

Understanding Transit Markets Transit Competitiveness Index

presented to

Transit Sustainability Project Steering Committee

presented by

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Strategic Roadmap

From Market Research to Service Planning

Understand Customers

Market Segmentation
Mode Choice Analysis

Ridership
forecasting

Competitive
Positioning

Service
Planning

Financial
Resources

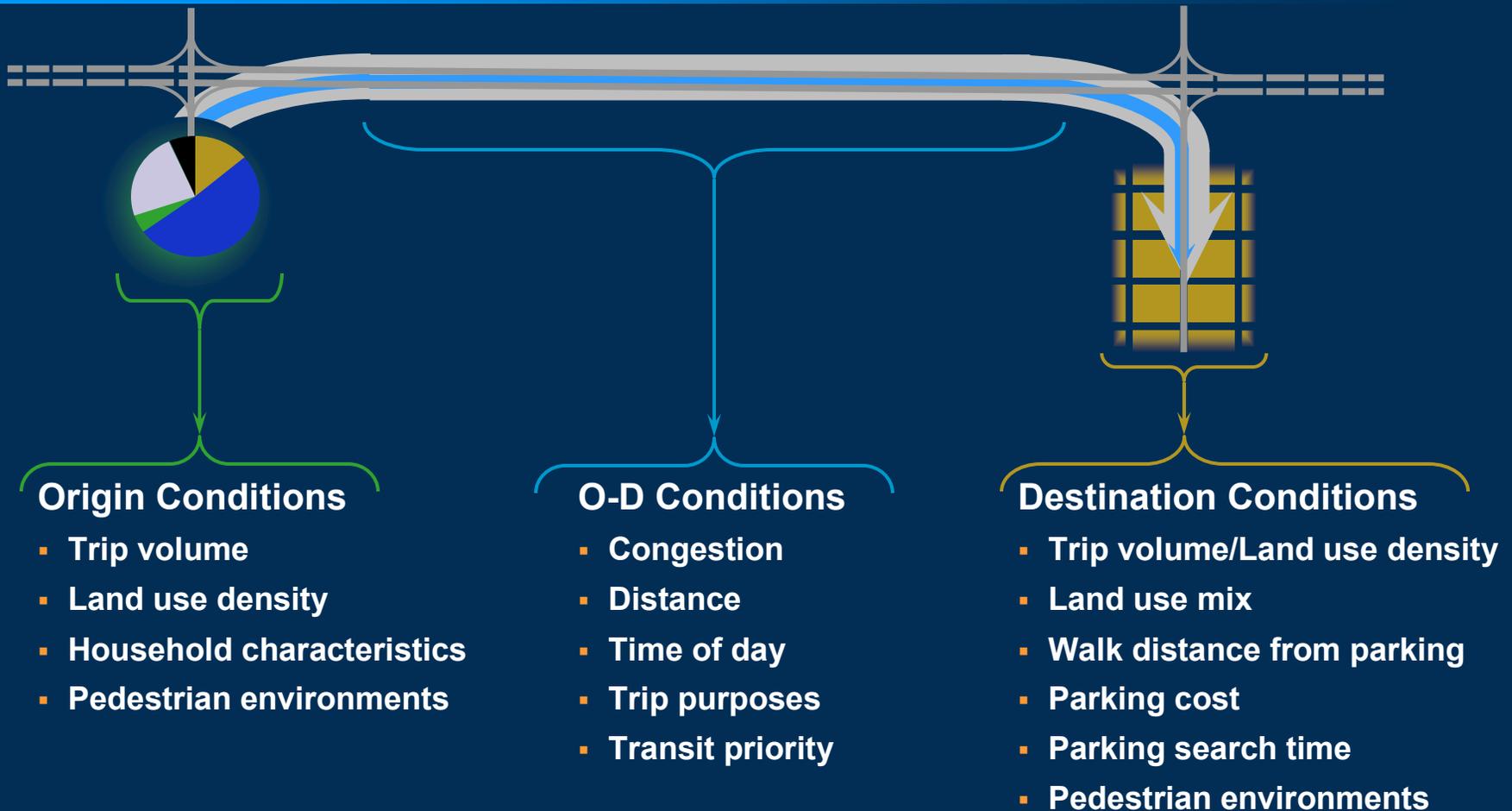
Understand Markets

Origin – Destination Volumes
Other Travel Market Conditions

Transit
Competitiveness
Index
(TCI)

