



Implementing Vehicle-Kilometers Traveled in California

Updating San José's Transportation Analysis Approach

Wilson Tam
2021 Decarbonizing Transport

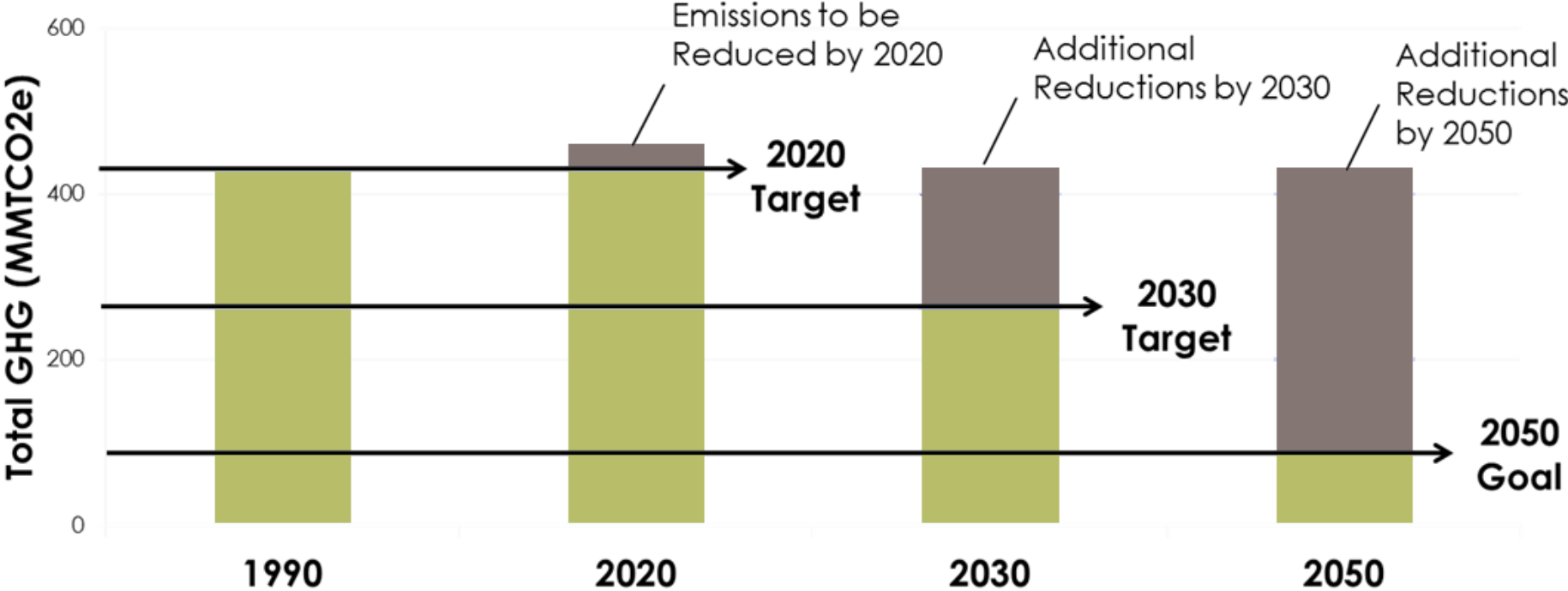


Agenda

- California Climate Goals
- State implementation of VKT
- San José's implementation of VKT

