



H O R I Z O N

Toward a Shared Future: Strategies to Manage Travel Demand

Perspective Paper #2

Horizon is exploring how economic, environmental, technological, and political uncertainties may create new challenges - or exacerbate existing ones - for the Bay Area over the coming decades.

H O R I Z O N

Futures Planning

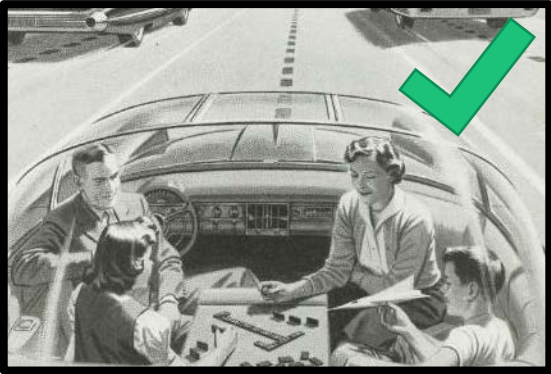
Perspective Papers

Project Performance

PLAN BAY AREA 2050

For more information, go to:
mtc.ca.gov/horizon

Perspective Papers



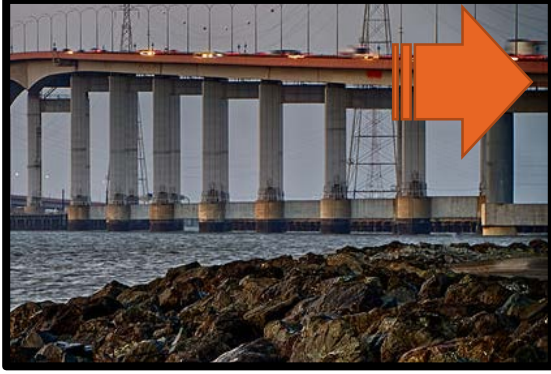
1) Autonomous Vehicles



2) Toward a Shared Future



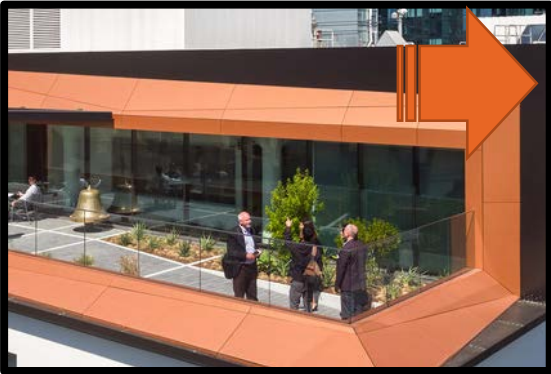
3) Regional Growth Strategies



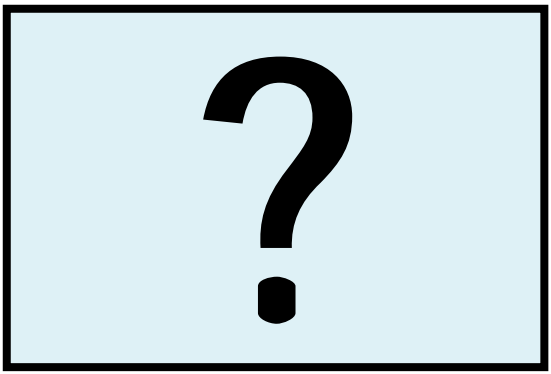
4) Crossings



5) Future of Jobs



6) Governance



More to Come?

The San Francisco Bay Area aspires to be:

Guiding Principles



AFFORDABLE

All Bay Area residents and workers have sufficient housing options they can afford - households are economically secure.



CONNECTED

An expanded, well-functioning transportation system connects the Bay Area - fast, frequent and efficient intercity trips are complemented by a suite of local transportation options, connecting communities and creating a cohesive region.



DIVERSE

The Bay Area is an inclusive region where people from all backgrounds, abilities, and ages can remain in place - with access to the region's assets and resources.



HEALTHY

The region's natural resources, open space, clean water and clean air are conserved - the region actively reduces its environmental footprint and protects residents from environmental impacts.

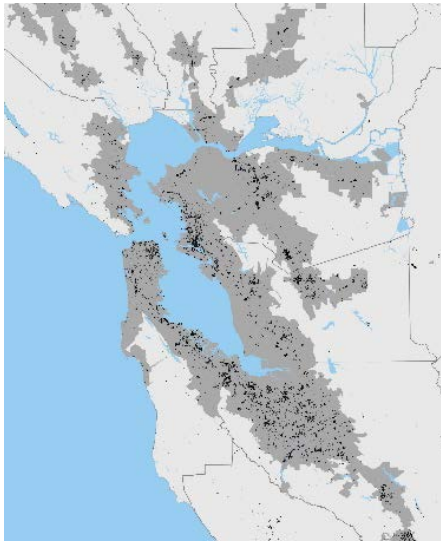


VIBRANT

The Bay Area region is an innovation leader, creating quality job opportunities for all and ample fiscal resources for communities.