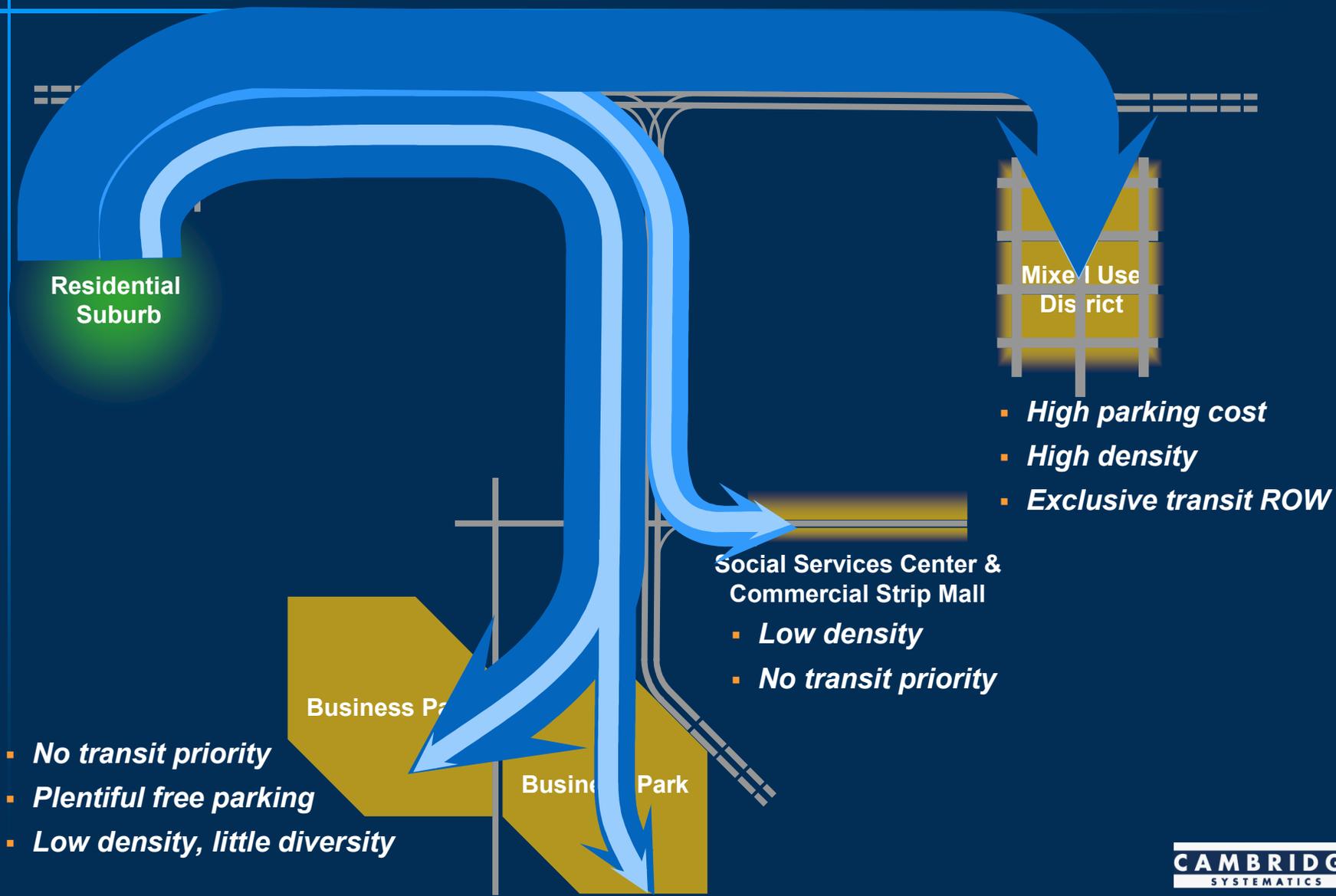
Understanding Each O-D Market

Some Attributes Can be Improved, Some Cannot



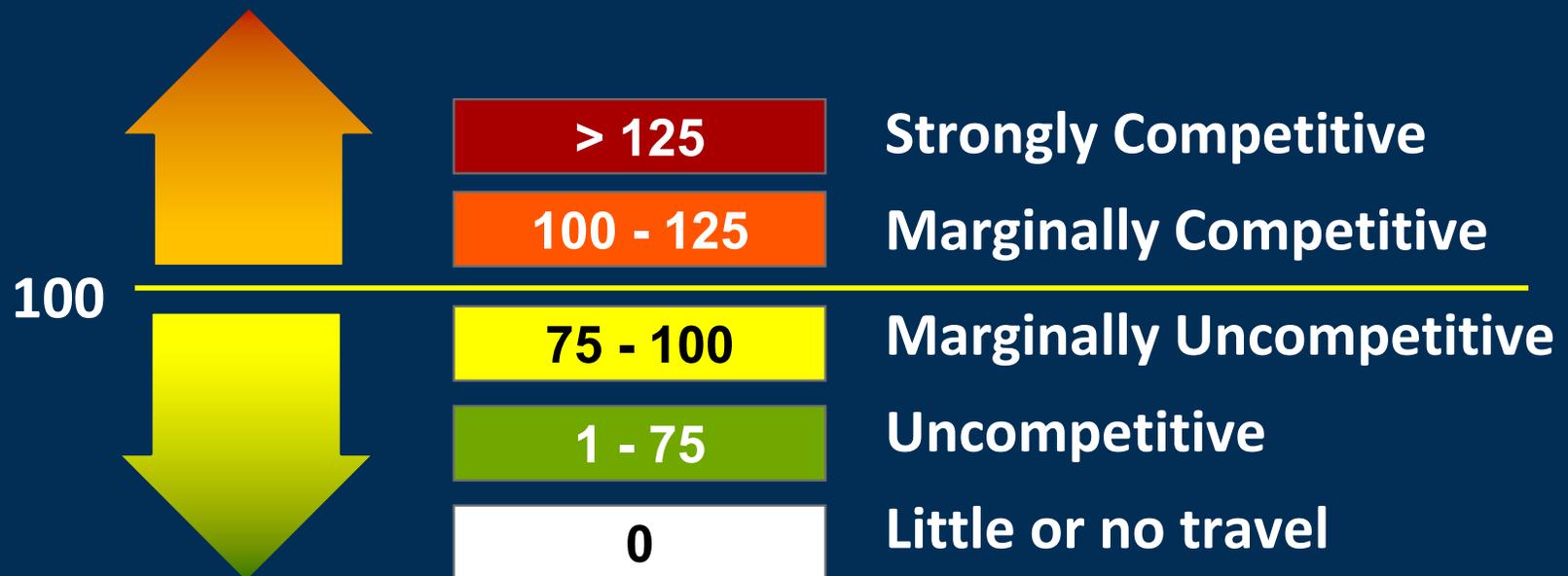
Understanding Each O-D Market

Competitiveness Unrelated to Current Transit Service

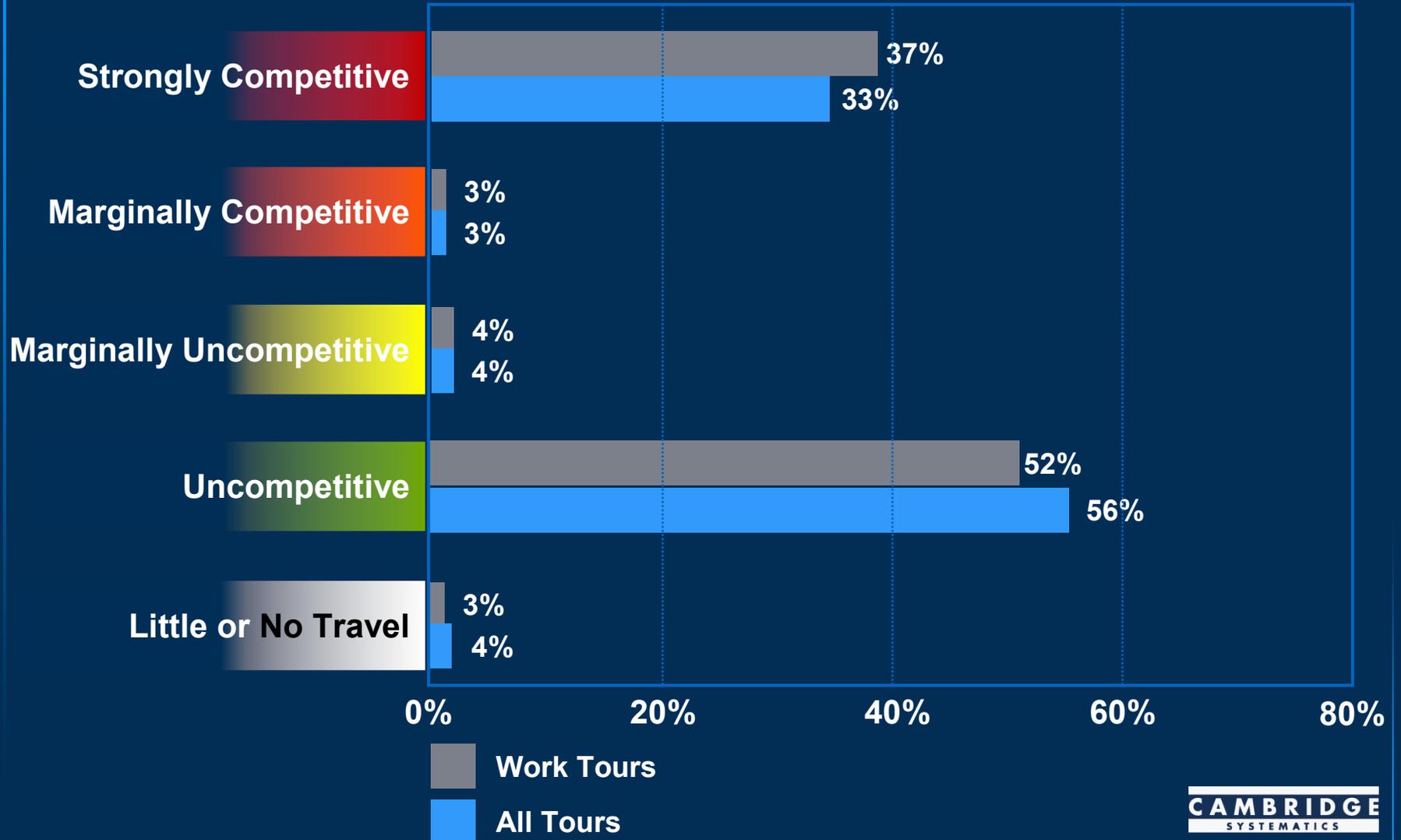


Interpreting the Transit Competitiveness Index