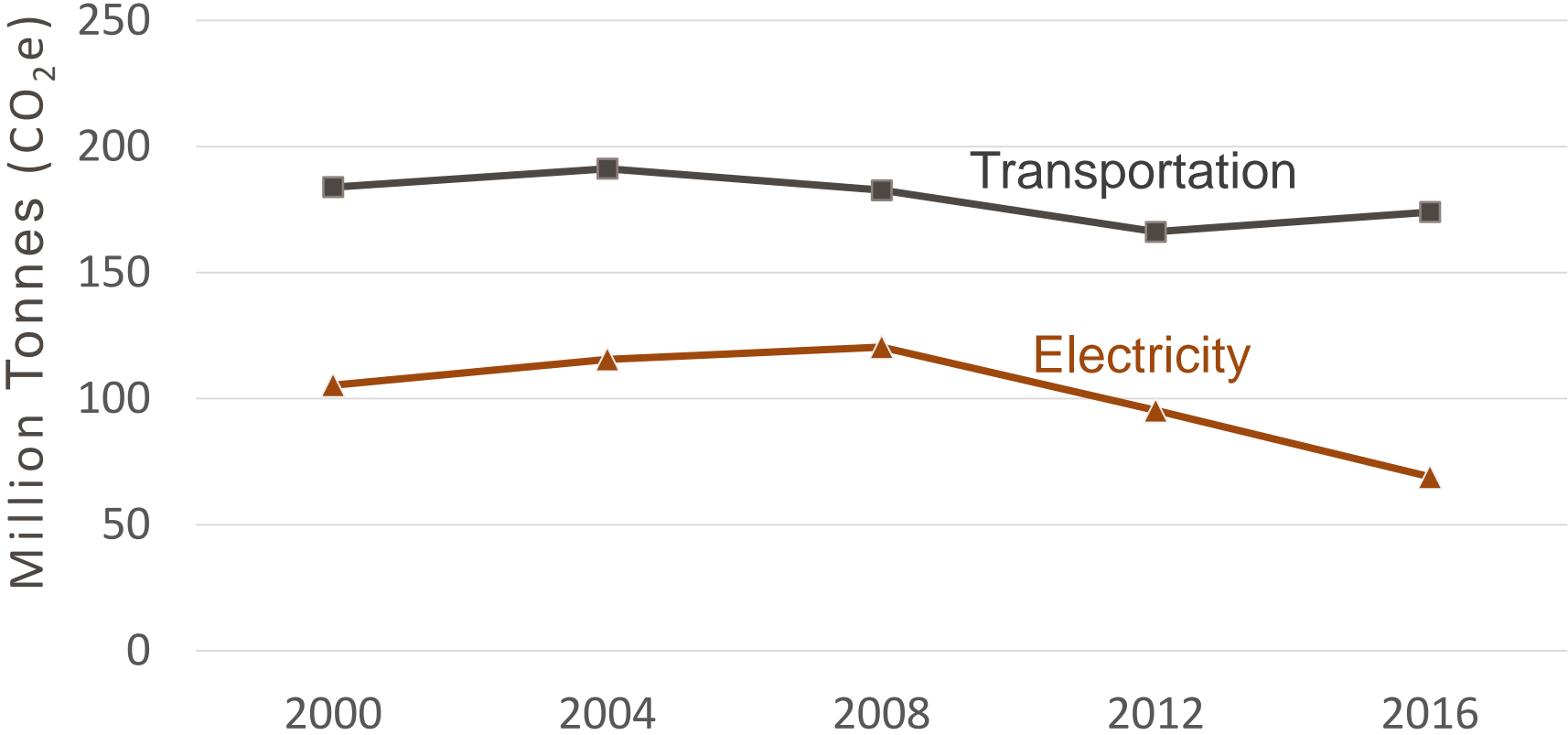


California Climate Goals



Note: MMT = Million Metric Tons

California GHG Emission Trends



Longitudinal Display of CA GHG Emissions by Sector. (Source: CARB CA GHG Inventory 2000 to 2016)

True “LOS Impacts”



Traffic engineer:

F

Economist:

A



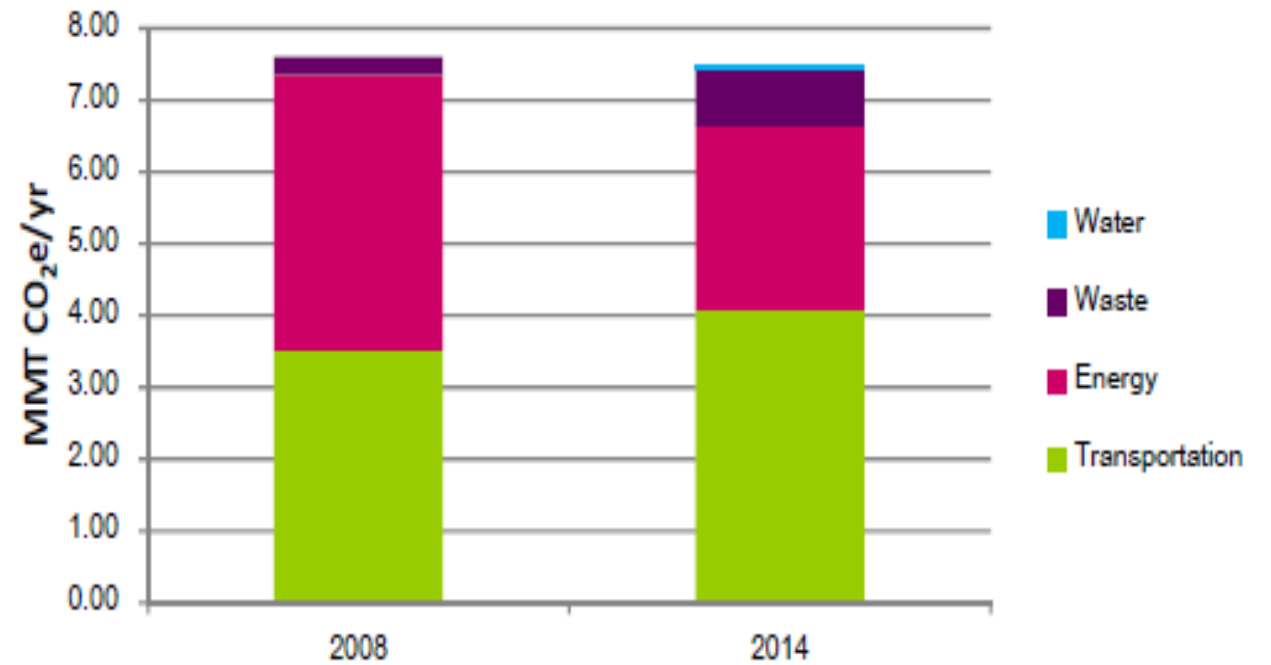
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True "LOS Impacts"