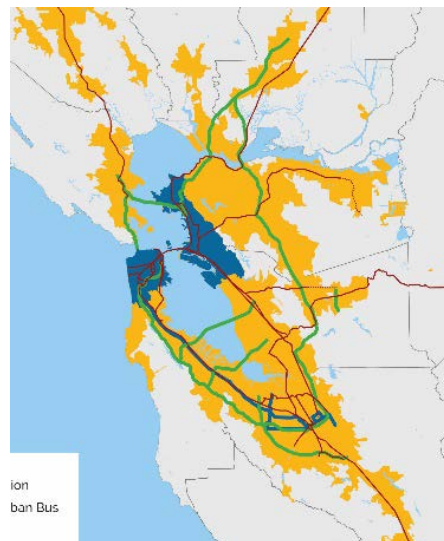
Perspective Paper #1: Autonomous Vehicle Priority Strategies

 Affordable



Housing
Opportunity
Sites

 Connected



Fair Pricing
Autonomous
Transit

 Diverse



Equitable
Outcomes

 Healthy



Vision Zero 2.0

 Vibrant



New Deal for
Mobility

Purpose of Perspective Paper 2

Develop “big picture” 2050 strategies for evaluation in Horizon’s *Futures*

Focus on reducing demand for vehicle travel

Inventory strategies based on worldwide scan and potential to manage travel demand

Create strategies addressing one piece of the “planning puzzle,” recognizing complementary investments and policies are needed to ensure success

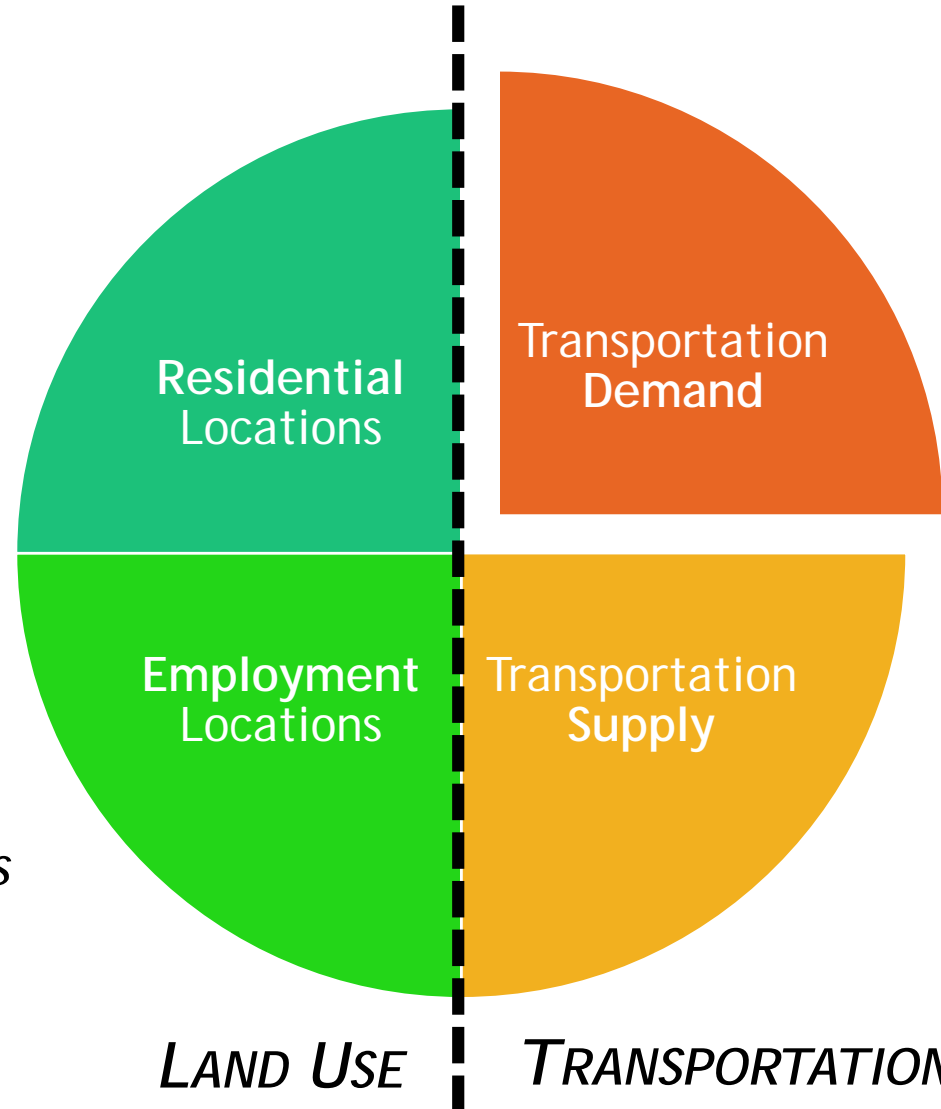
Factors Contributing to Bay Area Congestion