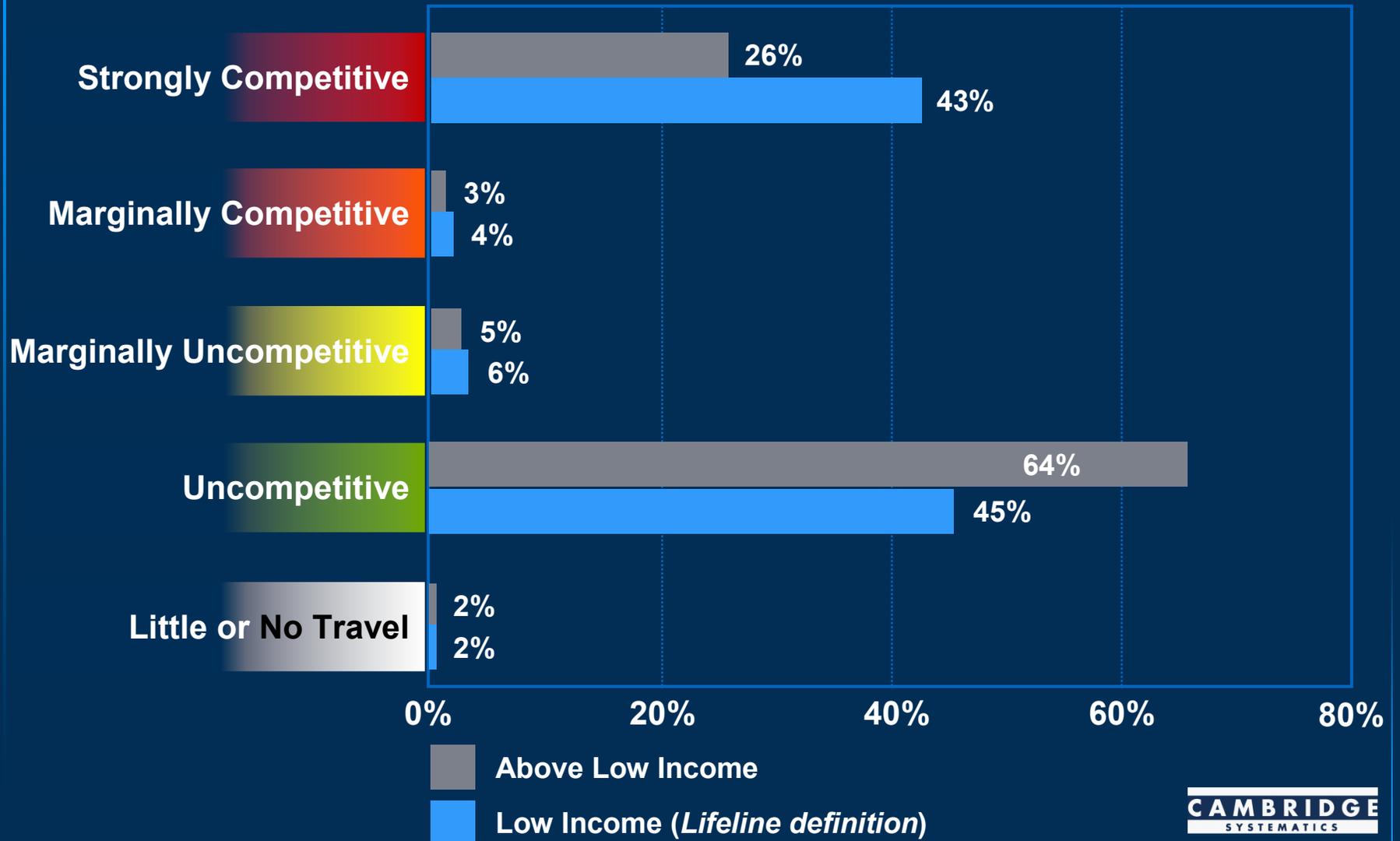
- Shows how competitive transit is relative to auto
- Based on all modes of travel not current transit network or service



Triage of 9 Million Daily Tours Bay Area Travel Grouped into Five Tiers



Distribution of Bay Area Households Grouped into Five Tiers Based on Work Origin TCI

