

# A BETTER MARKET STREET INITIATIVE - LIVING INNOVATION ZONE

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# INTRODUCTION

## A BETTER MARKET STREET INITIATIVE

To re-establish Market Street as the premier cultural, civic, and economic center of San Francisco.

### Objectives

1. Create a sense of PLACE through sustainable designs that celebrate local culture.
2. Optimize sustainable MOBILITY so that users have a fun, comfortable, and efficient experience.
3. Foster ECONOMIC DEVELOPMENT for a productive and vibrant corridor.



## MKTHINK OPPORTUNITY

To communicate the impacts of and the relationships between human activity and the built environment.

## PARTNERS



# LIVING INNOVATION ZONE

*The Living Innovation Zone Program (LIZ) seeks to create a flexible framework that harnesses the city's creativity by using City-owned assets, such as public spaces, and partnerships with leading organizations as catalysts for exploration, innovation and play.*

## GUIDING PRINCIPLES

MKThink has deployed sensor devices around the LIZ to investigate pedestrian use patterns in and around the site in order to understand the installation's impact on the urban environment and the interactions between urban inhabitants.

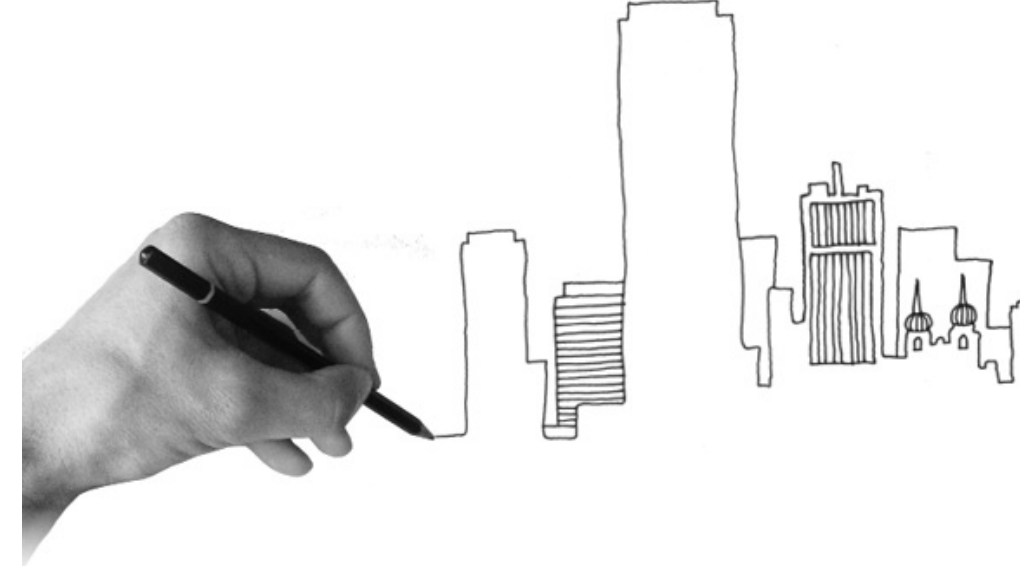
By conducting this research, MKThink hopes to achieve the following three goals:

- 1) Track the urban impact of the first Living Innovation Zone.
- 2) Support San Francisco Planning in their endeavor to use data to inform and understand planning decisions as part of the Better Market Street Initiative.
- 3) Test/prototype MKThink's pedestrian tracking technology in a new (public, outdoor) environment.

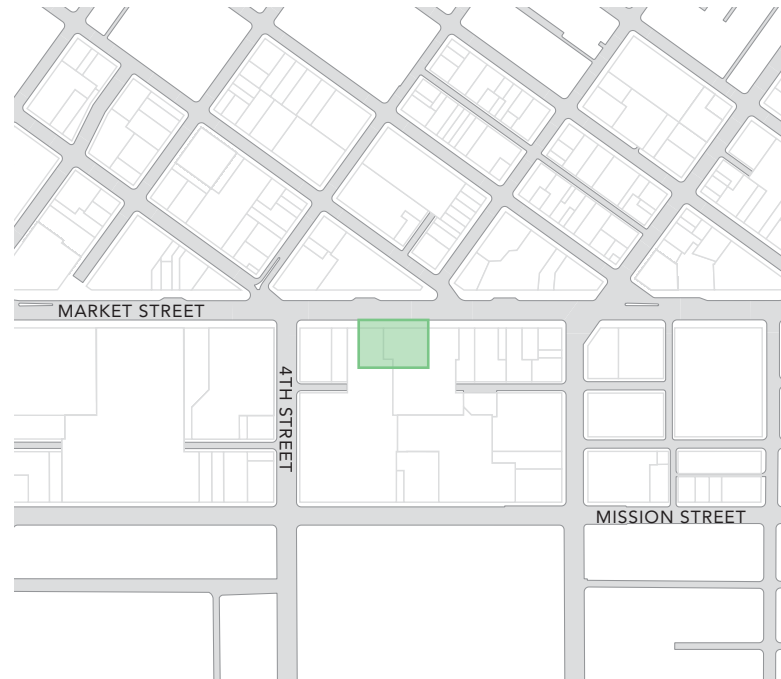
## RESEARCH GOALS

The project is divided into an analysis and communication component, and will address each of the following questions:

- A) Does pedestrian linger time increase during the LIZ installation? By how much? (Quantitative Analysis)
- B) How does the LIZ facilitate an increase in linger time? How does it activate the site? (Qualitative Analysis)
- C) How do we communicate this information and analysis to the general public? (Communication Piece)



