

East County Dynamic Personal Micro Transit Feasibility Study

Contra Costa Transportation Authority Board

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Dynamic Personal Micro Transit

A new mobility option being
explored at GoMentum
Station.



What is Dynamic Personal Micro Transit (DPMT)

- Closed system, autonomous, electric, public micro transit solution
- Virtual rail, tires on pathway
- Private seating, on demand, safe, and non-stop rides
- A financially sustainable model



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Advantages of DPMT

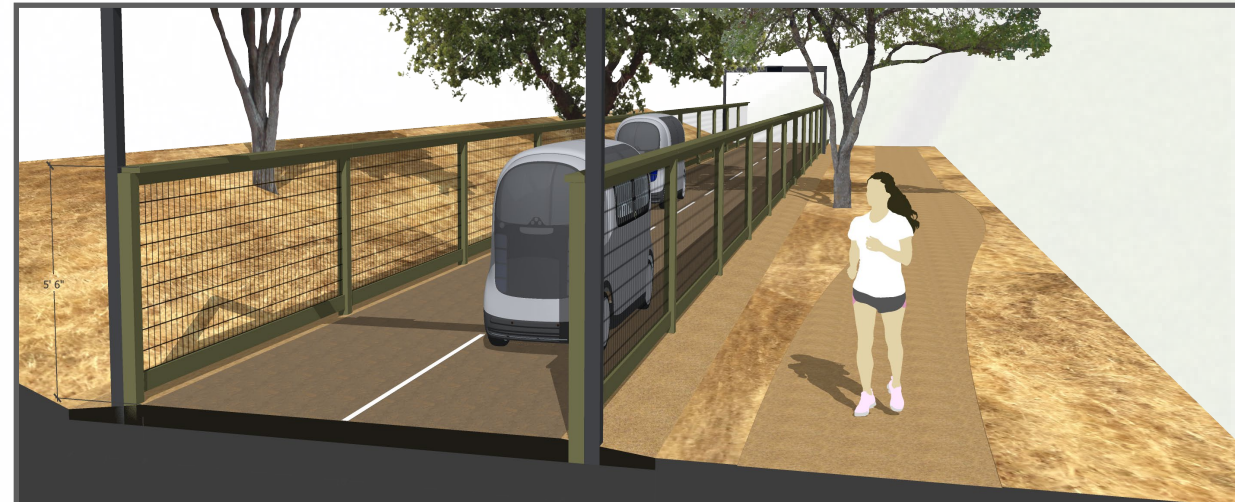
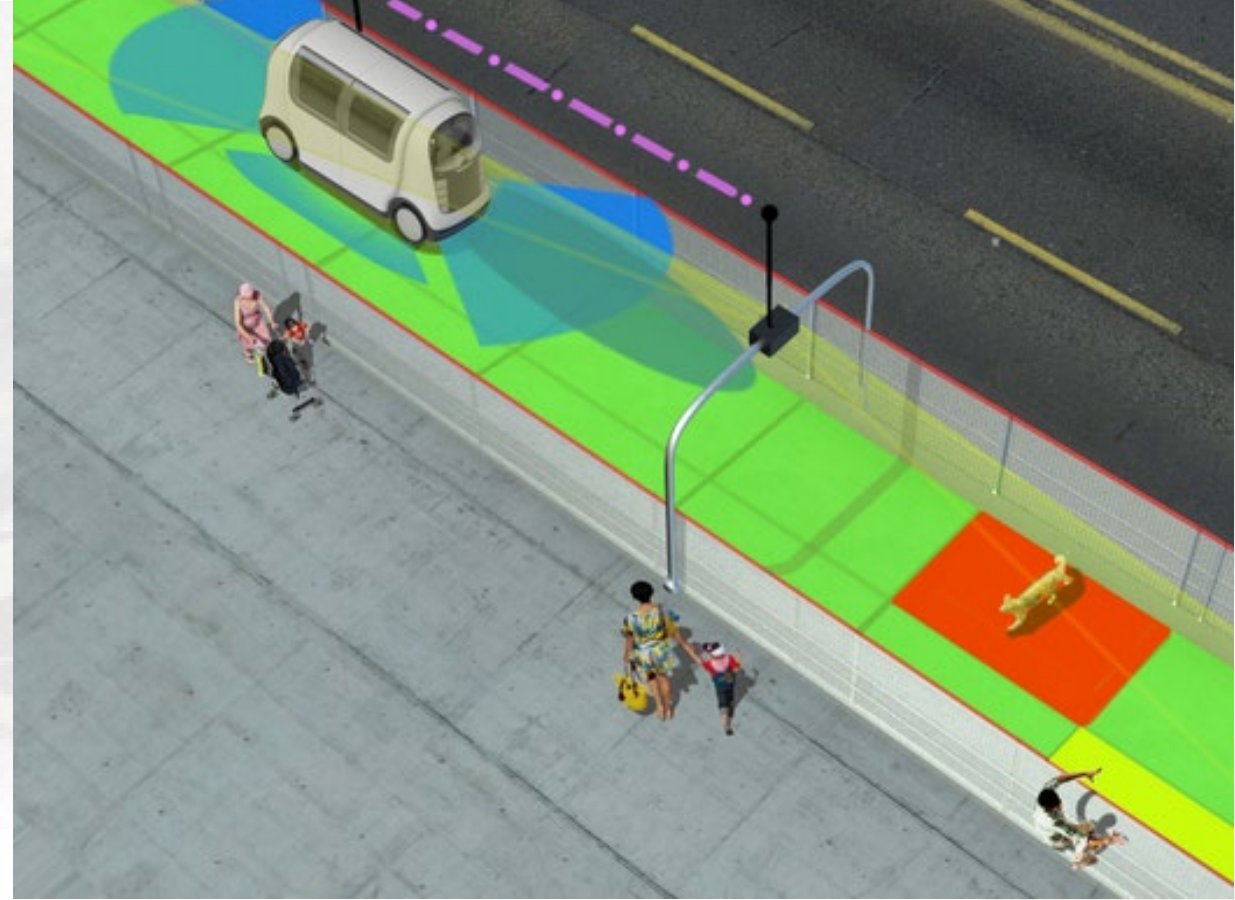
- Economic Development
- Sustainability – support emission reduction goals
- Transit Accessibility for Communities of Concern – First/Last mile Connections
- Complements Fixed Route Transit
- Cost Effectiveness
- Smaller footprint
- Safe, personalized, on-demand



