

# SUFFOLK COUNTY MOBILITY STUDY

## Strategies for Suburban Transportation

June 2018



# SUFFOLK COUNTY TRANSIT (SCT)

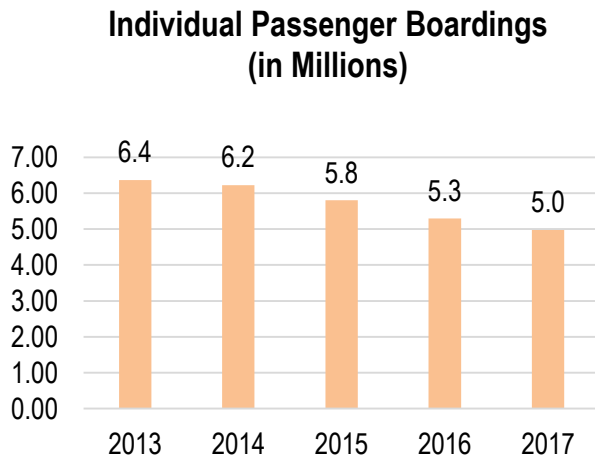
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- **14,000 +** daily weekday riders
- **912** square mile service area
- **43** bus routes, including two summer-only routes
- **2** service types - fixed route & paratransit (SCAT)

