

San Francisco Transport Strategy



Timothy Papandreou
Director- Strategic Planning & Policy



@tpap_

Baby Boomers

Millennials/GenX

**Drop in Licenses
& Revenues**



**Ubiquitous
Connectivity**

**Work Anywhere
Everywhere**

**Changing
Preferences**



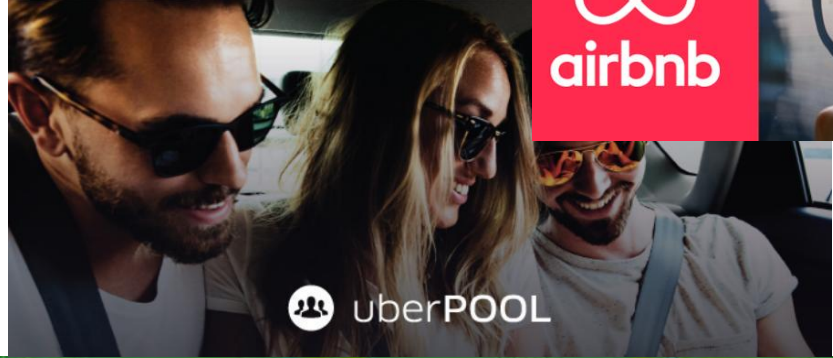
Big Trends

Major societal and system changes









Major Game Changers

The most
dangerous phrase
in the language is "we've
always done it this way."

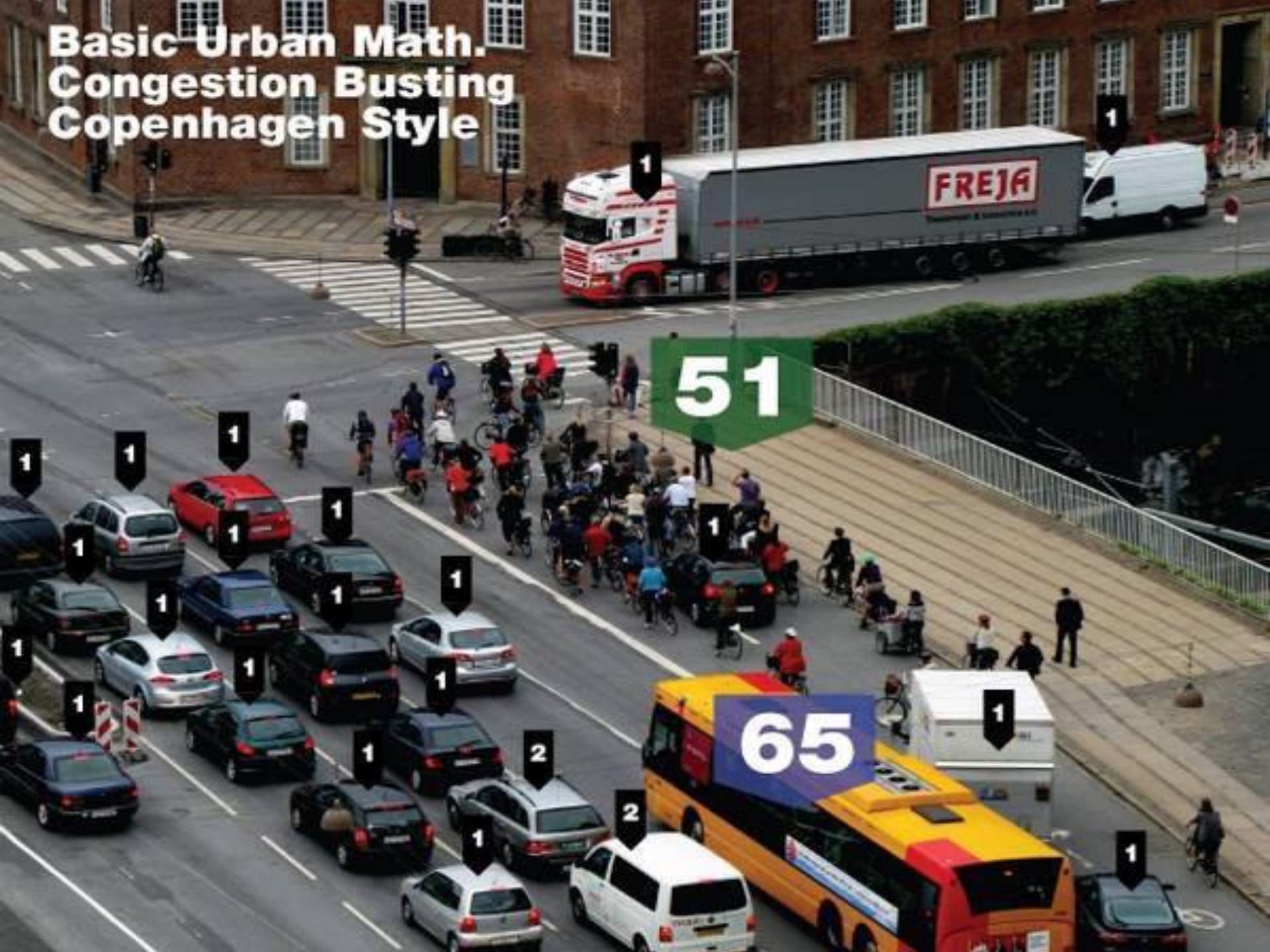
Rear Admiral Grace Hopper





405 NORTH
Sacramento

Basic Urban Math. Congestion Busting Copenhagen Style



51

65

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

2

2

1

1

1

1

**THIS ONE
RUNS ON FAT
AND SAVES YOU MONEY**



**THIS ONE
RUNS ON MONEY
AND MAKES YOU FAT**



Share The Road

Streets are for cars too.



A message from the American Automobile Association.



- 2012 Number of people killed walking/bicycling by people driving:
 - Globally: 400, 000
 - US: 5, 469
 - CA: 763
- In the US-that's more than one 747 jumbo jet crashing each month
- In CA no-one has died from Ebola despite the hysteria
- Average 30 people being killed in SF streets just crossing street



Policy & Governance:

Multiple partnerships, data sharing, performance driven policy, integrated land use/modes & streets



Customer Focused:

Integrated modes, routes, insurance, booking & payment in one system for all users



Scaling Up:

Market Analysis, ubiquitous dedicated spaces, new funding & transit partnerships, fleets mgmt



Opportunity:

Traffic safety, access & public health, economic competitiveness, energy/mobility independence

Shared Mobility Success: 4 key focus areas to get it right



Policy & Governance:
Multiple partnerships, data sharing, performance driven policy, integrated land use/modes & streets



Policy & Governance

Cities/Regions are in a “push and pull” on policy

Traditional



Trending



Future



Urban
Suburban
Rural

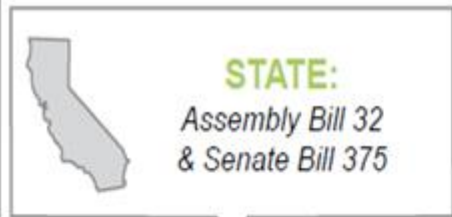
Urban Core

Urban Core
Suburban
Rural

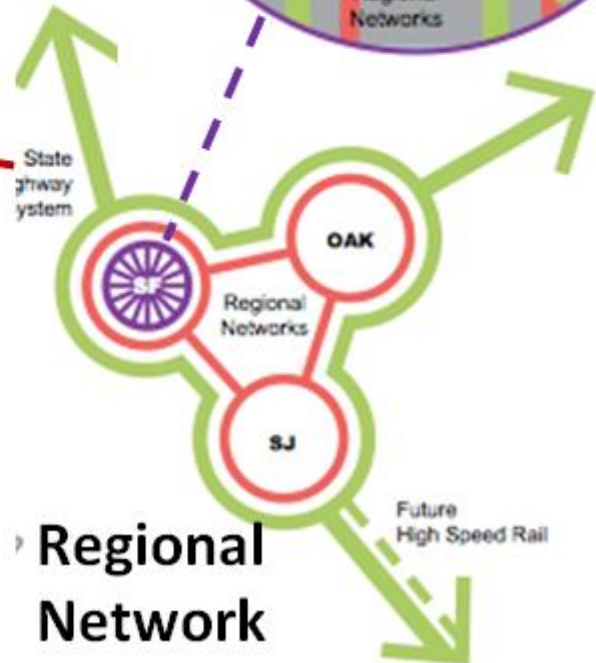
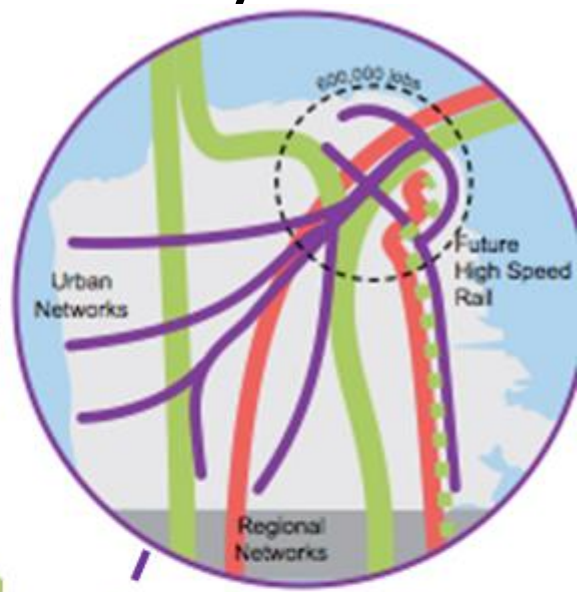
**Transportation
Policy**

