

# Novel Approaches to Parking Management on Nantucket



WPI

# Who We Are

Shannon Alvarez

*Civil Engineering*

Richard Hosea

*Robotics Engineering*

Angela MacLeod

*Mechanical Engineering*

Nicholas Lanotte

*Electrical & Computer/Robotics  
Engineering*

**Sponsors:**

Mike Burns, *Nantucket Planning Office*

Peter Morrison, *Nantucket Civic League*

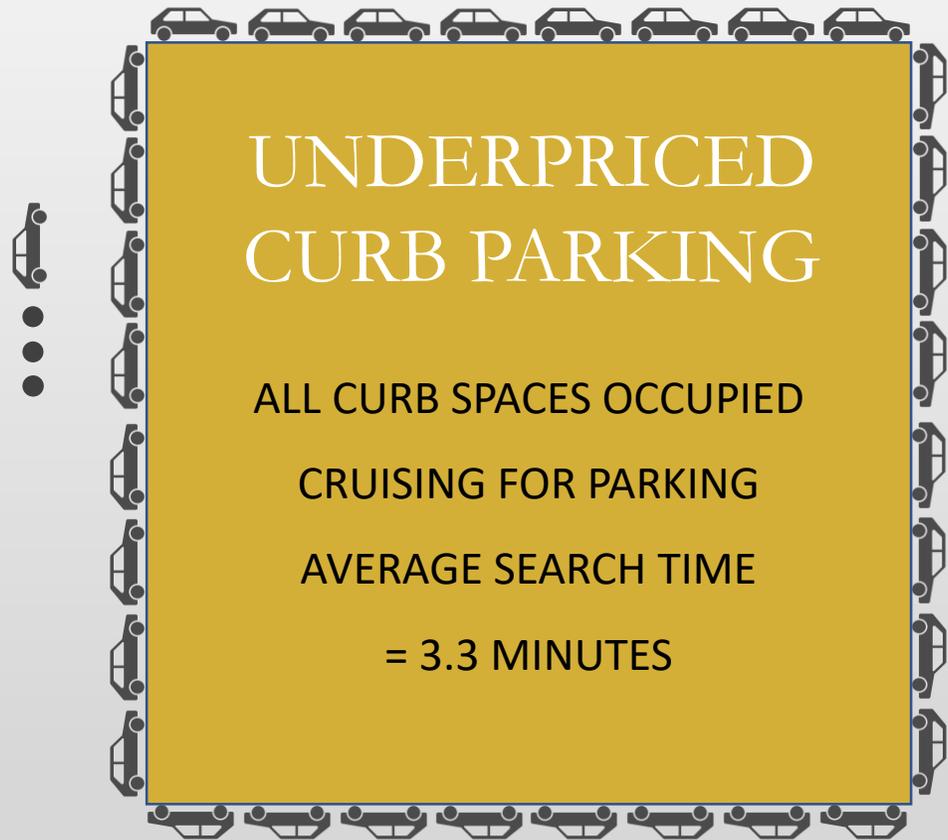




# Context

105%

Capacity of parking spaces during peak hours





# Goals & Objectives



## *Goal: Formulate and evaluate updated options to manage downtown parking*

- 🚗 Identified stakeholder perspectives
- 🚗 Surveyed residents' perspectives
- 🚗 Analyzed various facets of the problem
- 🚗 Formulated short-term actions and long-term strategies to inform public choices

# Goals of Nantucket Board of Selectmen

- 🚗 Institute a parking management program
- 🚗 Create commissions and funds
- 🚗 Engage an independent consultant

A group of people are seated around a long wooden conference table in a meeting room. Several laptops are open on the table, and some individuals are looking at them. The room has large windows with blinds and a map on the wall. The text "Stakeholder Perspectives" is overlaid in a large, bold, black font across the center of the image.