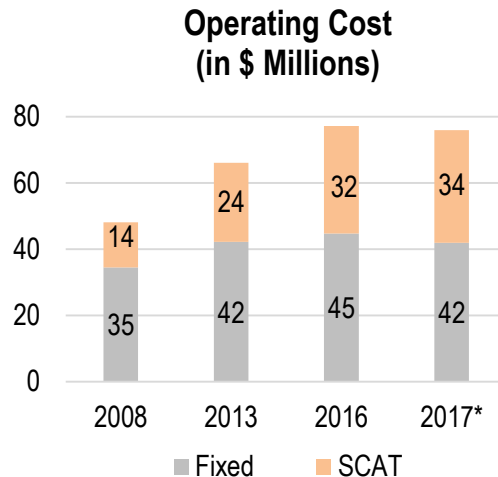


# CHALLENGES FOR SUFFOLK COUNTY TRANSIT

## DECLINING RIDERSHIP

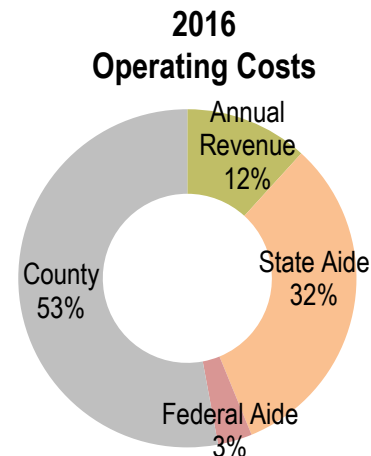


## ESCALATING OPERATING COST



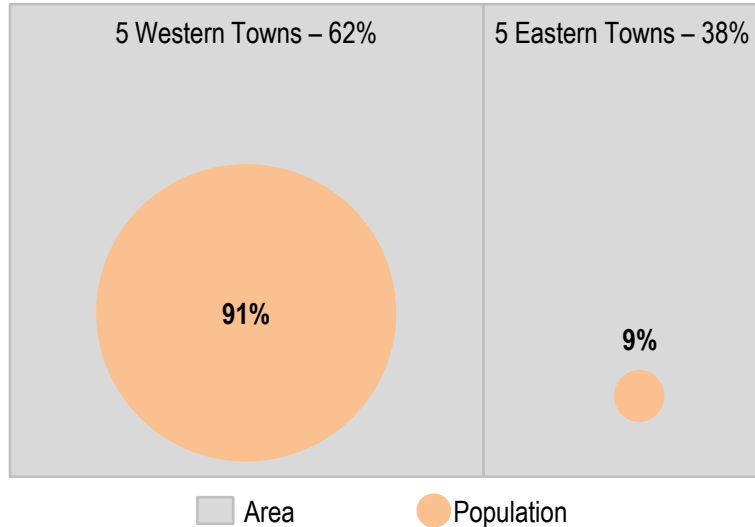
\* Route cuts were made in Oct 2016

## LAGGING SUBSIDY

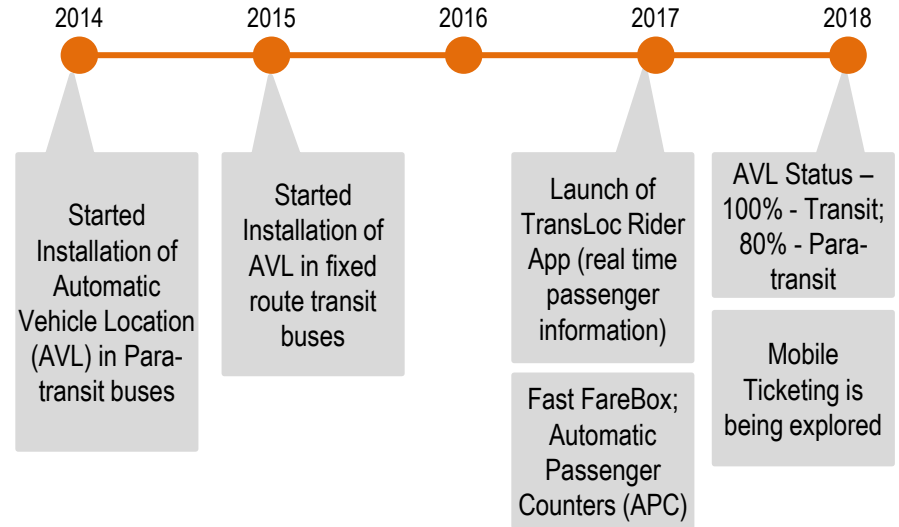


# CHALLENGES FOR SUFFOLK COUNTY TRANSIT

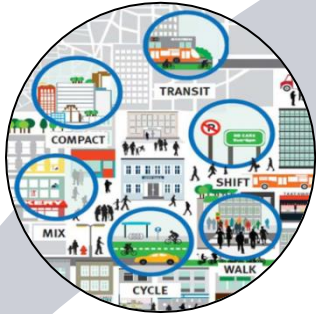
**LACK OF TRANSIT OPTIONS:** *Same fixed-route transit solution for very diverse geographic areas*



**LACK OF DATA AVAILABLE TO INFORM TRANSIT PLANNING:** *Just beginning to collect real-time data (TransLoc, AVL)*



# OPPORTUNITIES FOR SUFFOLK COUNTY TRANSIT



## COUNTY's RECENT INITIATIVES

- Compact walkable downtowns; mixed use developments
- Transit oriented developments
- Investments for improved transportation infrastructure



## OPPORTUNITIES !

- Evaluate and reimagine the transportation network
- Offer better and efficient mobility services to more people
- Develop a more resilient system aligned with evolving technologies and needs



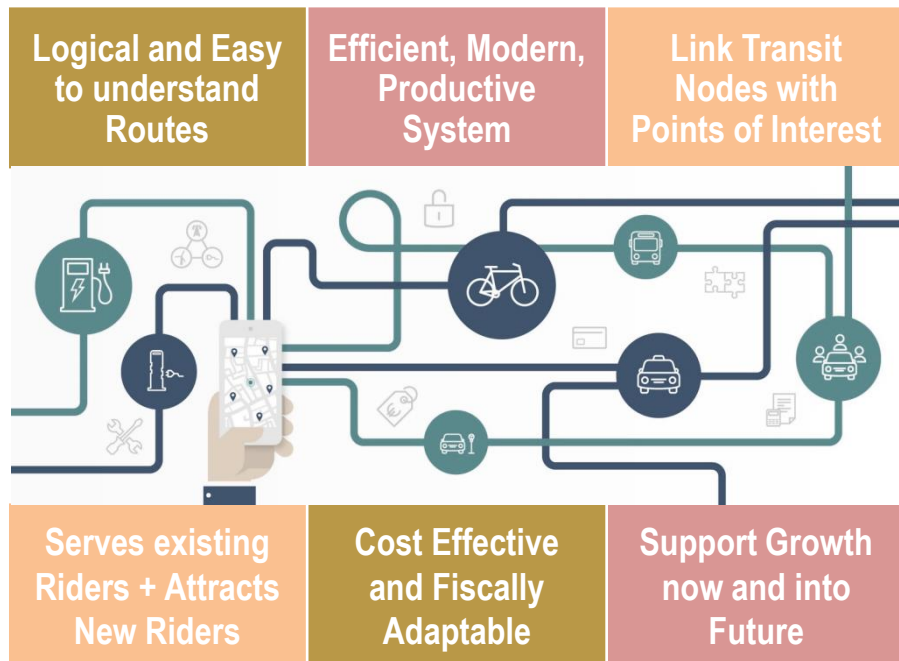
## COUNTY's PAST

- Decades of low-density residential and commercial land use sprawl
- Predominantly auto-dependent communities
- 30 year old fixed-route transit – “one size fits all” solution

