



# City of Seattle and King County Taxi, For Hire and Limousine Services Demand Study

Initial Presentation  
June 2013



## SCOPE OF STUDY

### Baseline Demand Analysis

- ❖ Background review, common practices in analysis
- ❖ Measure current demand
  - Identify market split by mode: Taxi, FHV, Limo etc.
  - Identify differences in demand by time of day
- ❖ Estimate latent demand: demand suppression and demand diversion
- ❖ Develop predictive demand model
  - Forecast trip production by type and purpose
- ❖ Develop cost model
  - Reflect current market structure and actual operating costs
  - Calibrate to baseline demand



Operator Data

Public Survey Data

Stakeholder survey Data

Baseline Demand Model

Predictive Demand Model

Operating Cost Model

Service level impacts

Driver Impacts

Cost Impacts

## DATA COLLECTION

- ❖ Electronic data - live dispatch and trip information
- ❖ Public Survey - reported experiences of taxi use and overall perceptions
- ❖ Secret Shoppers - measured service levels in the market
- ❖ Industry Interviews - perspective of owners, drivers etc.
- ❖ Stakeholder Engagement (Interviews and surveys) - business and institutions with interest in service (hotels, restaurants , bars, hospitals, people with disabilities).

## ELECTRONIC DATA

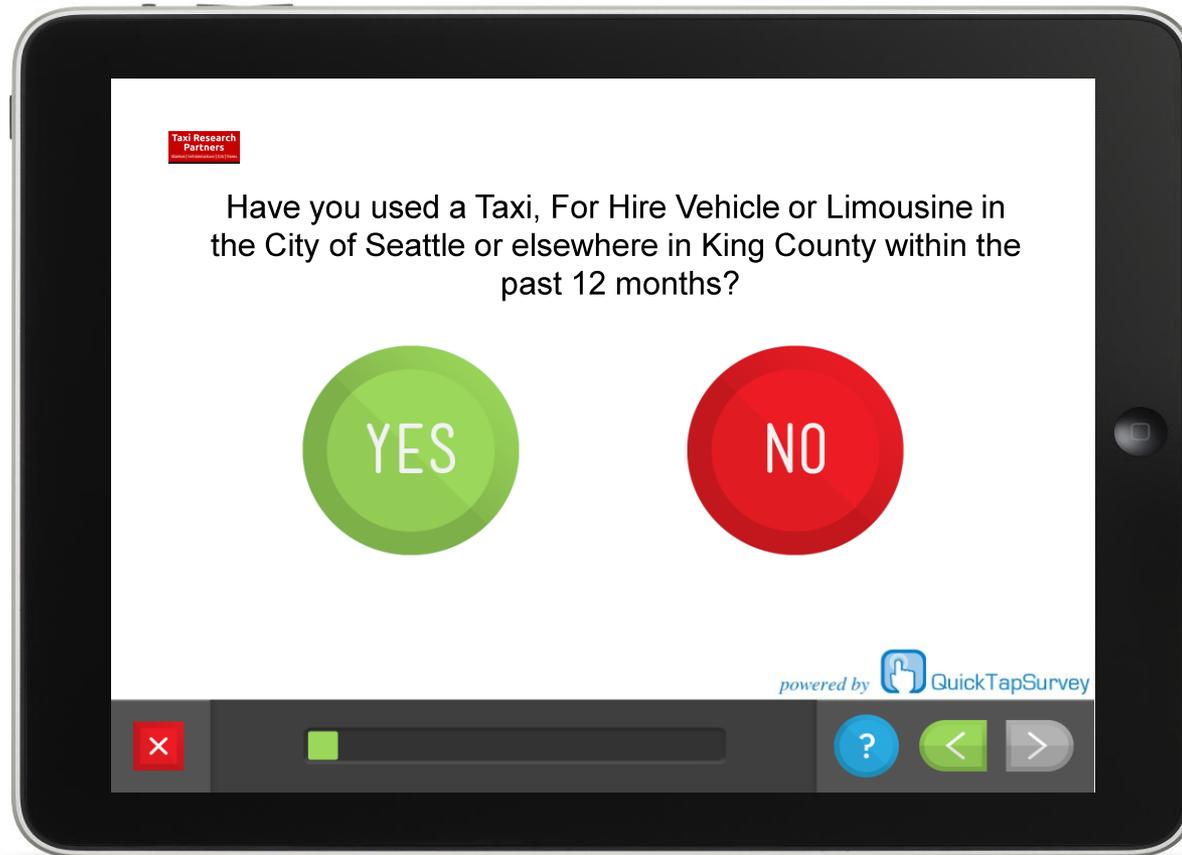
- ❖ Based on trip dispatch records, to include:
  - Time call taken
  - Requested trip start time (if not immediate)
  - Time vehicle dispatched
  - Time pick up made
  - Origin
  - Destination
  - Vehicle type