*Perspective Paper #3
Regional Growth Strategies*



*Perspective Paper #5
Future of Jobs*

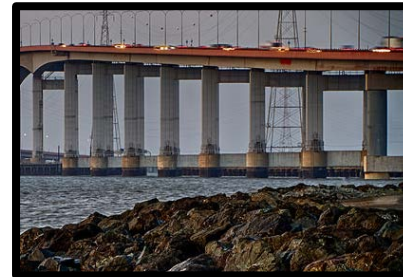


Today's Presentation

**Perspective Paper #2
Towards a Shared Future**



Transformative Projects + Crossings



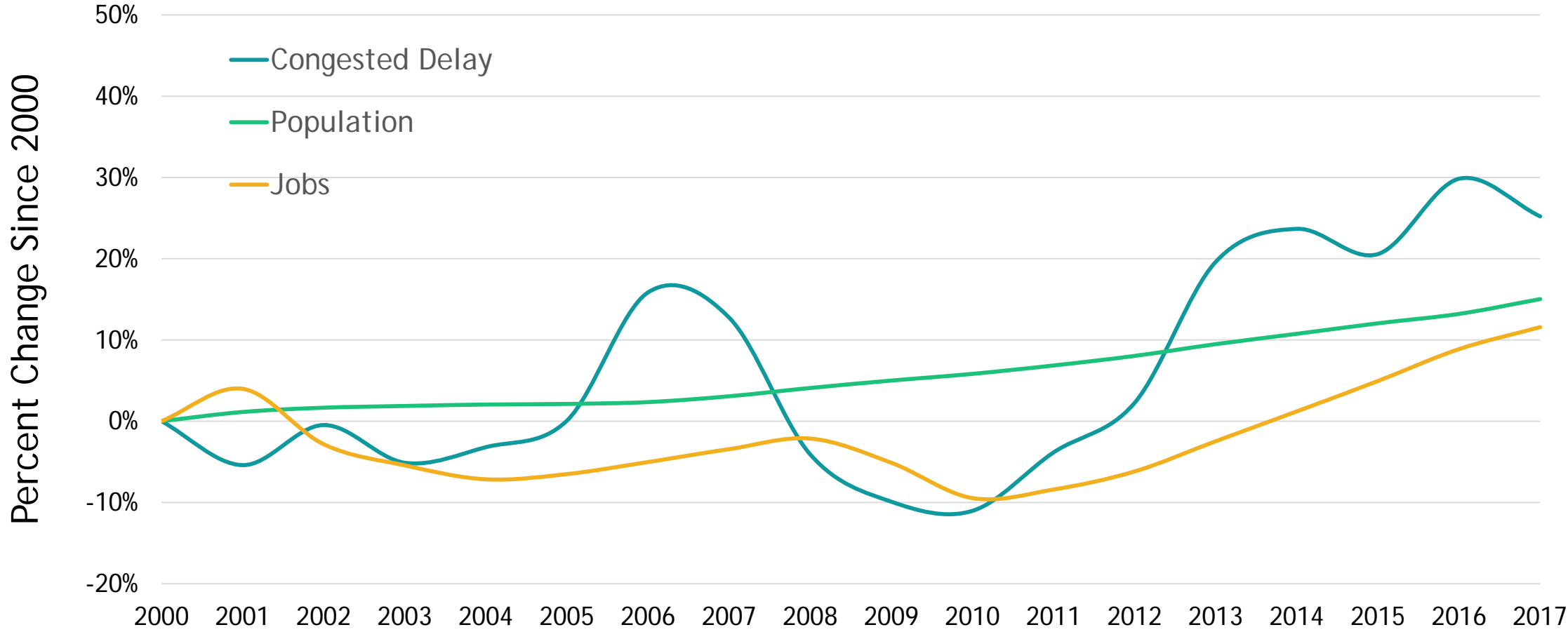


The sales pitch



The reality

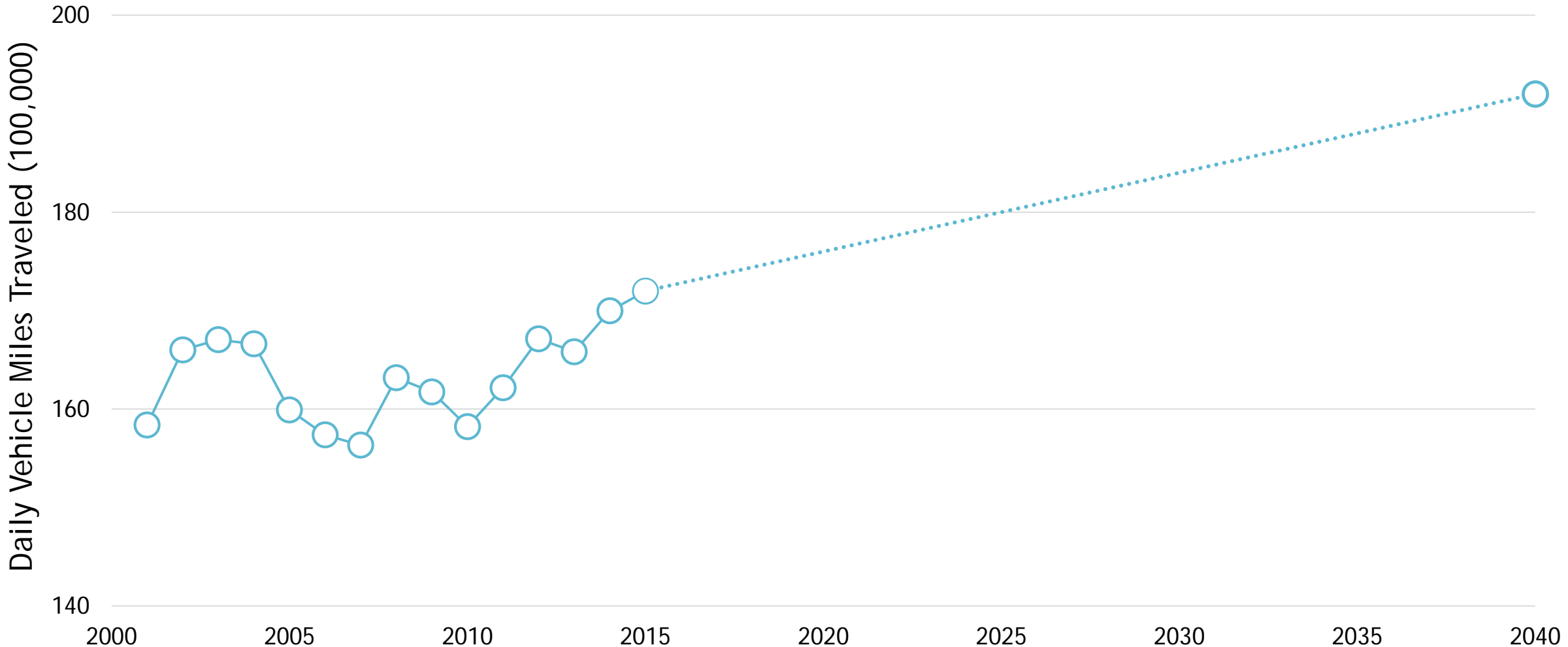
Congested delay has grown 25% since 2000