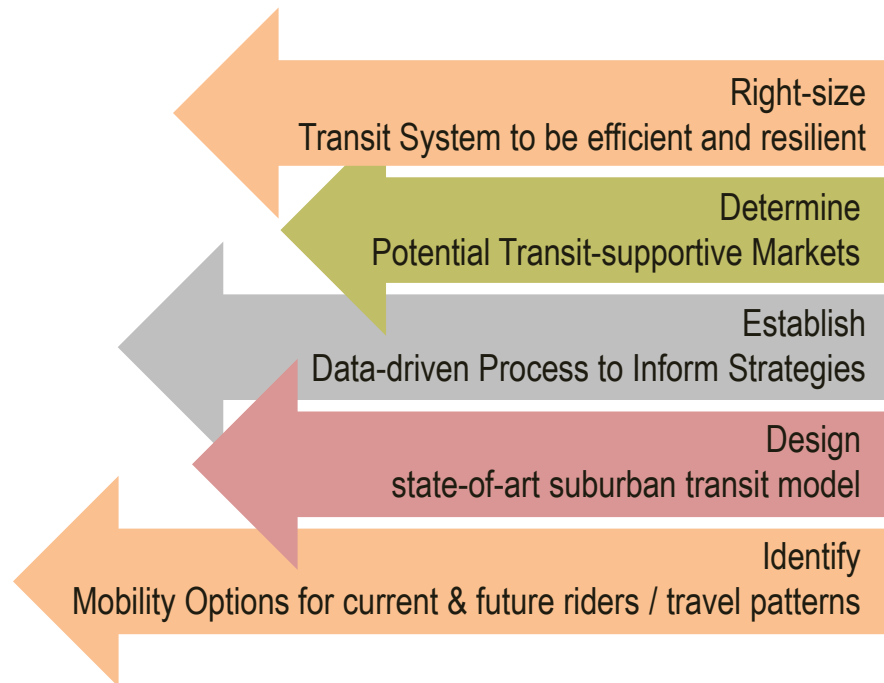
# NEW APPROACH TO MOBILITY FOR SUFFOLK COUNTY

“ **MOBILITY** as a **SERVICE (MaaS)** ”

## KEY DESIRED CHARACTERISTICS

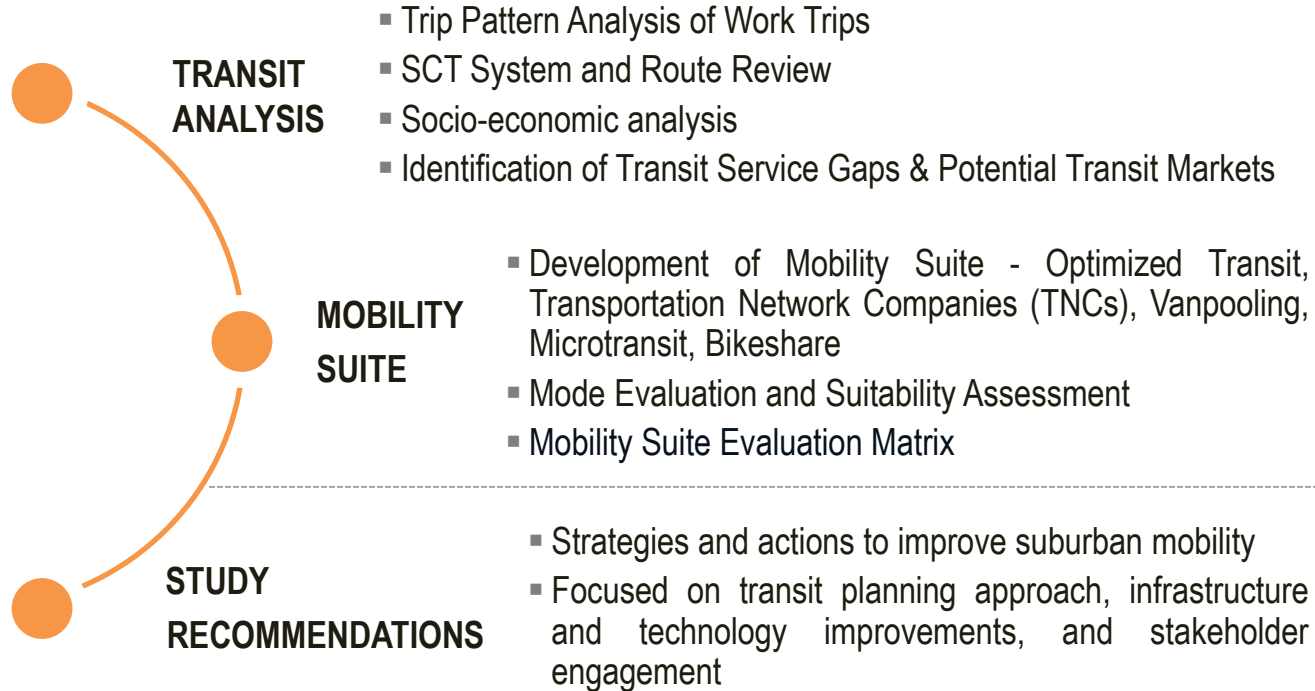


## TASKS TO GET THERE



# STUDY PROCESS AND TIMELINE

**November 2016 – June 2018**



## MOBILITY WORKSHOP

*November 2017*

- Suffolk County Economic Development and Planning, Suffolk County Public Transportation Working Group, and Arup (Consultant on the study)
- Share initial analysis & findings and solicit input to inform context and recommendations