- ❖ Intercept survey using tablet with on-line back up
  
- ❖ Survey locations selected to capture residents and tourists will include:
  - Downtown Core
  - Transit hubs
  - Hospitals
  - Neighborhood locations in City

## PUBLIC SURVEY Cont.

- ❖ Intercept survey using tablet with on-line back up
  
- ❖ Survey demonstrates:
  - Last trip experience (all hours, all origins)
  - Waiting times (experiential and desired)
  - Quality of experience
  - Reasons people do not use services
  - Knowledge of new entrants
  - Overall perceptions of services available in local market

# QUICKTAP SURVEY



## INSTITUTIONAL SURVEYS

- ❖ Hotels, restaurants, bars, hospitals, clinics to be sent on-line surveys customized by user type
- ❖ Survey to demonstrate:
  - Desired and experience of service levels
  - Quality of experience
  - Overall perceptions of service available in the local market
- ❖ Open ended questions included to allow for maximum user feedback

## SECRET SHOPPER SURVEY

- ❖ Taxis, For Hire Vehicles and Limos engaged as if private customer
- ❖ Trip locations and types selected to develop an overall sense of market and different providers
- ❖ Recorded information to demonstrate:
  - Service quality
  - Timeliness
  - Reliability (did a vehicle actually arrive?)

## INDUSTRY INTERVIEWS

- ❖ Structured interviews and focus groups of associations, operators and drivers - Taxis, For Hire Vehicles and Limousines
  
- ❖ Goals include:
  - Develop understanding of the operating circumstance of each group
  - Identify issues from the perspective of the supplier
  - Understand the changes in the market and impacts on supply
  - Review of range of local factors affecting operation (e.g. infrastructure, market etc.)
  - Review of factors affecting costs
  
- ❖ Interviews undertaken with
  - Taxi Associations
  - Driver Groups and Associations
  - For Hire Companies

## STAKEHOLDER ENGAGEMENT

- ❖ Structured interviews with stakeholders who rely on the service
- ❖ Goals Include:
  - Develop understanding need for taxis including group specific needs and issues in use
  - Capture demand side perspective on: availability, access, suitability
  - Obtain user perspective on current changes in the market
- ❖ Interviews completed with
  - Accessibility representatives,
  - Elderly groups,
  - Health care providers,
  - Seattle First,
  - Regulators (City, County, Port)

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## TAXI MARKET MODELING

- ❖ Repeatable analysis allowing for the identification of demand and potential demand. Can be used to identify impacts of changes in the market on: Taxi Users, Taxi Suppliers, Market Economics and wider market impacts.
  
- ❖ Three key components:
  - Demand Model, identifies current demand
  - Predictive Demand Model, identifies potential market growth, market diversion and latent demand
  - Cost Model, tracks operating costs and potential income arising from changes in the market

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## MARKET STRUCTURE AND ANALYSIS

- ❖ Review of the metrics applied in other taxi studies seeking to develop taxi market.
  - Most analyses in one of three domains: Quantity, Cost, Standards
  - Differences between “open” and “closed” markets, but
  - Definition of markets limiting to single issue / single “solution”

## COMPARATIVE APPROACHES

- ❖ Analysis of quantity controls, focused on four primary methods:
  - Ratios based on population
  - Ratios based on service level, can include reported trip rates
  - Surrogate demand Indicators
  - Market models
  
- ❖ Economic and driver impacts also factors in market development
  - Driver / industry income
  - Defined quality standards
  - Market competition / market contestability