# Stakeholder Perspectives



24

## INTERVIEWS

15 Town Officials

5 Selectmen

4 Private Organizations

# Pedestrians & Traffic

45% stakeholders mentioned pedestrian traffic is problem

🚗 Pedestrians: ignore crosswalks and obstruct traffic by walking in street

🚗 Bikers: ride on sidewalks, displacing pedestrians



# Public Behavior

75% of stakeholders mentioned that the residents and visitors alike need to improve behavior

- 🚗 Attachment to cars
- 🚗 Reluctance to walk/bike
- 🚗 Disinterest in public transport



# Parking Enforcement



-  Turnover affects availability
-  Inconsistency in ticketing
-  Increased penalties

# Employee and Commercial Vehicle Parking Issues

- 🚗 Dedicated employee parking
- 🚗 “Hidden cost”
- 🚗 Construction boom
- 🚗 Divert contractor vehicles





# Intermodal Transportation Hub

- 🚗 Split support
- 🚗 Centralized transportation
- 🚗 Paid on-street parking



# Public Perspectives



262

RESPONSES

- 112 Madaket Residents
- 29 Tom Nevers
- 21 “Mid-Island”
- 19 Pocomo
- 73 Other

# Paid Parking Divide

50%

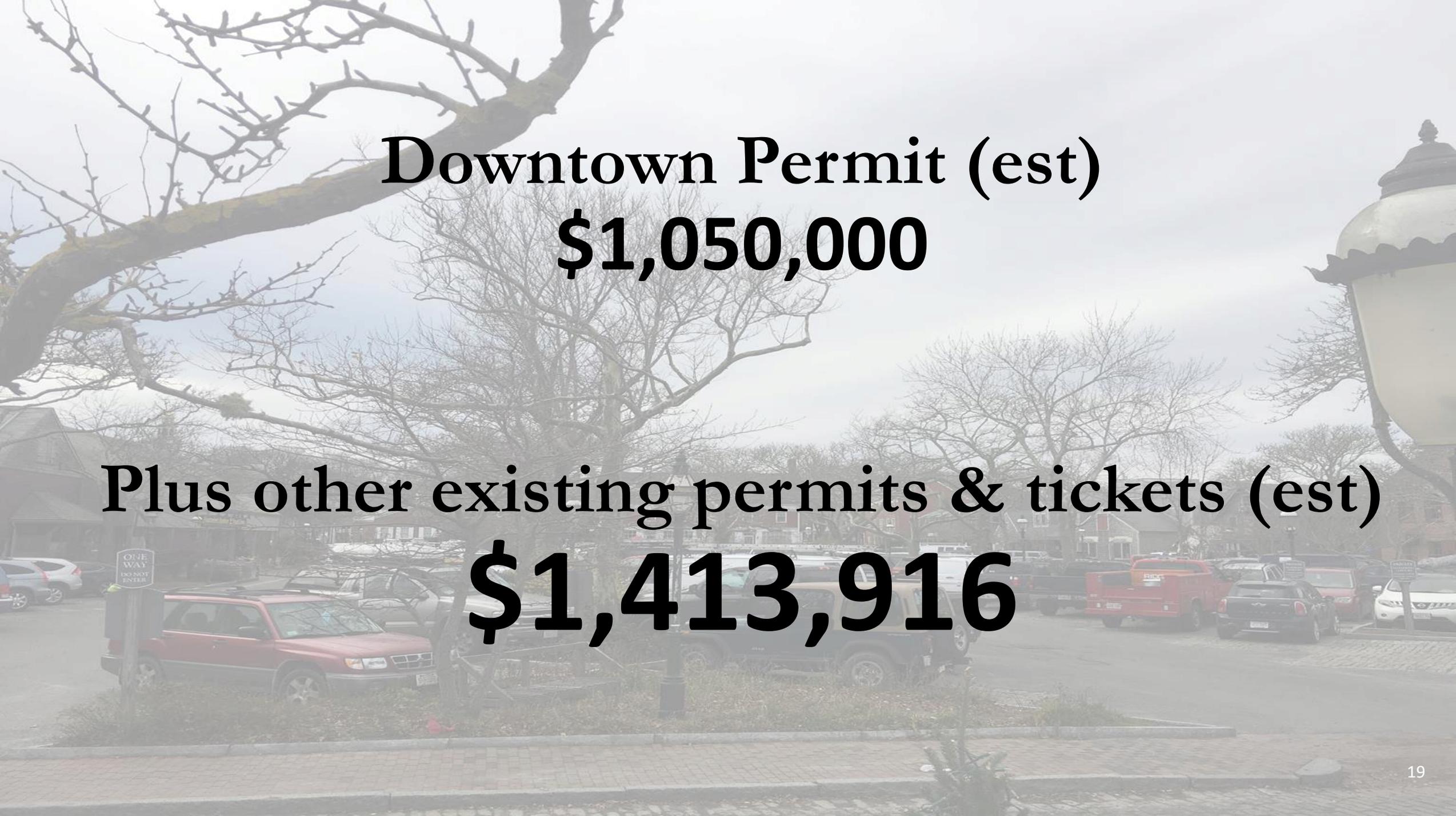
One-Time Fee

43%

Hourly Rate

7%

No Response