Shifting of transportation norms

California Integrated Transportation Policy



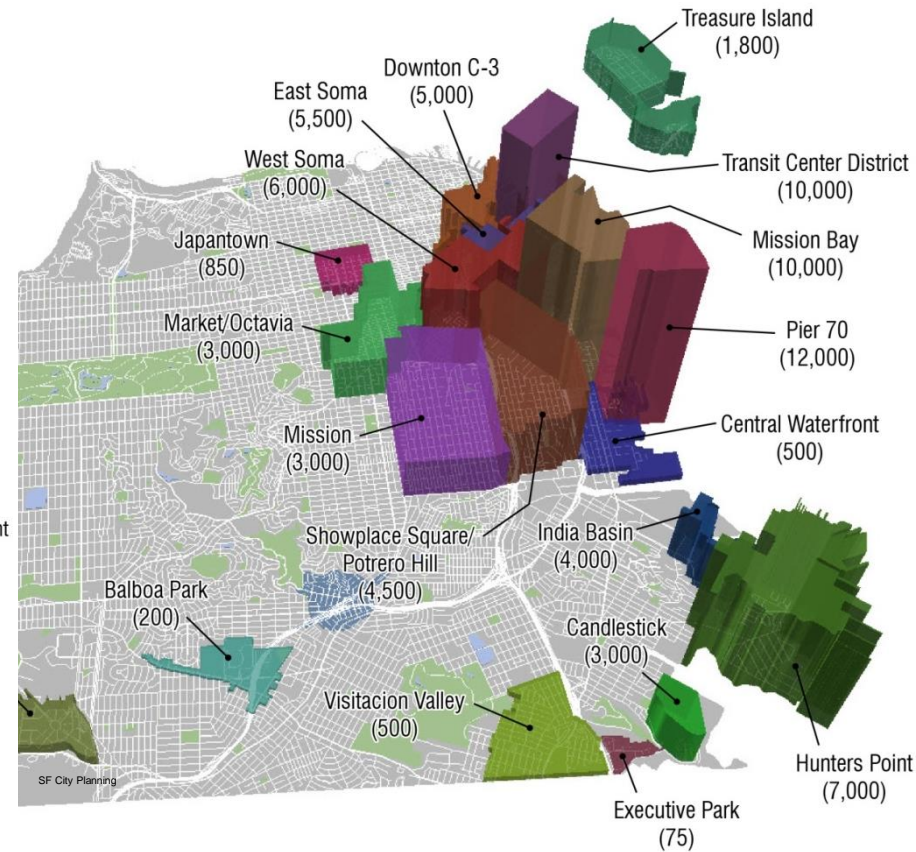
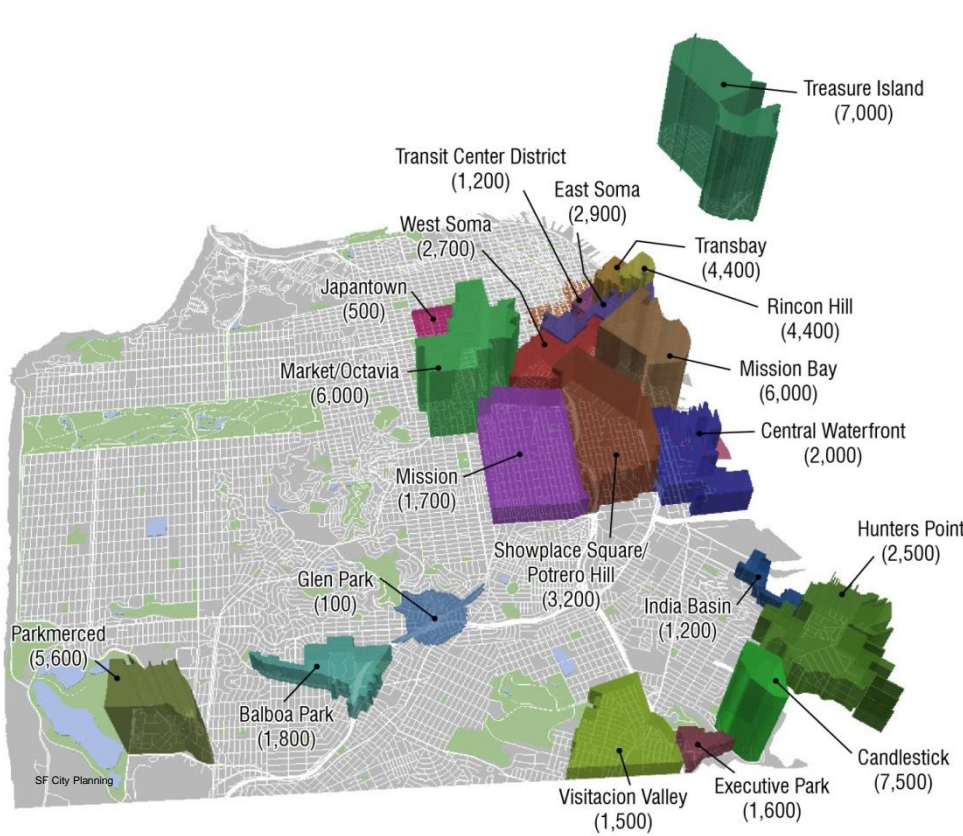
City Network



Transport Policy

Integration of transportation at all levels local, regional and state

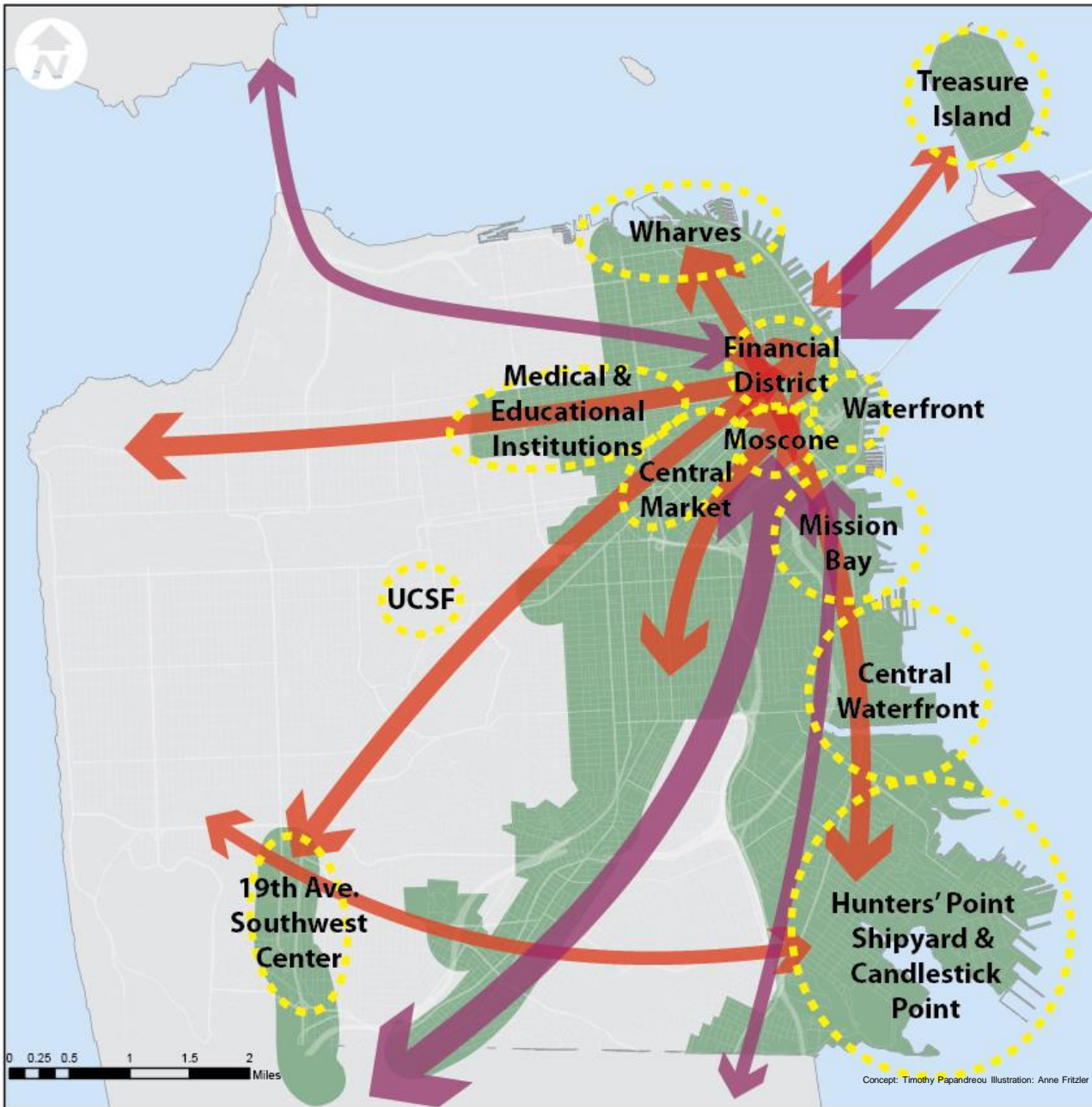
How do we grow sustainably? And lead the region?



The number of jobs is projected to grow from 568,724 in 2010 to over 760,000 in 2040. 4,600 housing units are under construction, with 43,000+ in the pipeline

Sustainable Communities

**Integration of land use, transportation, energy.
The next 25 years - 35% Increase in Jobs & Housing**

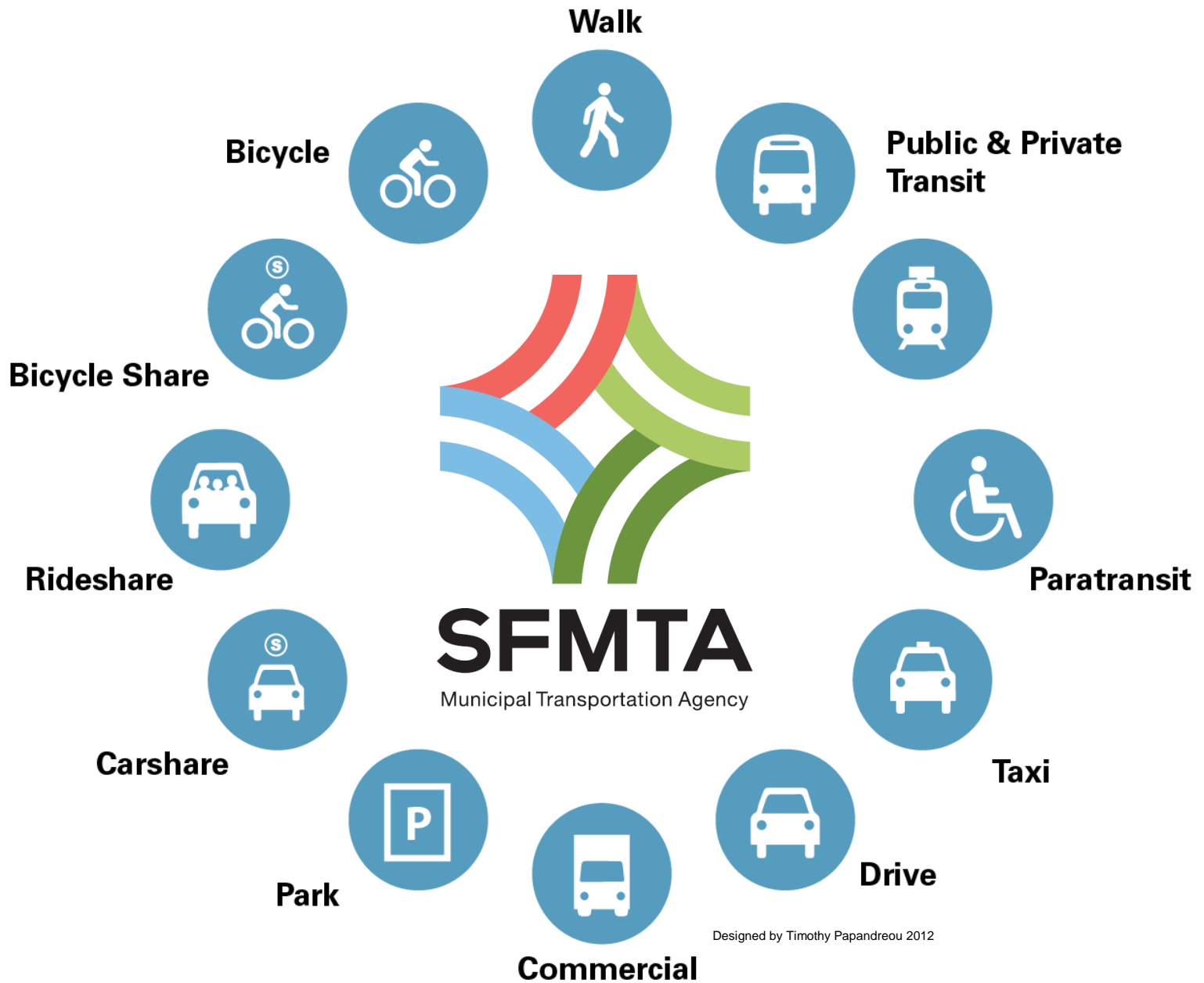


Significant regional growth from the East Bay and South Bay

Increasing pressure on BART's downtown station areas, Caltrain and Muni connecting service.