# TRIP PATTERN ANALYSIS



**MOBILITY  
SUITE**

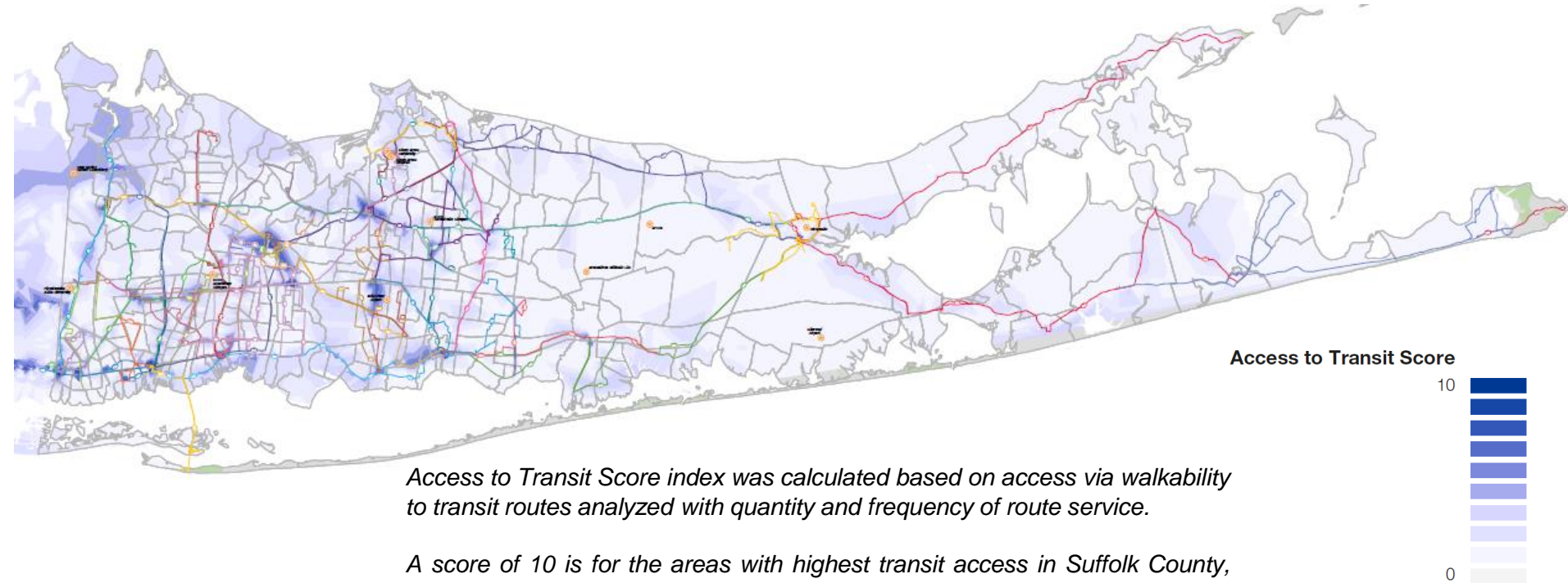


**STUDY  
RECOMMENDATIONS**



# TRIP PATTERN ANALYSIS FINDINGS

## MOST AREAS IN THE COUNTY HAVE LOW ACCESS TO TRANSIT

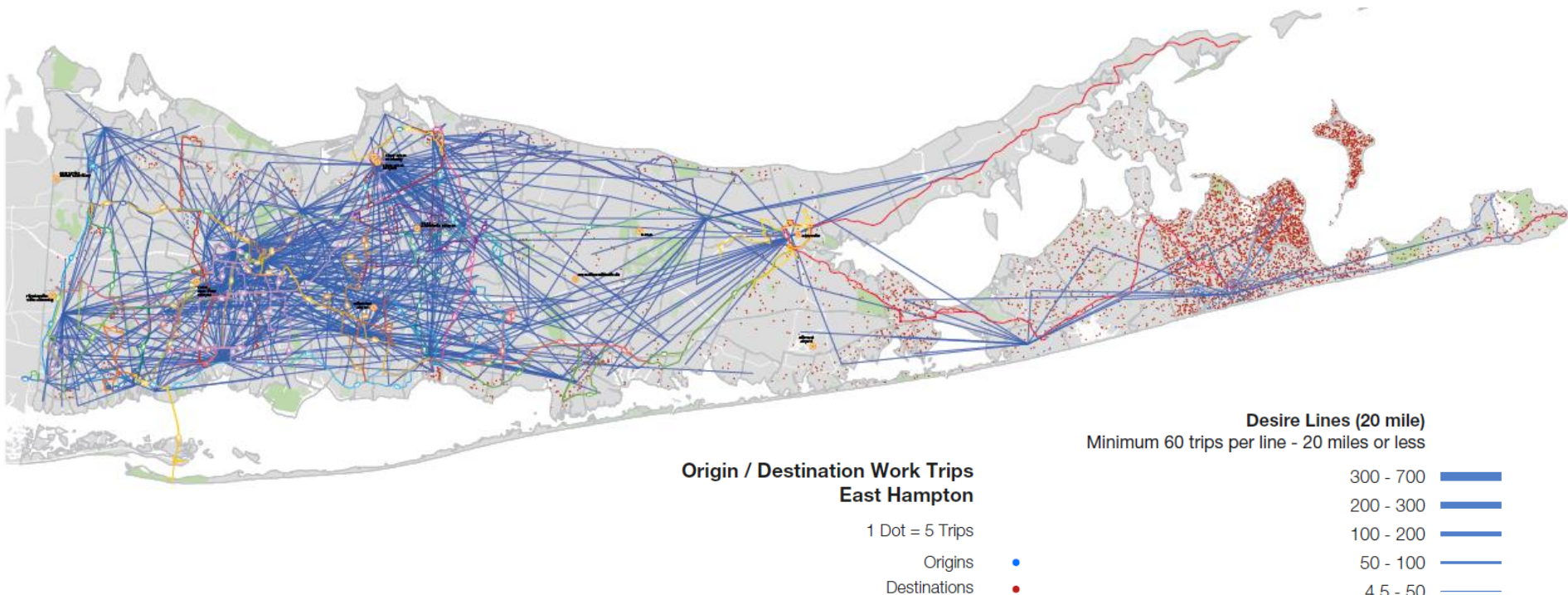


*Access to Transit Score index was calculated based on access via walkability to transit routes analyzed with quantity and frequency of route service.*