Current Programs



VMT is expected to continue growing even under Plan Bay Area 2040



Examples from Around the World



Perspective Paper #2: Travel Demand Reduction Strategies

 Affordable
 Diverse



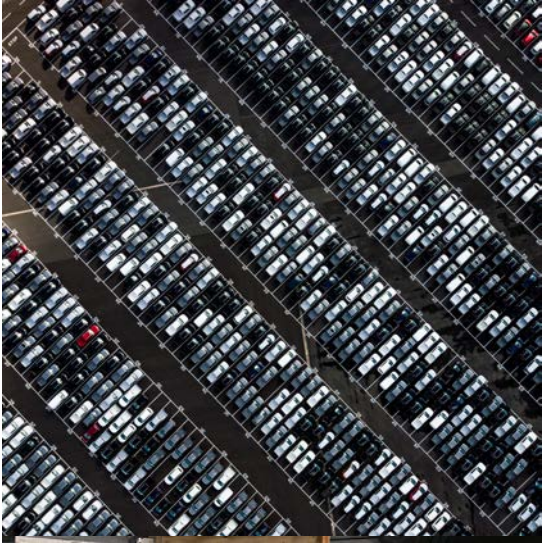
Free Feeder Services
to High Capacity
Transit

 Connected



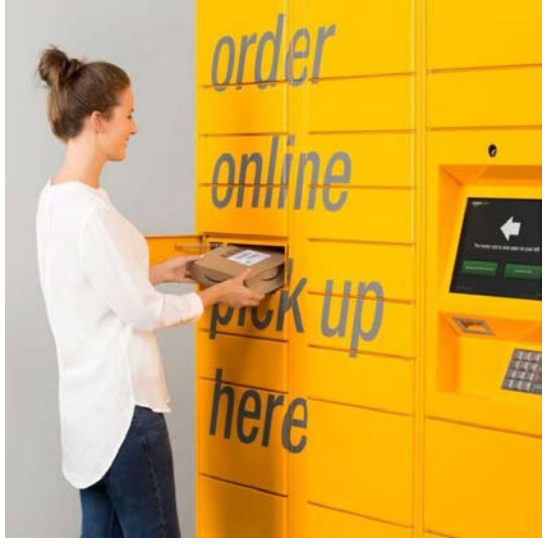
Mobility as a Service
Ridesharing and Teleworking
Tolling All Bridges & Highways
Cordon Pricing

 Healthy



Required TDM for New
Development
Parking Fee/Tax

 Vibrant



Parcel Lockers &
Freight Consolidation
Centers



AFFORDABLE



DIVERSE

Free Feeder Services to High Capacity Transit

Using AVs to provide on-demand feeder service primarily in suburban and rural communities

Examples

Chapel Hill, North Carolina

Seattle, Washington

Tallinn, Estonia

Travel Demand Reduction Potential

50% reduction in fares could lead to a 15% increase in transit ridership

Not all new riders will be from single-occupant vehicles





AFFORDABLE



DIVERSE

Free Feeder Services to High Capacity Transit

Using AVs to provide on-demand feeder service primarily in suburban and rural communities

Key
Implementation
Considerations
to Support the
Guiding
Principles

Couple with added service on high capacity transit lines and expanded active transportation infrastructure

Target service in rural, suburban and disadvantaged communities

Fund service with revenues raised from the Tolling, Cordon Pricing and Parking Fee strategies



Mobility as a Service

A multimodal on-demand service providing regionwide access to travel options and payment via a single platform.

Examples

Houston, LA Metro, Phoenix
(in development)
Helsinki, Finland
(pilot with Whim)
Hannover, Germany
(pilot with Mobil)
Vienna, Austria
(pilot with SMILE)

Travel Demand Reduction Potential

Among users, private car use
and auto ownership could be
halved

Among users, transit
ridership could increase by
roughly 50%



Mobility as a Service

A multimodal on-demand service providing regionwide access to travel options and payment via a single platform.

**Key
Implementation
Considerations
to Support the
Guiding
Principles**

Include access to all high quality mobility options: bike, scooter, transit, shared vehicle services, etc.

Offer fare packages for low-income households across public and private providers



Ridesharing and Teleworking

Reducing VMT by filling empty seats or by reducing trips all together.

Examples

Carpooling (Bay Area focus):

- MTC 511 ridematching
- San Mateo County (*pilot*)
- Contra Costa Transportation Authority (*pilot*)

Telework Tax Credit:

- Virginia

Travel Demand Reduction Potential

Travel demand reduction potential could be 16,000 empty seats (currently crossing Bay Bridge)

A telework tax credit could reduce daily VMT by over 9,000 miles



Ridesharing and Teleworking

Reducing VMT by filling empty seats or by reducing trips all together.

Key
Implementation
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Guiding
Principles

Support carpooling by:

- Complementary infrastructure to support time advantages
- Incentives (potentially through MaaS)

Support teleworking by:

- Fund tax credits with revenues raised from the Tolling, Cordon Pricing and Parking Fee strategies



Tolling of All Bridges and Highways

Tolls on all bridges and freeways in the Bay Area based on distance traveled or demand.

Examples

Austria

France

Switzerland

Travel Demand Reduction Potential

Doubling the cost of driving could reduce VMT per capita by 10%



Tolling of All Bridges and Highways

Tolls on all bridges and freeways in the Bay Area based on distance traveled or demand.

Key
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Guiding
Principles

Couple with added service on high capacity transit lines and expanded active transportation infrastructure

Incentivize shared rides and off-peak travel through pricing

Offer toll discounts for low-income households



Cordon Pricing

A fee based on the distances traveled in a car, often in place of fuel taxes.

Examples

London
Milan
Singapore
Stockholm

Travel
Demand
Reduction
Potential

Traffic congestion in central city areas could decrease by 30%



Cordon Pricing

A fee based on the distances traveled in a car, often in place of fuel taxes.