**Downtown Permit (est)**  
**\$1,050,000**

**Plus other existing permits & tickets (est)**  
**\$1,413,916**

**1st** – Increasing shuttle buses services

**2nd** – Developing satellite lots

**3rd** – Paving and improving bike paths

**4th** – Increasing parking enforcement

**5th** – Improving sidewalks

**6th** – Marketing of other transportation

# Shuttle Buses

49%

1st or 2nd Priority

25%

Willing to ride shuttle bus

# Conclusions

- 🚗 **Insufficient turnover**
- 🚗 **Need for paid parking**
- 🚗 **Difficult to alter parking behavior**



NO  
PARKING  
THIS  
SIDE  
N.P.D.

FORCE 5 WATERS

# Recommendations

Small Store &  
Interior Design  
123 Main St  
Tel: 333-0014

# Near-Term

- 🚗 Implement **parking sticker** and ***parking benefit district***
- 🚗 Expand ***Park & Ride*** services and **valet**



## Legend

- Study Area
- Core Business District
- Walkable Area

# Medium-Term

🚗 RFID tags to replace stickers

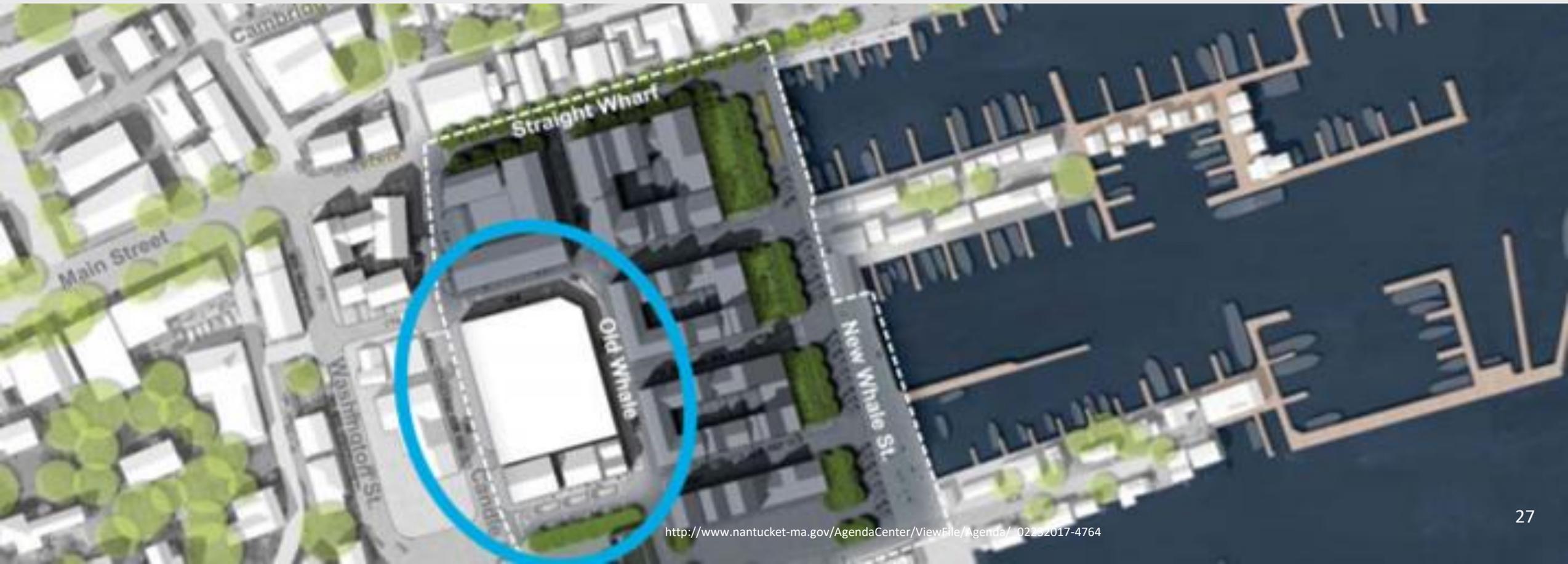
**Demand-driven pricing**

🚗 through **hourly rate** replaces flat-fee



# Long-Term

- 🚗 Accept a proposal for Intermodal Transportation Center
- 🚗 On street sensors for data collection, management and enforcement



