



Thinking Outside the Bus: New Approaches to Commuter Transportation



*Advanced Transportation
Technologies*

*Clean Transportation
Solutions* SM



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CALSTART Focus Areas (current programs)

Vehicles and Technologies

Hybrid Truck Users Forum
National Fuel Cell Bus
Tech Initiative
LNG and Hybrid Electric
Yard Hostlers

Consulting Services

Fleet AFV Choices
Strategic Partnering
Market Analysis

New Fuels

CA E85 Network
Biomethane Task Force
Hydrogen
Biofuels

**5-Year Goal:
To Develop Vehicles, Fuels
and Systems that Can Reduce
Petroleum Use 20%
by 2020**

Innovative Mobility

Bus Rapid Transit
First Mile
Clean Mobility Centers
MyGo-Pasadena
Bikestation Seattle

Industry Support

Participant Program
Technical Advisory Committee
Conferences
Publications

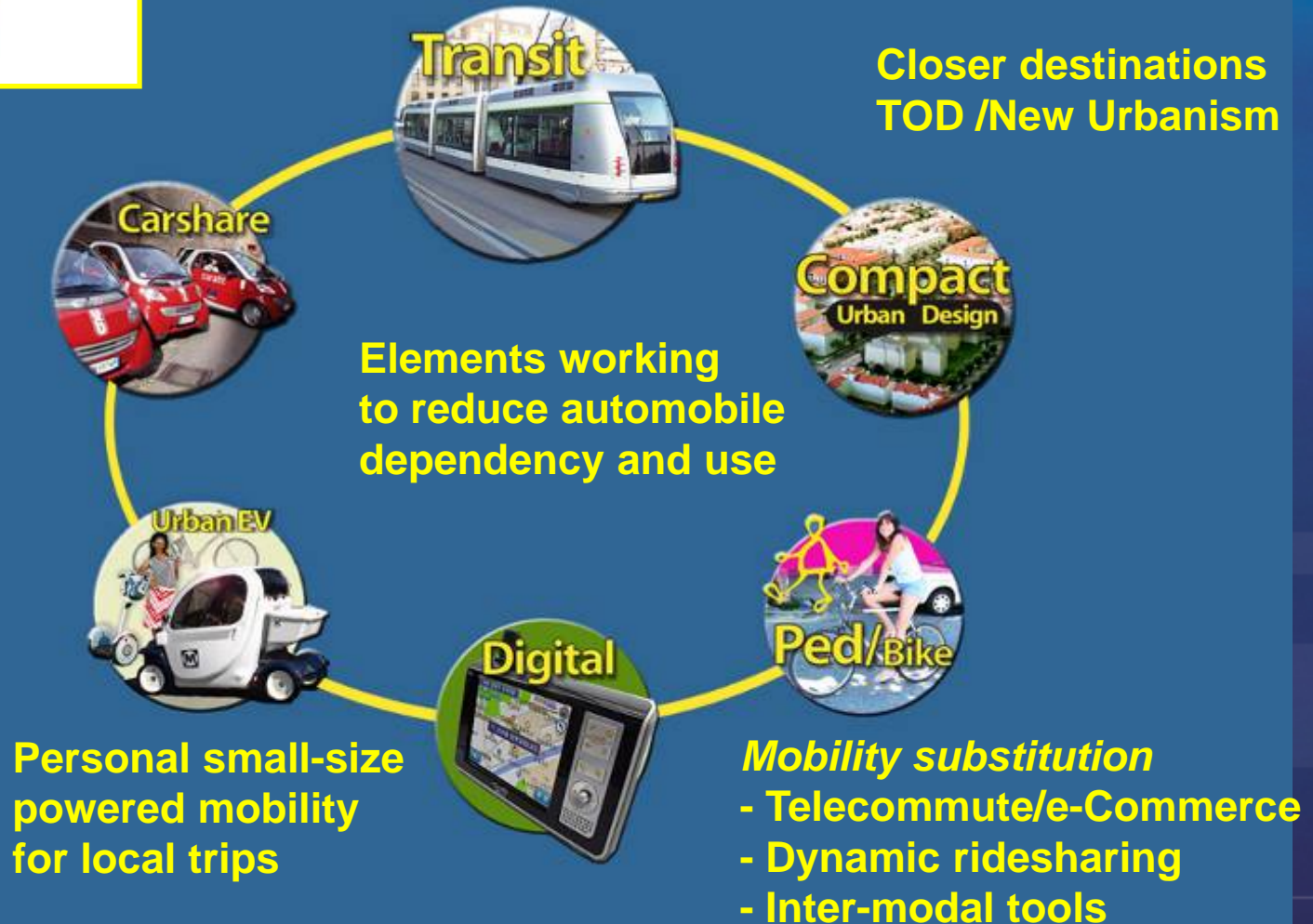
Policy

California Secure
Transportation Energy Partnership
2020 Conference

First Mile Solutions



First Mile



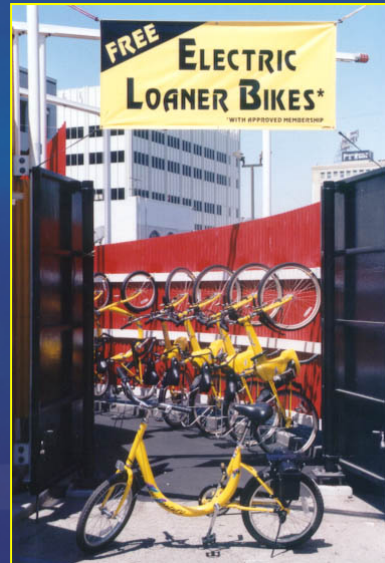


Nation's First Innovative Demo Projects by CALSTART



Bay Area Station Car Program

Long Beach Electric Bike Sharing Program



Clean Mobility Center in Long Beach



Urban Clean Fuel Car Sharing program 2002





The Transit Access Problem

- Most people don't live within easy walking distance of transit
- Collector transit can involve large time penalty
- Most convenient and flexible option is to drive to transit
- Owning a car can make transit less attractive



How can we provide door-to-door mobility without dependence on the private automobile?



