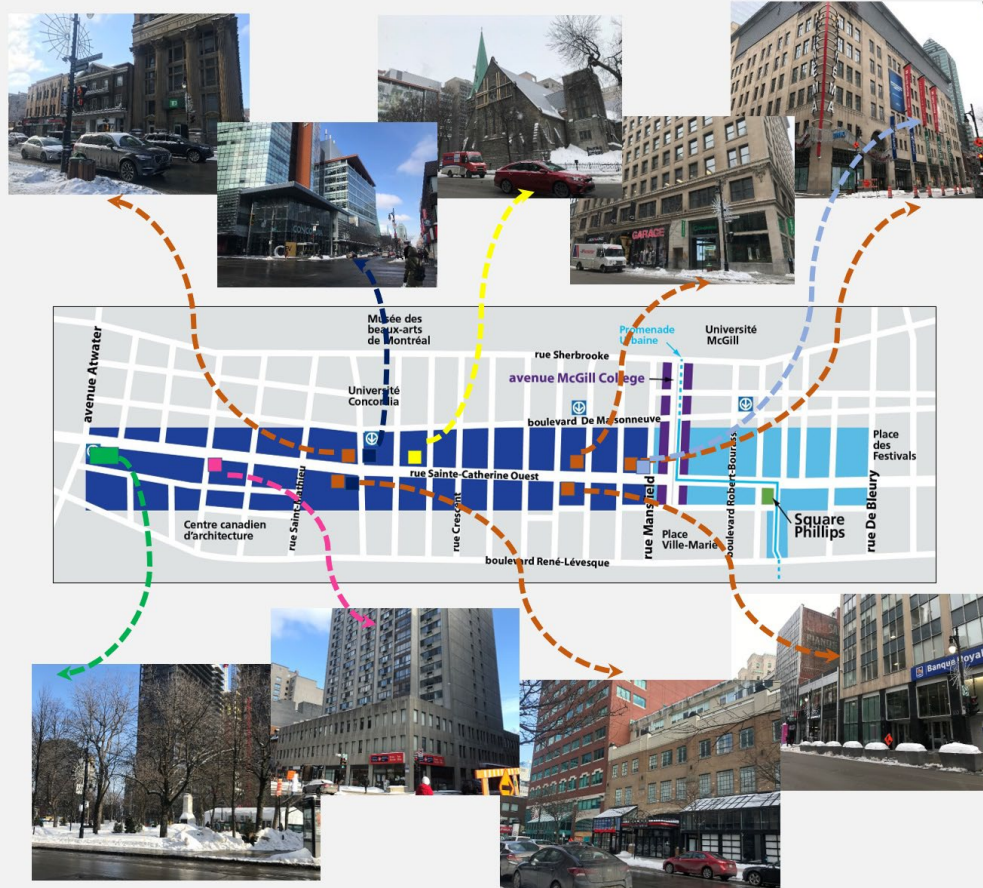
■ **STAKEHOLDERS**

- Tourisme Montréal
- Business association of Montreal
- Heritage Montreal
- Regional assessment agency
- The three universities in the area

St Catherine street has more than 100 functions.

It has 15 blocks:

- Cinema
- Bank
- Church
- University
- Post
- Park

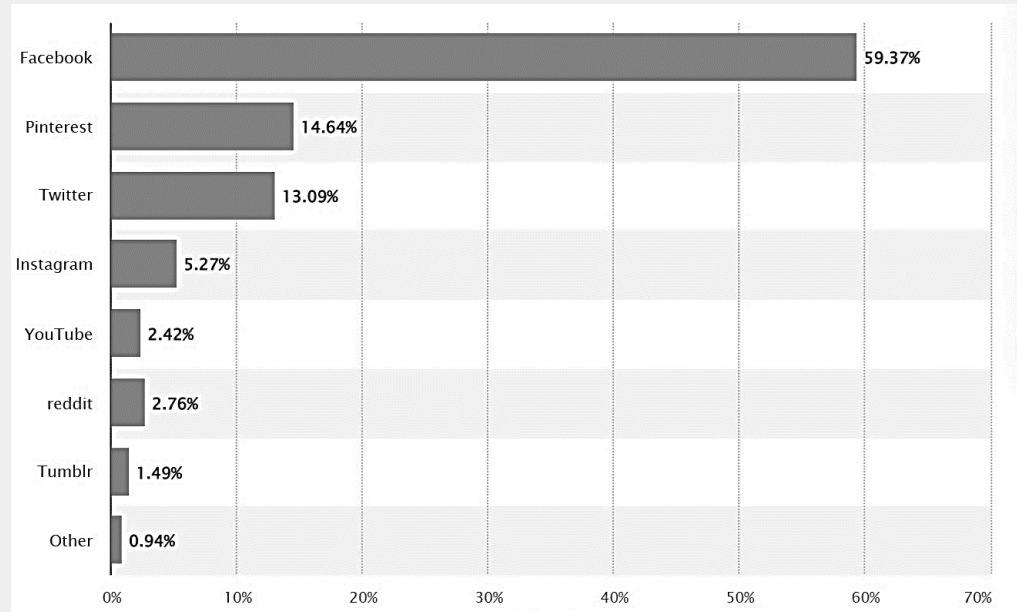


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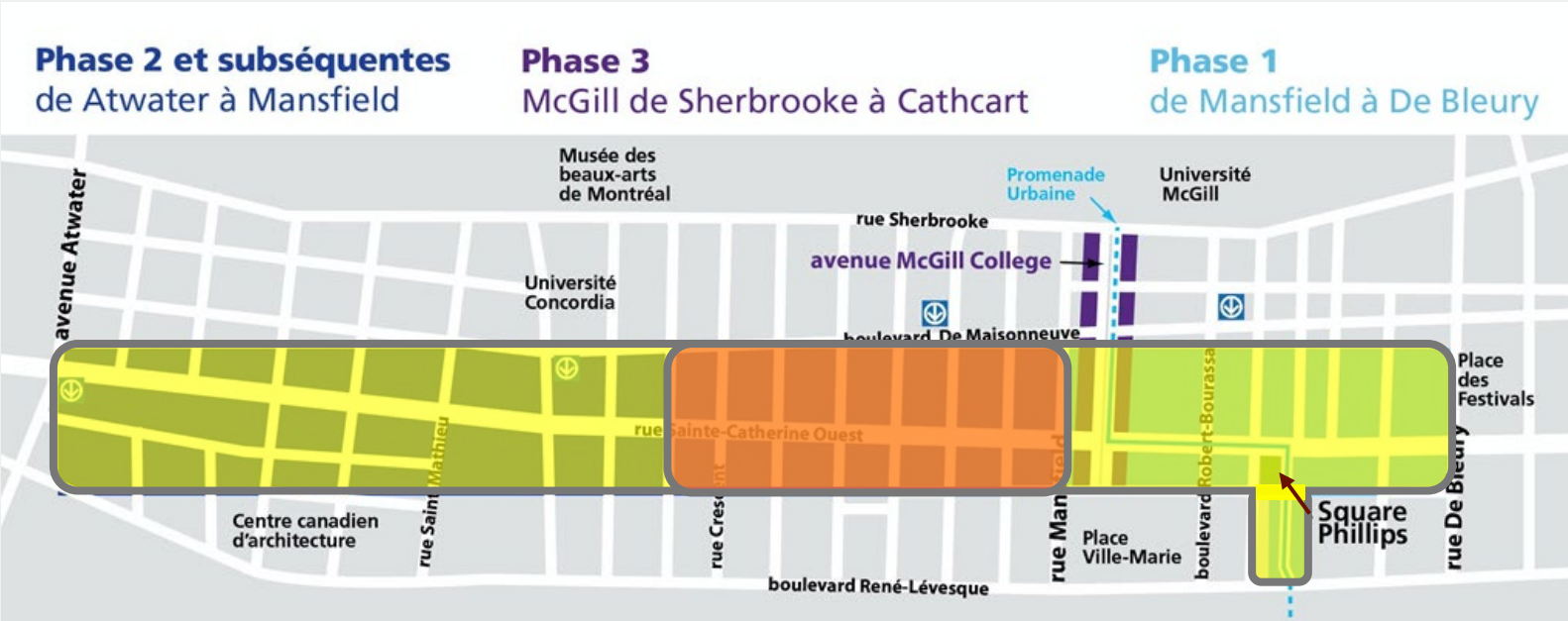
**Findings and
analysis**

SOCIAL MEDIA USAGE IN CANADA

- 94% of Canadians have an account on the social platforms
- In 2021, there were approximately 31.76 million social network users in Canada



Data has been collected from the city hall Facebook account, which has over 158K followers, between April 2018, October 2019, and December 2021.