San Jose's Greenhouse Gas Emissions
2008 and 2014 Community Inventory Comparison

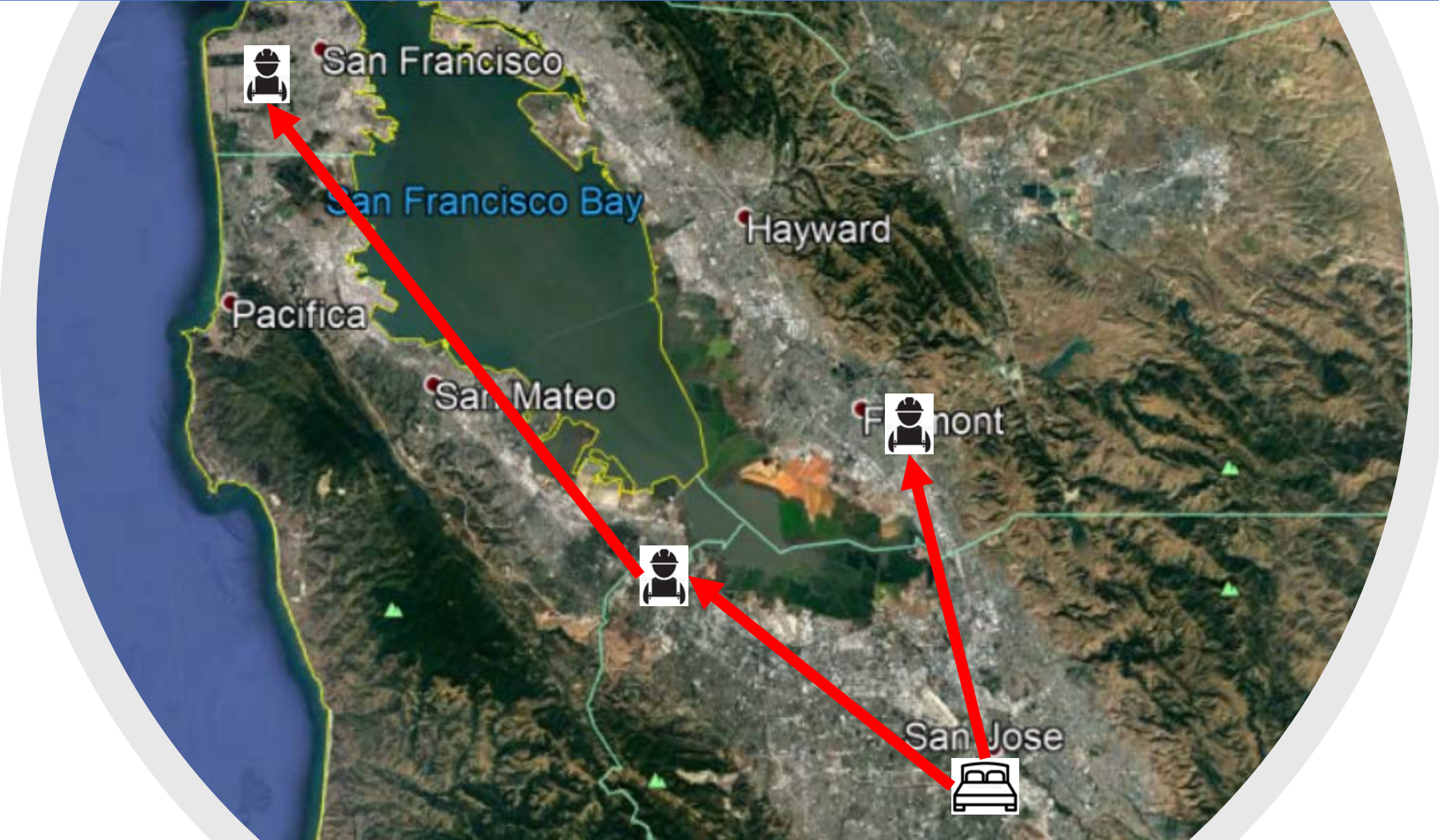


Vehicles-Kilometers Traveled (VKT)