# Acknowledgements

Thank you to our project sponsors and their organizations, **Mike Burns** of the **Nantucket Planning Office** and **Peter Morrison** of the **Nantucket Civic League**, for their support and direction.

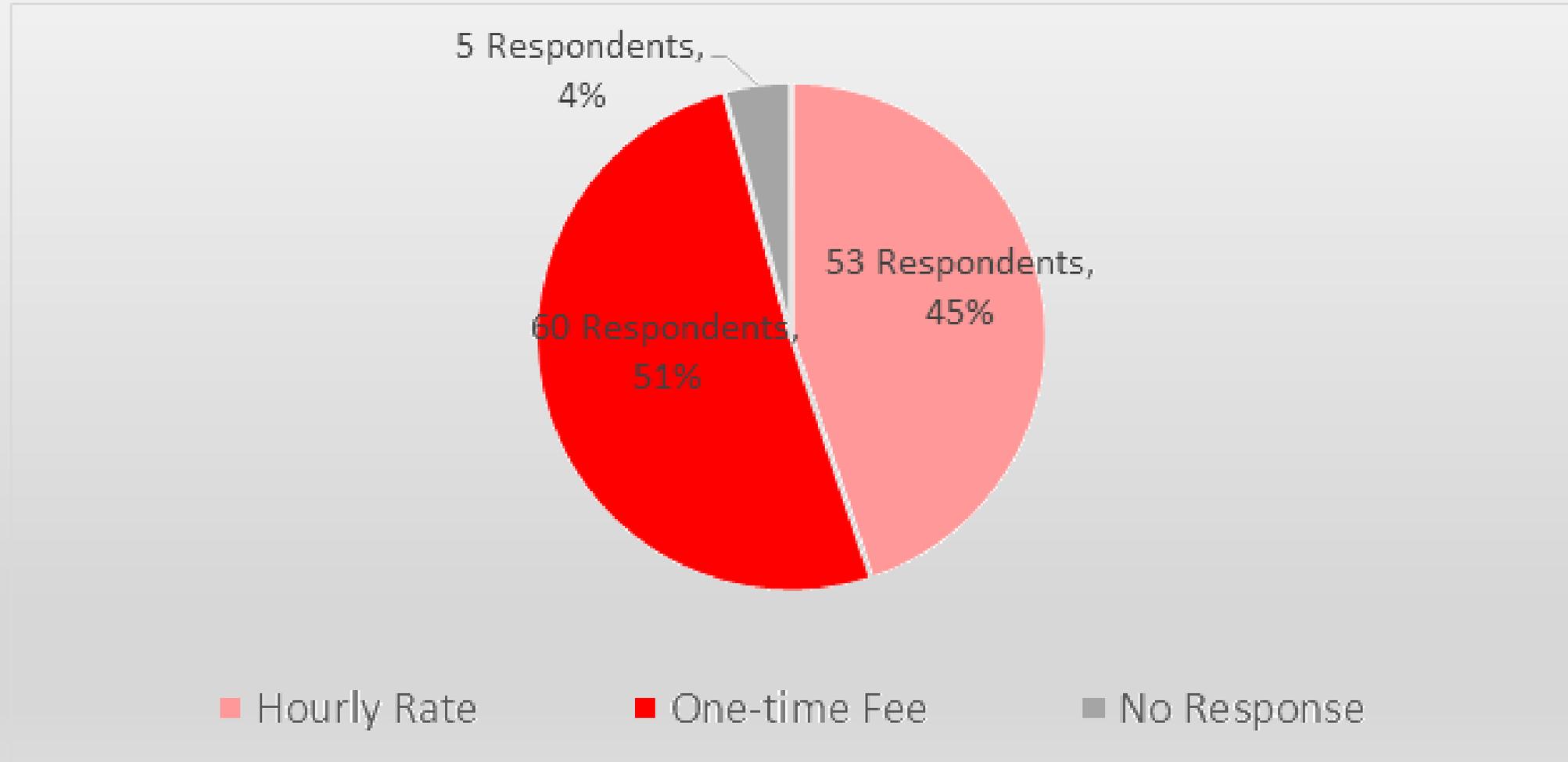
Thank you to those who took time to participate in our **interviews** and **survey**, it is greatly appreciated.