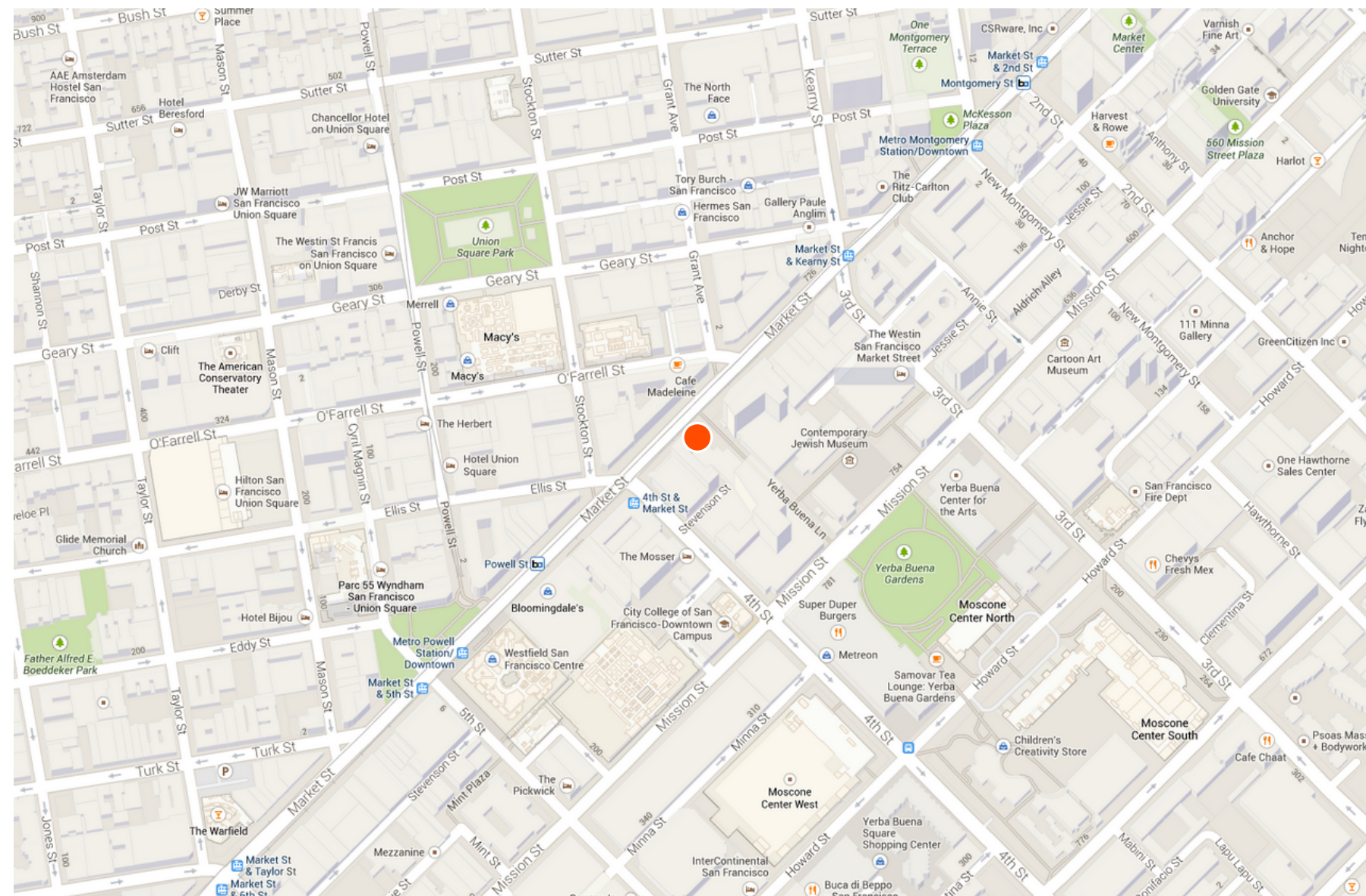
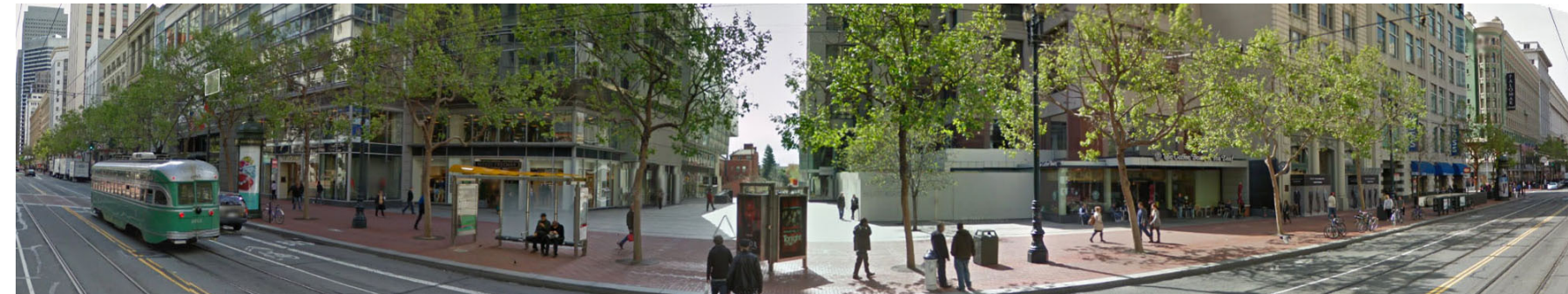
# SITE CONTEXT - YERBA BUENA LANE