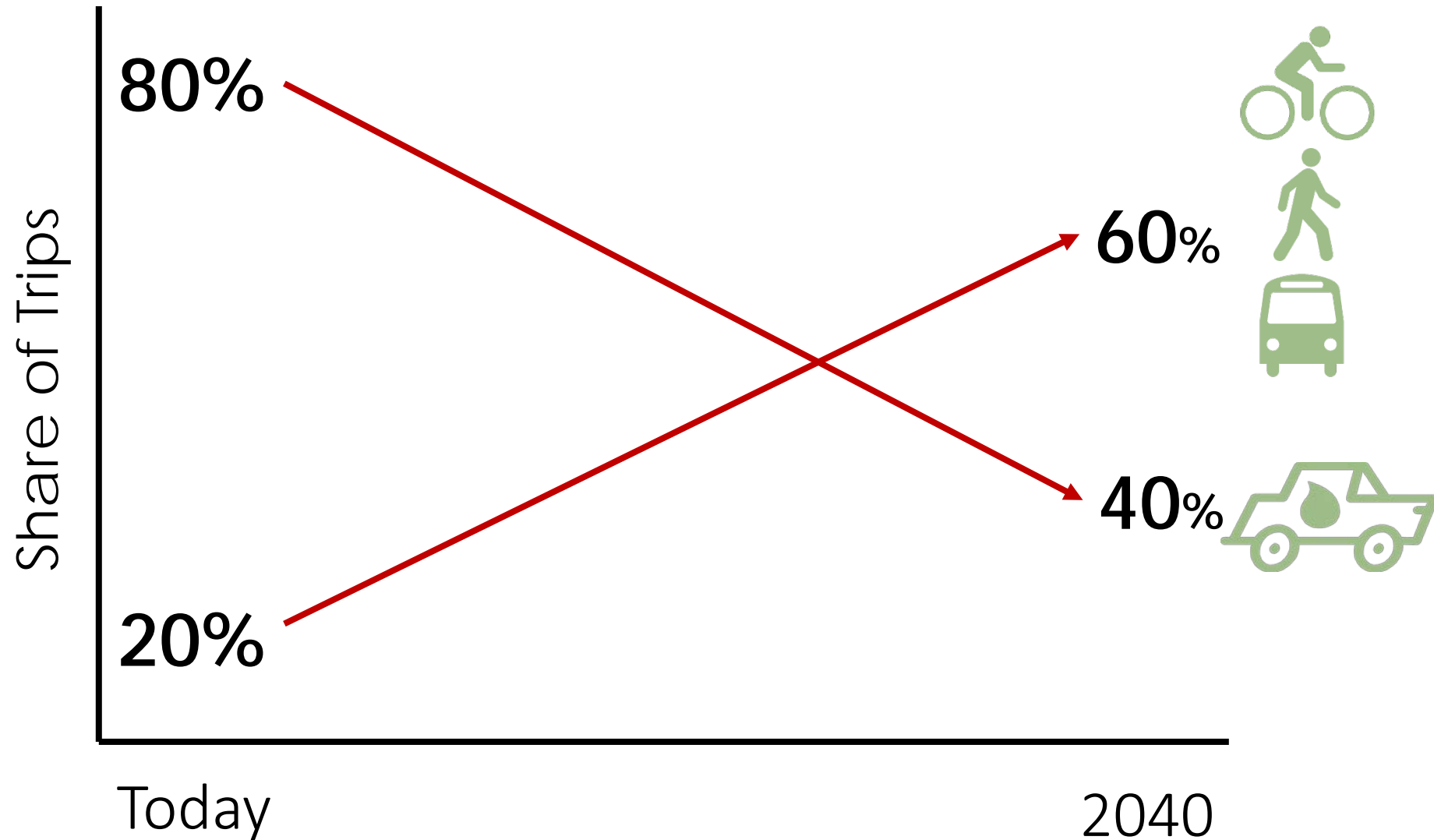


- **Senate Bill 743 (2013):** Requires jurisdictions in California to replace the auto LOS with VKT metric in environmental reviews
- **Goals:** GHG emissions reduction, infill development near transit, multimodal transportation system
- **State Guidelines (2020):** Streamline “low-VKT” projects