*A score of 10 is for the areas with highest transit access in Suffolk County, and zero represents areas with the lowest (or no) transit access.*

# TRIP PATTERN ANALYSIS FINDINGS

**SOME AREAS IN THE COUNTY ARE NOT IDEAL FOR FIXED ROUTE SERVICE**

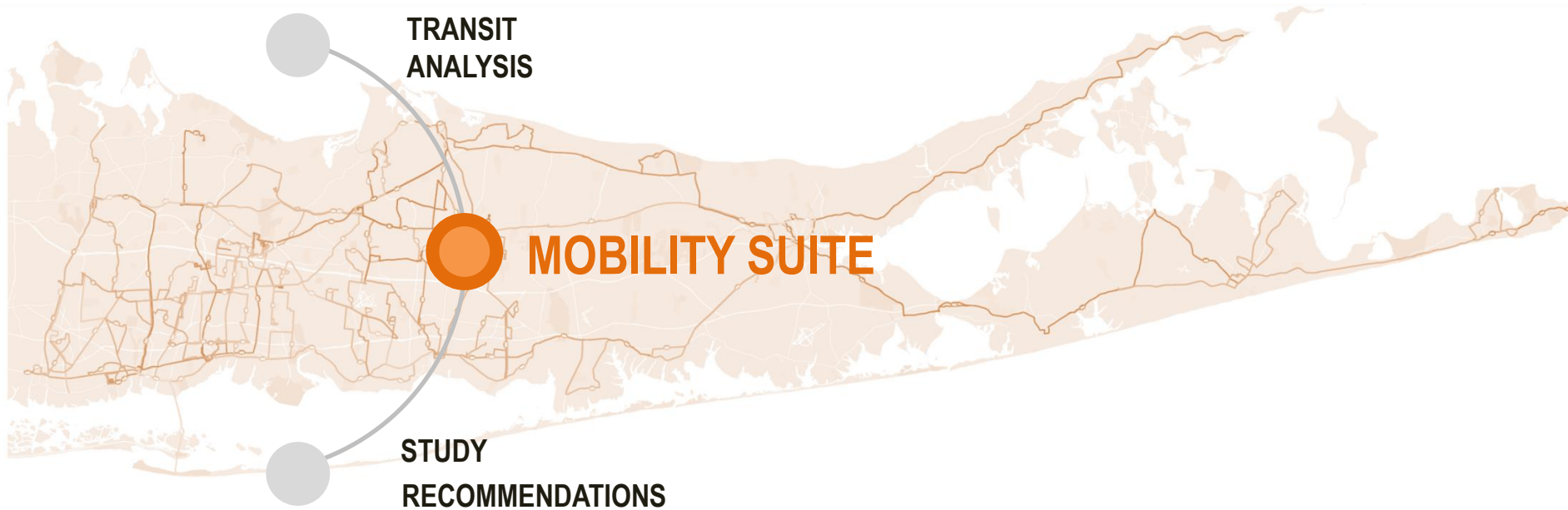


# TRIP PATTERN ANALYSIS FINDINGS

## UNEXPECTED DISTRIBUTION OF POTENTIAL TRANSIT MARKETS



*Potential Transit Markets were determined based on car ownership, income and specific age range.*



# MOBILITY SUITE

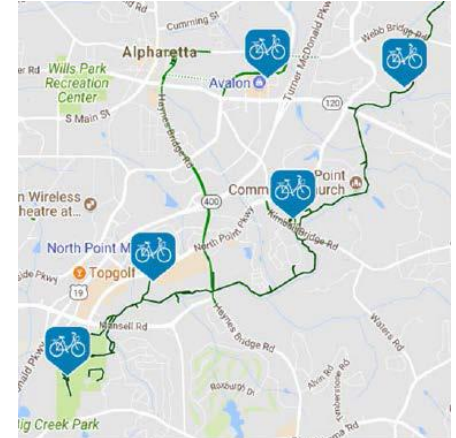
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DEVELOPMENT OF MOBILITY SUITE

REVIEW OF CASESTUDIES AND BEST PRACTICES

MODE PERFORMANCE AND SUITABILITY EVALUATION

DEVELOPMENT OF MOBILITY MATRIX





# MOBILITY SUITE – OPTIMIZED TRANSIT

## DEFINITION

The network redesign of existing fixed routes to provide more people with access to more frequent transit service.