Priority Development Areas

New & existing travel demand markets



Designed by Timothy Papandreou 2012



Citizen led process

All-in-one Agency

Focus on People

Integrated land-use transportation policy is key



Mixed-Use Land Use Plans
Travel Demand Management
Parking & Traffic Management



Highway/
Freight
Network



Local &
Regional
Transit
Network



Walkable
Streets & Safe
Intersections,
Public Spaces



Bicycle
Network &
Facilities



Shared Use
Network
Car/Bike/Taxi

Policy
Integration

Fundamental to support economic, community
environment outcomes



Designed by Timothy Papandreou 2012

Very high High Medium Low Low Medium High Very high



Integration Modal benefits analysis inform investment priorities

Transit Oriented Communities +

= Cascading Mode Shift Effect

Demand management and vehicle sharing programs



Car/bike/scooter sharing, taxi demand grows

Transit reliability and frequency programs



More comfortable bicycle facilities = more transit capacity

Bicycling infrastructure, facilities & programs



More transit and bicycle trips = more walking and more economic development

Walking infrastructure, facilities & programs



Policy Integration

Virtuous Cycle of Integrated Investments creates balanced mode share

Leverage agreements to manage parking supply



Candlestick/Hunters Point Shipyard



Park Merced



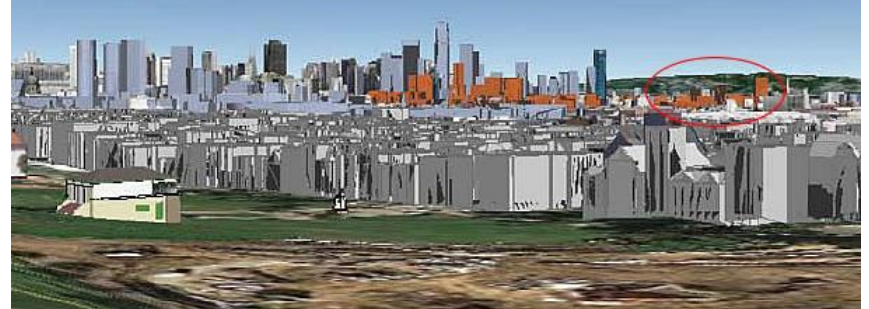
Treasure Island



California Pacific Medical Center



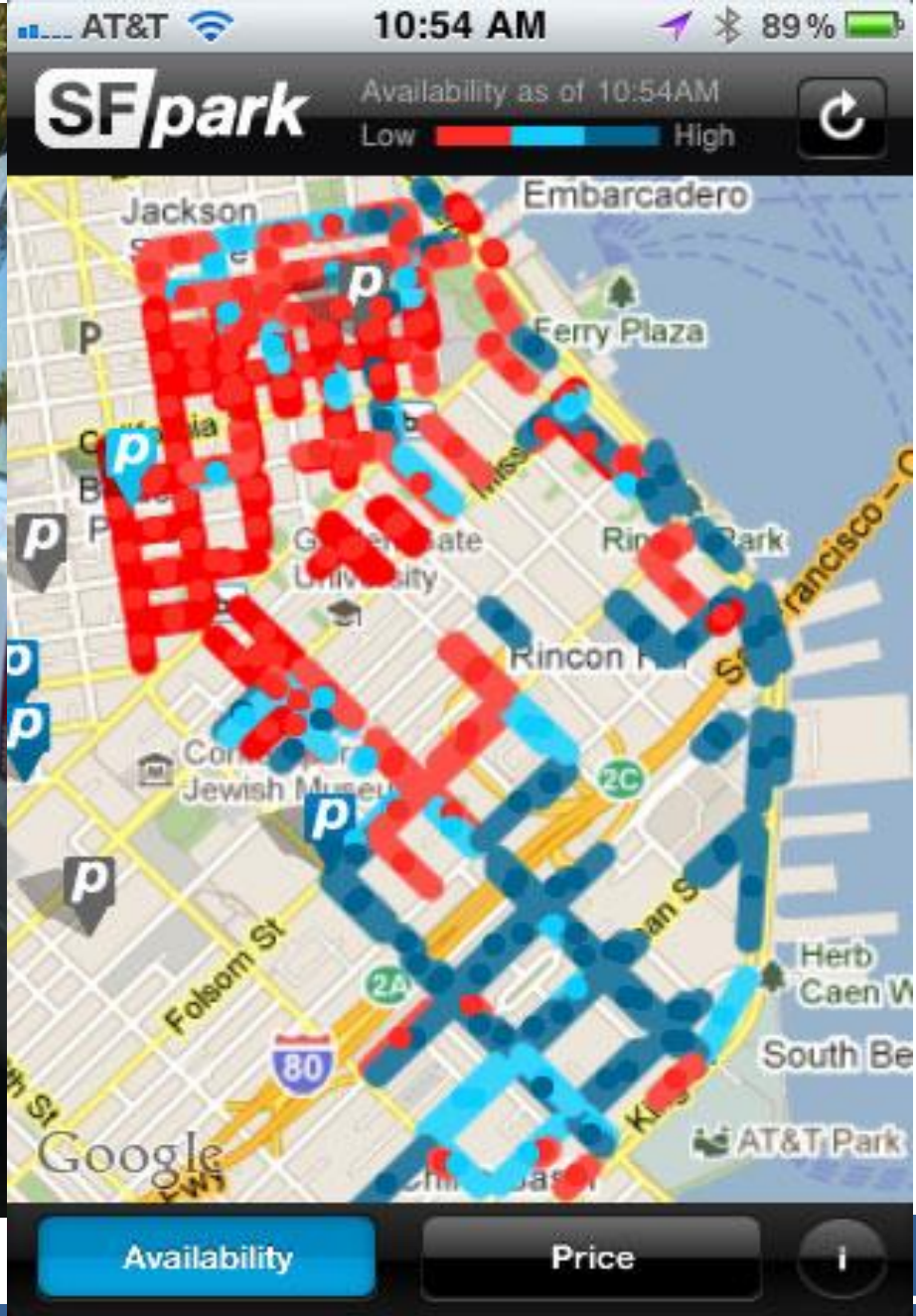
Transit Center District



Central SoMa

Development
Agreements

Leverage agreements to pay for transportation



Parking Management SFpark

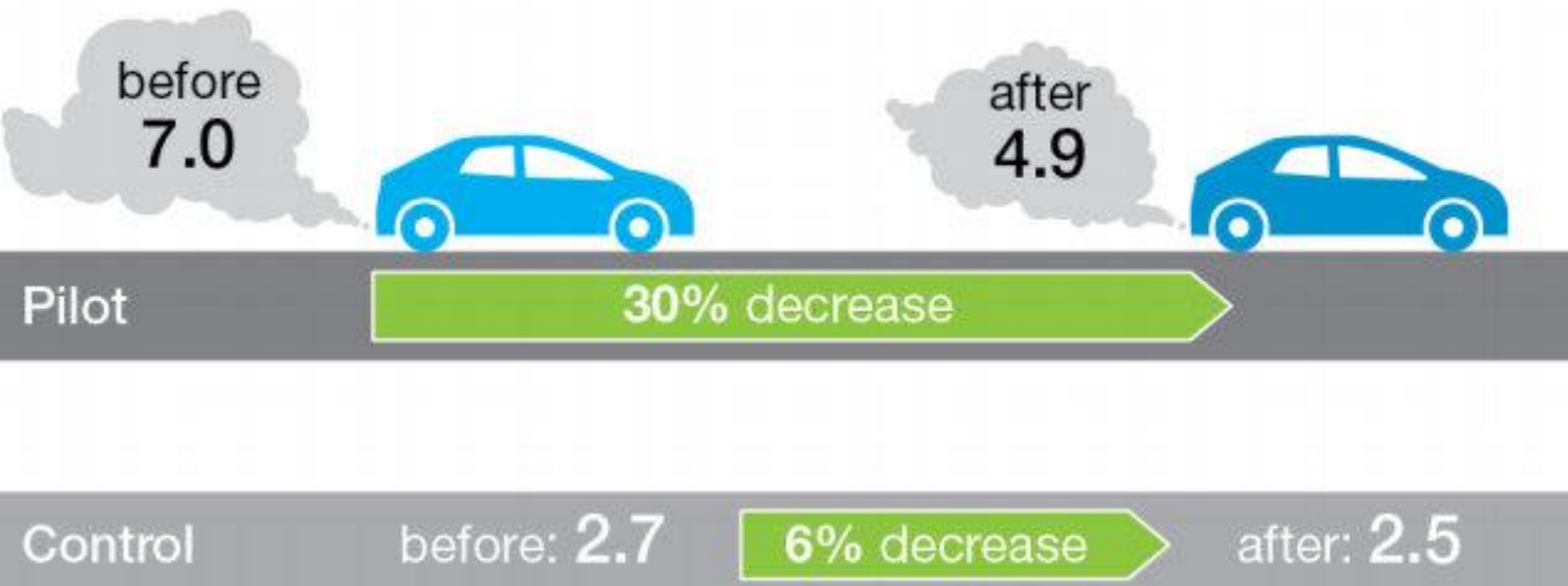
Transport Strategies

Parking Demand Management

Daily greenhouse gas emissions (metric tons)