Local Implementation of VKT: San José



San José's Mobility Goals



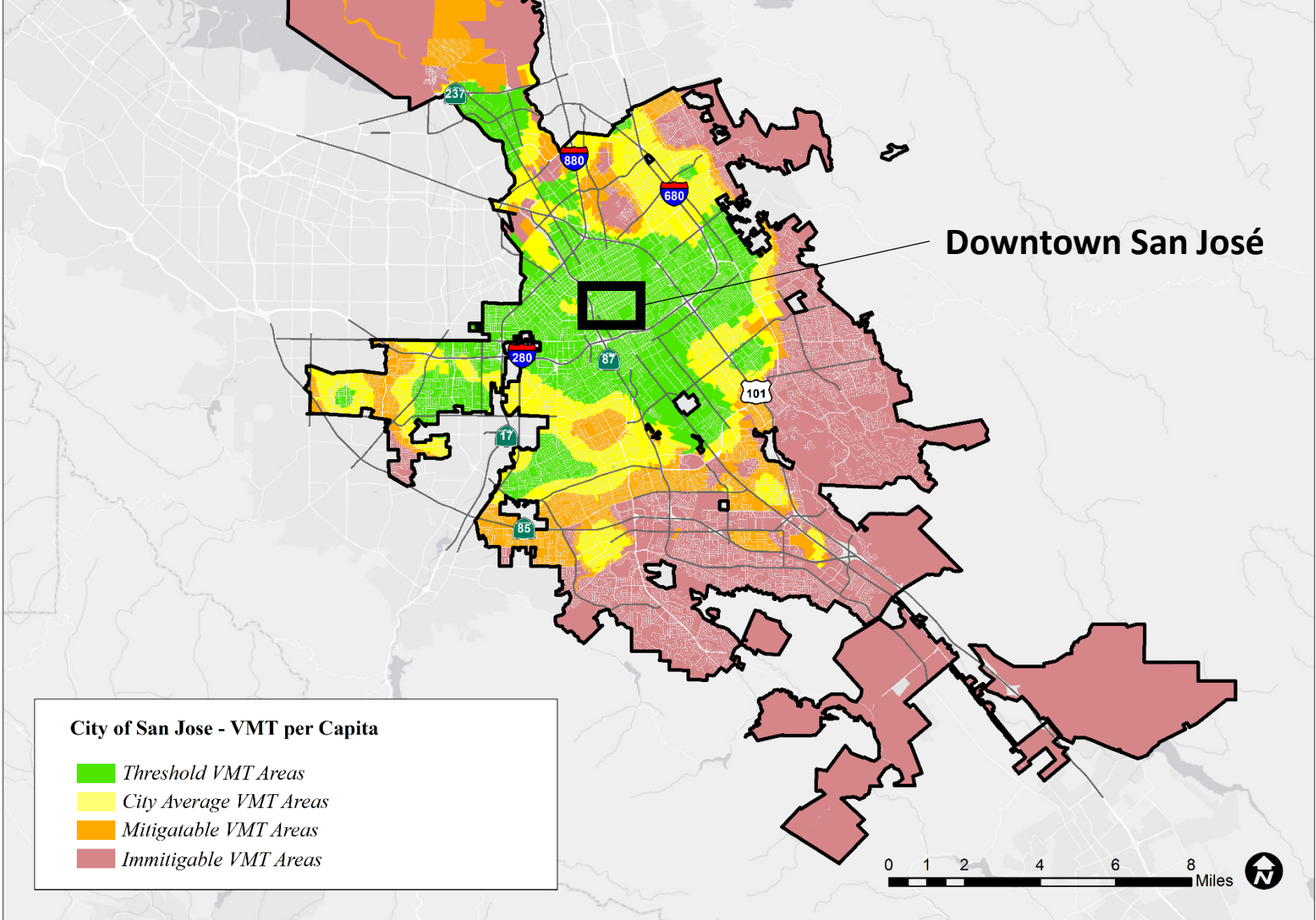
Promote Infill Development

Residential

VKT per resident

Existing San José Average 11.9

Threshold (15% below) 10.1



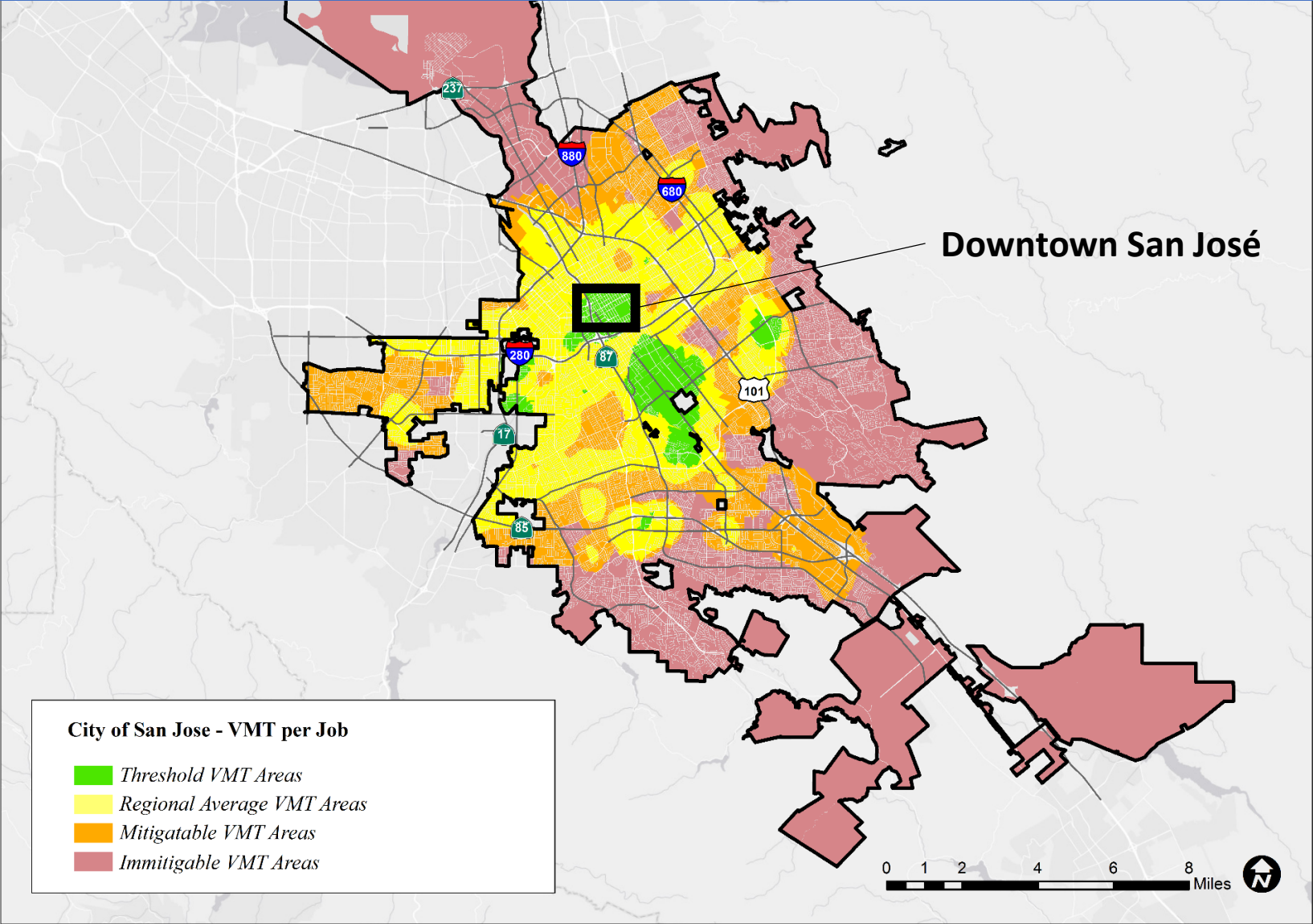
Promote Infill Development

Employment

VKT per worker

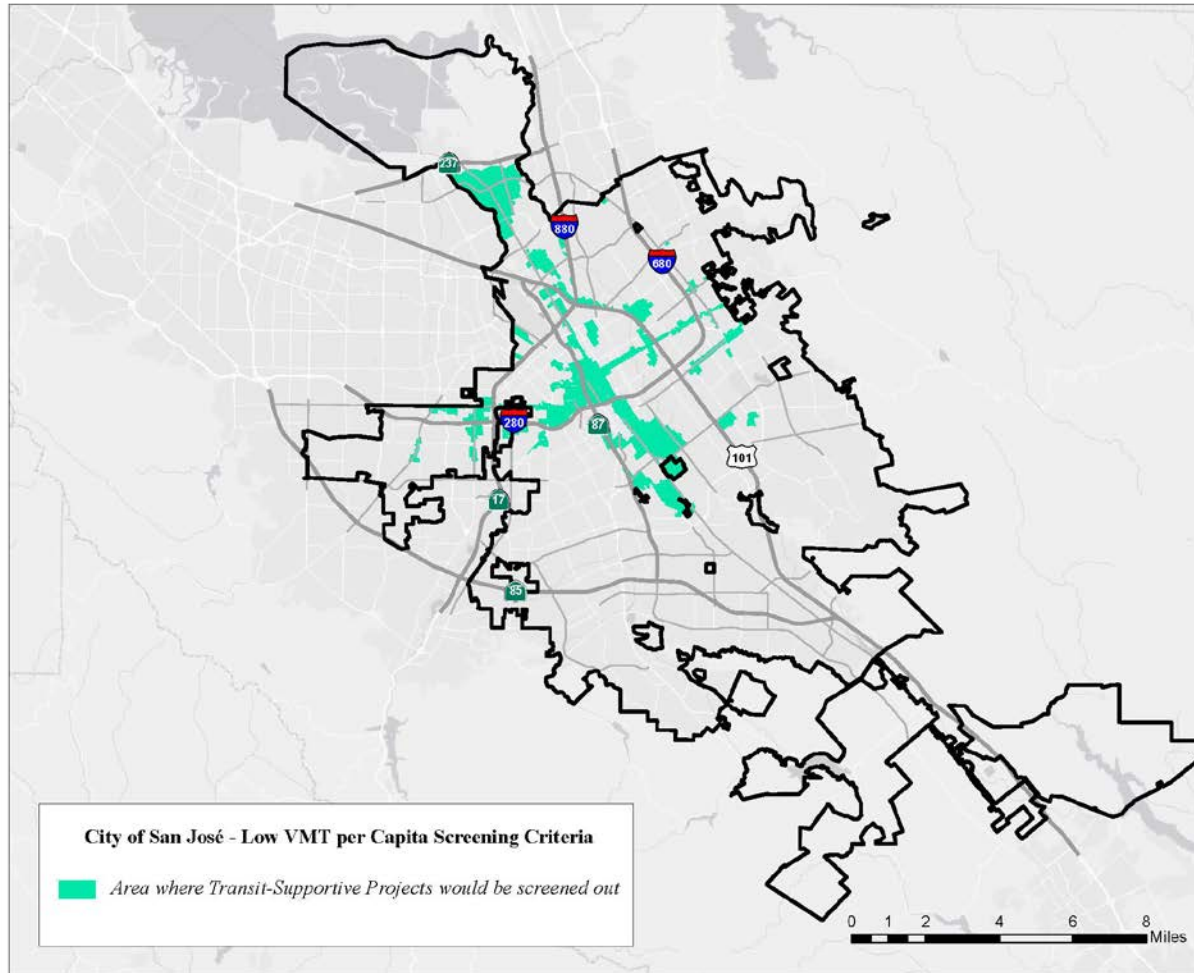
Existing Bay Area Average 14.4

Threshold (15% below) 12.2

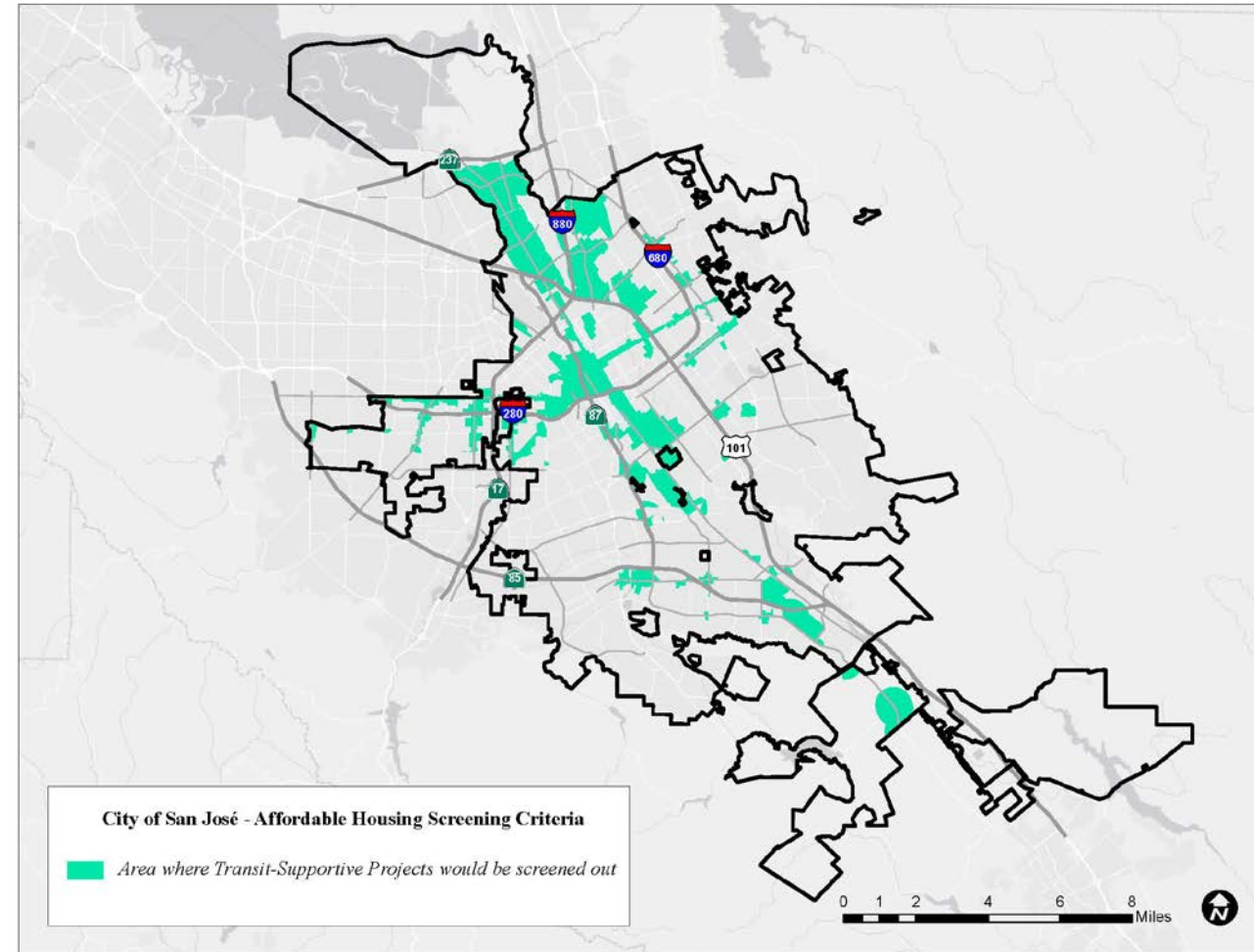


Streamline “Low-VKT” Projects

Market-Rate Housing



100% Affordable Housing



Streamline Analysis Process

Project Information

Project Name:

Project Parcel: Assessor's Parcel Number, Place Type = Urban Low Transit

Location:

Project Acreage: Acre