Benefits of 2-Wheel Transit-Linked Mobility

- Reduces demand for parking spaces
- Allows higher density TOD
- Makes carsharing a more viable option
- Reduces user transportation costs
- Encourages cleaner and more sustainable transportation
- Can provide flexibility for trip chaining





New Forms of 2-Wheel Mobility

- Bike commuting limited to small segment of commuting population
- Rapidly broadening array of 2-wheel mobility devices
- Motorized or pedal assist technologies attract a new segment
- Strong growth in motor scooter sales (up 180% since 1999)





Long Beach Clean Mobility Center - 2002



- Bikestation Long Beach modified to become a Clean Mobility Center
- Offers four different types of clean mobility – electric cars, electric scooters, electric and conventional bikes
- Valet and unattended bike storage
- Site adjacent to Metrorail station and Long Beach Transit stops
- Partnership between CALSTART, Bikestation Coalition, Flexcar



City wheels



What Did We Learn?



- Intensive marketing required to change transportation behavior
- Smart access and communications technologies can facilitate unattended facilities
- EV range, charging time not well suited to rental applications
- Strong interest in scooters
- Network effects critical to enhancing value proposition





Seattle Clean Mobility Center



- Attended facility providing multiple mobility options
- Located adjacent to a bus transit center, near Amtrak, Ferry Terminal, sports arenas
- Builds and improves upon Long Beach CMC