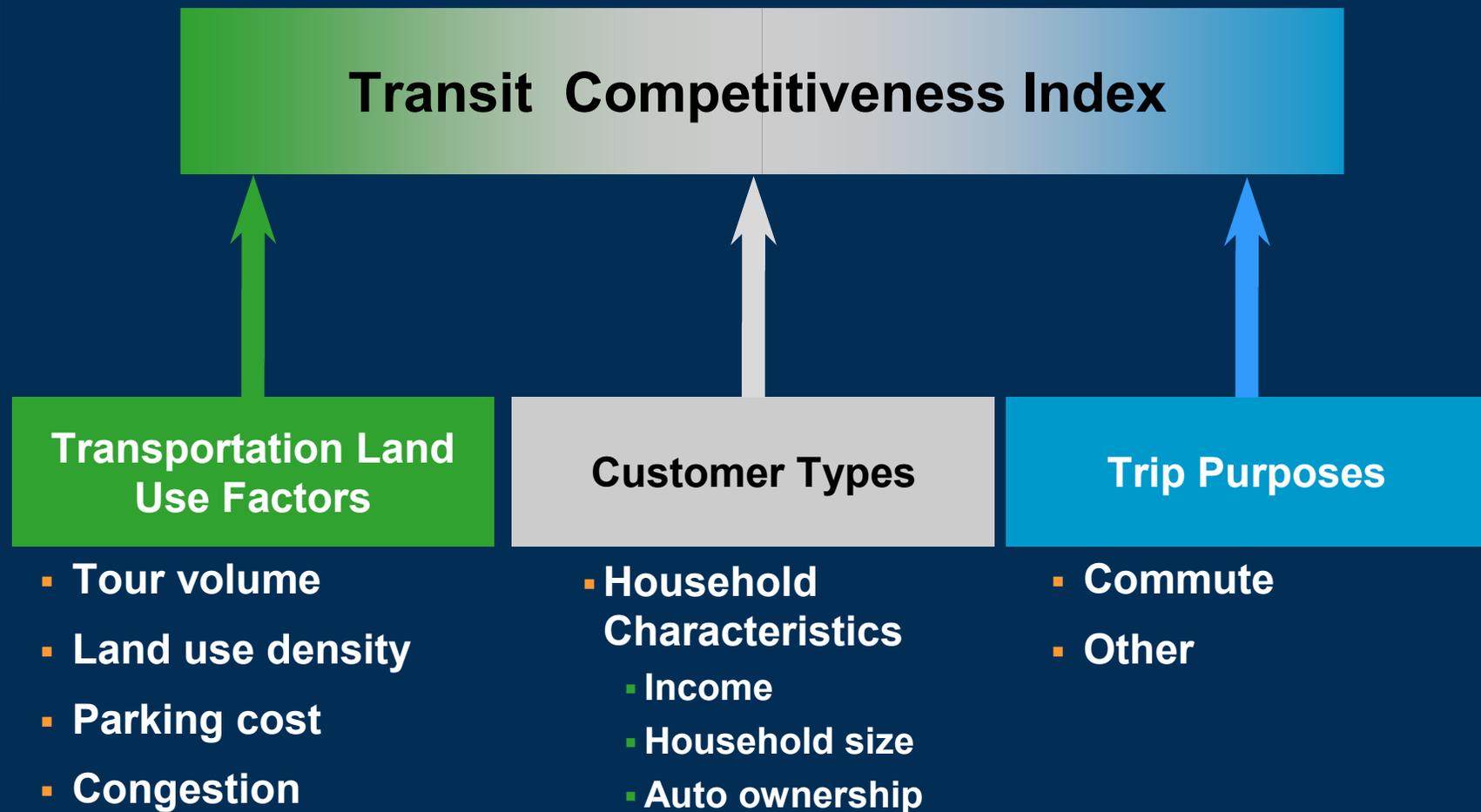


Initial Observations

- **40% of work tours and 36% of all tours are in competitive markets**
 - Yet our current transit mode share for work tours is 9% and for all tours is 4.5%
- **There is significant potential under current conditions to get more people on transit**
- **More low income households live in strongly competitive locations than in the population at large**
- **Being an uncompetitive area does not mean there is no opportunity**
 - For many uncompetitive zones, there are competitive trips within those areas
 - Options other than fixed-route transit could also be considered to provide mobility options

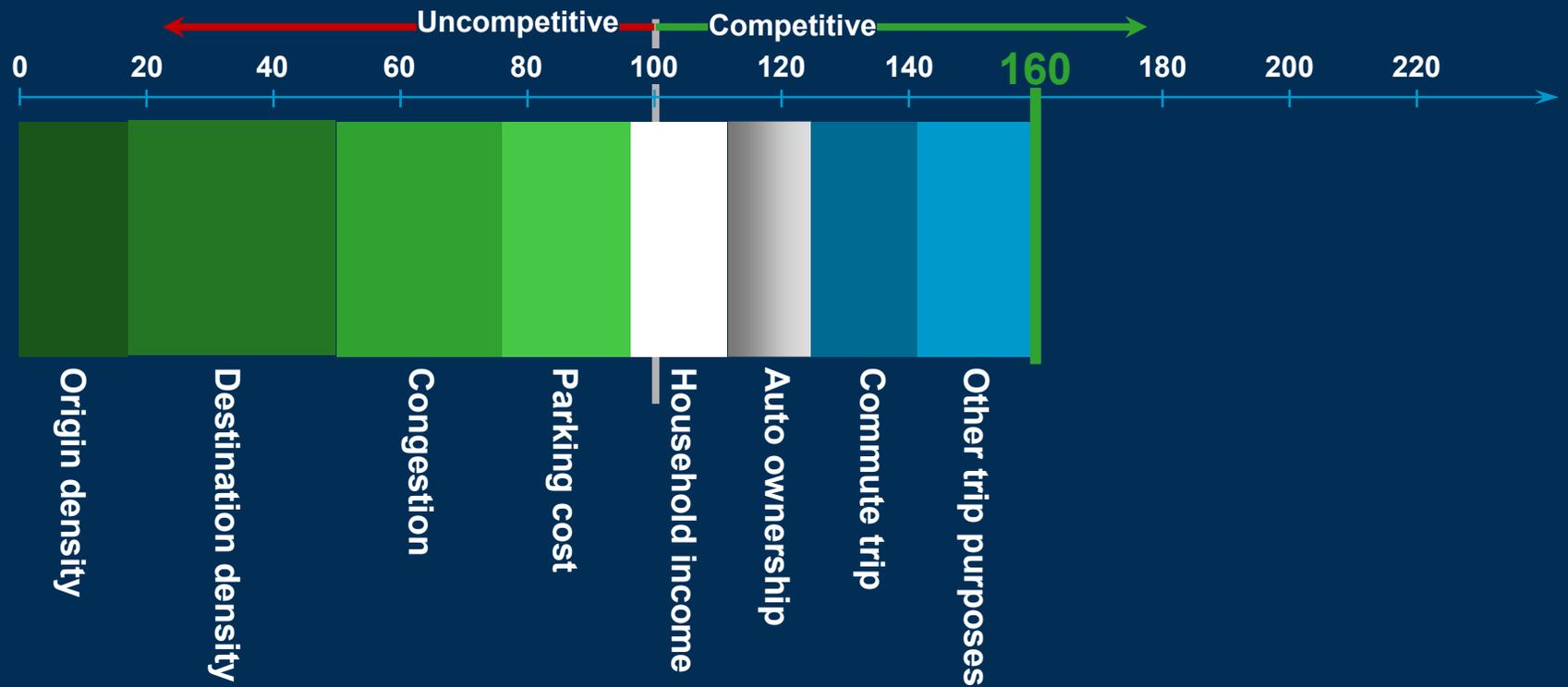
Transit Competitiveness Index (TCI)

Combining Market Conditions that Generate Ridership



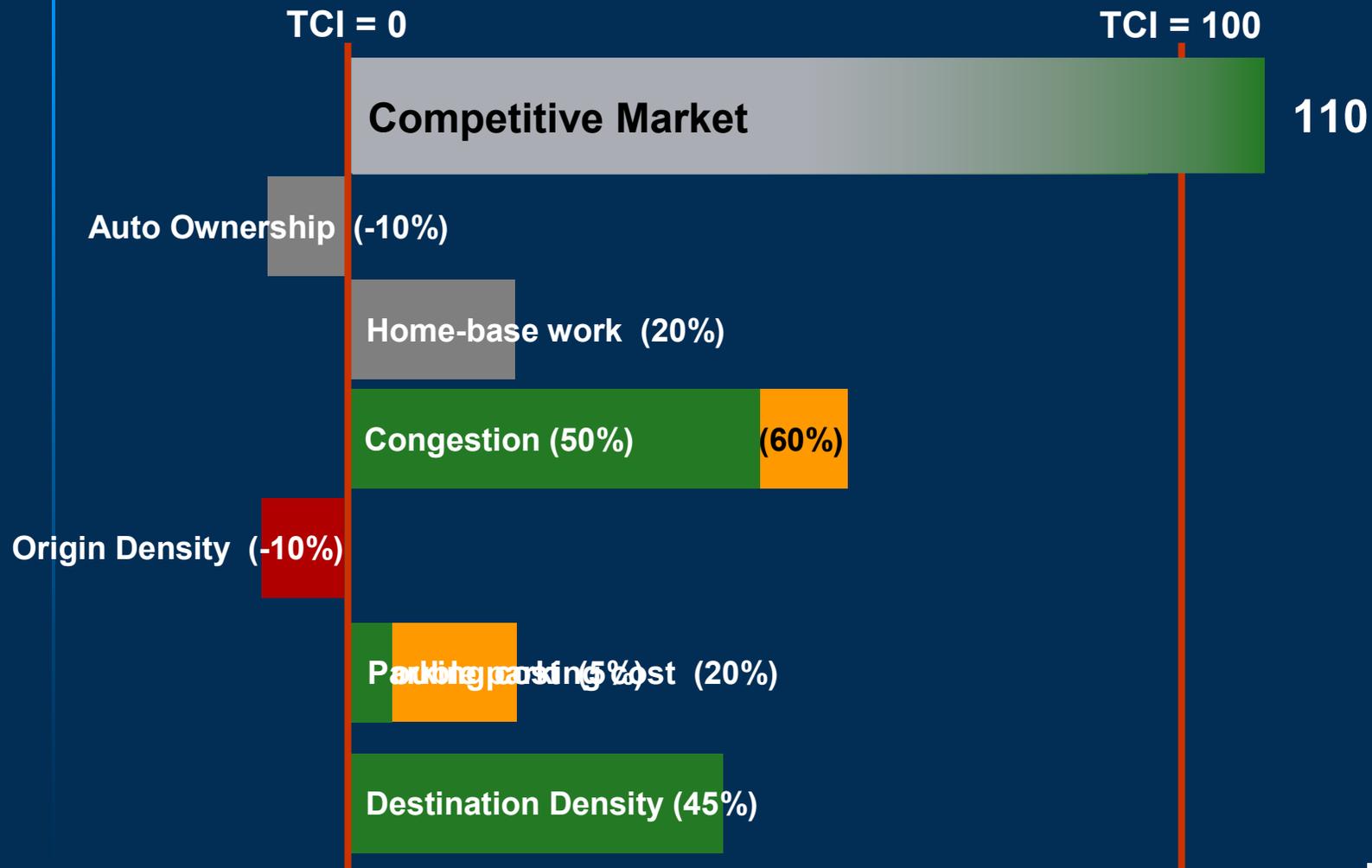
Transit Competitiveness Index (TCI)