Proposed Parking: Vehicle Bike

Land Use Type

RESIDENTIAL

Single Family DU

Multi Family DU

Percent of All Units:

Extremely Low Income ($\leq 30\%$ MFI) % Affordable

Very Low Income ($>30\%$ MFI, $\leq 50\%$ MFI) % Affordable

Low Income ($>50\%$ MFI, $\leq 80\%$ MFI) % Affordable

OFFICE KSF

RETAIL KSF

INDUSTRIAL KSF

VMT Reduction Strategies

Select each section to show individual strategies

Tier 1 PROJECT CHARACTERISTICS

Increase Residential Density
8.1 - Existing Density (DU/Residential Acres in Parcel Buffer Zone) ?
8.2 - With Project Density (DU/Residential Acres in Parcel Buffer Zone)

Increase Employment Density
12.1 - Existing Density (Jobs/Commercial Acres in Parcel Buffer Zone) ?
18.4 - With Project Density (Jobs/Commercial Acres in Parcel Buffer Zone)

Increase Development Diversity
0.38 - Existing Activity Mix Index ?
0.47 - With Project Activity Mix Index

Integrate Affordable and Below Market Rate
0% Extremely Low Income BMR units ?
0% Very Low Income BMR units
0% Low Income BMR units

Tier 2 MULTIMODAL INFRASTRUCTURE

Tier 3 PARKING

Tier 4 TDM PROGRAMS

Analysis Results

RESIDENTIAL ONLY

Category	VMT / CAPITA
Existing VMT	10.74
Tier 1+2+3	10.62
Tier 1+2+3+4	9.67
Residential Threshold	10.12
Est. Max Reduction Possible	6.44


IMPACT? NO

EMPLOYMENT ONLY


Category	VMT / WORKER
Existing VMT	13.66
Tier 1+2+3	13.17
Tier 1+2+3+4	10.78
Office Threshold	12.22
Est. Max Reduction Possible	8.2

