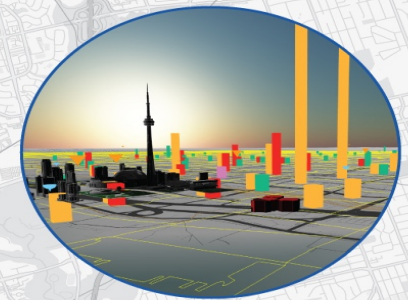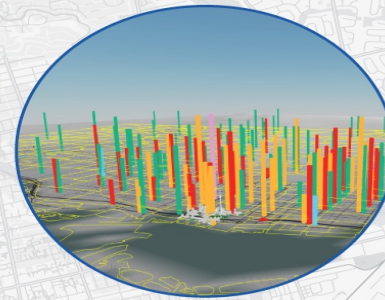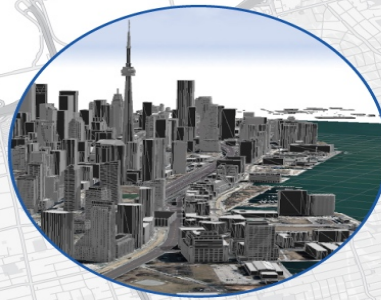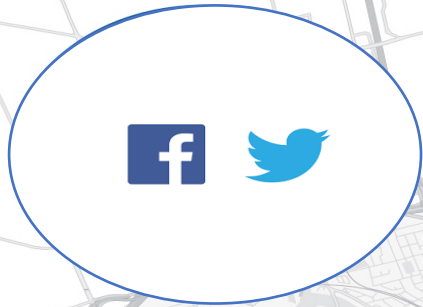# iCity: Integrating Qualitative Analytics into Transportation Planning

Complete Streets Qualitative Survey Methods: The King Street Pilot

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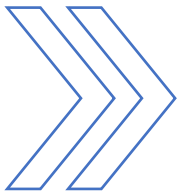
Integrating Qualitative Analytics into Transportation Planning

The King Street Pilot Case Study
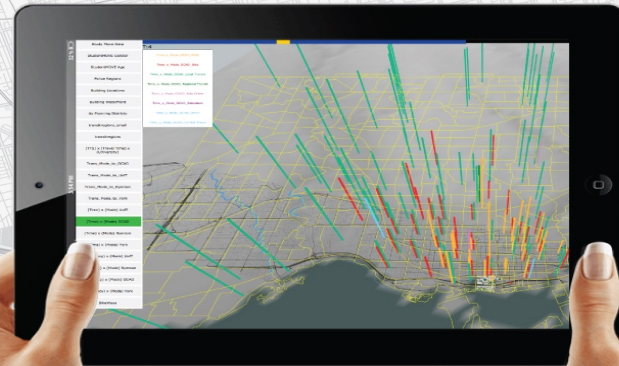
Sara Diamond, Jeremy Bowes, Marcus Gordon, Ajaz Hussein, Orlando Bascunan, Lee Balakrishnan , Manpreet Juneja, Chieng Luphuyong, Mudit Ganguly , Riley McCullough, Igor Bueno Antunes, OCAD University, Toronto

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?

Approach

- 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.