Key
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Principles

Couple with added service on high capacity transit lines and expanded active transportation infrastructure

Incentivize shared rides and off-peak travel through pricing



Parking Fee/Tax

A fee or tax on off-street parking facility owners or users.

Examples

San Francisco: 25% tax

Oakland: 18% tax

Los Angeles: 10% tax

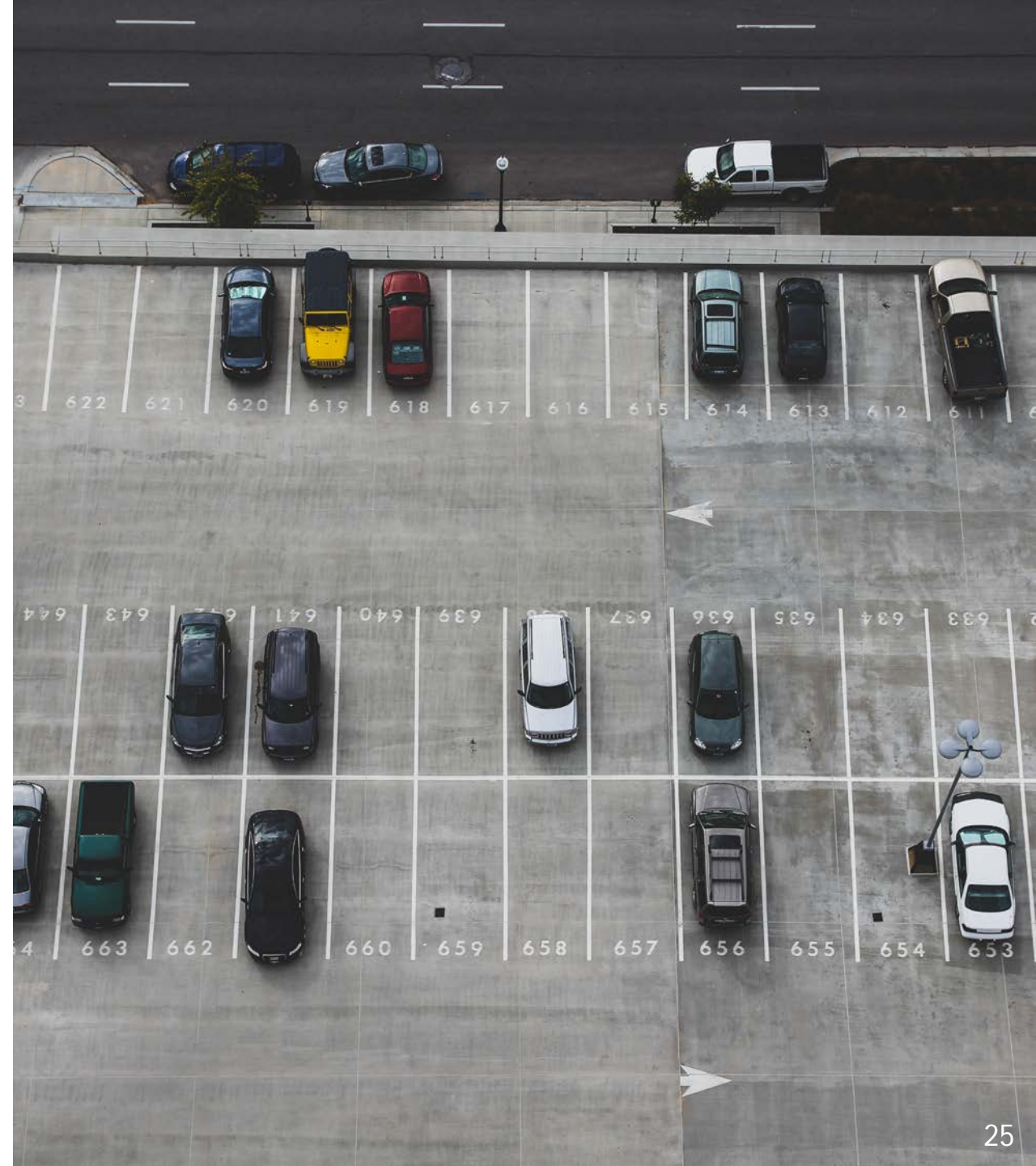
Chicago: 18-20% tax

Pittsburgh: 34% tax

Travel Demand Reduction Potential

A 25% parking tax could reduce parking demand by 7.5%

Free to priced parking typically reduces solo commuting by 10% to 30%



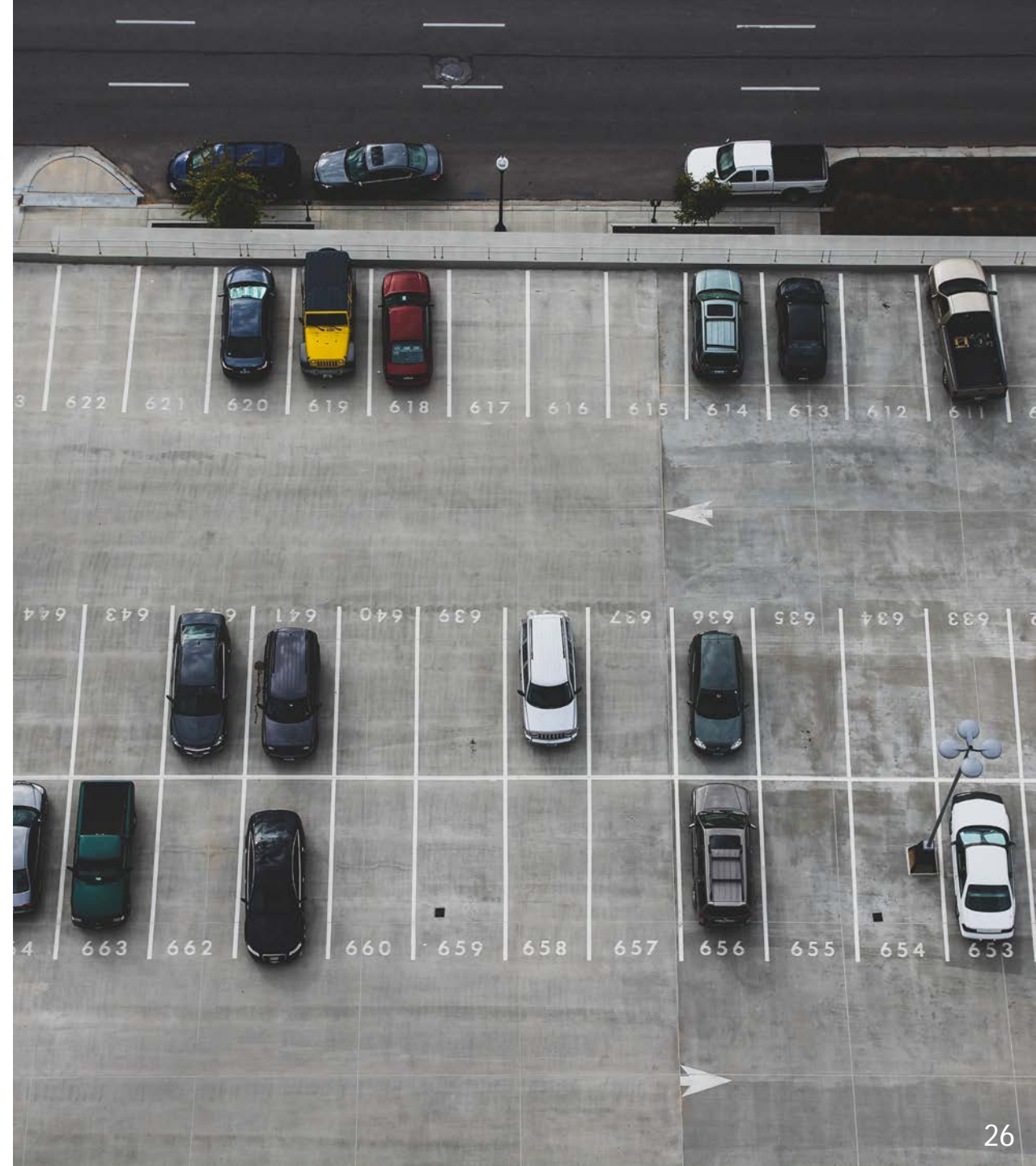
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A fee or tax on off-street parking facility owners or users.

Key
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Couple with added service on high capacity transit lines and expanded active transportation infrastructure

Offer parking fee discounts for low-income households



Required TDM for New Development

Reducing VMT with developer provided programs that could include transit passes, bike/carshare on site and real time transportation information displays.

Examples

San Francisco

Oakland

Buffalo, NY

Fairfax County, VA

Arlington County, VA

Travel Demand Reduction Potential

Potential depends on TDM programs implemented and enforcement

From program research on similar programs, **solo commuting could decrease by 34%**



Required TDM for New Development

Reducing VMT with developer provided programs that could include transit passes, bike/carshare on site and real time transportation information displays.

Key Implementation Considerations to Support the Guiding Principles

Couple with added service on high capacity transit lines and expanded active transportation infrastructure

Offer compliance flexibility or waivers for development of affordable housing

Provide technical assistance to cities for complementary parking policies



Parcel Lockers and Freight Consolidation Centers

Reduction in delivery VMT by collecting and storing freight at central locations.