April 2018

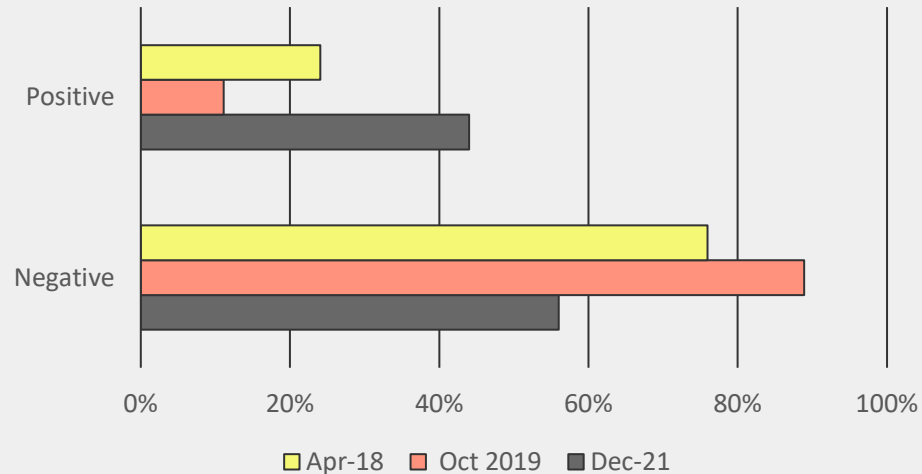
Oct 2019 & Dec 2021

Data has been collected from the city hall Facebook account between April 2018, October 2019, and December 2021.

- It was posted on April 2018: “The Rue Sainte-Catherine project is much more than upgrading hundred-year-old infrastructures. It's a transformation of the heart of downtown and a destination you won't want to miss.”
- (Oct 2019): “Have your say on the future of West St. Catherine Street! Montreal invites you to participate in the public consultation process on the redevelopment of the section between Mansfield and Bishop streets.”
- (Dec 2021): “Saint-Catherine Ouest is ready to welcome you with its new fixtures, entertainment, festive decorations and free parking on weeknights and weekends throughout downtown!”

Topic	April 2018		Oct 2019		Dec 2021	
	% Users with Negative or Positive scores	Number of Messages	% Users with Negative or Positive scores	Number of Messages	% Users with Negative or Positive scores	Number of Messages
Negative	75.95%	398	89%	64	56%	14
Positive	24%	126	11%	8	44%	11
Out of topic	221		37		26	
Total Messages	972		148		54	

1166 comments and replies are retrieved.