Image: **iCity Images,** King Street, iCity Team

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
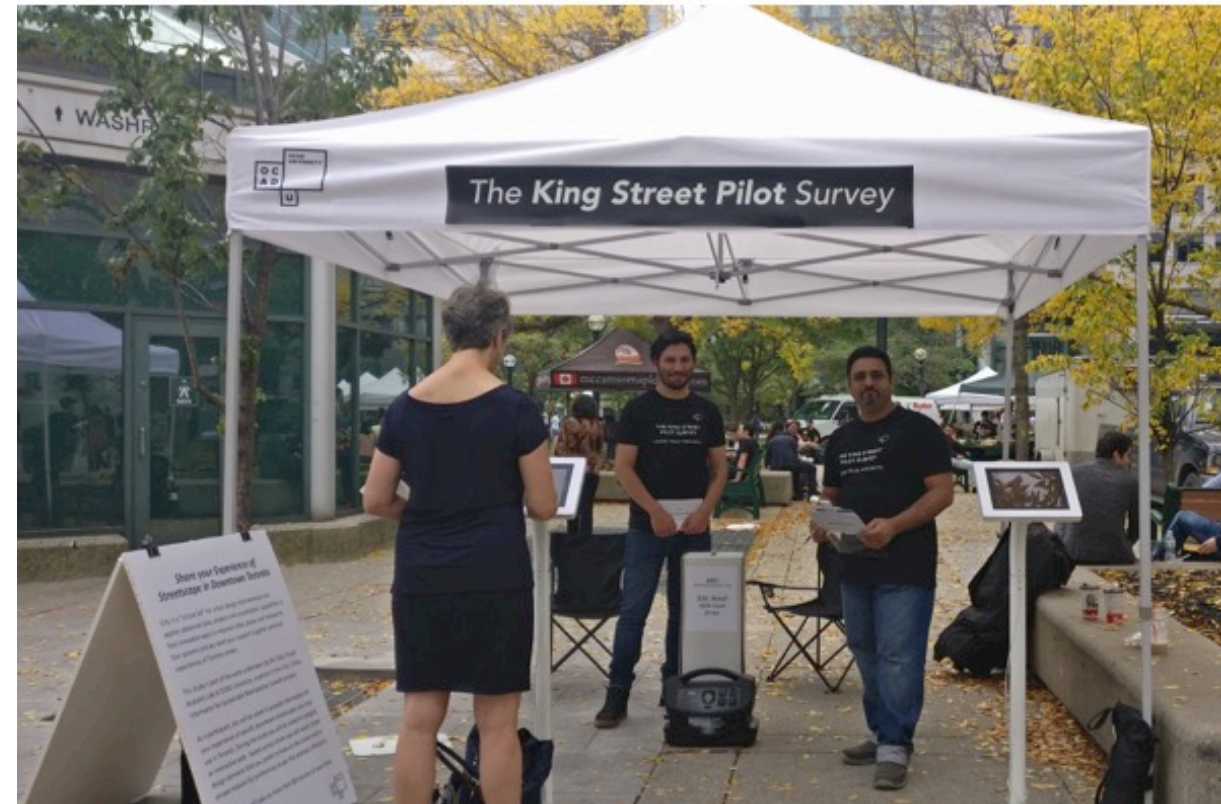

On-Street Survey: Going to the Street: Street setup at David Pecaut Square, Ajaz Hussain, Orlando Bascunan, VAL researchers

Purpose of Trip, mode of travel

2. I travel to the King street area because...

More Details

●	It is on my way to work	250
●	I am going to a specific destin...	201
●	I am going to shop at local st...	146
●	I am going to a club or restaur...	158
●	I am going to a sports event	59
●	I am going to a health club	36
●	I live in the area	181
●	Other	2
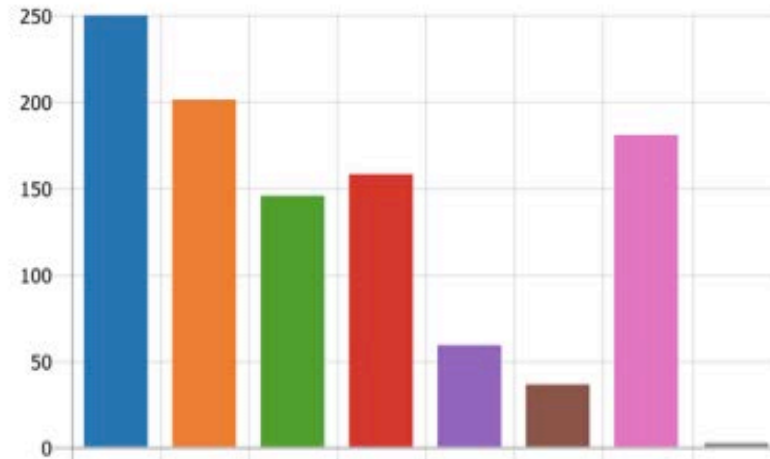
Qualitative survey: Image Chart of responses around purposes of trip, Microsoft Forms Analytics
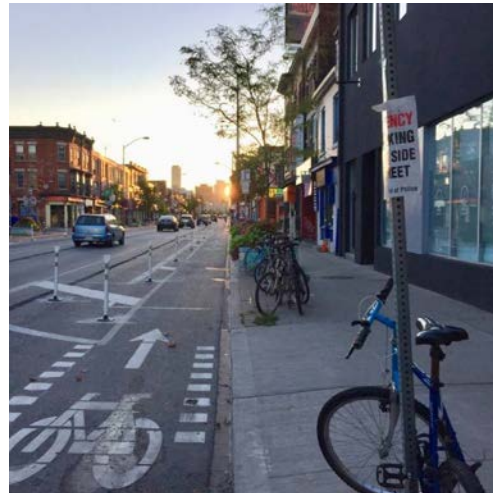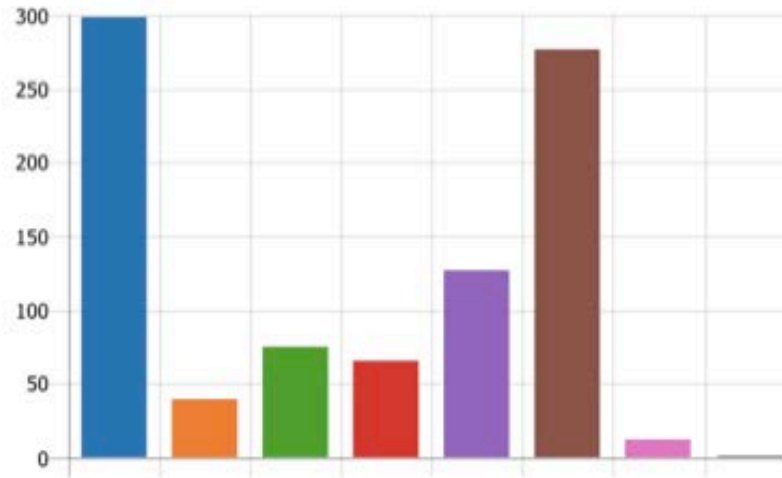