Examples

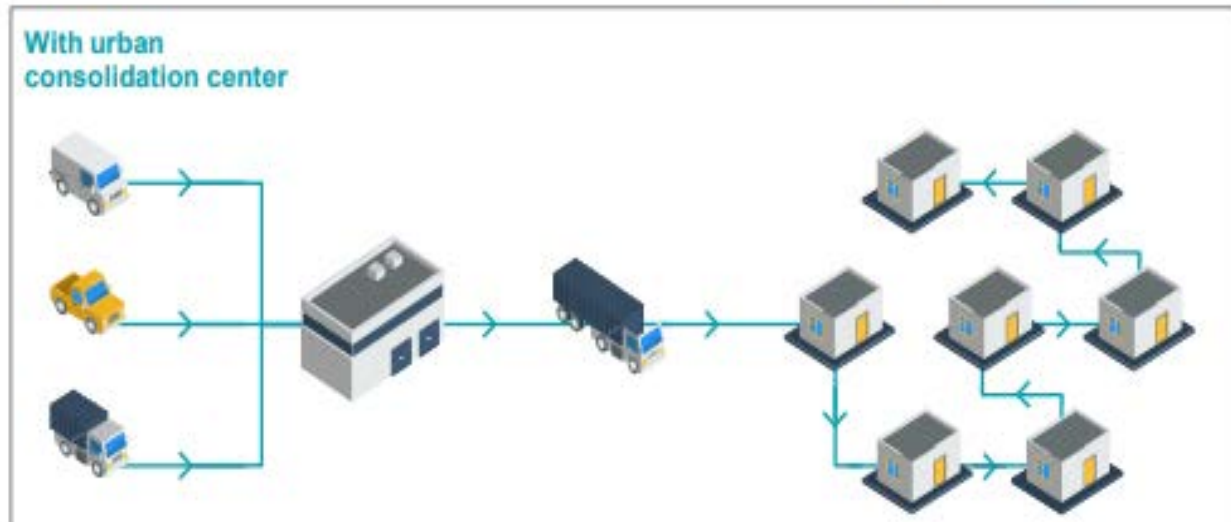
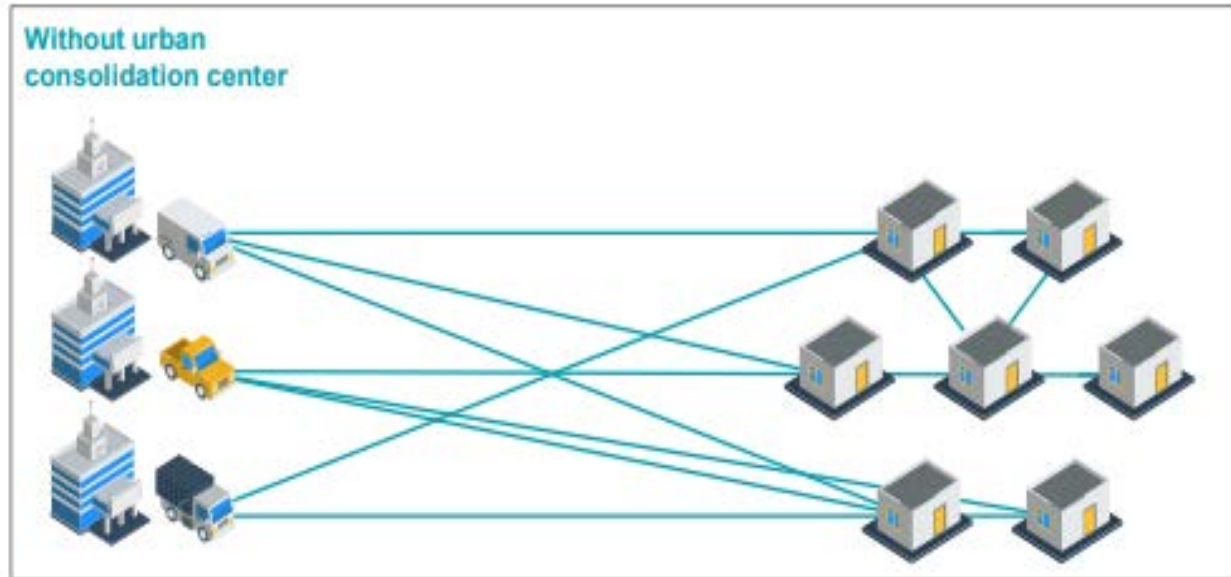
London

West Sussex, UK (*pilot*)

Travel Demand Reduction Potential

Consolidation centers could reduce mileage by 45% to deliver the same amount of goods

Parcel lockers could reduce emissions per parcel by over 66%



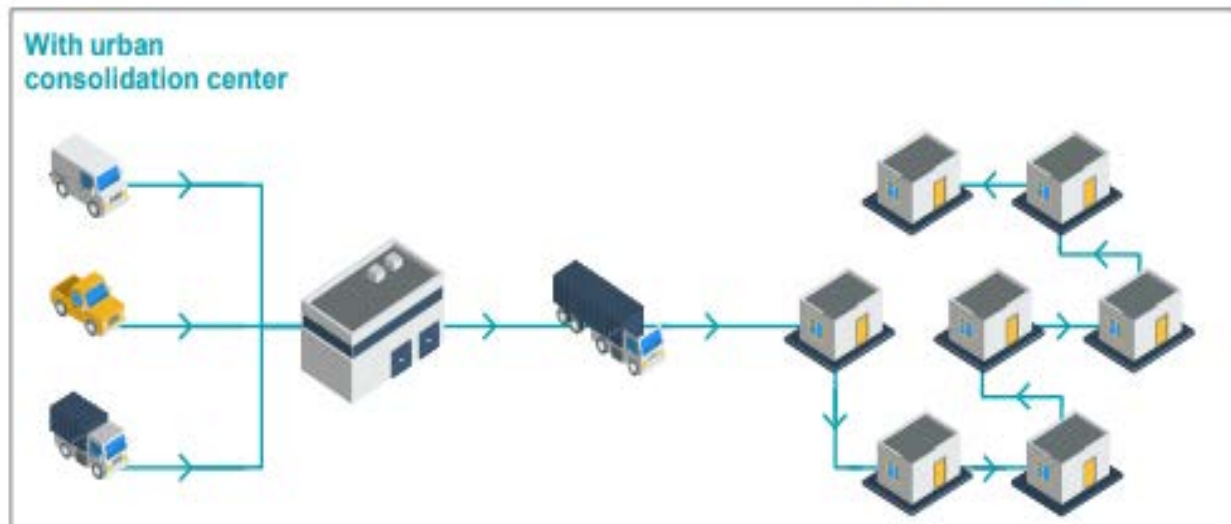
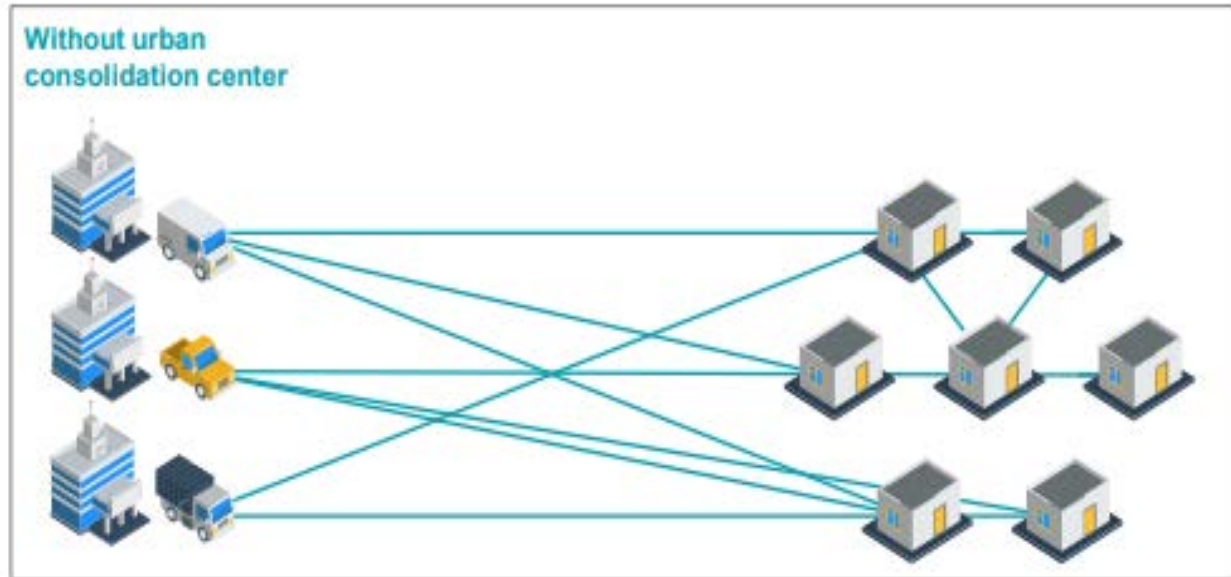
Parcel Lockers and Freight Consolidation Centers