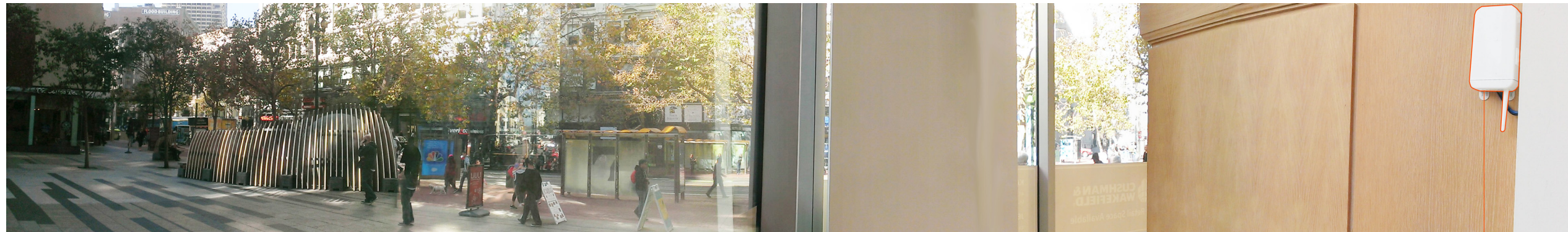
LIVING INNOVATION ZONE SITE

## SURROUNDING REGION

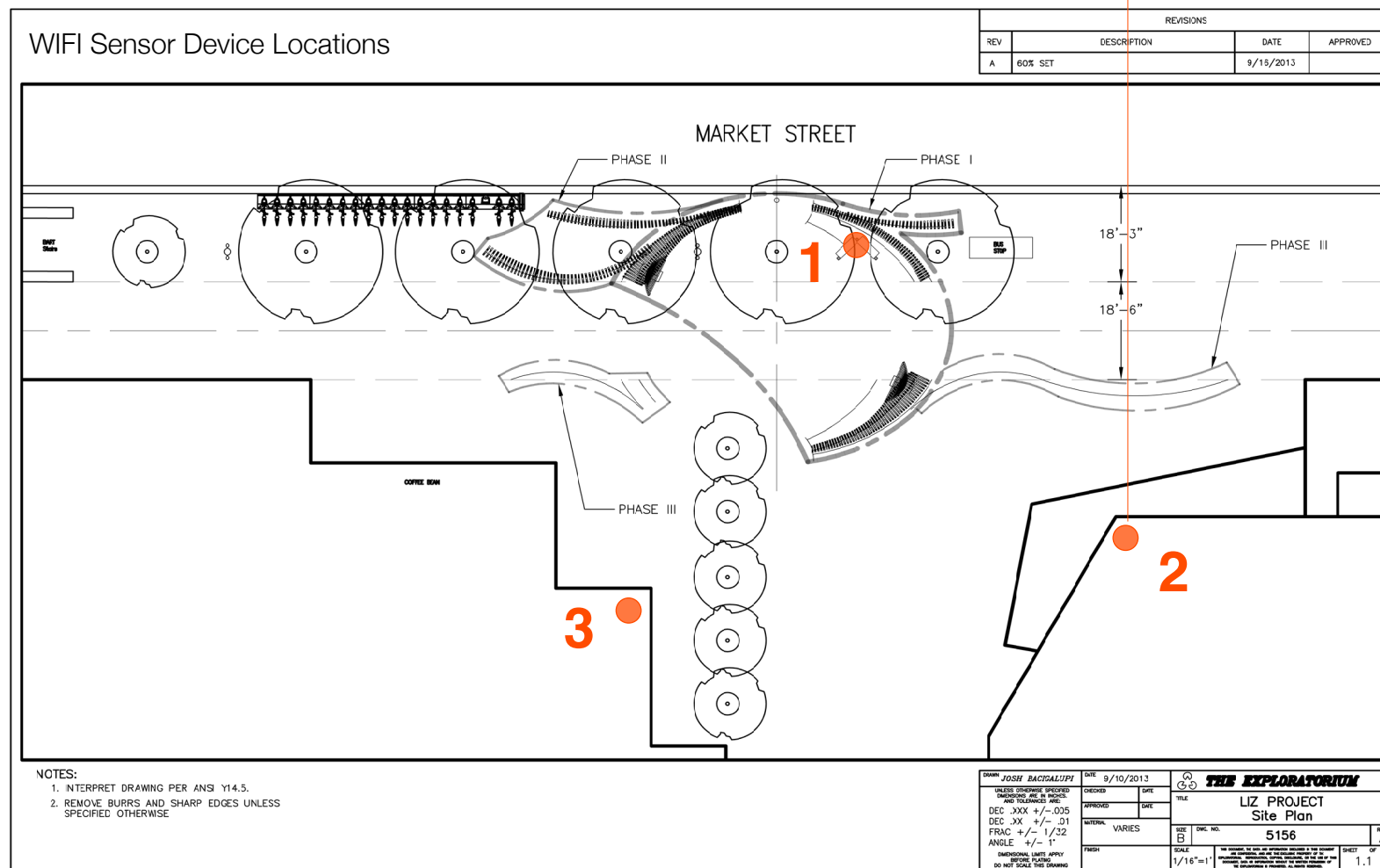
The Living Innovation is located in a heavy urban region along Market Street. It is close to a variety of transportation stops, including Powell Bart Station, above-ground MUNI stops, and a city bike share kiosk. It is located near a variety of civic hubs, destinations, and amenities which include Union Square, the Westfield Mall, the Moscone Center, the Contemporary Jewish Museum, and is connected to the Yerba Buena Gardens and Center for the Arts by a pedestrian pathway.



# WIFI SENSOR DEVICES



LIVING INNOVATION ZONE AND SENSOR DEVICE IN HICKEY FREEMAN STOREFRONT



## WIFI SENSOR DATA

MKThink has deployed sensor devices around the LIZ to investigate pedestrian use patterns in and around the site in order to understand the installation's impact on the urban environment and the interactions between urban inhabitants. Three WiFi sensor devices have been installed at the site of the Living Innovation Zone. They are located:

- 1) Inside the digital kiosk operated located along Market Street.
- 2) Within the Hickey Freeman vacant storefront at 767 Market Street.
- 3) Within the Blue Stem Brasserie Restaurant at 1 Yerba Buena Lane.