Image: **iCity Images,** King Street, iCity Team
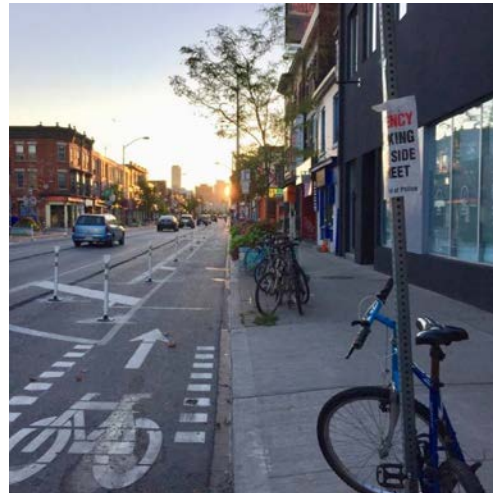
Purpose of Trip, mode of travel

3. How do you travel there?

More Details

● public transit	299
● taxi	39
● ride share	75
● private vehicle	65
● bicycle	127
● walk	277
● other	12
● Other	2

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.

Qualitative survey: Image Chart of responses around purposes of trip, mode of travel, Microsoft Forms Analytics
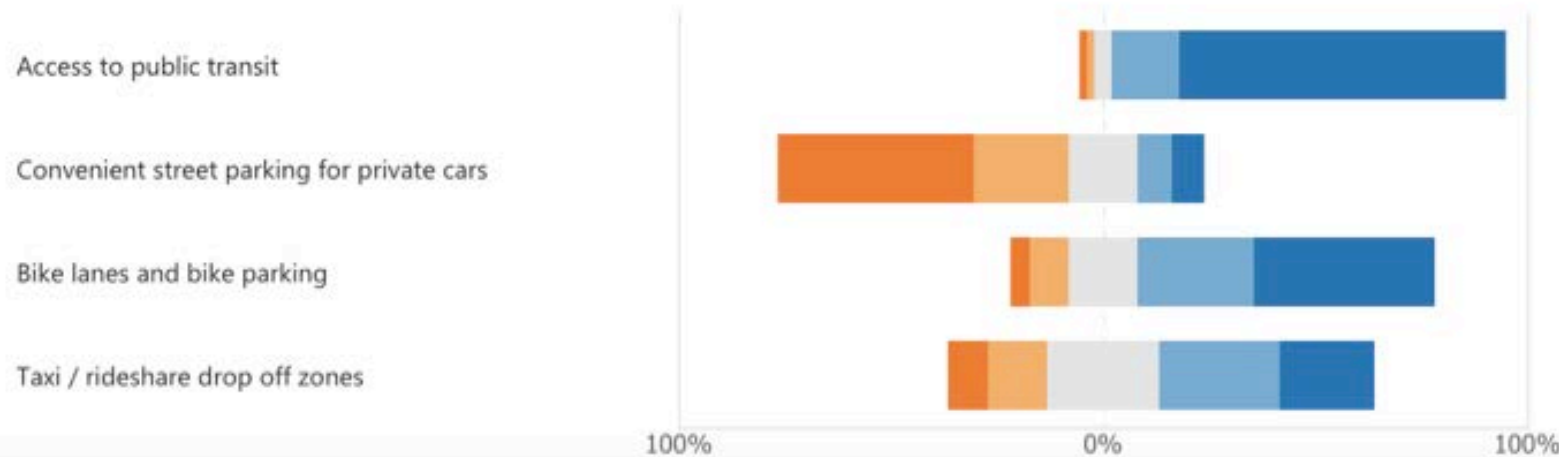
Image: **iCity Images,** King Street, iCity Team