Each Condition Weighted by Ability to Generate Ridership



Improving a Marginally Uncompetitive Market

What Might Make This Transit Market Competitive



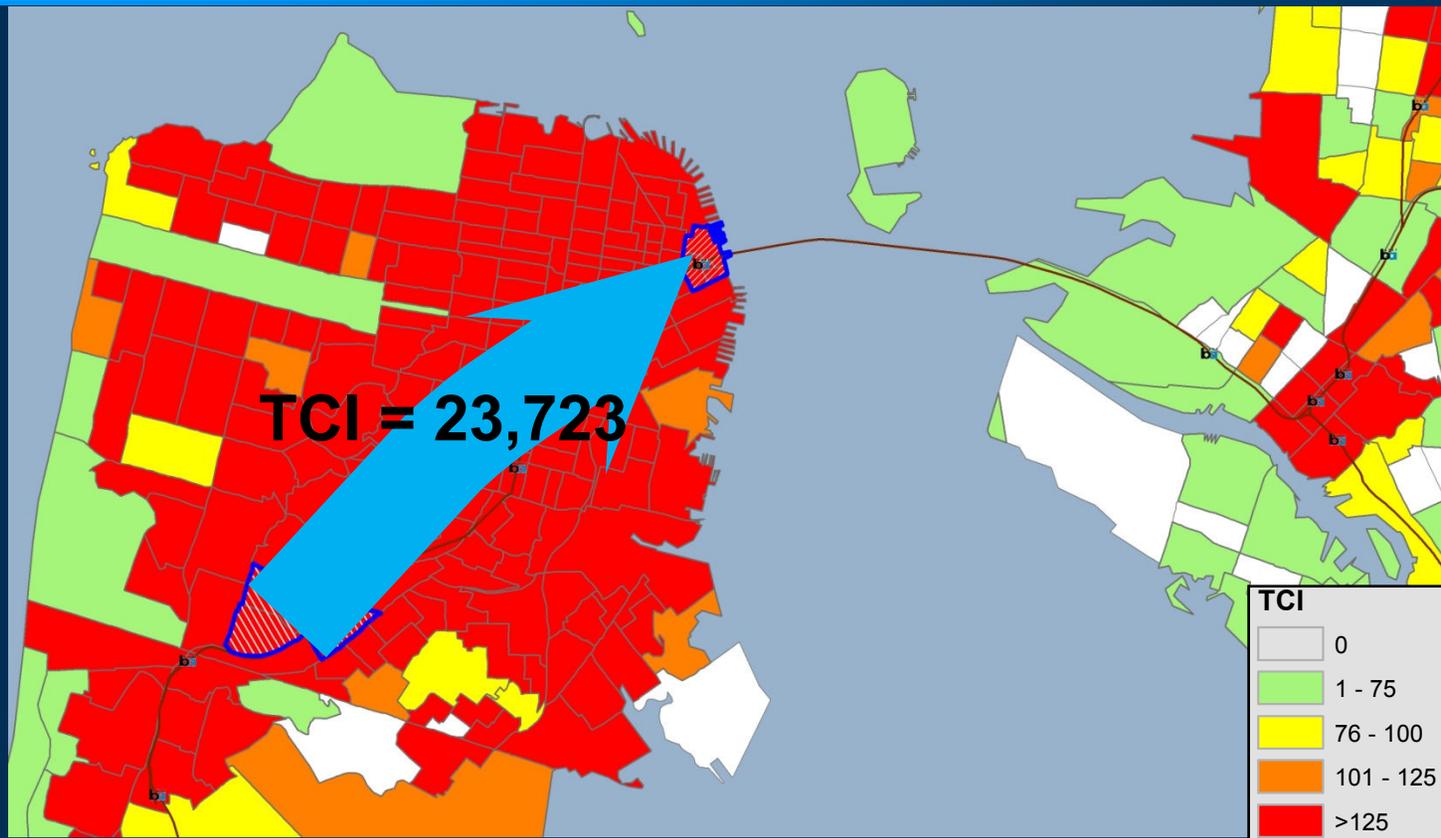
Analysis of Individual Market Work Trips From Walnut Creek to Downtown Oakland



Contribution from...

Attraction density	69%	Auto ownership	-1%	Household income	0%
Production density	-11%	Congestion	5%	Origin diversity	0%
Parking costs	13%	Access from parking	4%	Topology	0%
CBD characteristics	20%	Destination diversity	1%	Toll	n/a