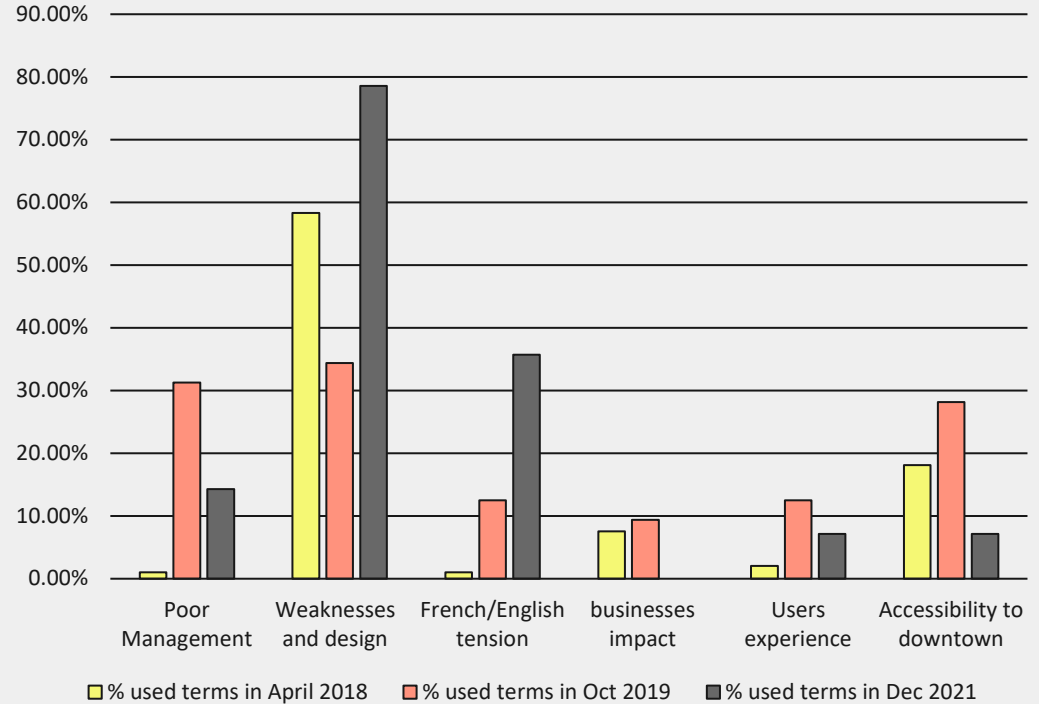


Topics From April 2018	Description	Terms	Number of used terms
Poor Management	Complains about the management	Not satisfied about the mayor	1.01%
Weaknesses and design	Complains about the design	Disabled and elderly people have been forgotten, dirty, pothole, lack of elevators at the downtown metro stations, Lack of green spaces, benches, human scale is forgotten, be pedestrianized, Lack of parking, Hated sidewalks, Keeping the old streetlights, Adding bike path, Dirty metro station	58.29%
French/English tension	Complains about French/ English tension	Nothing in English	1.01%
businesses impact	Complains about the negative effects of the project on trades	Stores will be closed	7.54%
Users experiences	Reports about users' experiences and issues	Scary, Homeless people on every corner, Bad smell of Marijuana, dangerous, flexibility	2.01%
Accessibility to downtown	Complains about heavy traffic	Traffic, Delivery Trucks, Poor public transportation	18.09%

Topics From Oct 2019	Description	Terms	Number of used terms
Poor Management	Complains about the slowness and issues	Not satisfied about the mayor, Slowness	31.25%
Weaknesses and design	Complains about the design	Lack of green spaces, benches, human scale is forgotten, be pedestrianized, Lack of parking, Heated sidewalks, Keeping the old streetlights, Adding bike path, Dirty metro station	34.38%
French/English tension	Complains about French/ English tension	Nothing in English	12.50%
businesses impact	Complains about the negative effects of the project on trades	Stores will be closed	9.38%
Users experiences	Reports about users' experiences and issues	Scary, Homeless people on every corner, Bad smell of Marijuana	12.50%
Accessibility to downtown	Complains about heavy traffic	Traffic, Delivery Trucks, Requesting for more metro stations	28.13%

Topics From Dec 2021	Description	Terms	Number of used terms
Poor Management	Complains about the management	Not satisfied about the mayor, Not killing the planet	14.28%
Weaknesses and design	Complains about the design	Lack of parking, Price of parking, clearing the side walks	78.57%
French/English tension	Complains about French/ English tension	Nothing in English	35.71%
businesses impact	Complains about the negative effects of the project on trades	Stores will be closed	0%
Users experiences	Reports about users' experiences and issues	Scary, Dangerous	7.14%
Accessibility to downtown	Complains about heavy traffic	Requesting for more metro stations	7.14%

Topic	% used terms in April 2018	% used terms in Oct 2019	% used terms in Dec 2021
Poor Management	1.01%	31.25%	14.28%
Weaknesses and design	58.29%	34.38%	78.57%
French/English tension	1.01%	12.50%	35.71%
businesses impact	7.54%	9.38%	0%
Users experience	2.01%	12.50%	7.14%
Accessibility to downtown	18.09%	28.13%	7.14%



05

Conclusion

■ DISCUSSION

The most important thing is the way of consulting people and how you will use information in your design, and designers need to know they should use information in the designing process.

■ LIMITATIONS & CHALLENGES

- There was no two-way dialog. Just some simple replies such as thank you for your comment on the city hall Facebook page.
- Older, poorer, and illiterate people may not use new technologies.
- Social media platforms API do not let us extract data for users whose privacy settings do not allow data sharing.
- Language barriers (The comments are mostly in French).
- Finding a way to put a proper filters on comments.
- Communication with Facebook API.

Thank you