Summary

6. Rate how each of the following elements contribute to an accessible pedestrian street? (Please rate it from 1: Least to 5: Most)

More Details

■ 1   ■ 2   ■ 3   ■ 4   ■ 5

Access to public transit

Convenient street parking for private cars

Bike lanes and bike parking

Taxi / rideshare drop off zones

100%   0%   100%

Qualitative survey: Image Chart of responses around important elements contributing to a pedestrian street, Microsoft Forms Analytics
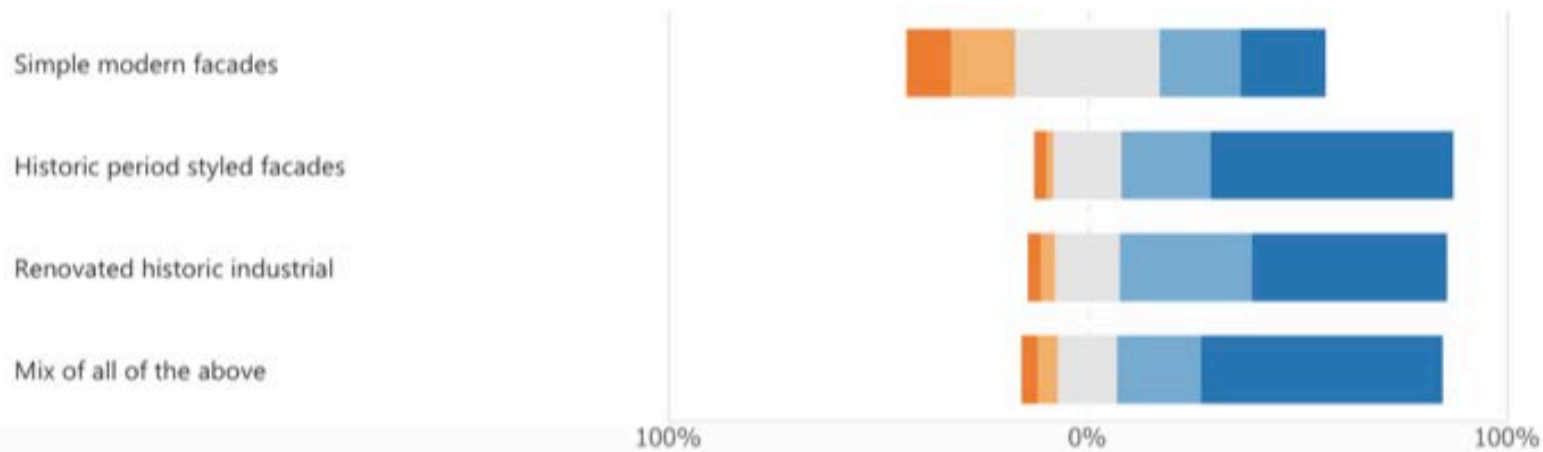
Access to transit, followed by bike lanes & bike parking were felt to be most important contributions to an accessible pedestrian street. Density of **pedestrian traffic** and **extended sidewalks** for café seating, bike parking etc. were identified as primary factors over speed and proximity to moving 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

■ 1 ■ 2 ▨ 3 ■ 4 ■ 5

Simple modern facades

Historic period styled facades

Renovated historic industrial

Mix of all of the above

100%   0%   100%

Qualitative survey: Image Chart of responses around place, building facades, Microsoft Forms Analytics