Analysis of Individual Market Work Trips from Balboa Park to Embarcadero

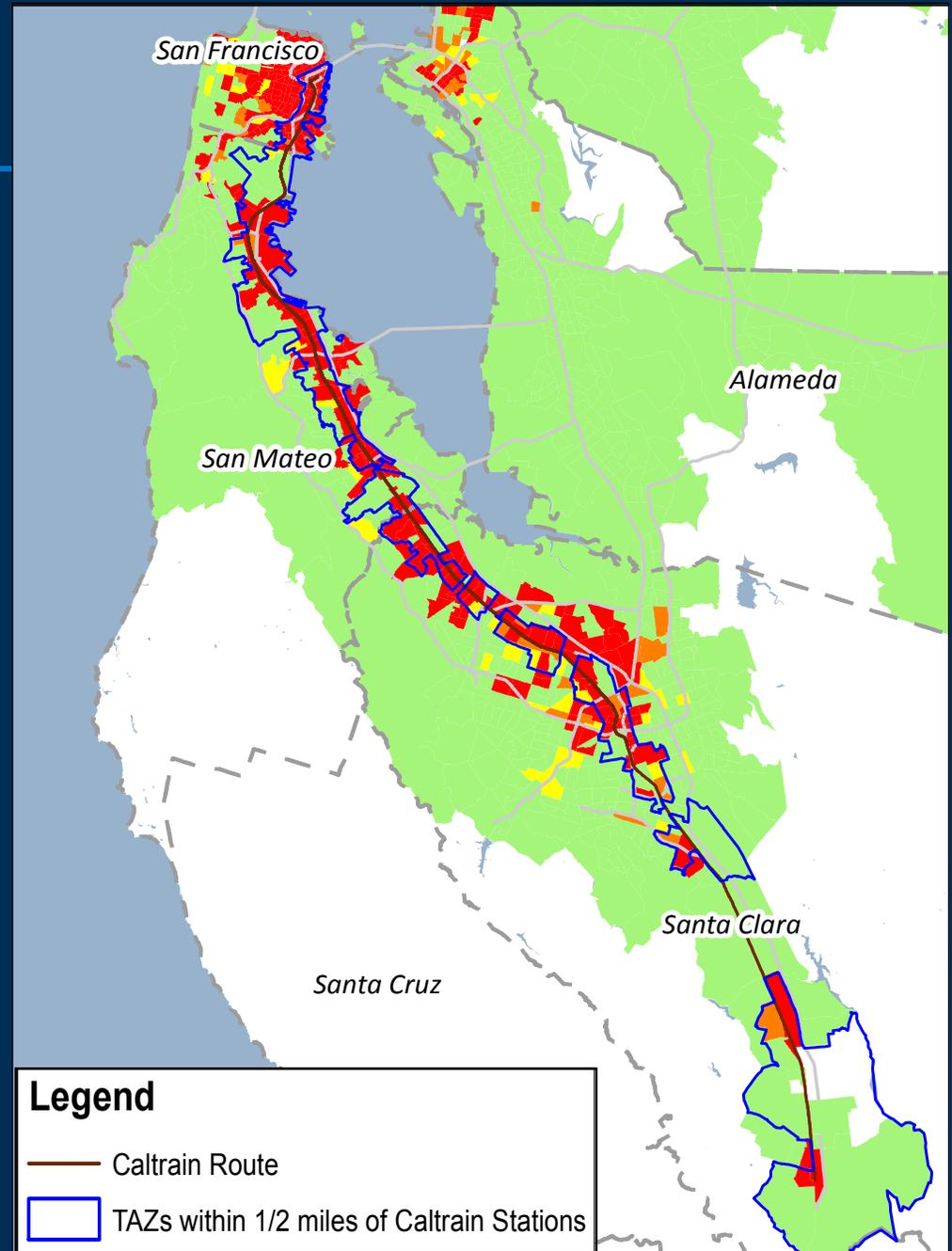
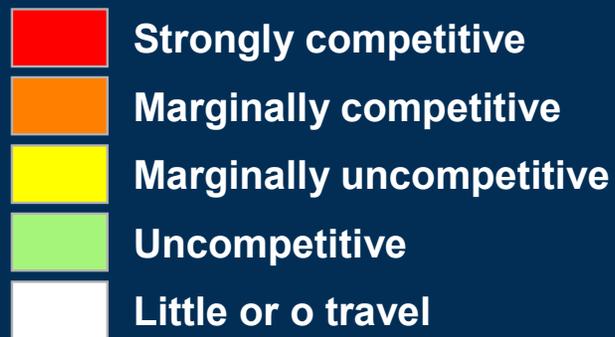


Contribution from...

14	Attraction density	51%	Auto ownership	1%	Household income	0.3%
	Production density	25%	Congestion	1%	Toll	n/a
	Parking costs	18%	Access from parking	2%	Topology	0%
	CBD characteristics	3%	Destination diversity	0.2%	Origin diversity	0%

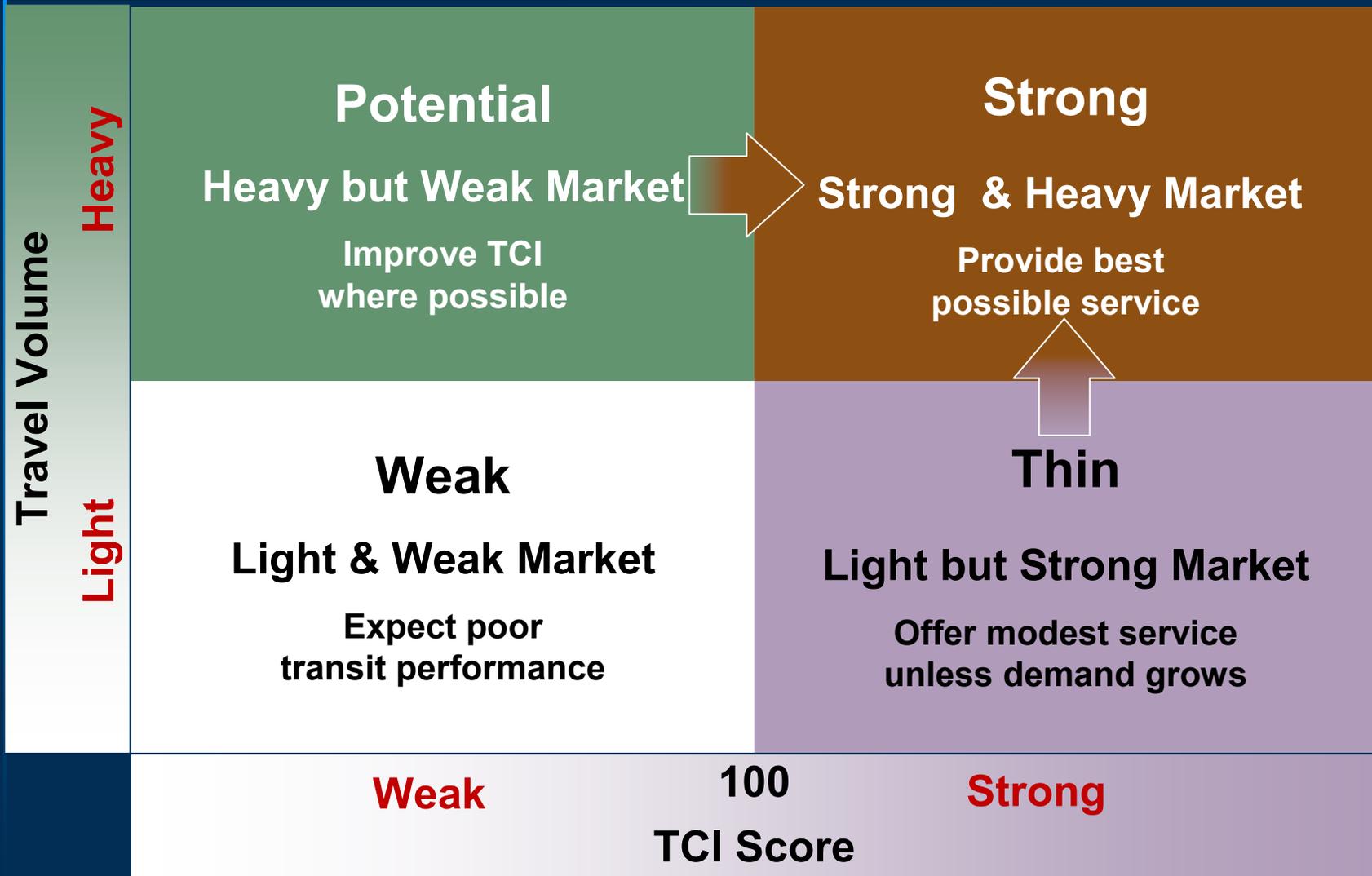
Caltrain Route Analysis

Colors indicate destination TCI for work tours that originate within the Caltrain corridor



Assessing Competitive Markets for Transit

TCI Score and Travel Volume



Application of TCI to VTA

Improve Financial Performance and Ridership

- **Market-based evaluation of all bus service in the VTA 2007 COA identified uncompetitive routes**
 - **Cut or consolidate service on 7 routes and re-deploy resources elsewhere in the core network**
 - **LRT Restructuring Study found that the Almaden spur was a competitive market but very low ridership**
 - **LRT service required 20 minute wait before transferring**
- 