Thank you to the **Maria Mitchell Association** for their hospitality and **Young's Bike Shop**, **ReMain Nantucket** and **The Shipwreck Museum** for their generosity.

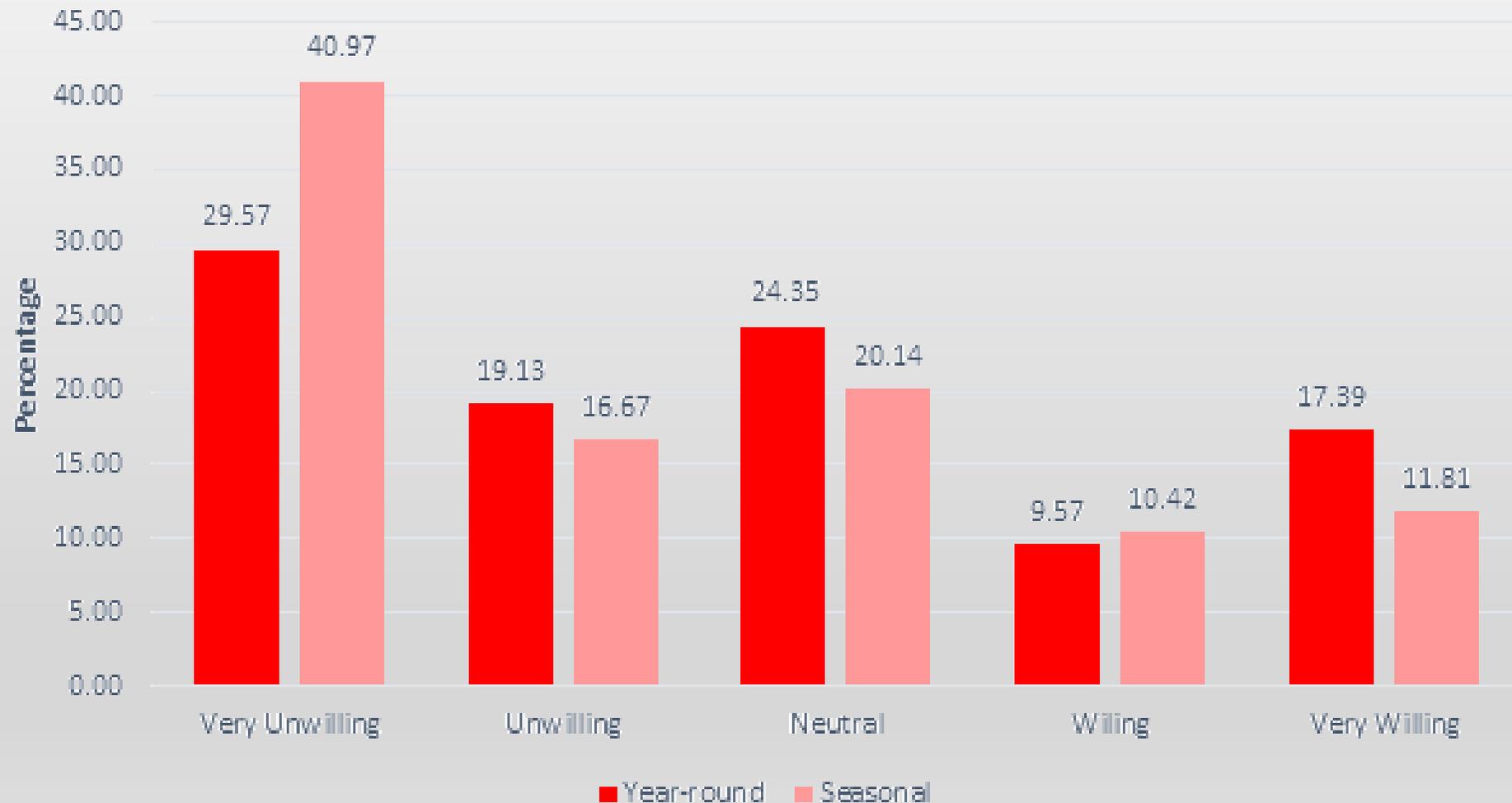
# Thank You!