Seattle Clean Mobility Center

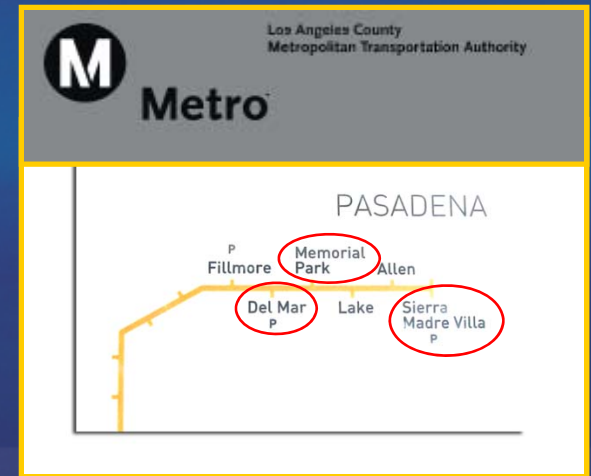




MyGo-Pasadena 2006 Electric Bike Subsidy Program



- MyGo-Pasadena provided **significant rebates and cash rewards** to transit commuters to purchase/use a two-wheel electric bicycle/scooter to connect to their neighborhood transit stations.
- Sought current & future Gold Line riders to drive a 2-wheel EV (vs. a single occupancy vehicle) to one of three stations. Sierra Madre Villa, Memorial Park or Del Mar will be the “origin” stations, while Union Station in downtown LA will be the most common “destination” station for participant commuters.





The MyGo-Getters!



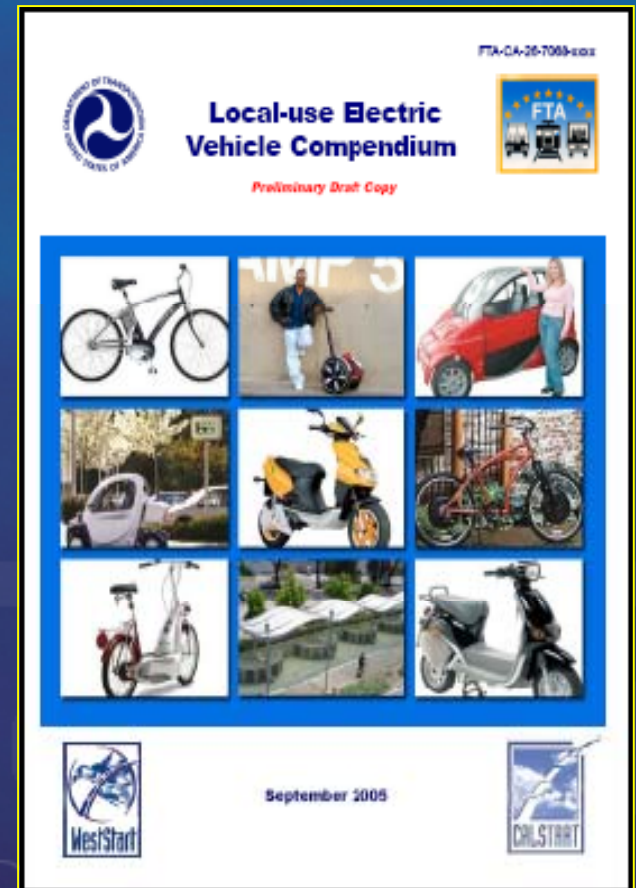


Local-Use EV Compendium 2005

A 2005 publication that lists all available local-use EV's in an effort to integrate a new class of vehicles with public transit, including:

- Low and high-powered e-scooters
- E-Bikes
- EPAMDs (Segways)
- Neighborhood Electric Vehicles (NEV's)
- EV Storage Devices