Before vs. after

Pilot vs. control areas | Weekdays 9am to 6pm



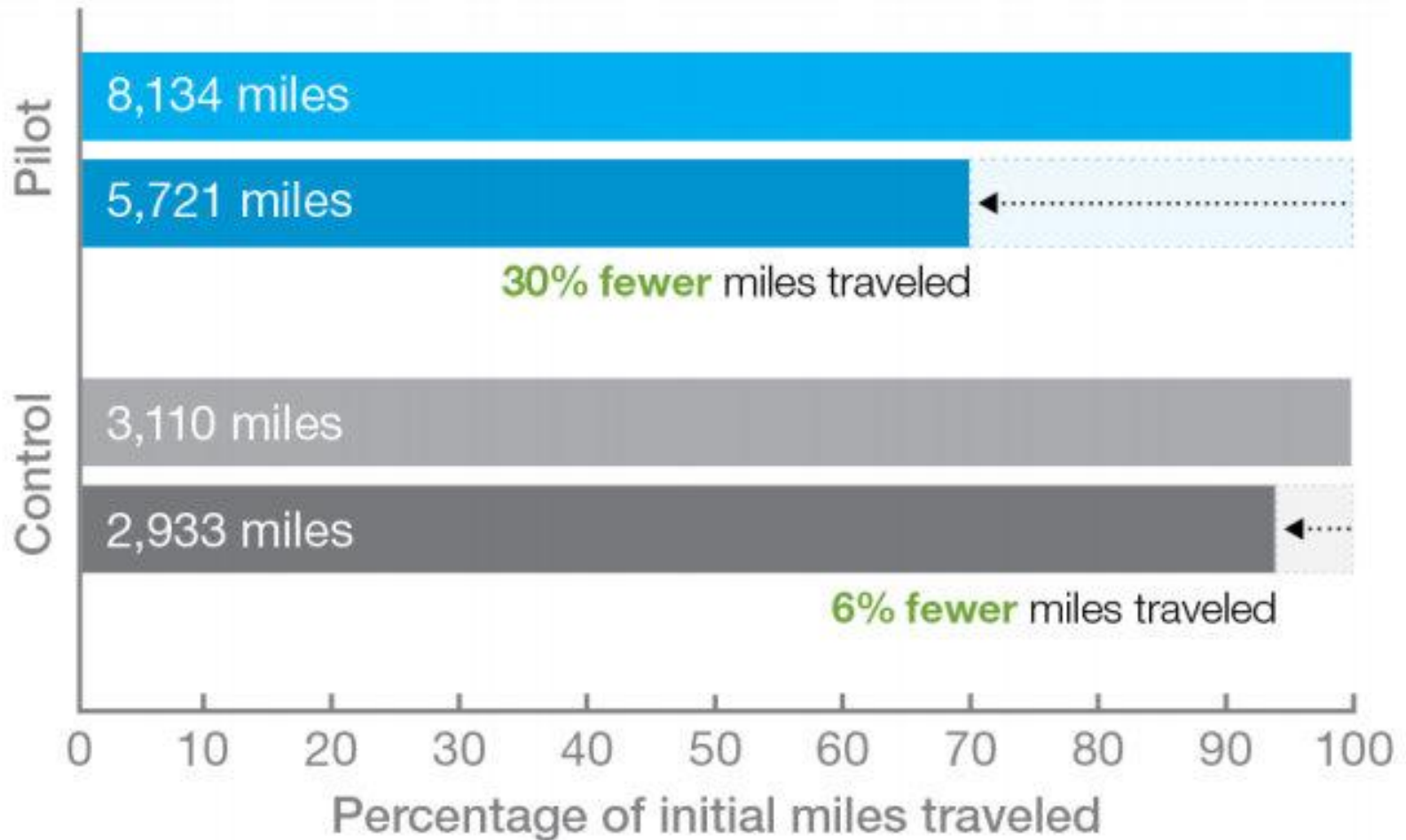
Transport
Strategies

Parking Demand Management reduced GHGs

Daily vehicle miles traveled

Before vs. after

Pilot vs. control areas | Weekdays 9am to 6pm





**Transport
Trends**

Transit is backbone but getting overwhelmed

Long-term Transit Vision

Upgrade the core capacity Lines



- Multimodal Hub
- Historic Network
- Local Network
- Key Transit Corridor
(high frequency, high capacity)
- Core Capacity Line
(high frequency, high capacity, high speed)
- Regional Rail Line
- Regional Ferry Line
- Regional Bus Line

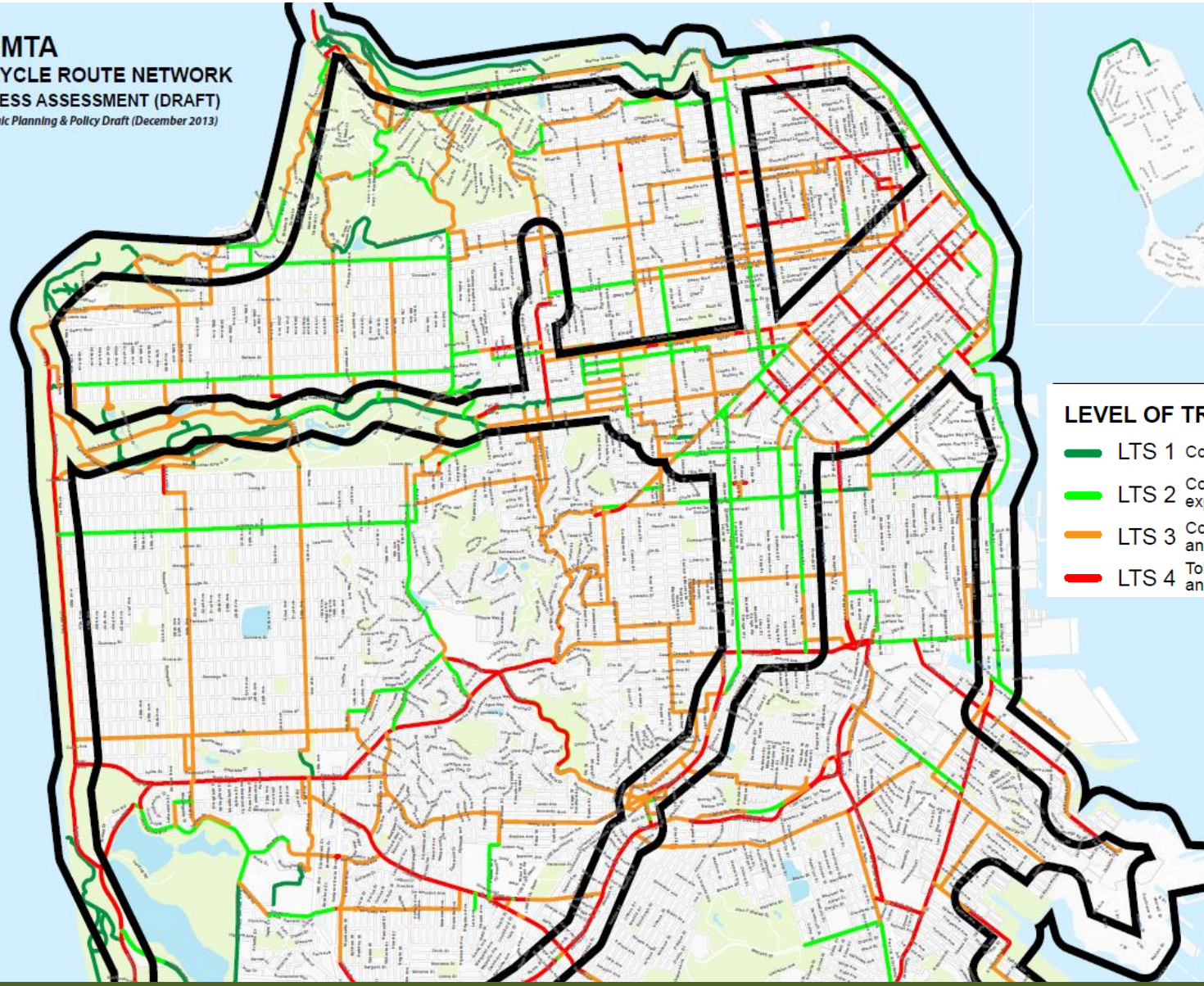
DRAFT



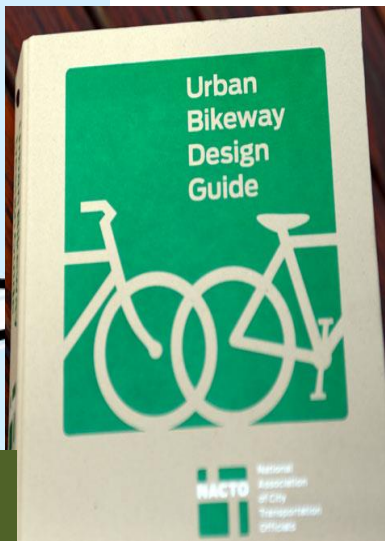
**Transit
Strategy**

**Mid Term: Priority Network Enhancements
Pilots to test effectiveness**

**SFMTA
BICYCLE ROUTE NETWORK
STRESS ASSESSMENT (DRAFT)**
Strategic Planning & Policy Draft (December 2013)



- LEVEL OF TRAFFIC STRESS**
- LTS 1 Comfortable for all user groups
 - LTS 2 Comfortable for most adults, experienced children & youths
 - LTS 3 Comfortable for intermediate and experienced adults
 - LTS 4 Tolerated only by the "strong and fearless"