## CASE STUDY: HOUSTON METRO BUS NETWORK REDESIGN

- Goal: More Service, Better Service and Your Service
- Process:
  - 2013-2014 – Planning and Outreach
  - 2015 – Implementation of New Service
  - Move from a peak-oriented low frequency radial network to grid network with high-frequency service.
- Results:
  - 11% overall increase in ridership within a year
  - Overtime – 3.3% growth rate each year
  - 95% of Houston's population is within  $\frac{1}{4}$  mile of service



# MOBILITY SUITE – TNCs

## DEFINITION

Use of online platforms to connect passengers with drivers for point-to-point trips while automating reservations and payments, and providing customers with travel times, wait times and pricing.

## CASE STUDY: PINELLAS SUNCOAST TRANSIT AUTHORITY, FL

- Transit authority in St. Petersburg, Florida partnered with TNCs for pilot program in select zones to support first/last mile trips to bus stops in 2016.
- Process:
  - Divided the County in 8 Direct Connect Zones
  - Provided rider subsidy of up to \$5/ride. Average user expense \$1.
  - \$100K budget for first 6 months and included service for riders with disability
- Results:
  - 1st year reported 3K + riders with average \$11.48 cost/ride to PSTA
  - Program expanded in 2017 - 7days a week, 6am to 11pm
  - Annual Savings - \$100K



### DIRECT CONNECT STOPS

Location	Connecting Routes
1 Huey Ave & Lemon St E	19, 66L
2 Tampa Rd & Pine Ave N	67, Countryside/Oldsmar/ Tampa Connector
3 Main St & Patricia Ave	67, 66L, 78, Dunedin/ Palm Harbor Connector
4 PSTA 34th St Layby	4, 11, 52, 59, 97, 98
5 Pinellas Park Transit Center	11, 34, 52, 74, 75, 97, 444
6 Seminole Blvd & Orange Blossom Ln	18
7 16th St S & 18th Ave S	23
8 E Bay Dr & Missouri Ave N	18, 52, 98



### HOW TO RIDE



Choose a provider



Hail a ride



Travel to/from a designated PSTA stop



Ride the bus

# MOBILITY SUITE – MICROTRANSIT

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## DEFINITION

IT-enabled private multi-passenger service that serve passengers using dynamically generated routes. May expect passengers to make their way to and from common pick-up or drop off points. Vehicles range from large SUVs to vans to shuttle buses.

## CASE STUDY: CHARIOT

- Currently in NYC, Austin, Seattle, Bay Area
- Operates on fixed-routes but makes limited stops
- Smart-phone based app to reserve a seat and for real time arrival information
- Pricing varies by city (NYC \$4/ride) and monthly passes are available.





# MOBILITY SUITE – VANPOOLING

## DEFINITION

Vanpooling involves the driver adding passengers to a private trip in which both share a destination. Such an arrangement provides additional transportation options for riders while allowing drivers to fill otherwise empty seats in their vehicles.

## CASESTUDY: PACE VANPOOL (SUBURBAN CHICAGO)

- Operated by suburban bus division of Chicago Transit Authority
- Pace provides vehicles and covers cost of fuel, insurance, maintenance and guaranteed ride home.
- 8/12/15 person capacity vans
- Benefits for those who volunteer to drive
- Monthly fare is per passenger based on distance and # of participants.
- 718 active vanpools in Pace Vanpool system (2016)



# MOBILITY SUITE – BIKESHARE

## DEFINITION

Short-term bike rental, usually for individual periods of an hour or less over the course of a membership. Information technology-enabled bikesharing provides real-time information about the location and demand for bikes at docking stations.

## ZAGSTER (LONGMONT, CO)

- 10 Stations and 50 bikes operated by Zagster in 7-square mile area connecting downtown and key retail/recreational destinations
- Bikeshare sponsors include local hospitals and brewery
- Annual or monthly membership
- Accessed via mobile application



# MOBILITY SUITE - MODE EVALUATION

## STAGE 1: MODE'S STAND-ALONE PERFORMANCE

Summary Table - Average Rankings (Stage 1)						
Average Scores (criteria ranking)	Existing Conditions	Optimized Transit	Van Pooling	TNCs	Micro- transit	Bikeshare
Planning and Policy Impacts	Poor	Moderate	Strong	Moderate	Strong	Strong
Transportation Performance	Poor	Moderate	Moderate	Strong	Strong	Poor
Environmental + Sustainability Performance	Poor	Moderate	Moderate	Failure	Moderate	Strong
User Experience	Poor	Strong	Moderate	Strong	Strong	Strong
Economic Feasibility	Moderate	Strong	Strong	Strong	Moderate	Strong

# MOBILITY SUITE - MODE EVALUATION

## STAGE 2: MODE'S PERFORMANCE IN PREDEFINED MARKETS

Summary Table - Average Rankings (Stage 2)		Existing Conditions	Optimized Transit	Van Pooling	TNCs	Micro-transit	Bike-share
Trips (Medium - High Activity Density)	Work	Fair	Good	Fair	Fair	Good	Poor
	Connectivity	Fair	Good	Good	Good	Fair	Fair
	Commercial/ Institutional/ Recreational	Good	Good	Fair	Good	Good	Good
	School (HS/ College)	Poor	Good	Fair	Fair	Fair	Poor