WIFI Sensor  
Devices

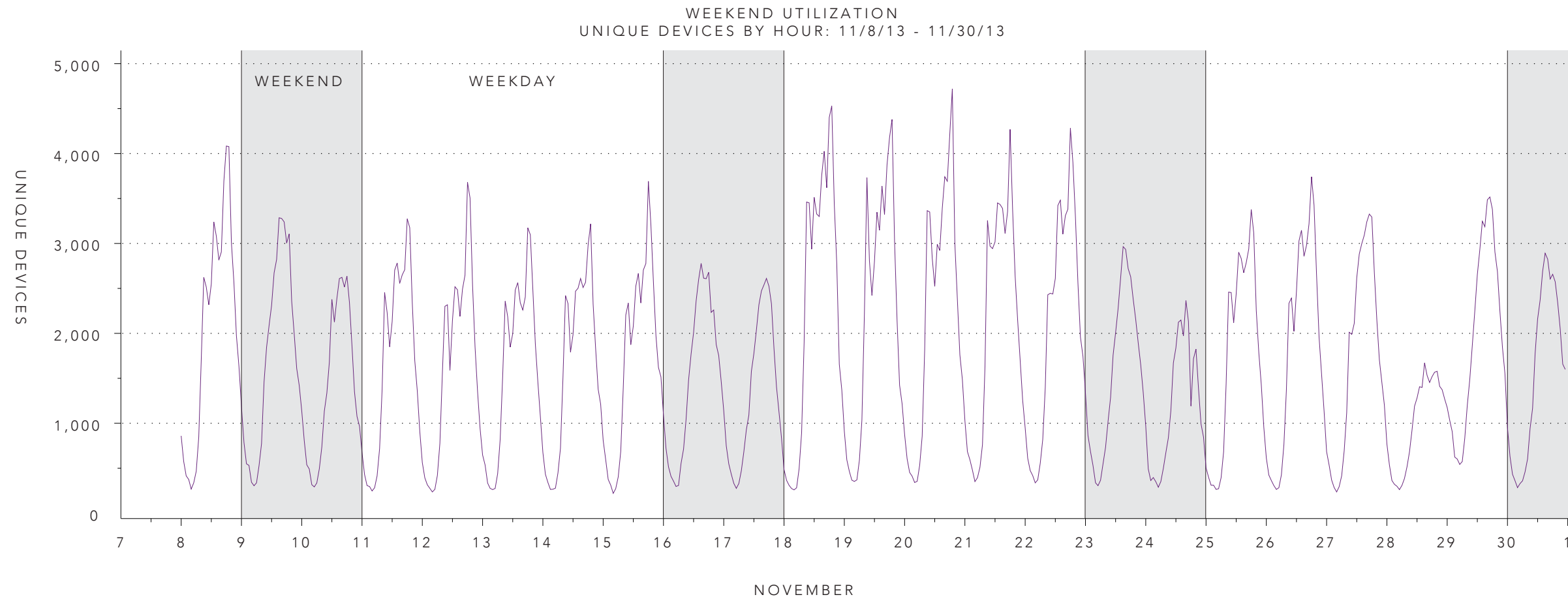
# ANALYSIS - SENSOR DATA

## SUMMARY OF FINDINGS

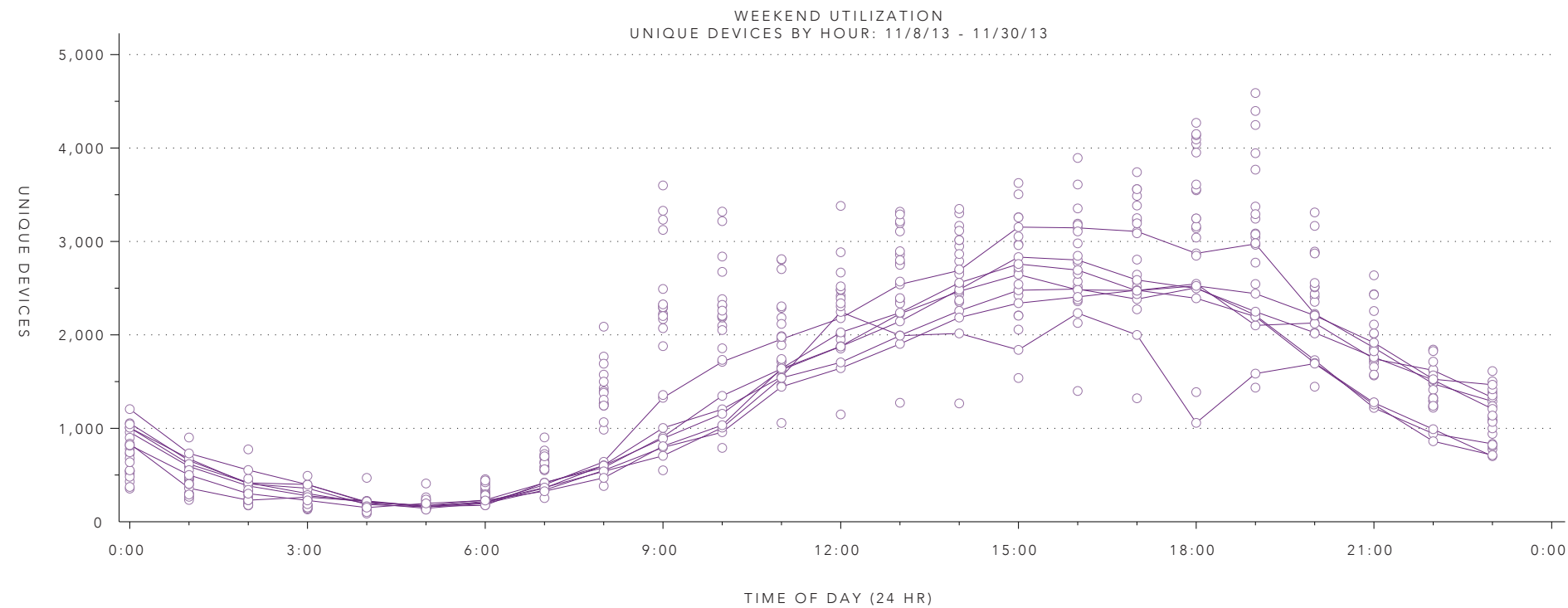
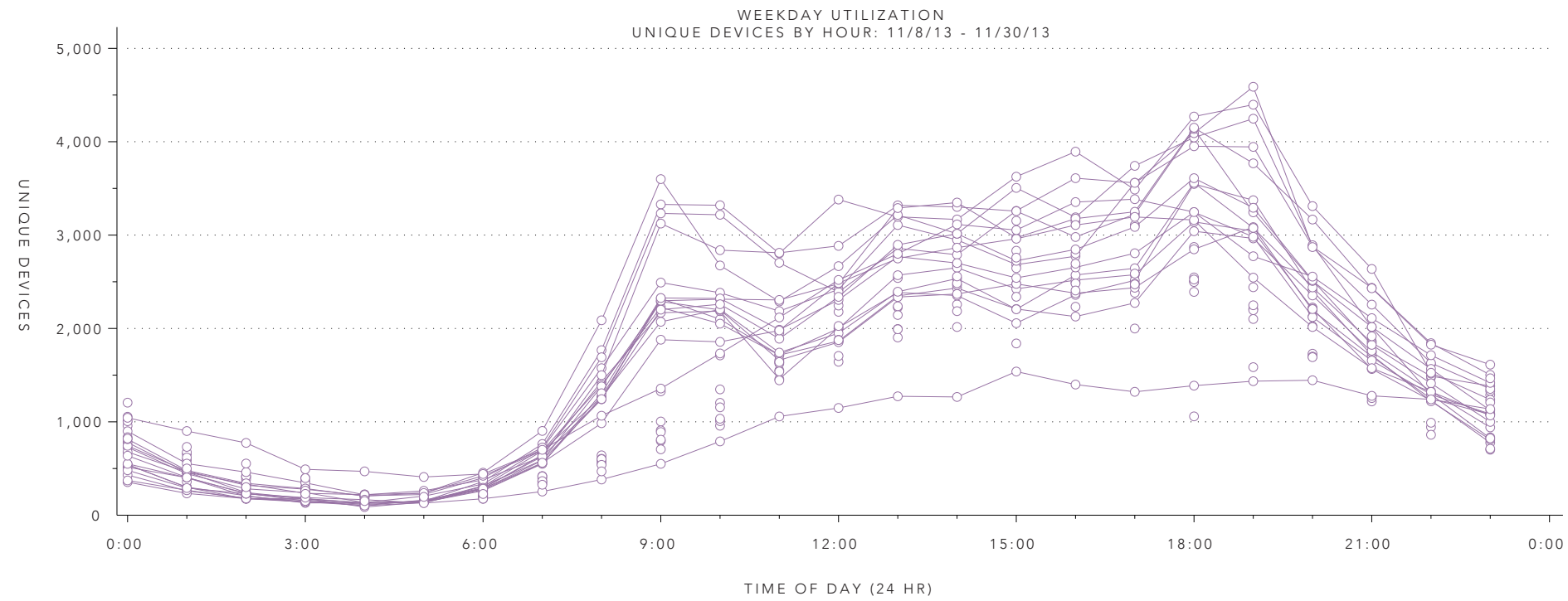
- The data provides insight into pedestrian usage of one segment of Market Street Corridor, which can serve as a control for future investigations.
- Technology did not capture the finer grain data required to understand more precise LIZ utilization; however, it could also be due in part to the fact that there was no existing baseline data to compare against.