Only 10% of network comfortable & connected

LTS 1 Everyone feels comfortable to ride

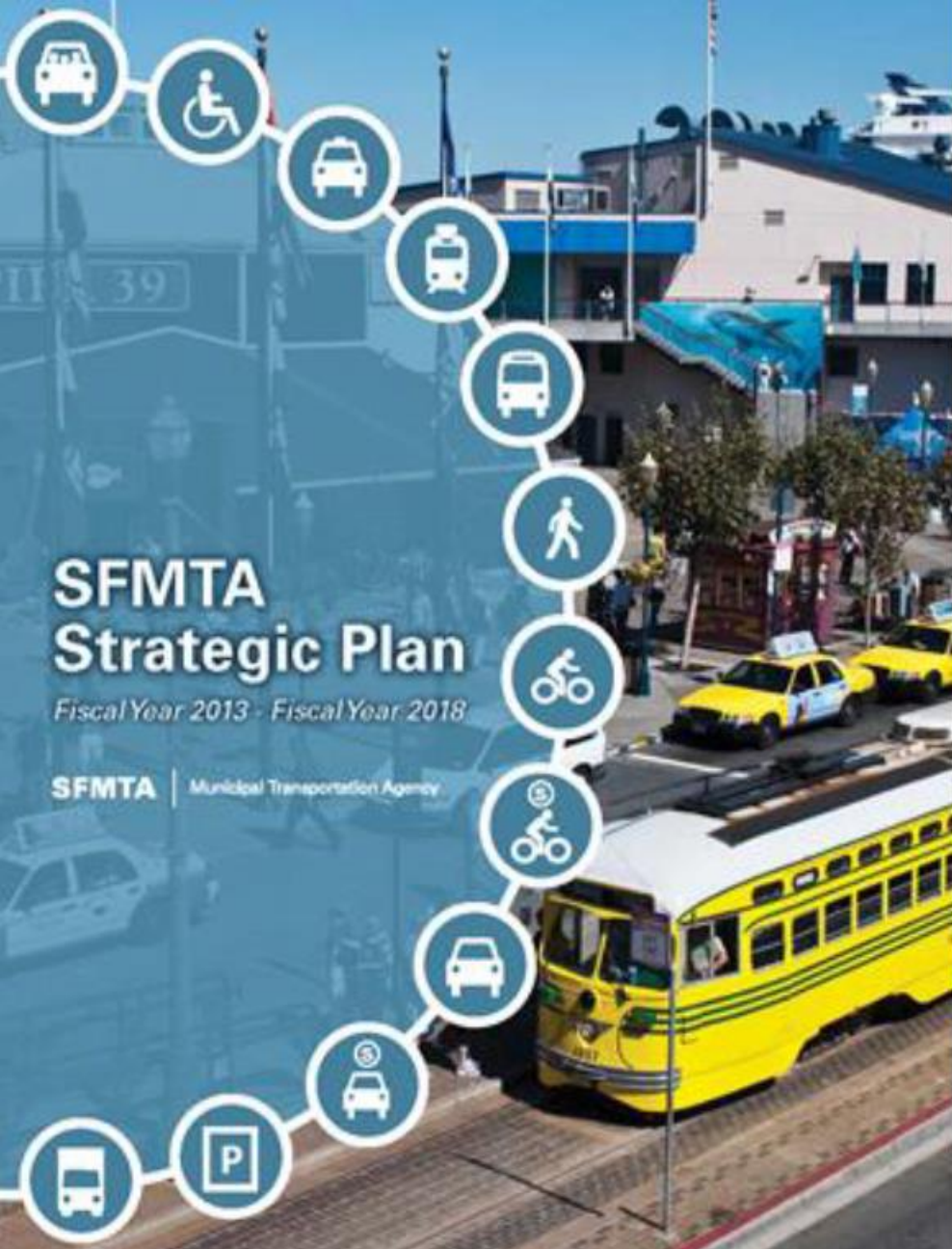


LTS 3 "Enthusied and Confident" will ride

LTS 2 Adults feel comfortable to ride



LTS 4 Only "Strong and Fearless" will ride

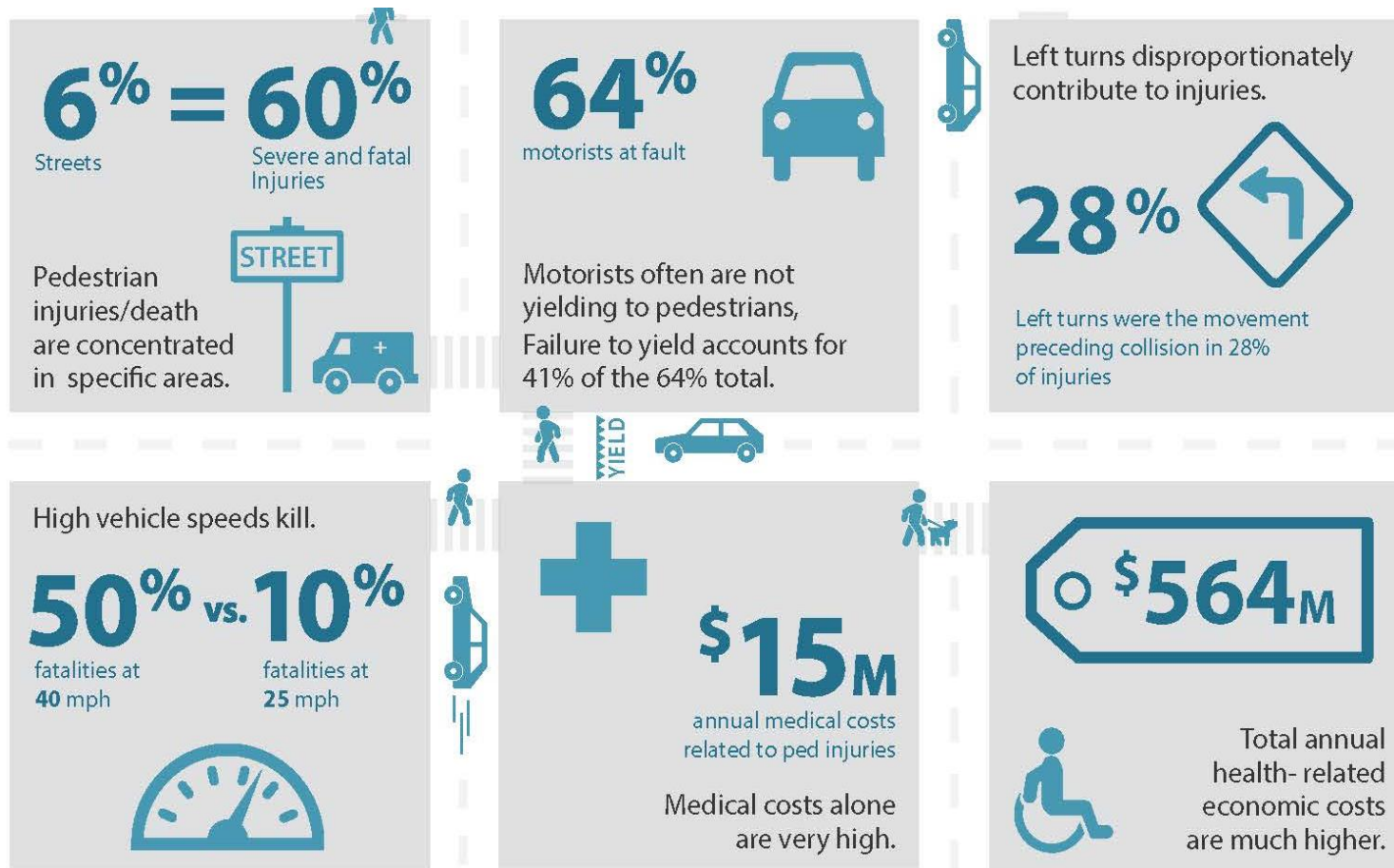


SAFE, RELIABLE AND AFFORDABLE TRANSPORTATION
MAYOR'S TRANSPORTATION TASK FORCE
2030

CITY AND COUNTY
OF SAN FRANCISCO



Walk First Prioritizes the Walking Projects that support Vision Zero



**Injury statistics based on analysis of California Highway Patrol SWITRS data, 2007-2011, by SFDPH.*



Through Vision Zero SF we commit to working together to prioritize street safety and eliminate traffic deaths in San Francisco by 2024



Create a traffic safety culture for city residents, workers & visitors

As people make mistakes while using our streets the result is not serious injury or death

Vision Zero High Injury Network: San Francisco, California (SWITRS 2008- 2012)

High Injury network with
Pedestrian, Bicycle, Transit &
Vehicle collision data

12% of street miles*

Severe/Fatal Injuries:

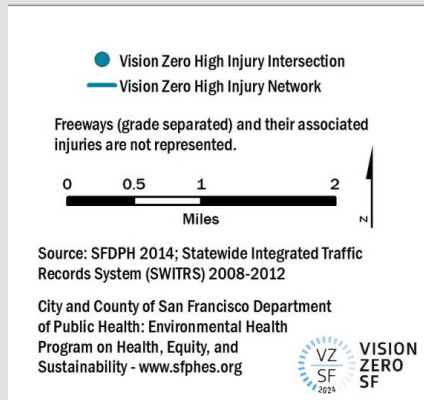
76% People on Motorcycles

74% People Riding Bikes

72% People Walking

70% People in Vehicles

* *non-freeway*




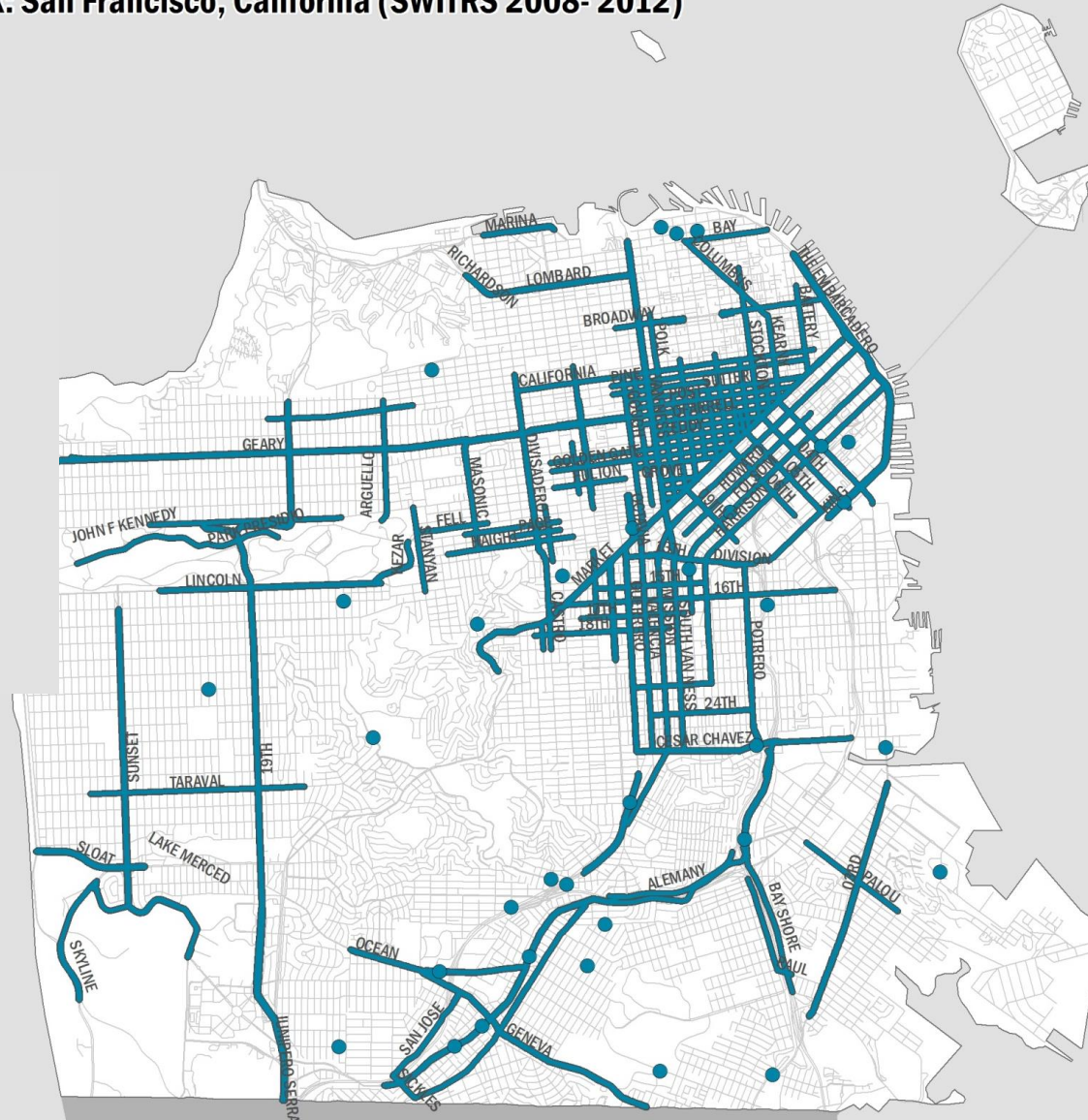
● Vision Zero High Injury Intersection
— Vision Zero High Injury Network

Freeways (grade separated) and their associated injuries are not represented.