*Markets are defined based on Activity Density - Population & Number of Jobs*

# MOBILITY SUITE - MODE EVALUATION

## STAGE 2: MODE'S PERFORMANCE IN PREDEFINED MARKETS

Summary Table - Average Rankings (Stage 2)		Existing Conditions	Optimized Transit	Van Pooling	TNCs	Micro-transit	Bike-share
Trips (Low / Special Activity Density)	Work	Fair	Good	Fair	Fair	Good	Poor
	Connectivity	Fair	Good	Good	Good	Good	Poor
	Commercial/ Institutional/ Recreational	Fair	Good	Fair	Good	Good	Poor
	School (HS/ College)	Poor	Fair	Fair	Fair	Fair	Poor

*Markets are defined based on Activity Density - Population & Number of Jobs*

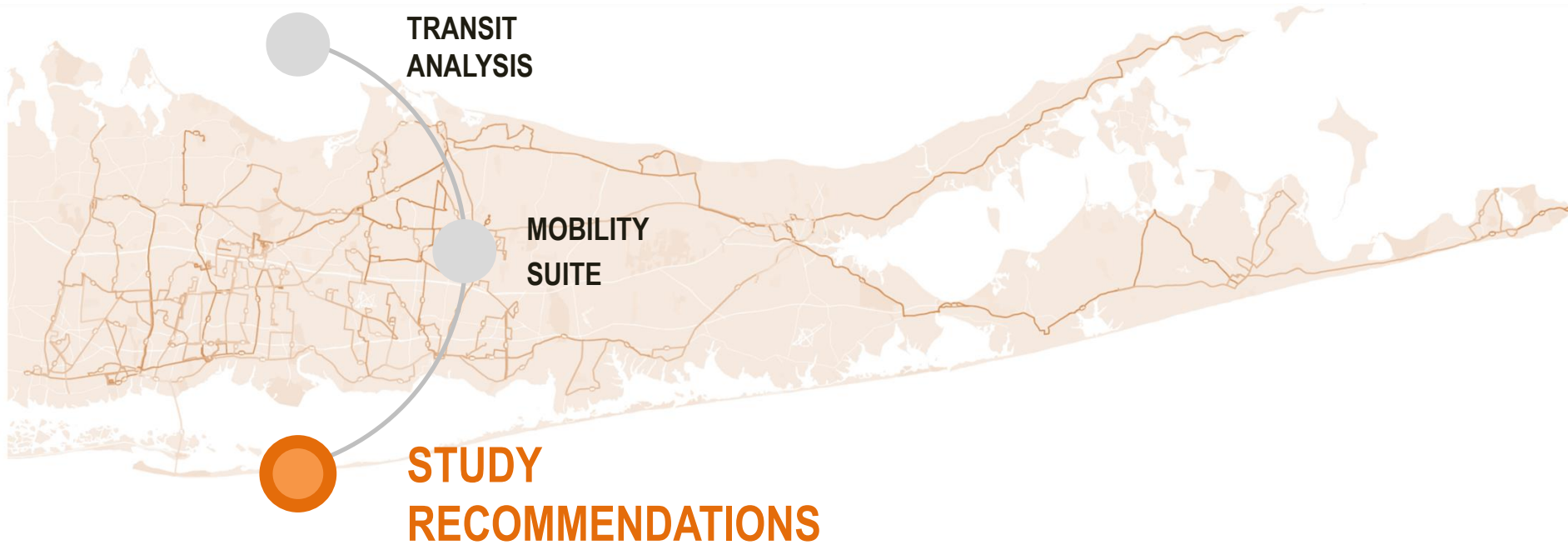
# MOBILITY SUITE - MODE SUITABILITY

High to Medium Activity Density				
Trip Type Mode	Work	Connectivity	Commercial / Institutional / Recreational	School (HS / College)
Existing Conditions	2.0	2.0	3.1	1.0
Optimized Transit	6.6	5.7	6.6	5.7
Van Pooling	4.4	5.3	3.5	3.5
TNCs	3.3	5.8	5.8	3.3
Microtransit	5.5	4.6	5.5	3.6
Bikeshare	1.9	4.8	5.8	0.0

**Optimized Transit scored high across all trips in high-medium activity density areas.**

Low Activity Density / Special Activity Density				
Trip Type Mode	Work	Connectivity	Commercial / Institutional / Recreational	School (HS / College)
Existing Conditions	2.0	2.0	2.0	1.0
Optimized Transit	4.9	4.9	4.9	4.1
Van Pooling	4.4	5.3	3.5	3.5
TNCs	3.3	6.6	5.8	3.3
Microtransit	5.5	5.5	6.4	3.6
Bikeshare	0.0	0.0	0.0	0.0

**Micro-transit also scored moderate to high across all trips and can be employed in a variety of ways**



# STRATEGIES AND RECOMMENDATIONS

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**Continue to invest in  
What's Working**

**Pivot from being a transit provider to  
provider of "Mobility Services"**



**Utilize Data and Technology for  
Transit Planning**

**Develop a County-wide Mobility Brand**



**Community Outreach through  
Technology and Strategic Partnerships**



# STRATEGIES AND RECOMMENDATIONS

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## **Continue to invest in What's Working**