IMPACT? NO

Mitigate VKT Impacts



Land Use



Mobility



Parking



TDM



Up to 1 hour	23.65
Up to 2 hours	27.88
Up to 3 hours	35.48
Up to 12 hours	56.60
Max 24 hrs or 0.25	65.05
Suv's, 0'size, 1.5m add daily	8.45
24 hr monthly	1000.00
Suv's, vans, 0's and 1.5m	100.00
Exotic Cars add 1.5m	100.00
Boot removal fee	63.29
18 ³ / ₈ % Parking tax extra	



Partner with Developments to Monitor VKT Performance



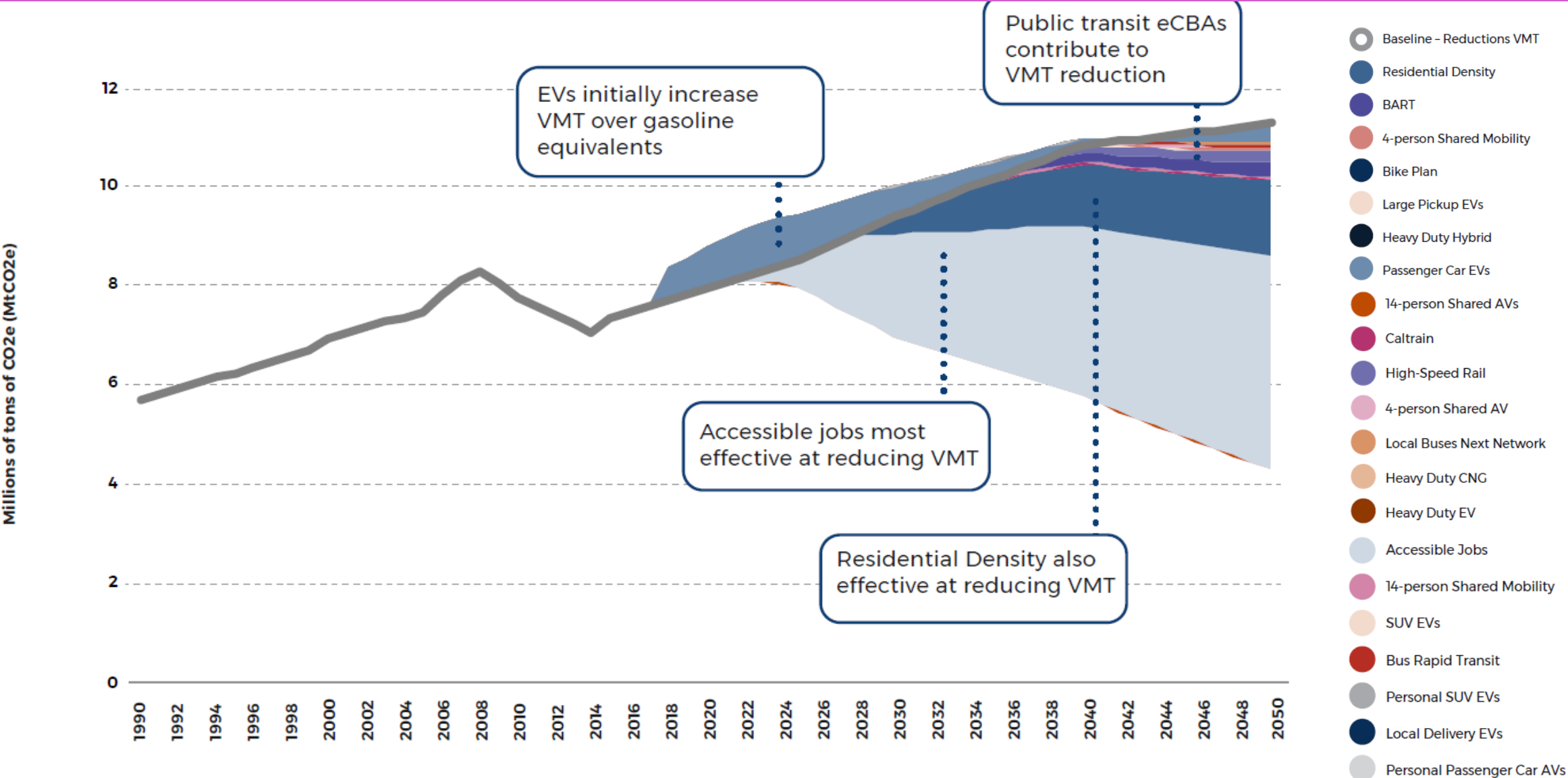
Lessons Learnt

- VKT impacts are regional in nature, but mitigations have not been.
- Site-specific strategies are more suitable for urban areas, whereas program-level strategies are more applicable for projects in suburban areas. Regional fee programs, mitigation exchanges, and mitigation banks are being explored.
- Varying implementations at the local level give the “more stringent” cities a competitive disadvantage with investors.

Lessons Learnt

- System improvements (e.g. streets, transit service) should be prioritized over programmatic measures (e.g. incentives) as mitigation.
- Most “low-VMT” developments in urban areas would be streamlined without mitigation. Complementary funding mechanisms are needed to support a multimodal transportation system in the urban areas.
- Other complementary VKT and emissions reduction strategies should be implemented.

Complementary Strategies



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