0 0.5 1 2
Miles

Source: SFDPH 2014; Statewide Integrated Traffic Records System (SWITRS) 2008-2012

City and County of San Francisco Department of Public Health: Environmental Health Program on Health, Equity, and Sustainability - www.sfpbes.org



Customer Focused:
 Integrated modes, routes, insurance, booking & payment in one system for all users



Driving + Public Transit + Shared Use Mobility Choices

Privately-Owned Vehicles



Public Transit, Rail, Bus, Ferry



**Regional & Intercity
Services: Rail, High-Speed
Rail, Air**



Shared Fleet Vehicles



**Employer Shuttles, Jitneys
Commercial Deliveries**



**Taxi, Limousine & Transportation
Network Companies**



**Transportation
Today**

Multiple modes, little or no integration



==



Transportation Today

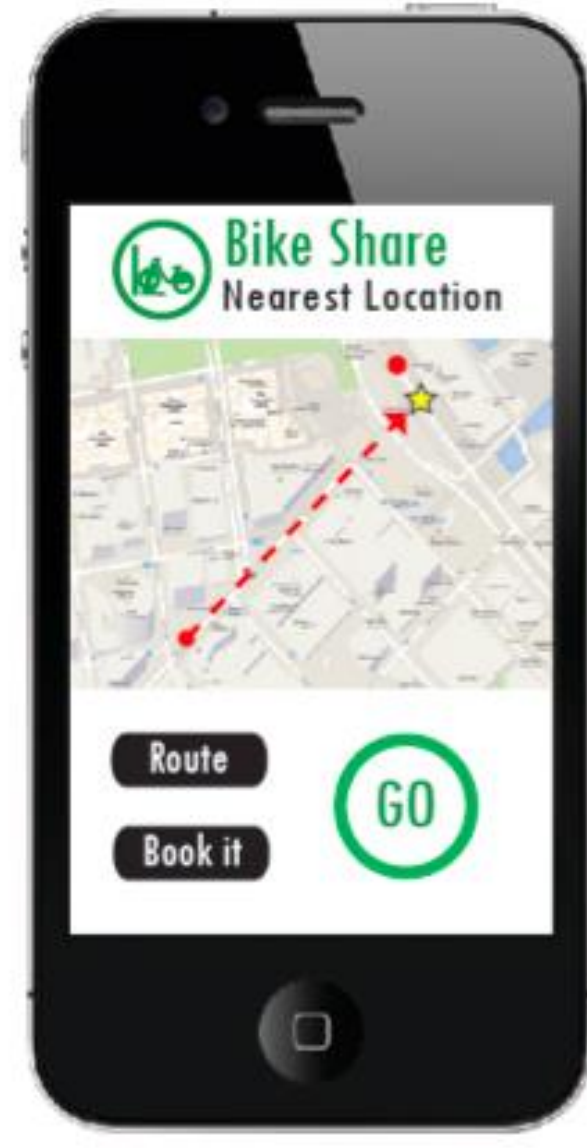
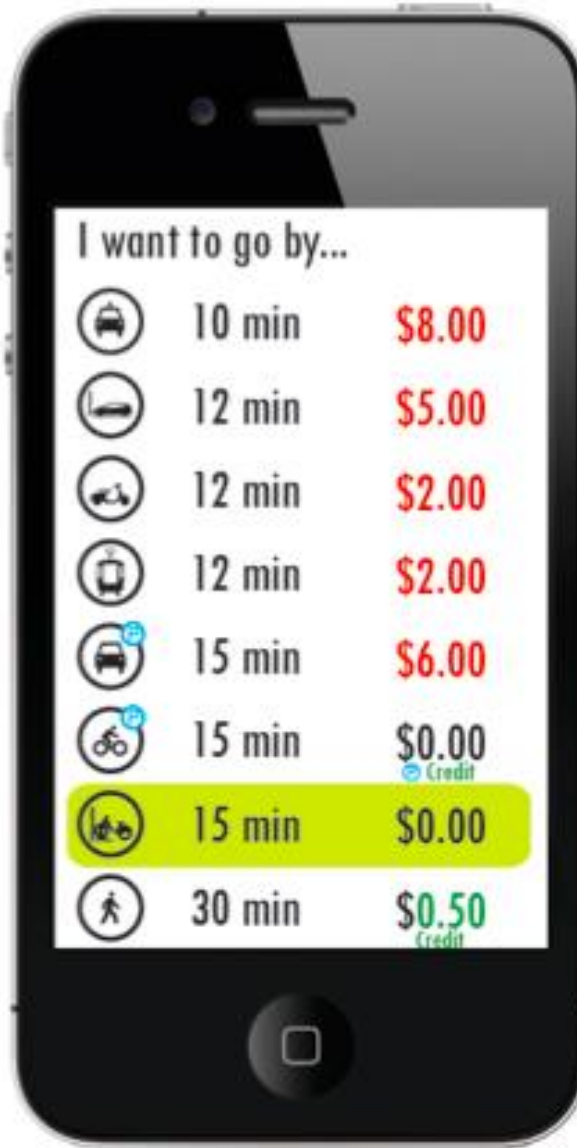
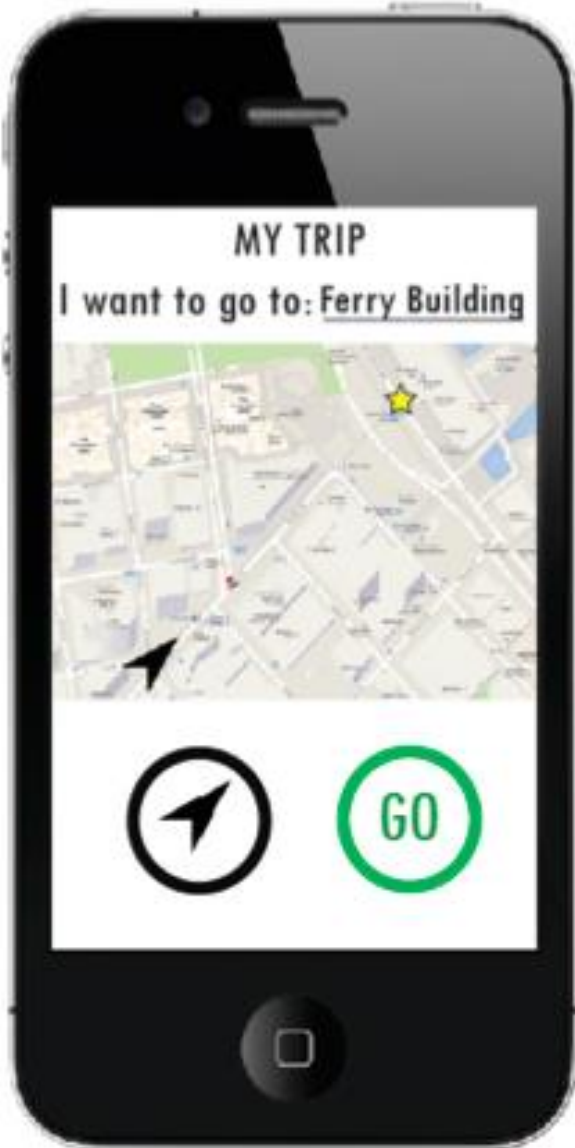
Multiple providers, agreements, insurance, payments, routes, booking = headaches!

Customer Experience



**Integration
Vision**

Integrated for the customer experience



Concept / Intellicy Paperman, Schaller, Miller Piv. Maria Murabit, Jack Murabit, Susan Bell

Mobility Minutes for a Mobility Menu

A complete customer focused experience



Scaling Up:

Market Analysis, ubiquitous dedicated spaces, new funding & transit partnerships, fleets mgmt





Estimated CA Private Auto Fleet Market Analysis Example

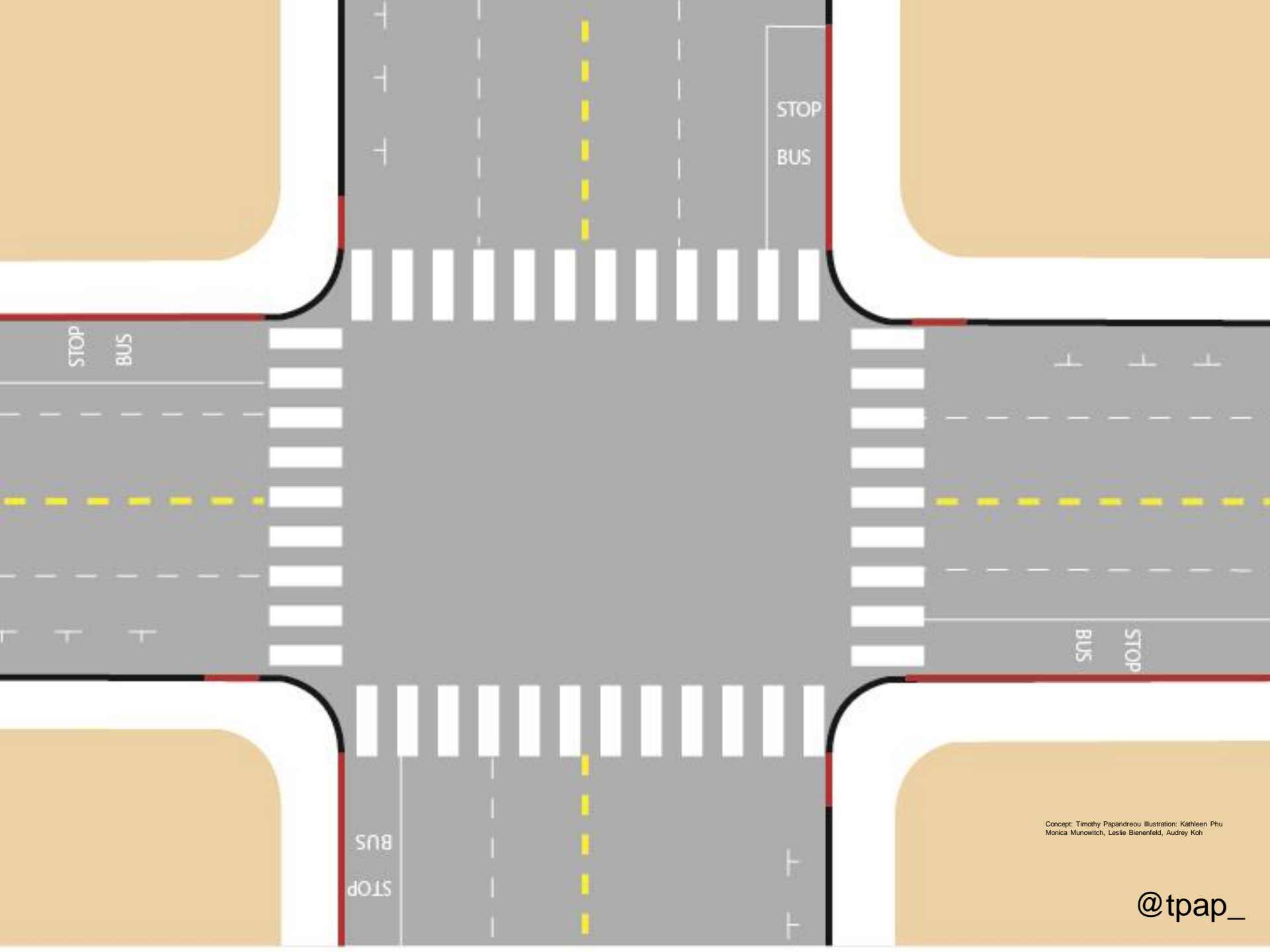
Est. Annual Private Operating costs of private vehicles
28 million vehicles X \$7,000 average = \$195 Billion