- Reinvest in high performing fixed-routes
- Continue coordination and integrated planning of transportation investments

# STRATEGIES AND RECOMMENDATIONS

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## Pivot from being a transit provider to provider of “Mobility Services”

- **Implement** demand-responsive Mobility Solutions through **Pilot Programs**
- **Use Mobility Suite and Suitability Matrix** to inform discussions on Implementation Plan
- **Develop & Implement Design Guidelines**
- **Institute Processes and Policies** to support a modern mobility system



# STRATEGIES AND RECOMMENDATIONS

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- **Identify rider patterns to inform service planning**



- **measure system performance** to prioritize investments



## **Utilize Data and Technology for Transit Planning**



- **Conduct ridership surveys and analysis**
- Have **clear contractual agreements** on data ownership



# STRATEGIES AND RECOMMENDATIONS

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- **Develop “Umbrella Brand” for multiple mobility services**
- **Developing a single website as Mobility Information clearinghouse**
- **Package Rebranding with Transit investment**

**Develop a County-wide Mobility Brand**



# STRATEGIES AND RECOMMENDATIONS

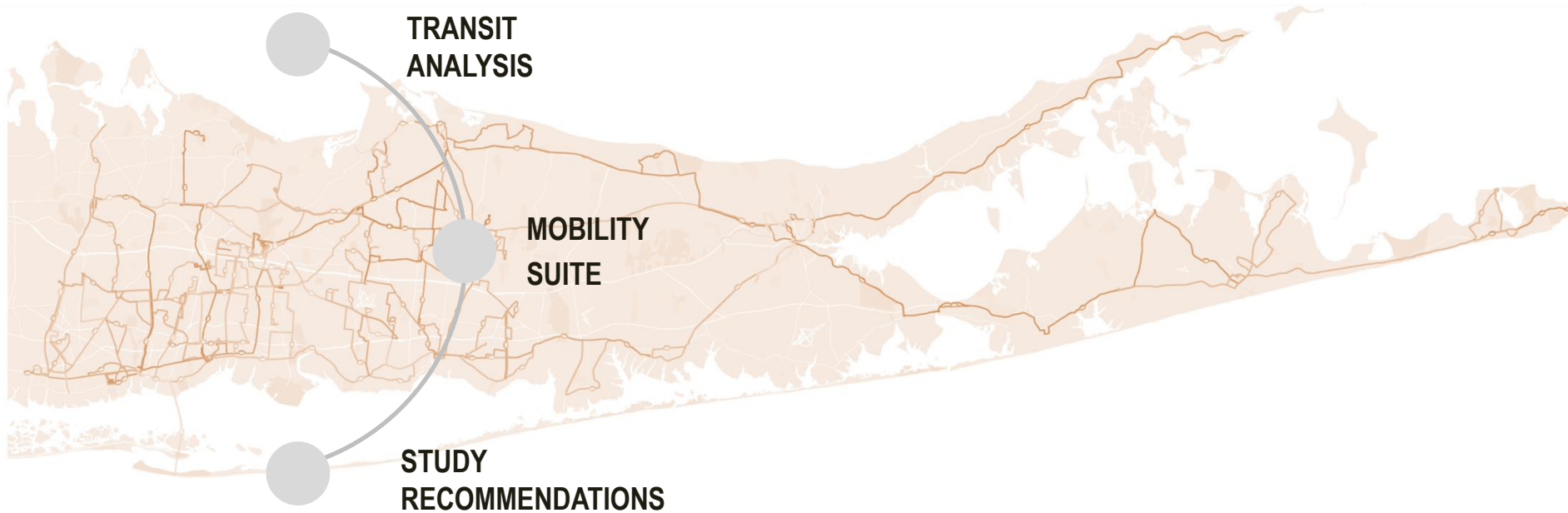
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- Engage riders through Technology
- Capitalize on strategic County partnerships.



**Community Outreach through  
Technology and Strategic Partnerships**



# NEXT STEPS

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## Utilize Data and Technology to Inform Transit Planning

- Use data available via Automated Passenger Counters, Fast Farebox, and TransLoc to **evaluate ridership patterns**
- Use Automatic Vehicle Locator (AVL) data to **evaluate the system's operational efficiency, transit planning and real-time passenger updates.**
- **Explore Open Data program** to identify partnerships for managing and analyzing the data

# NEXT STEPS

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Utilize Data and Technology to  
Inform Transit Planning



**Pilot Programs for Demand  
Responsive Mobility Services**

- **Bikeshare Pilot Programs**
- **Microtransit Pilot Program**



# NEXT STEPS

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Utilize Data and Technology to Inform Transit Planning



Pilot Programs for Demand Responsive Mobility Services



**Suffolk Countywide Mobility Implementation Plan**

- Route restructuring & incorporation of demand responsive mobility services
- New Transit Maps and Rollout Plan
- Marketing and Branding Plan
- Community Outreach



# ANY QUESTIONS?



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[SuffolkCountyEconomicDevelopmentPlanning](#)