Line 36 Penitencia Creek Transit Center – Valley Fair/Vallco Park Proposal

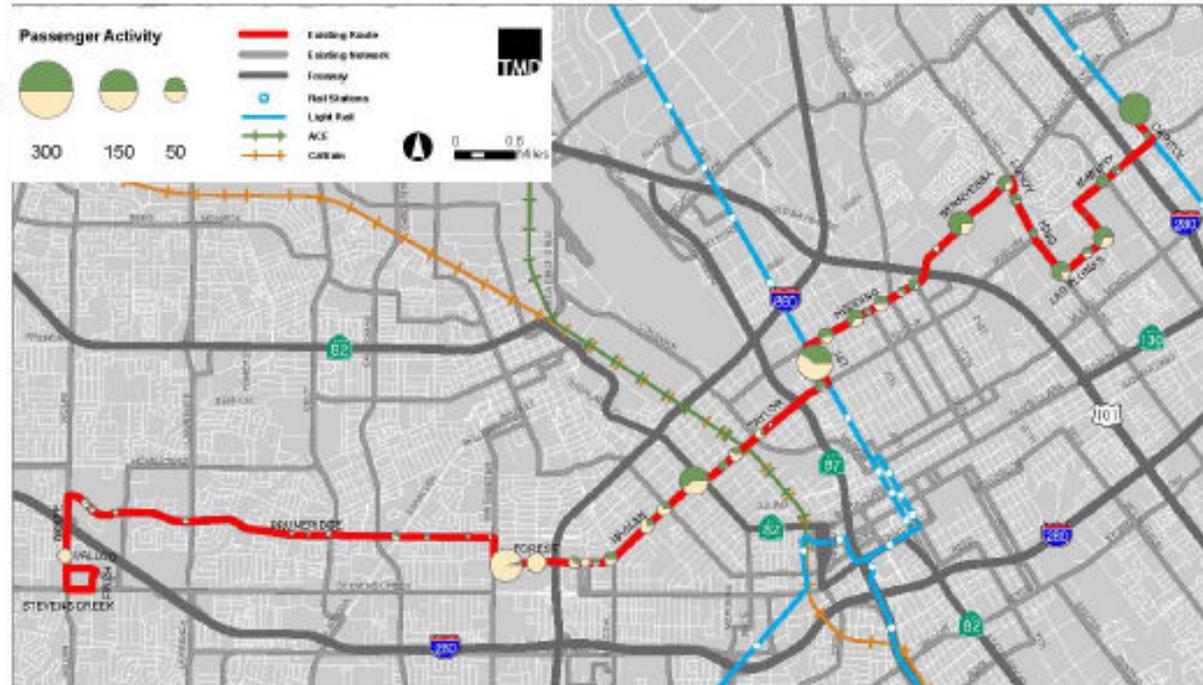


Findings

- This route competes with Route 23 along Stevens Creek and with Route 62 along Naglee. There may be opportunities for consolidating service and improving service frequency in the Bascom/Naglee corridor which is within the core network area.

Proposal

It is proposed to discontinue Route 36 and reinvest resources into Route 62 and New Route 61, to provide service to the same areas.



Transit Competitiveness



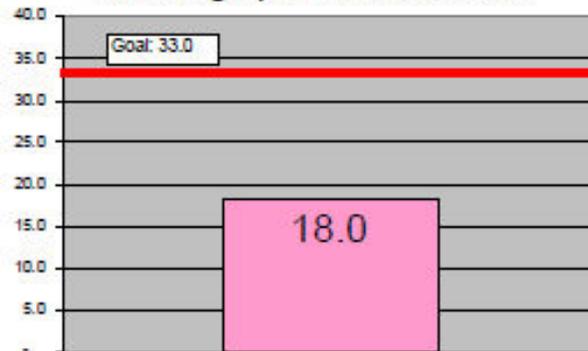
Origin: 122

Destination: 67

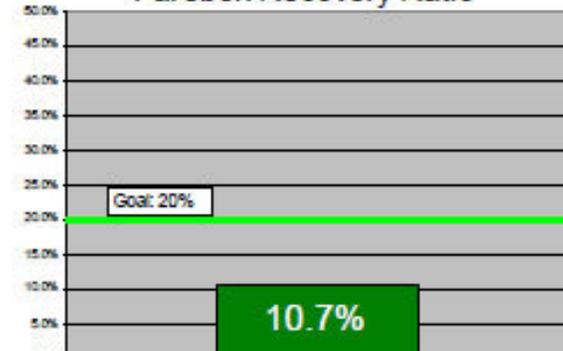
Proposal Highlights

- Join the Route 36 alignment east of Coleman/Naglee to Route 62 and operate as Route 61. Routes 61 and 62 collectively will provide a high-frequency service between 1st/Naglee and Bascom/Union.

Boardings per Revenue Hour



Farebox Recovery Ratio



Source: 2006 Passenger Counts, 2006 Ridership Data

Line 38 Monterey & Senter – Winchester Transit Center Proposal

Findings

- This is a peak-only weekday service, which limits its usefulness to transit riders.
- East of Camden, this route travels through a residential area with no major generators. This corridor is outside of the core area.
- In the Los Gatos area, Route 38 competes with Routes 48 and 60.

Proposal

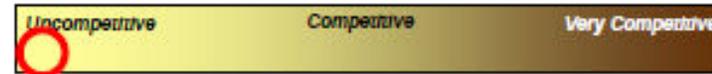
It is proposed to discontinue Route 38 and reallocate its service resources elsewhere in the network.