Est. Annual public operating costs of assets
street miles, signals, garage spaces etc. = \$15 Billion

Est. Annual Trips average 110 million X 365 days = 40 Billion

Est. Average cost per trip = \$5.00

10% Market Share for Shared Mobility is approx \$20B annually



STOP
BUS

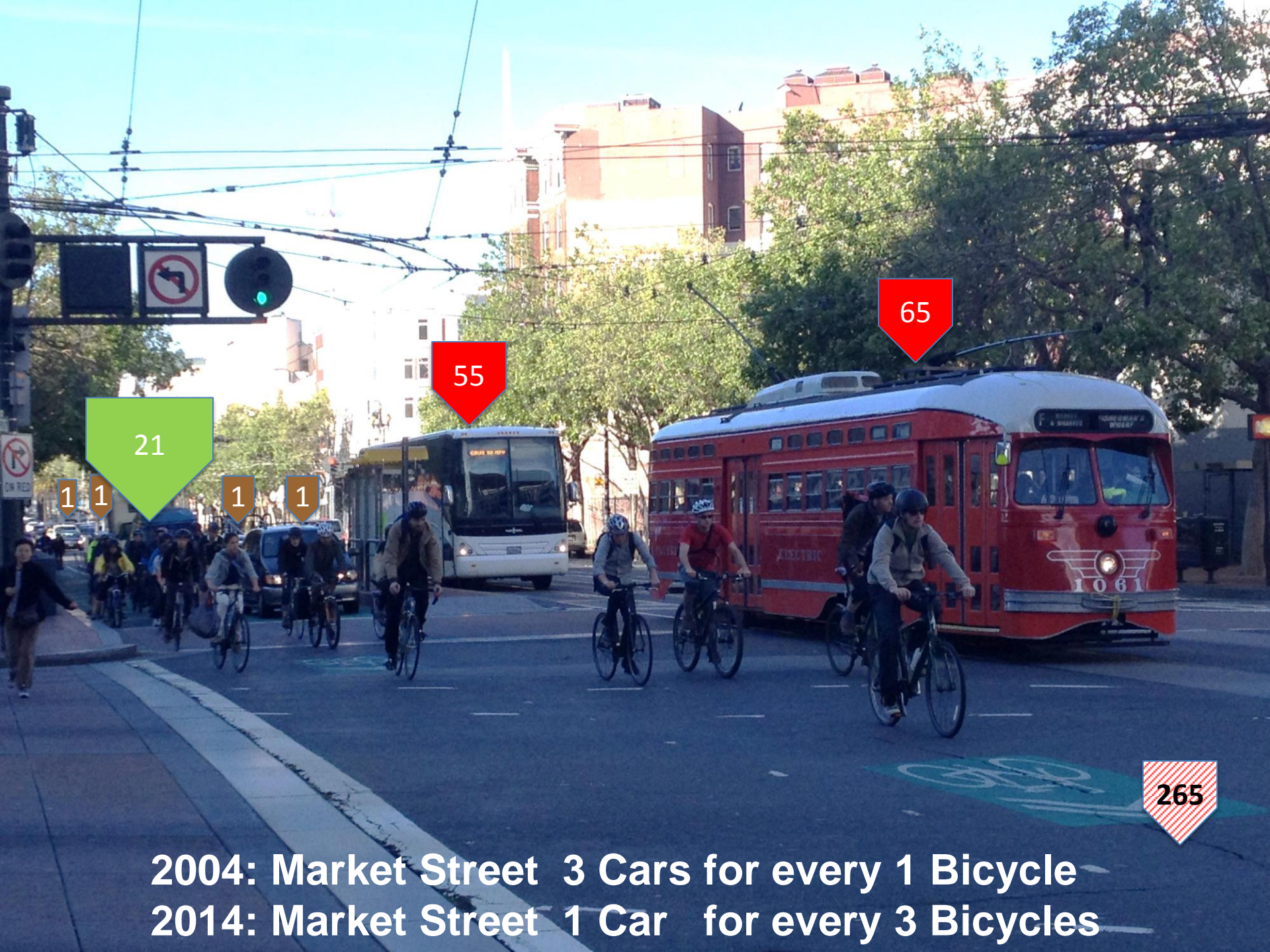
STOP
BUS

STOP
BUS

STOP
BUS

Concept: Timothy Papandreou Illustration: Kathleen Phu
Monica Munowich, Leslie Bienenfeld, Audrey Koh

@tpap_



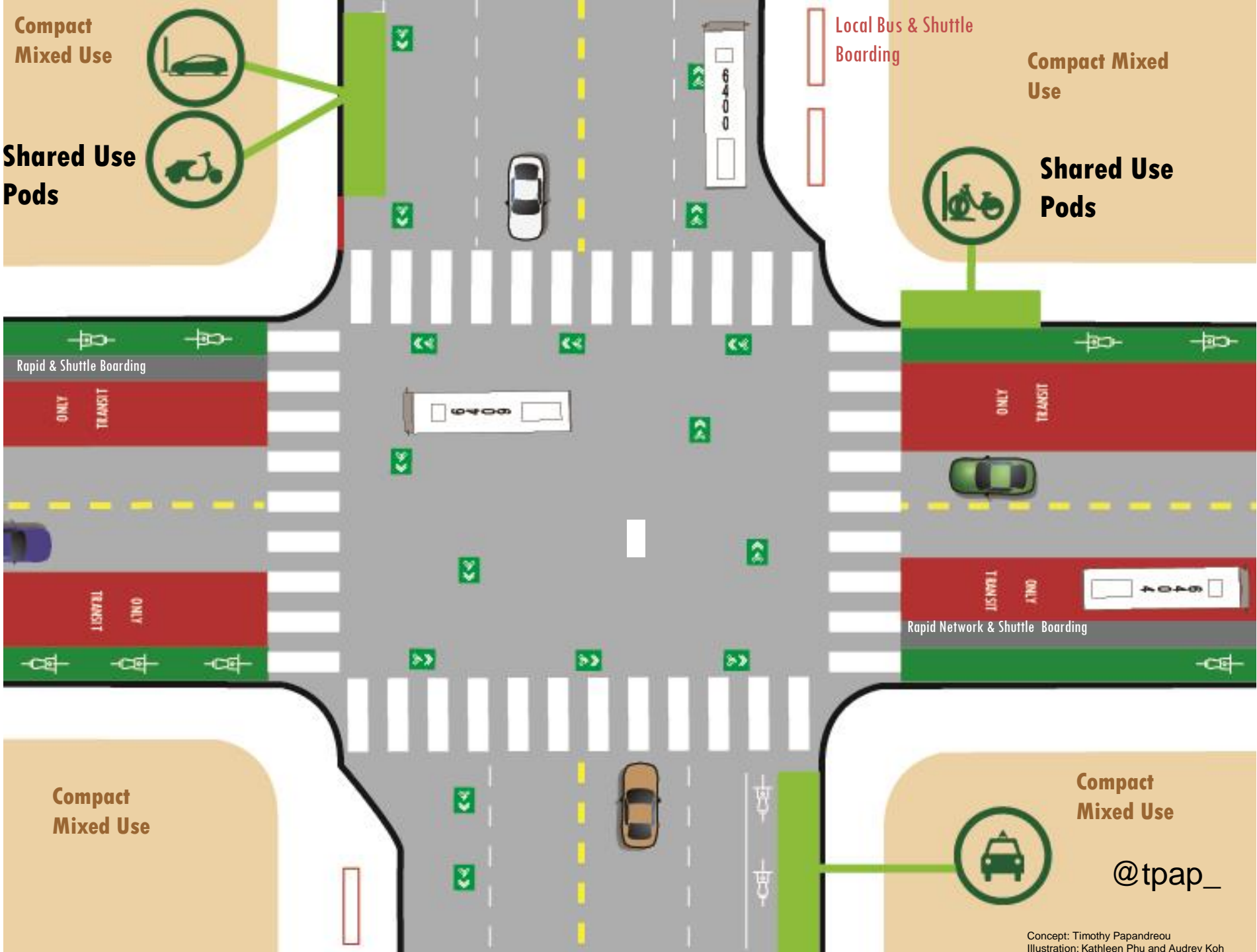
21

55

65

265

2004: Market Street 3 Cars for every 1 Bicycle
2014: Market Street 1 Car for every 3 Bicycles



Compact Mixed Use



Shared Use Pods

Local Bus & Shuttle Boarding

Compact Mixed Use



Shared Use Pods

Rapid & Shuttle Boarding

ONLY
TRANSIT



ONLY
TRANSIT



TRANSIT
ONLY

TRANSIT
ONLY



Rapid Network & Shuttle Boarding

Compact Mixed Use

Compact Mixed Use



@tpap_





Smart City

Redesign streets to focus on shared mobility tied to mixed use



Opportunity:

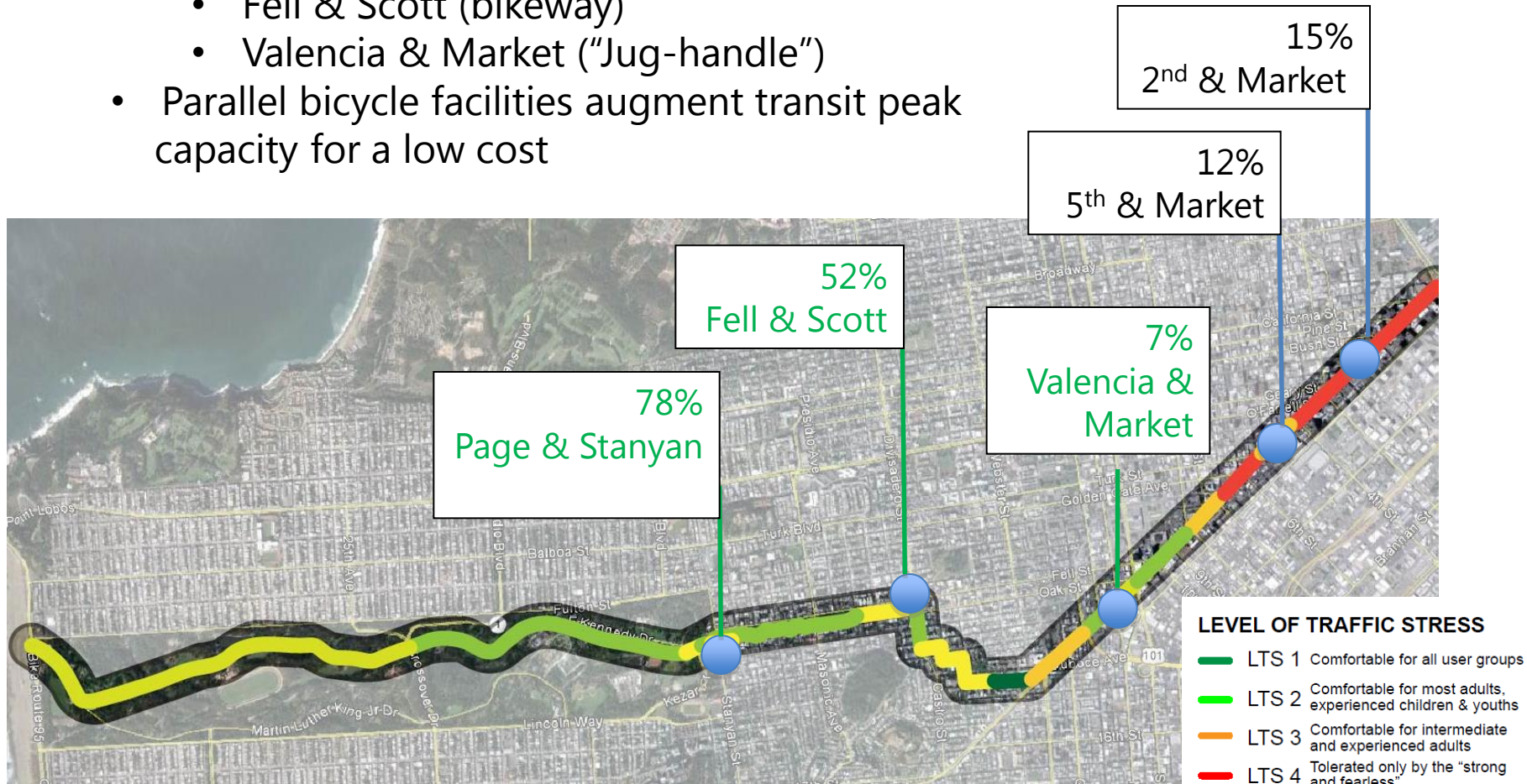
Traffic safety, access & public health, economic competitiveness, energy/mobility independence

