iCity: Integrating Qualitative Analytics into Transportation Planning

Complete Streets Qualitative Survey Methods: The King Street Pilot

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The King Street Pilot Case Study

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At the Visual Analytics Lab for the iCity project we are developing decision support tools combining social media and mobile data with GIS, demographic, socio-economic, and transit data.

**How can qualitative and quantitative research methods combine to analyze the success and failure of transit and transportation planning and change?**
As part of an information gathering, decision - support strategy, our iCity group focused on a recent street and placemaking strategic intervention - “the King Street pilot”

This intervention / prototype was a pilot to alleviate traffic congestion, improve transit services, and to enhance pedestrian experience through the introduction of pedestrian friendly art and street installations throughout a core downtown area of King Street.
**Method**

- After extensive discussions with the City of Toronto, Complete Streets division, and Waterfront Toronto, we implemented a survey designed to solicit and target qualitative responses to the KSP project, to delve into placemaking practices.

- We created categories of survey questions around the City of Toronto’s Complete Streets guidelines.
  - Prioritizing accessibility and mobility
  - Encourage walking through a network of continuous sidewalks Design for Safe Crossings
  - Placemaking, Design for Comfort
  - Greening Infrastructure and Storm Water Management
  - Design for Efficient Maintenance, and Coordination with Utilities

  *Toronto Complete Street Guidelines, Making Places for People*
**Method**

What are the **factors** that impact street experience?

Through our research key factors were identified...

- Purpose of trip, mode of travel
- Place - Street width, Sidewalk width, Building height, Street function & Usage
- Place - qualities and amenities
- Place-making - Public art
- Place - Technology Support and WiFi
- Place - safety and comfort

TCS Guidelines, Designing for Pedestrians, Ch4

Image: iCity Images, King Street, iCity Team
Method
We decided to take a multi-tactical approach to gathering information;

- **On-street surveys** using ipad tablets, loaded with questions and visual information prompts
- More extensive **web-based survey** circulated through local BIA, and community residents associations
- In-depth **focus groups** conducted at the Visual Analytics Lab with a cross sectional representation of stakeholders
- All of this information could then be aggregated to provide a holistic picture of the King Street pilot issues and responses
Purpose of Trip, mode of travel

Qualitative survey: Image Chart of responses around purposes of trip, Microsoft Forms Analytics

Image: iCity Images, King Street, iCity Team
Most of the survey group were on their way to work, mostly by public transit or walking, or specifically headed to King street destinations for restaurants or shopping, and over half of those surveyed would spend more than 4 hours.
Access to transit, followed by bike lanes & bike parking were felt to be most important contributions to an accessible pedestrian street. Density of pedestrian traffic and extended sidewalks for café seating, bike parking etc. were identified as primary factors over speed and proximity to moving traffic.
Place - Street function & usage, Building height & character

9. Rate which types of building facades CONTRIBUTE MOST to a positive pedestrian street experience. (Please rate it from 1: Least to 5: Most)

More Details

Simple modern facades
Historic period styled facades
Renovated historic industrial
Mix of all of the above

A mix of architectural styles, with historic facades being favoured contributed most to pedestrian street experience.
Place - Street width, Sidewalk width, Street function & Usage

12. Which of the following elements would MOST create a successful and inviting social street / park place? (Please select most important factors)

More Details

- Sidewalk social gathering space...
- Furniture / seating in different...
- Greenery, trees and landscape
- Public art, murals, interactive ...
- Water elements
- Warming spots
- All of the above
- Other

Bar chart showing responses around street elements.

Qualitative survey: Image Chart of responses around street elements, Microsoft Forms Analytics

Image: iCity Images, King Street, iCity Team
Summary - Street function, qualities, amenities, and technology support

• A mix of cafes & restaurants, followed by groceries, galleries, and retail were the favoured types of shops, with pharmacies and medical services being a dominant service shop type.

• While many elements were identified as contributing to a social street / park place, greenery, trees and landscape followed by sidewalk social gathering spaces were felt to be most important. Buskers, musicians and street performers contributed to the street experience.
Generally 90% of those surveyed identified the King street pilot as either extremely successful or somewhat successful, with almost 95% wanting either more permanent installations, with a changing venue of artists, or live events. The majority of people felt that the KSP had increased their experience of the area.
how can visualization tools help in assessing participant responses?

Visualization tools help to facilitate an understanding of the qualitative factors that influence a complete street experience through combined social media, demographic, socio-economic and transit data.
Thank you
Questions?

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Bibliography


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