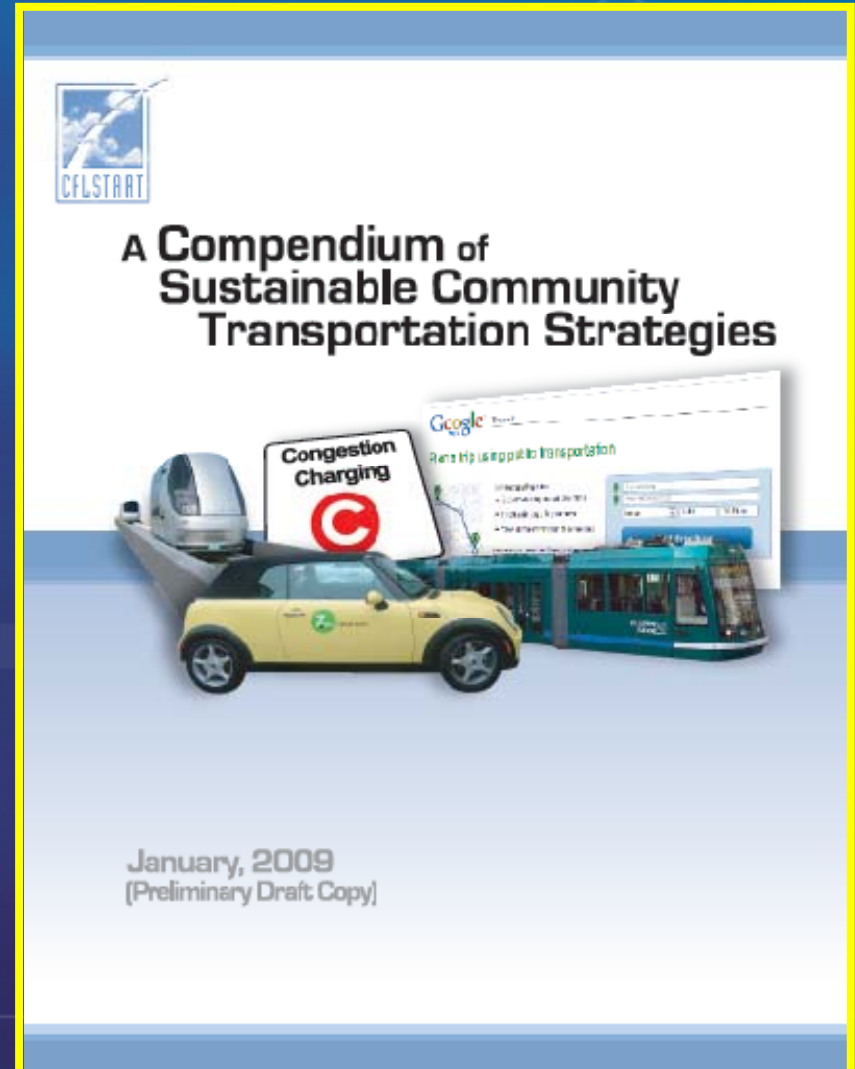
**Currently available on the CALSTART website
www.calstart.org**





Compendium of Sustainable Community Transportation Strategies - 2009

- Toolkit of innovative mobility technologies and strategies that can help California communities meet requirements of SB375.
- Includes summaries of strengths & weaknesses of each approach and examples of showcase communities.
- Contains select metrics
 - VMT reduction potential
 - Cost savings to community & user
 - GHG / criteria emission reductions





About the Compendium

Compendium consists of ten strategies/actions:

1. First Mile/Last Mile Connectors
2. Streetcar
3. Car Sharing and Vanpooling
4. Car-free Days (Ciclovía)
5. Bikesharing
6. Personal Rapid Transit
7. Real-Time Urban Traveler Information Systems
8. Congestion Pricing
9. Smart Parking Systems
10. Financial Incentives



FIRST MILE / LAST MILE CONNECTORS

Packaging Ideas:

- **Strengths:** insurance did not play a large role in their failures or success, which is quite different from car sharing programs, where it did.
- **Weaknesses:** Demo programs = Highly dependent on funding and unsustainable on subscriber-based fees alone.
- **What it works well with:** Station car programs are particularly popular with people who place a high value on their presumed social and environmental benefits.

Barriers to implementation:

- **For station cars:** No economies of scale which would dramatically reduce costs and increase the affordability of the services.
- **For bike transit connections:** program fund reallocation. Breaking from “business as usual” method of transit agencies building new parking capacity at far higher costs instead of lowering demand of vehicle parking.

Maximizing Mobility Options in Los Angeles: First/Last Mile Strategies

December 2009





SCAG Report - 2009 Elements

Mobility Strategies found to have the greatest applicability in
Los Angeles:

1. Casual Carpooling
2. Taxis
3. Car-sharing
4. Short-term Car Rental
5. Folding Bikes on Transit
6. Bicycle Sharing Programs



Clean Transportation Technologies and SolutionsSM



www.calstart.org