Transit Competitiveness Factor

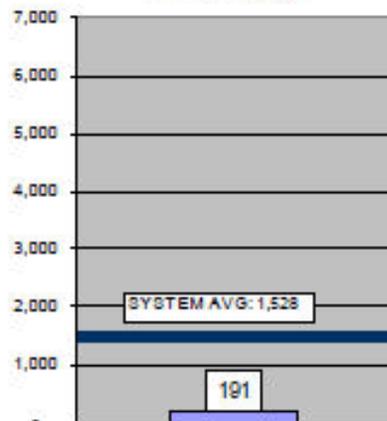


Origin: 77

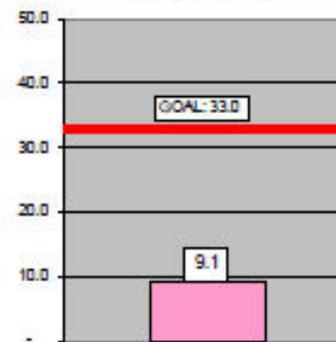


Destination: 25

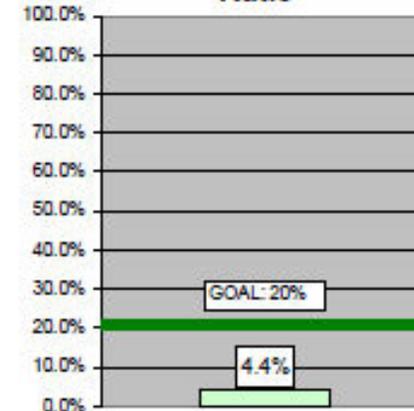
Boardings



Boardings per Revenue Hour

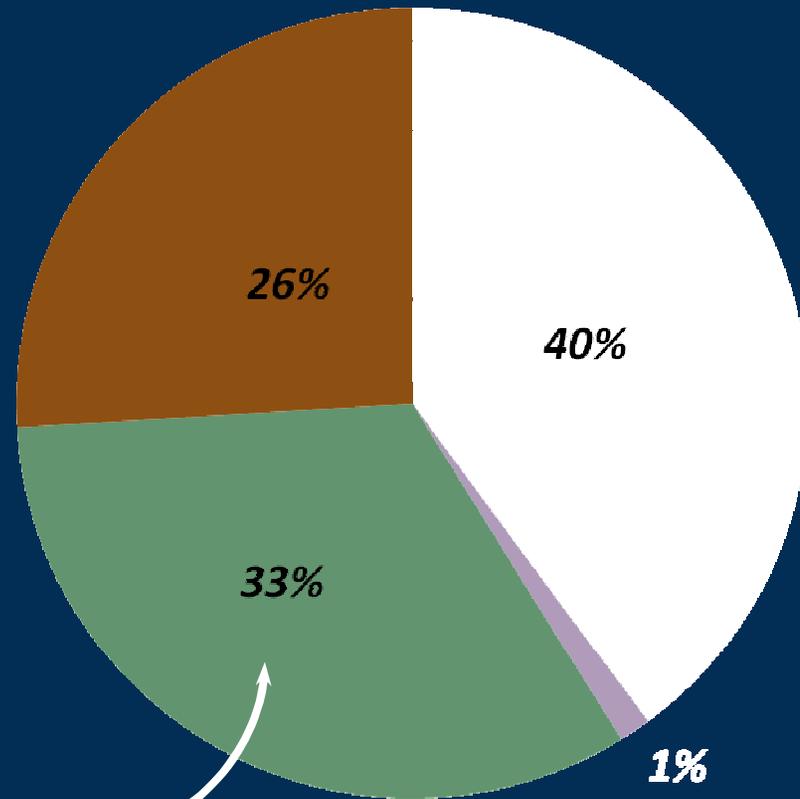


Farebox Recovery Ratio



Commute Tours Originating from Almaden Strong Market with Over 13,000 Tours

Travel Volume <i>Light</i> / <i>Heavy</i>	Potential	Strong
	Weak	Thin
	<i>Weak</i>	<i>Strong</i>
	TCI Score	

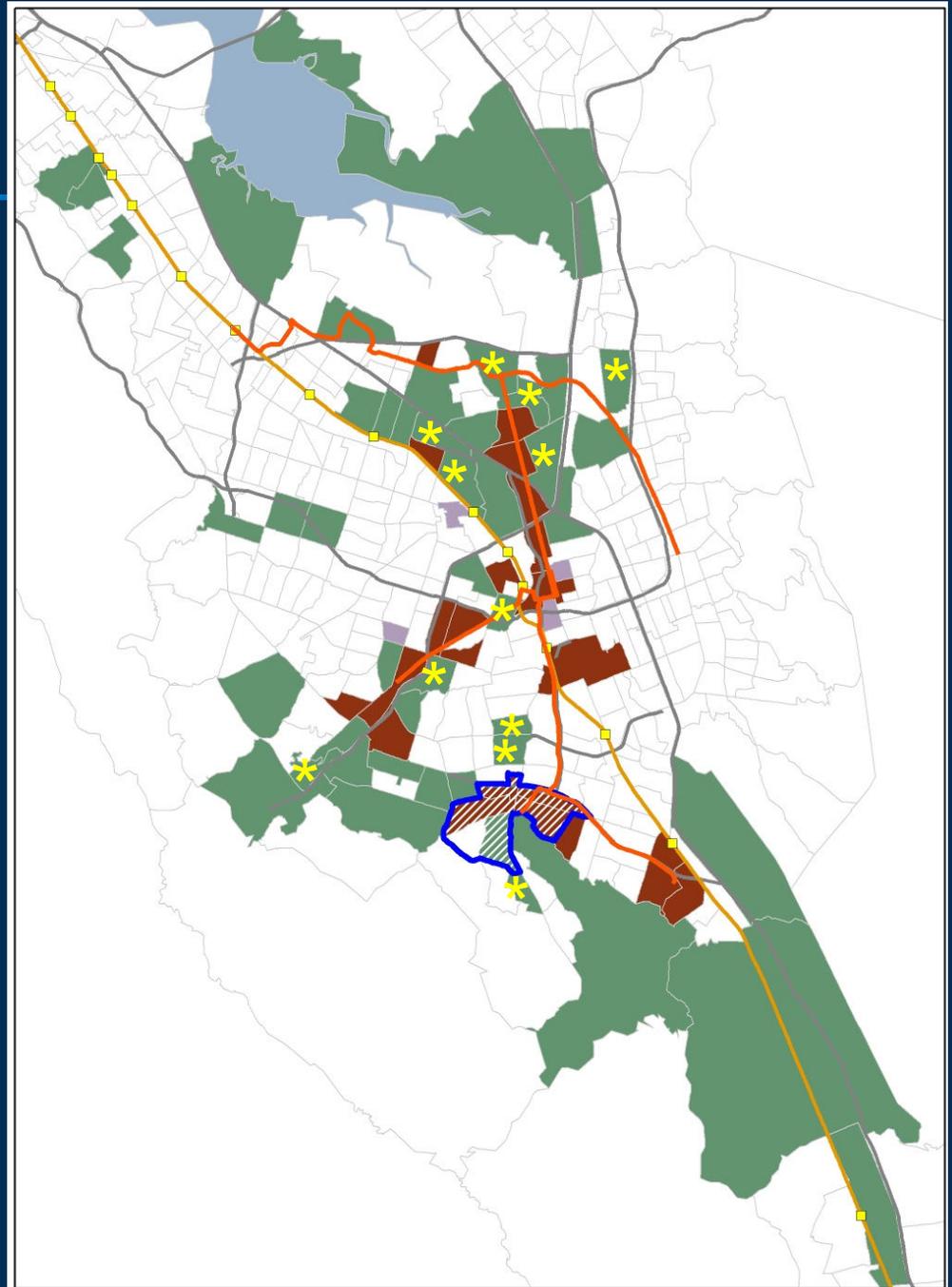


1/3 of tours go to zones with TCI above 75

Commute from Almaden on LRT

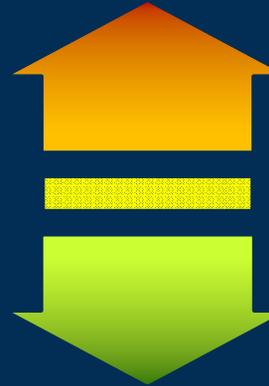
- Almaden spur was a competitive market but very low ridership
- LRT service required 20 minute wait before transferring
- VTA planning direct through service
- Potential negotiations with marginally uncompetitive neighborhoods over parking prices and density

* Indicates marginally uncompetitive market with high travel volume



Three Applications of TCI

**Intra-Agency
Resource Allocation**



Expand competitive markets
Investigate marginal markets
Reduce or eliminate uncompetitive markets

**Partnership with
Jurisdictions**

- Land use density
- Parking price & supply
- Transit priority

**Public Outreach &
Funding**

- Advocates
- Voters
- Neighborhoods

Web-Based Tool Available to All Transit Agencies

- Available to all transit agencies in all nine counties
- Policy Analysis
 - Auto Operating Cost (per mile)
 - Parking Cost (at destination)
 - Bridge Tolls
 - Parking Distribution (at destination)
 - Residential density in each zone
 - Employment density in each zone
 - Travel Time (traffic delay)
- Training for transit agencies beginning in August or September

Questions and Answers