Reduction in delivery VMT by collecting and storing freight at central locations.

Key Implementation Considerations to Support the Guiding Principles

Incentivize use of low emission delivery vehicles (e.g. electric cargo bikes)

Design and site consolidation centers and parcel lockers appropriate to community and to realize VMT savings



Next Steps

Paper Release Event - September 26th, 6pm
WeWork Valley Towers, Downtown San Jose

Aligning Specific Strategies with Futures



**AFFORDABLE
DIVERSE**

Free Feeder Services



CONNECTED

Mobility as a Service
Ridesharing and
Teleworking
Tolling Bridges, Highways
Cordon Pricing



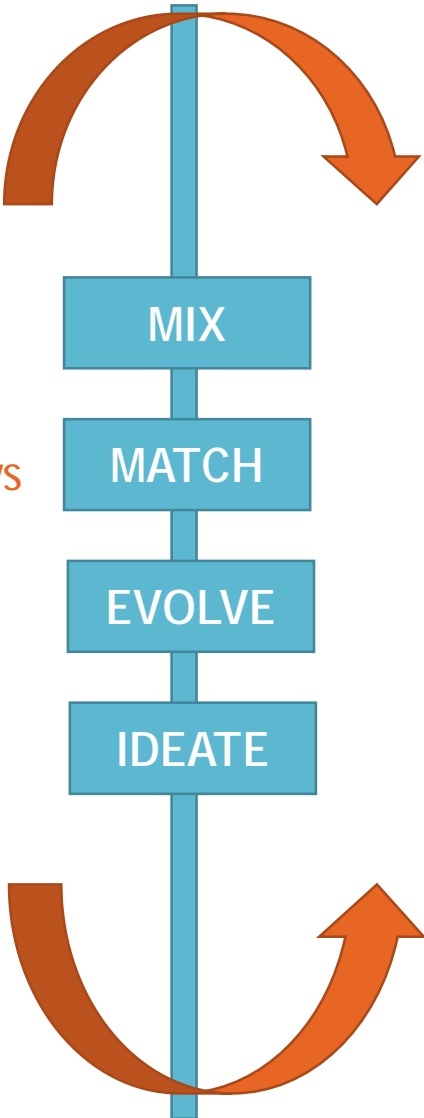
HEALTHY

Required TDM Plans
Parking Fee/Tax

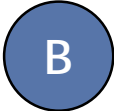


VIBRANT

Parcel Lockers and
Freight
Consolidation Centers



**Clean
and Green**



**Rising Tides,
Falling
Fortunes**



**Back to
the Future**

What's Next for Strategies Identified?

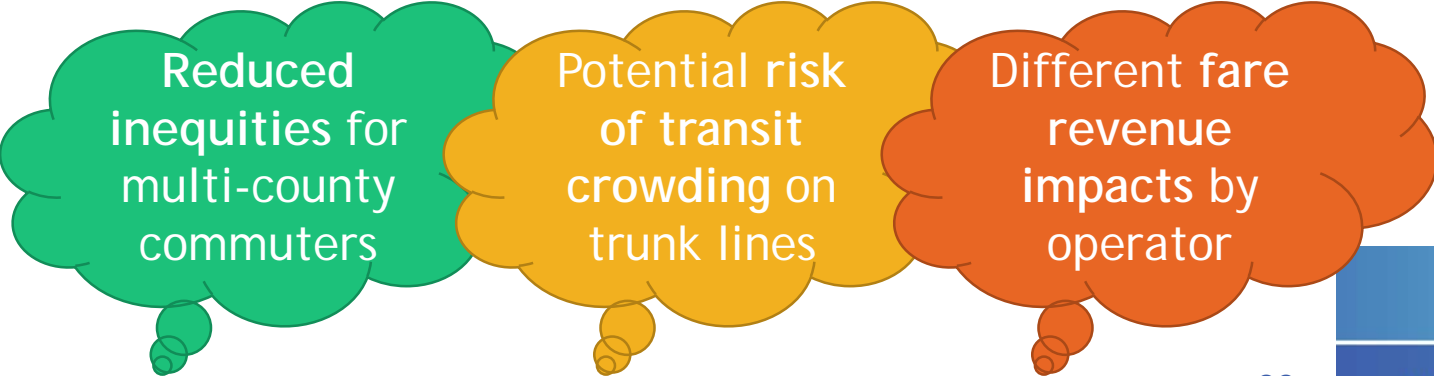
Strategies will undergo further review and consideration in the months ahead, as we work with stakeholders & the public to consider the benefits of a particular strategy alongside its impacts.



FOR EXAMPLE:



Free Feeder Services to High Capacity Transit



Questions?