## PROPOSED TECHNOLOGY ADJUSTMENTS AND EXPANSION

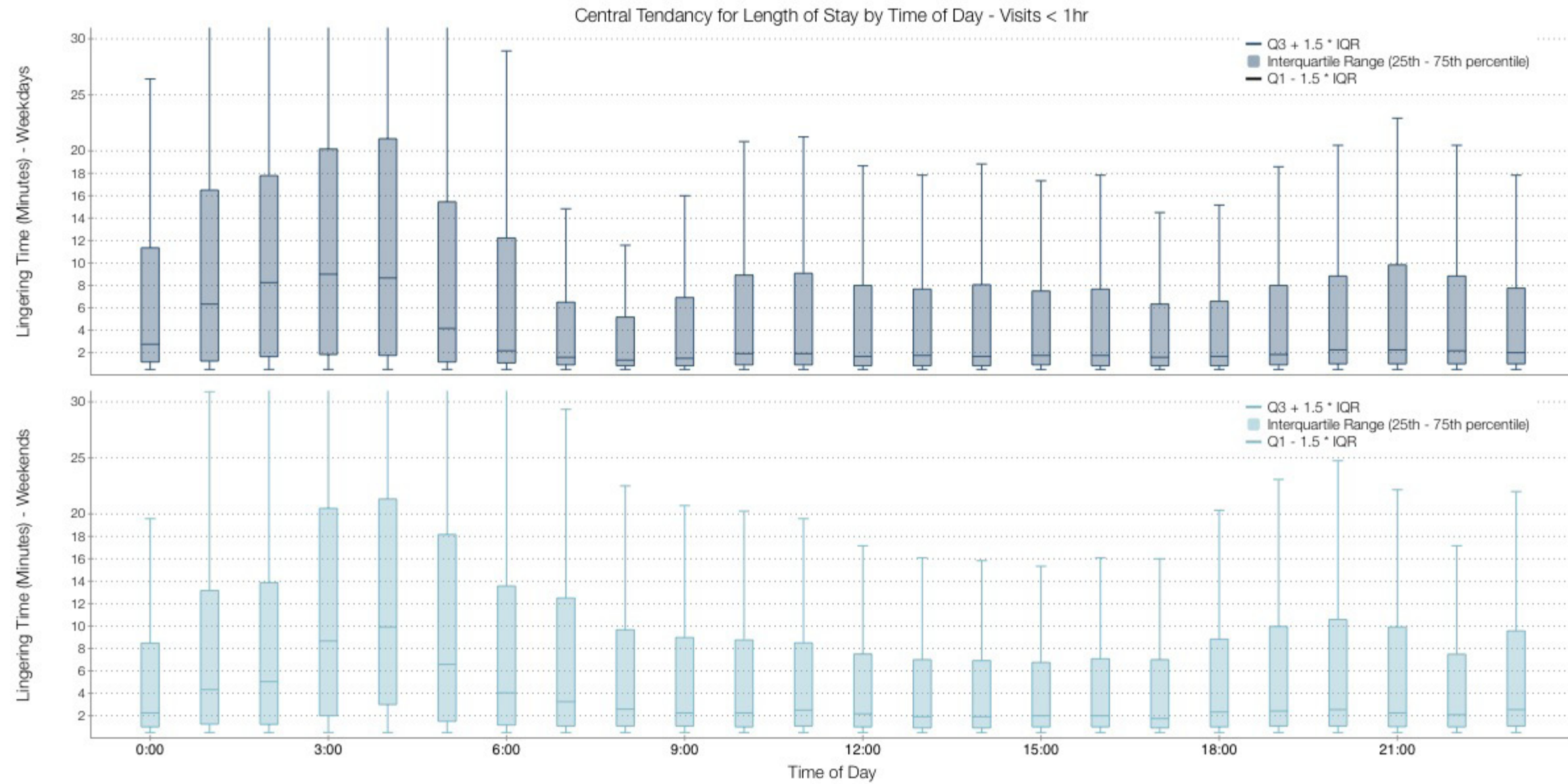
- Explore use of other technologies and installation methods such as node sensors within each structure/system of the LIZ to capture more precise activity.
- Install Sensors at the Exploratorium to create a network between the museum and its "satellite" campus.
- Install sensors at every future LIZ, which will not only provide insight into Market Street Corridor as a whole, but information about a network of public spaces.