- Strategic Plan: 10 miles of bike lanes a year
- 100% growth in bicycle trips since 2006
- \$15 million investment in network resulted in bicycle mode share from 1.9% to 3.5%
- Market St 3:1 Bicycle/Car ratio (was 1:3 in 2004)

Gap Closures- An Effective Return on Investment



- Bicycle improvements made between 2011-2013 at:
 - Page & Stanyan (signal)
 - Fell & Scott (bikeway)
 - Valencia & Market (“Jug-handle”)
- Parallel bicycle facilities augment transit peak capacity for a low cost



33% average on corridor, with even higher growth at locations with improvements



**Pedestrian
Strategy**

**N'hood parklets bring economic benefits to
small businesses**



6th/Market Before



**VISION
ZERO
SF**

Through Vision Zero SF we commit to working together to prioritize street safety and eliminate traffic deaths in San Francisco by 2024



6th/Market After



**VISION
ZERO
SF**

Through Vision Zero SF we commit to working together to prioritize street safety and eliminate traffic deaths in San Francisco by 2024

Bean & Tea Leaf

MENS WEARHOUSE
Coffee Bean & Tea Leaf

MENS WEARHOUSE

MENS WEARHOUSE

ROSS

ROSS

SHOP ABOUT
ANY TIME

b

People walking on the sidewalk, including a woman in a beige jacket and a man with a backpack.

BayAreaBikeShare
A woman in a beige cap and shirt is sitting on a teal bicycle, looking at a map.

BayAreaBikeShare
A row of teal bicycles docked at a station with grey racks and white bollards.

FACTS: POLK STREET

How do people arrive on Polk Street and what do they spend shopping per week?

80% walk, bike or take transit

Pedestrians, transit riders, and people on bikes spend more per week than motorists.

\$82.02



\$90.16



\$122.62

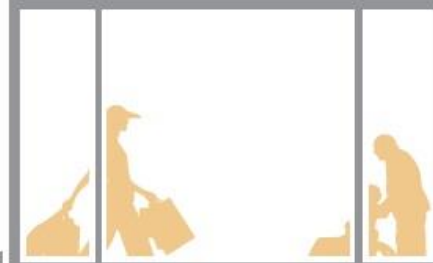


\$130.12



Cafe

POLK STREET



Based on data from SF Municipal Transportation Authority survey.
*Three percent of respondents answered "other" and two percent did not reply.

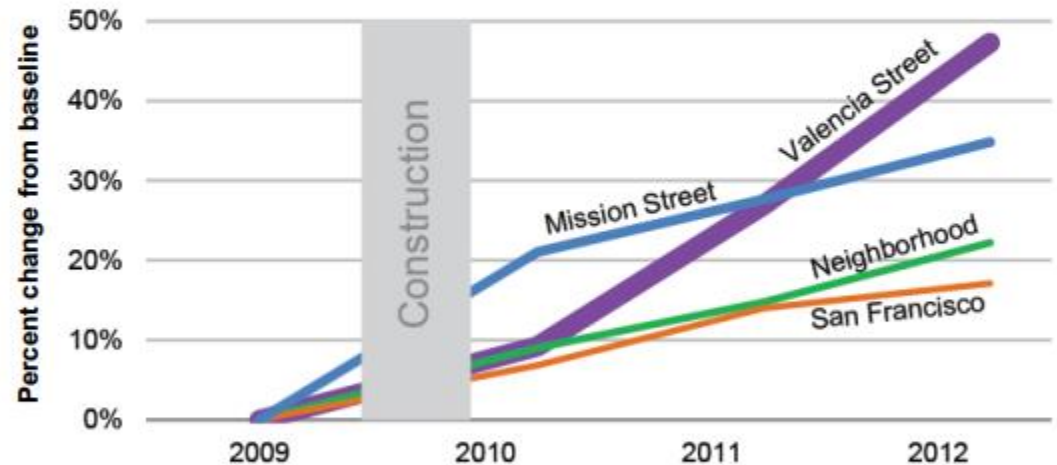
Complete
Streets

n'hood economic benefits

Valencia Streetscape Project - 2010



Retail Sales Tax Growth
Valencia and Comparison Sites



Complete
Streets

Economic Benefits are higher for complete streets



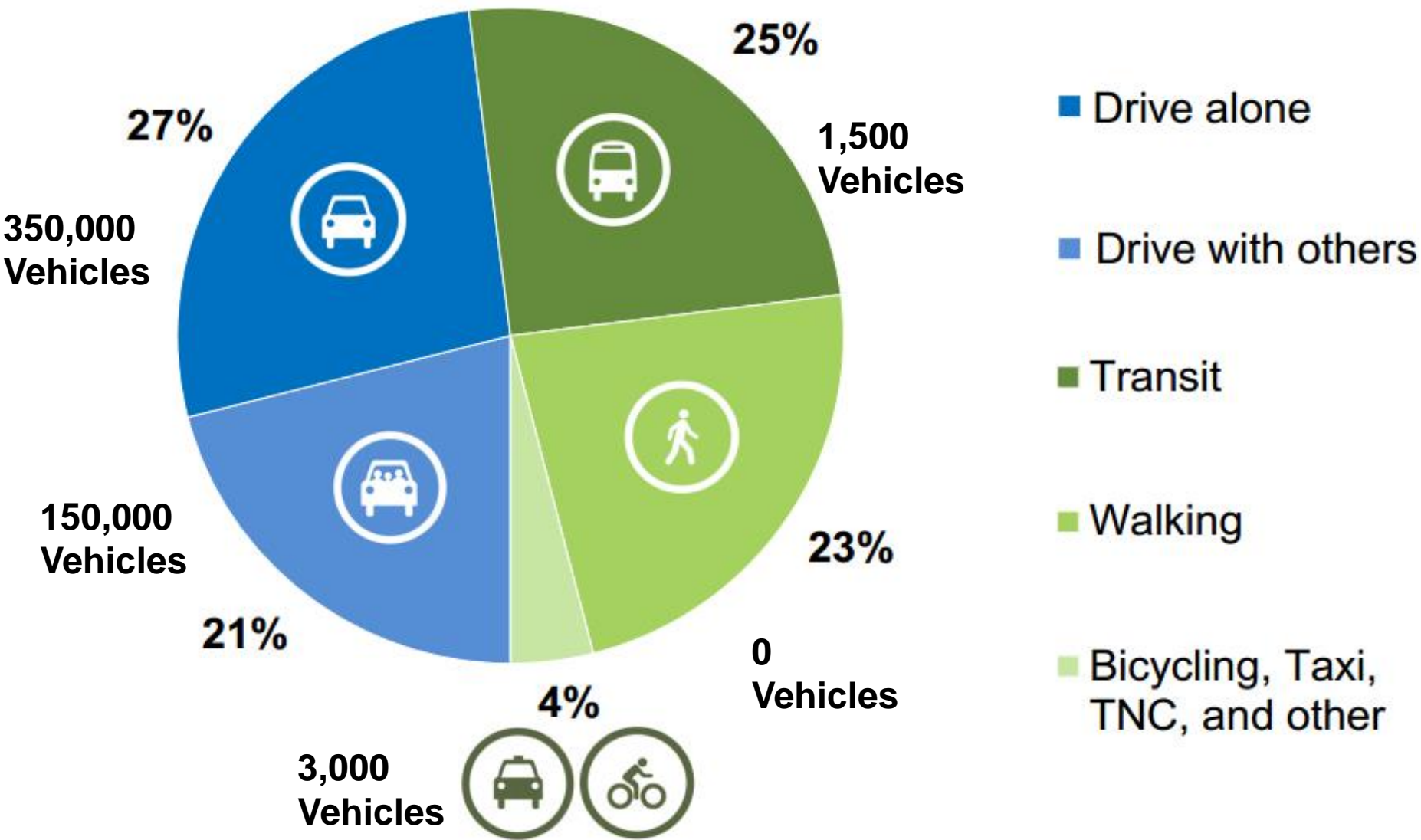
SFMTA
Municipal Transportation Agency

**Complete
Streets**

Priority for Transit, Walking and Bicycle first

Shared Fleets move more people with less vehicles

2014 Survey All Trips to, From & Within San Francisco



Shared Mobility is used by more people more often

2014 Survey All Trips to, From & Within San Francisco



20% of San Franciscans use taxis at least monthly



25% of San Franciscans use TNCs at least monthly



6% of San Franciscans use carshare at least monthly



4% of San Franciscans have tried Bay Area Bike Share

Scaling up and across is essential to reduce auto trips

1.0
Public
Operators &
Information

1.2 Diversification
Private Operators &
Info providers

2.0 Consolidation of
Providers, Operators &
Data Aggregators

3.0 Mobility
Minutes for
local, regional,
international
travel

\$150 My City Plan
1000 city minutes

100 Rideshare min
100 Carshare min
400 Transit min
400 Bikeshare min
Walking Credits
Share Minutes

\$500 My Travel Plan
300 Flying minutes
700 City minutes

Concept: Timothy Papandreu

Are Mobility Anytime Minutes the next big trend....



Concept: Timothy Papandreu
Illustration: Kathleen Phu and Audrey Koh

**Mobility
On-Demand**

Integrated for the customer experience



timothy.papandreou@sfmta.com



Timothy Papandreou



@tpap_