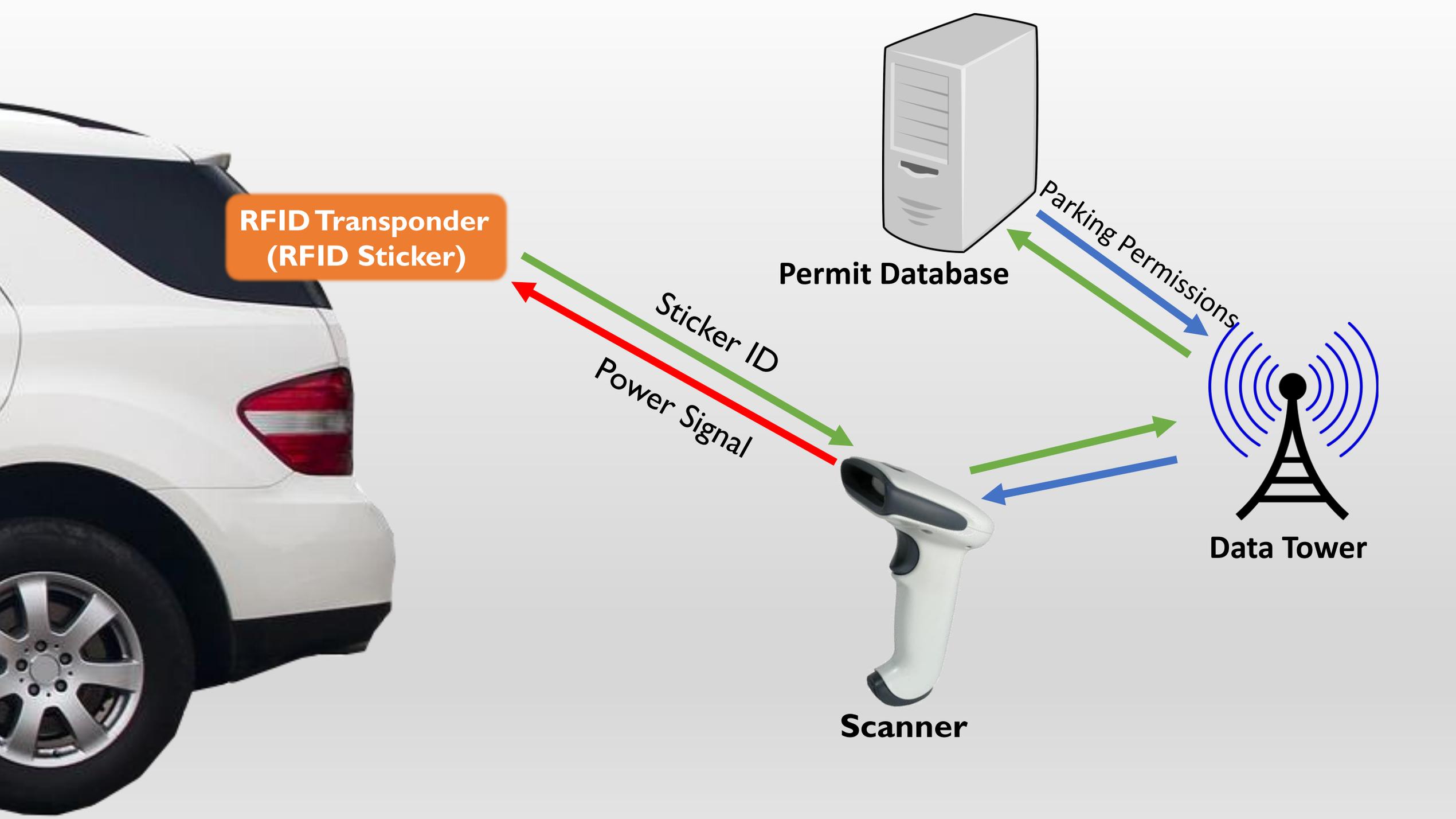


# Voting Resident



# Willingness to use shuttle





**On-Street Sensor**