# ANALYSIS - SENSOR DATA

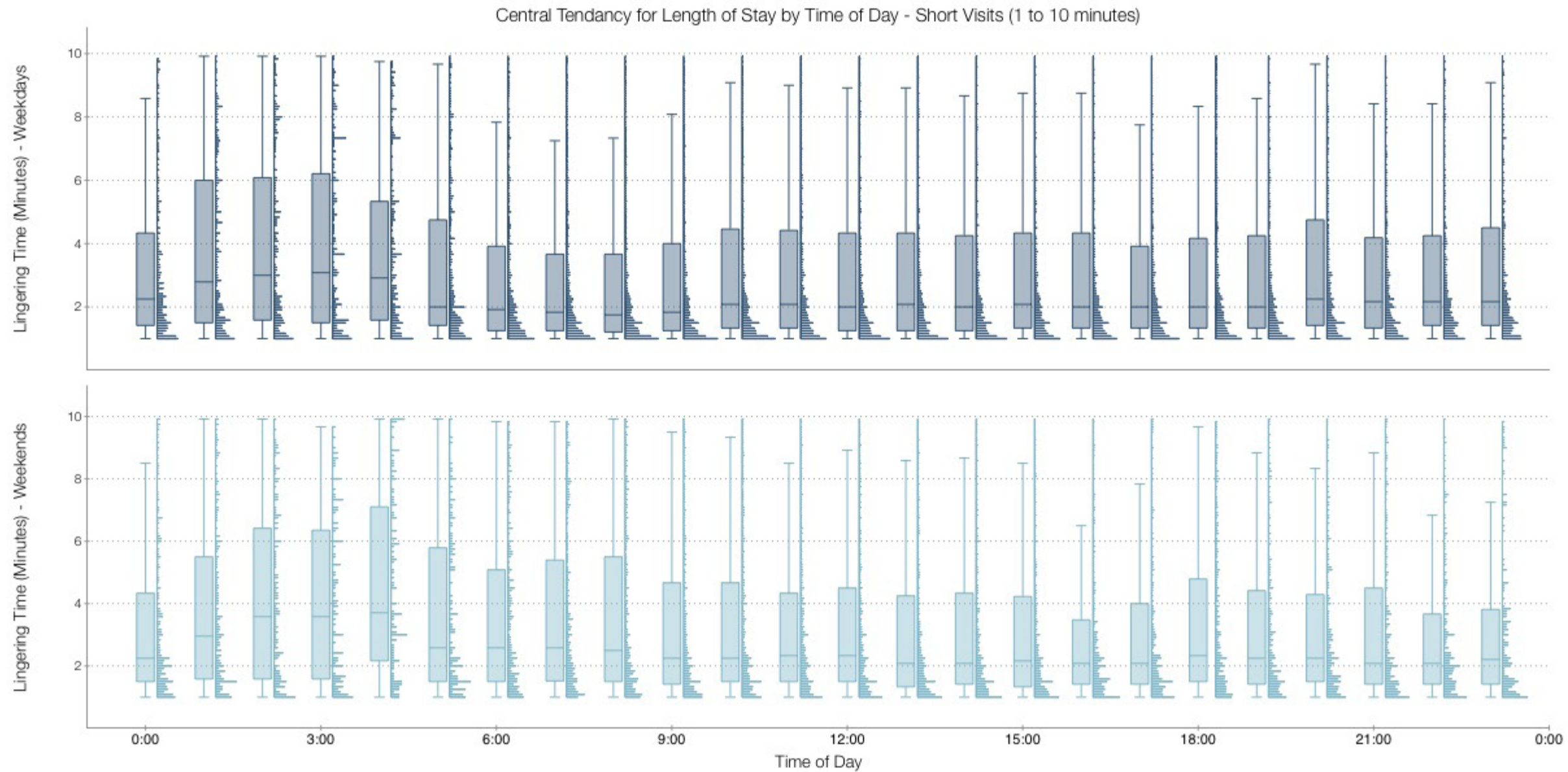


# ANALYSIS - SENSOR DATA





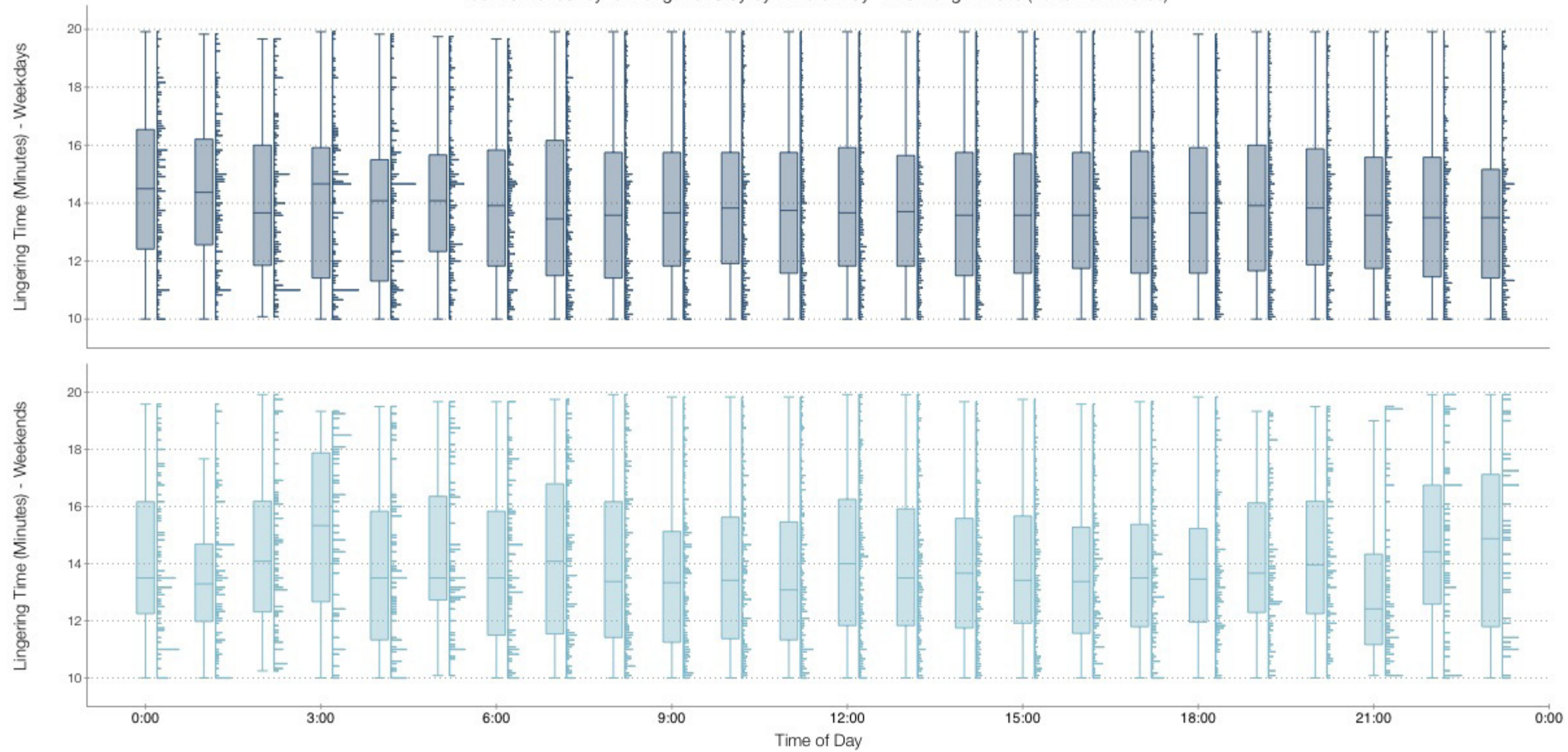
# ANALYSIS - SENSOR DATA



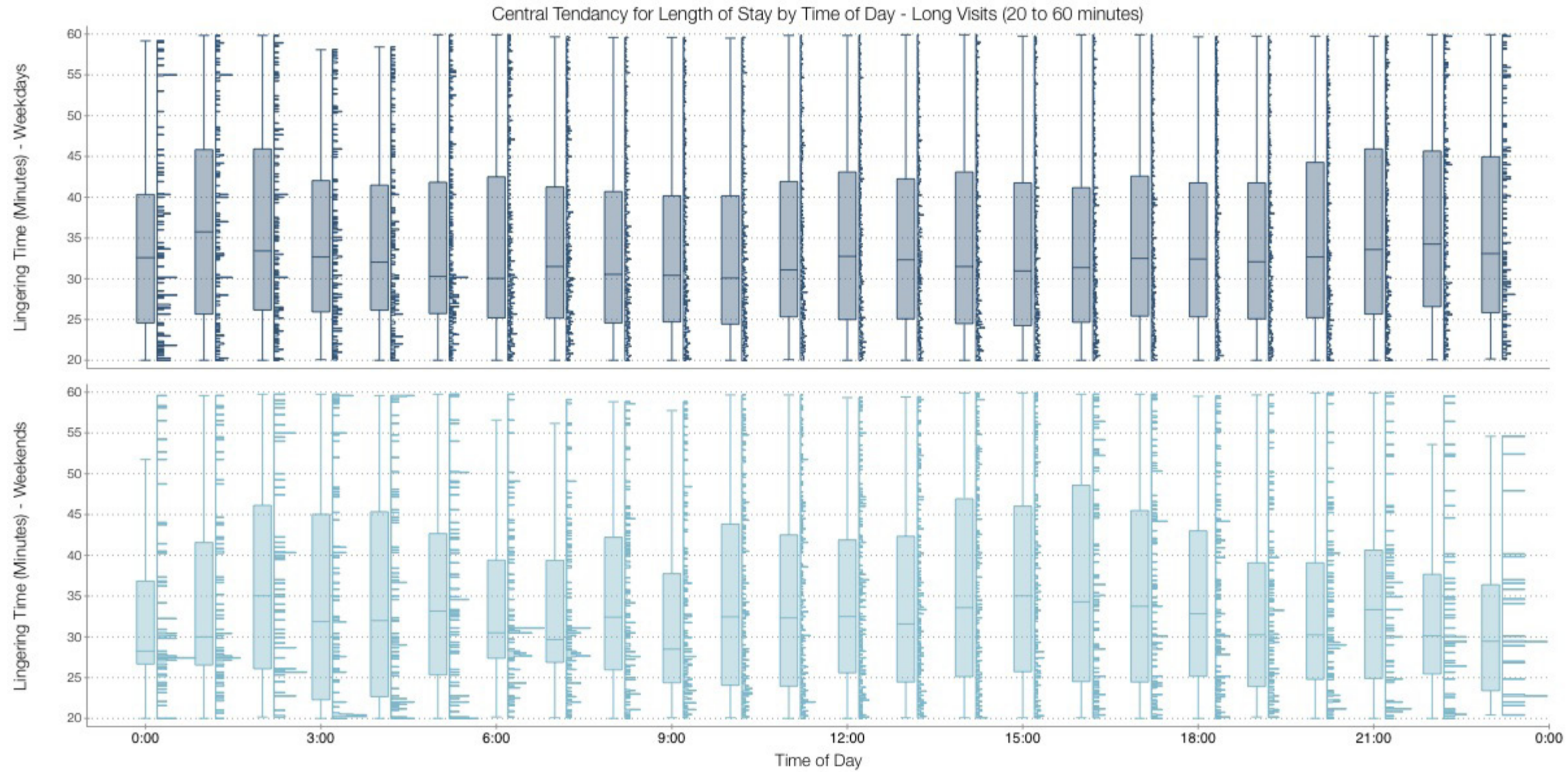
# ANALYSIS - SENSOR DATA



Central Tendency for Length of Stay by Time of Day - Mid-Length Visits (10 to 20 minutes)



# ANALYSIS - SENSOR DATA



# ANALYSIS - QUALITATIVE SITE INVESTIGATIONS

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## GOALS

- 1) Is linger time due to user activity of the LIZ?
- 2) Does the LIZ affect pedestrian density and traffic volume?
- 3) How do users engage with the LIZ?
- 4) How do users engage differently with each other in and around the LIZ?

## KEY FINDINGS

- Consistent pedestrian flow through the site
- Light overall usage
- Forces people to walk through the LIZ – good
- Creates a circulation bottleneck – not ideal under heavy pedestrian flow, especially among people walking straight through; disruptive without being engaging for many
- Moderate to heavy usage of the whispering dishes; strangers occasionally interacting with each other, using the whispering dishes, asking other what the installation is for/about
- Two exhibits are broken or not operational (Charging Bike, Singing Bench)
- Frequent use of the benches - good addition to a plaza that previously had no public seating
- Presence of installation causes some passersby to slow down / stop and read / watch others even if they do not interact themselves