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 spac...	223
●	Furniture / seating in different...	206
●	Greenery, trees and landscape	267
●	Public art, murals, interactive ...	200
●	Water elements	132
●	Warming spots	145
●	All of the above.	210
●	Other	14
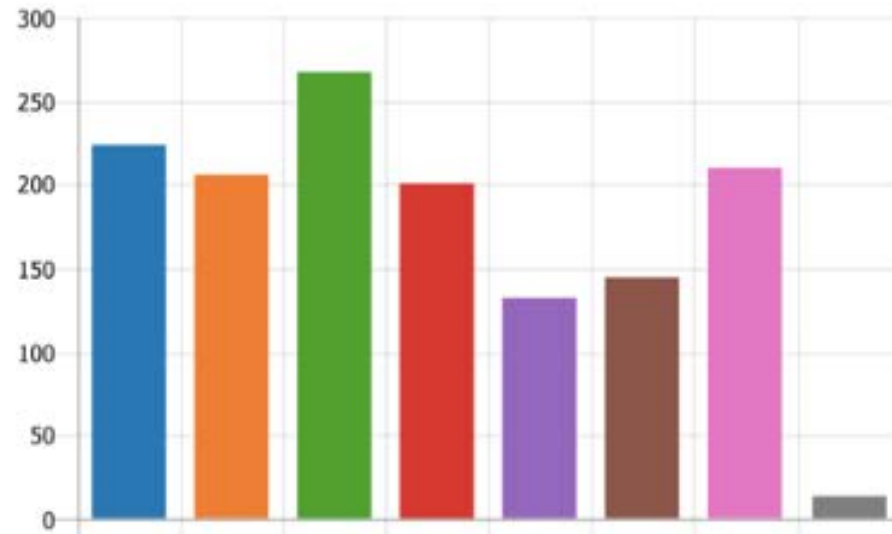
Qualitative survey: Image Chart of responses around street elements, Microsoft Forms Analytics
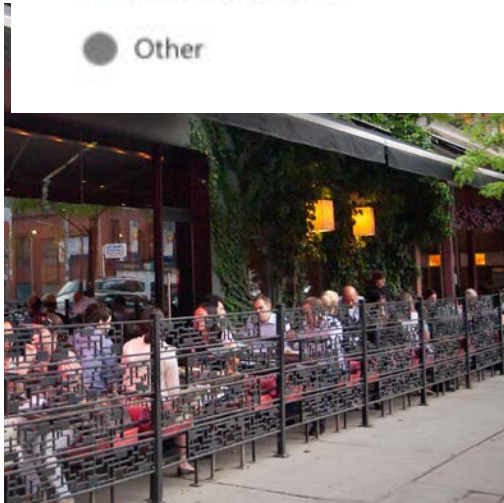

Image: **iCity Images,** King Street, iCity Team

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.


Image: **iCity Images,** King Street, iCity Team

Place – Public Art, Installations

17. What makes public art successful? Check all that are key.

More Details

- The ability to enhance a specif... 284
- The ability to add to our know... 208
- Cultural heritage 209
- Access to international artists 119
- Access to local artists 235
- Access to Canadian artists 191
- Offers a diversity of artists 223
- Interactive installations that all... 196
- Making infrastructure such as ... 302
- Other 19
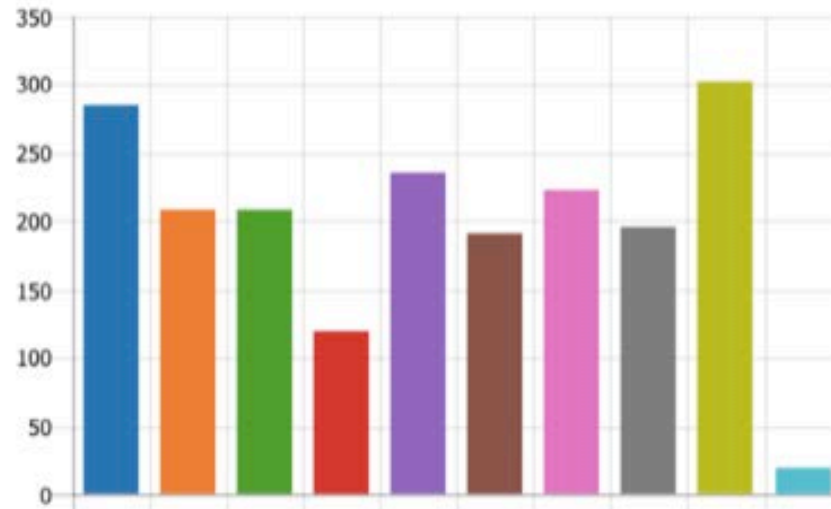
Qualitative survey: Image Chart of responses around public art, Microsoft Forms Analytics

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.
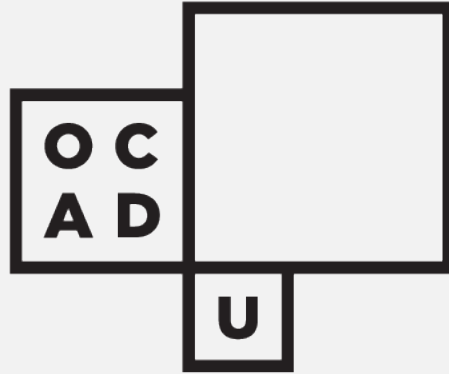
Image: **iCity Images,** King Street, iCity Team

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.

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Thank you
Questions ?

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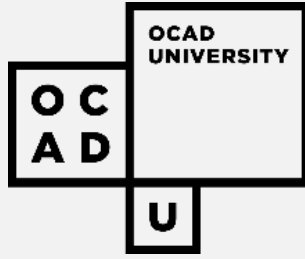
THANK **Y**OU!

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Acknowledgements