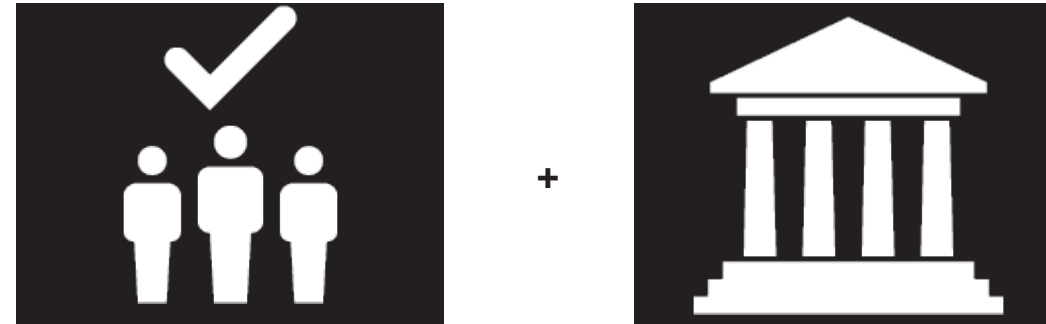
# COMMUNICATION

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*How do we communicate this information to the public? For the city? For the individual?*

## EXHIBITS / INSTALLATIONS

- Interactive Data Visualization Exhibit at the LIZ
- Interactive Exhibit at the Exploratorium
  - As a prototype for the LIZ exhibit
  - As a network with the LIZ – Exploratorium’s “satellite” campus
- Data Upload to DataSF.org
- Findings Report



# NEXT STEPS

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## EXHIBITS / INSTALLATIONS

- Determine how to communicate MKThink’s data findings to the public and be transparent in our process.

## TECHNOLOGY ADJUSTMENTS / EXPANSION

- Depending on the what other types of data should be collected, explore other technologies that would capture precise usage of the Living Innovation Zone, along with the more general Market Street Corridor utilization data.
- Installation of sensors in every LIZ to provide insight into Market Street Corridor as a whole, as well as a network of Living Innovation Zones, or a network of public spaces.

## DATA OVERLAY / CORRELATION INVESTIGATIONS

- Determine other types of information to overlay, such as transportation ridership, crime, revenue data, and weather data to investigate correlations and use in future planning interventions