Efficient cleaning & Sanitization

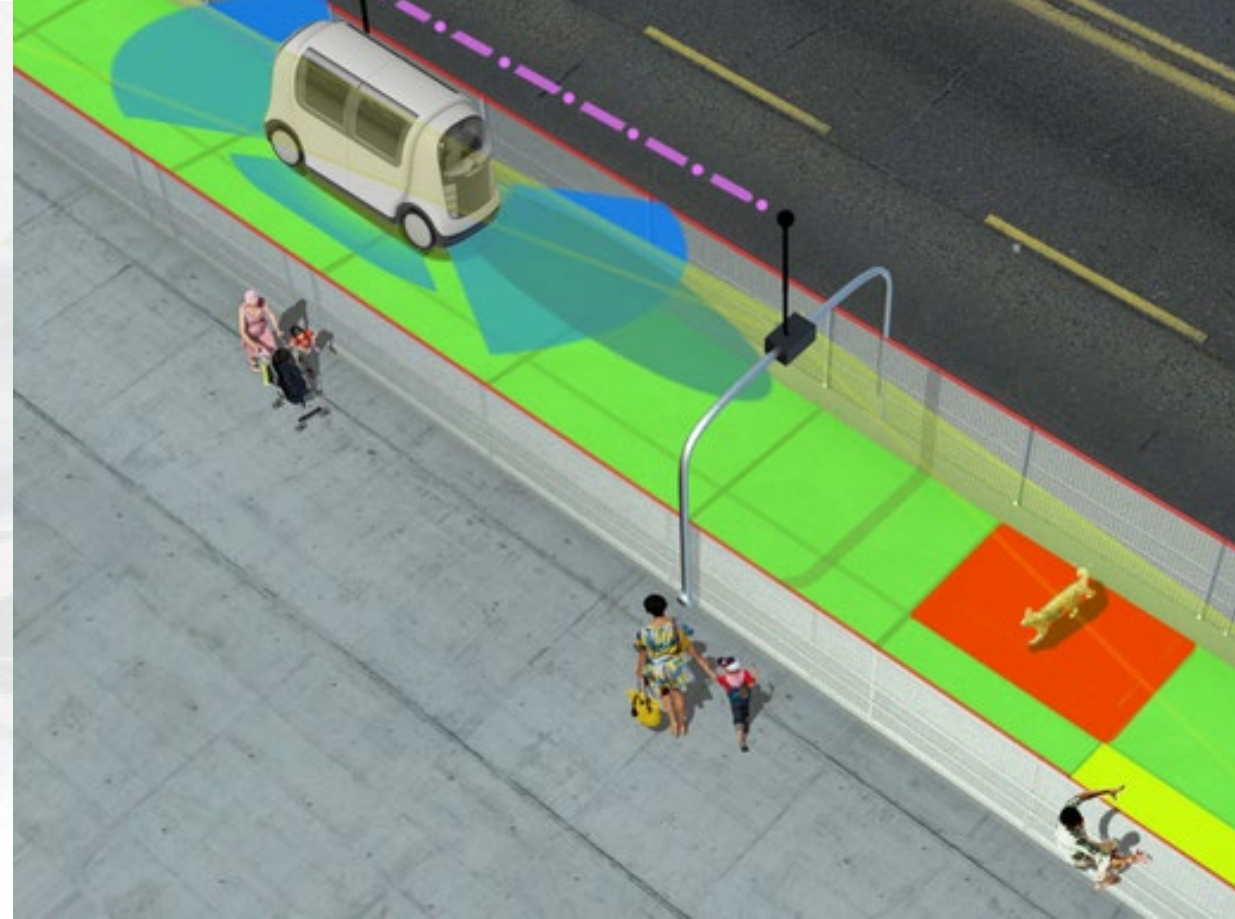
Personal Safety

- Personalized, safe, on-demand travel
- Built-in Multi-layered Protection and Security:
 - Security Barriers
 - Sensors
 - SOS buttons
 - Cameras
 - Instant emergency response
 - Vehicles that stop/react in concert



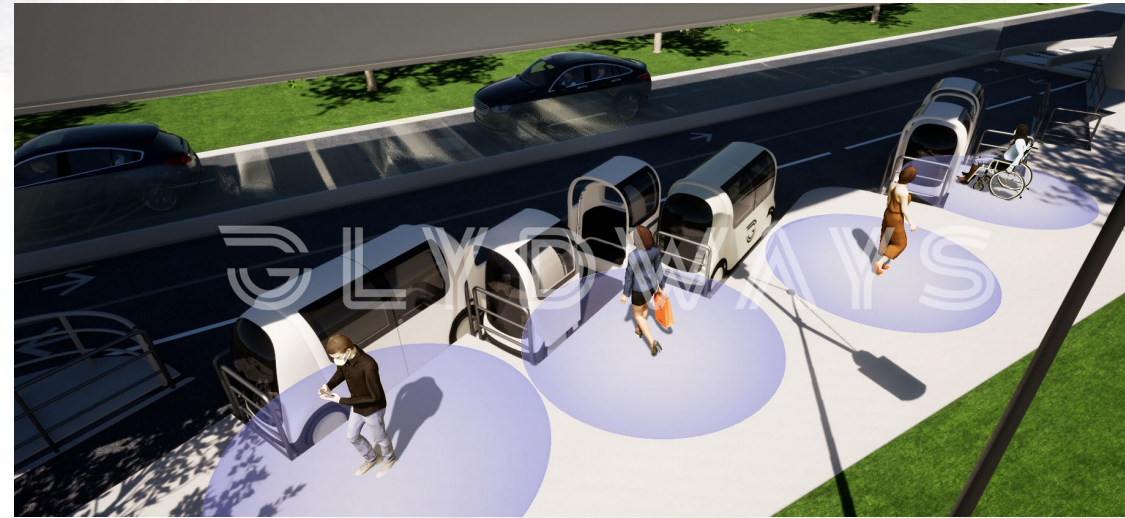
System Safety

- Real-time monitoring inside and outside of the network and intrusion alarm system.
- Safe Right of Way: Closed corridor means it never mixes people and vehicles.
- Built-in Multi-layered Protection and Security.



Other DPMT Systems

- DPMT networks currently in planning stages in the Bay Area:
 - Mountain View area near Google campus
 - South San Francisco
 - Diridon Station Connection – San Jose



East County DPMT Feasibility Study

- Undertaken by Cities of Antioch, Brentwood, Pittsburg, Oakley, and Contra Costa County



Goals and Objectives -

East County DPMT Feasibility Study Progress

- Provide Transit Accessibility by building a DPMT system to provide First/Last mile connections
- Provide Transit Accessibility to assure Economic Development and attract employers.
- Evaluate feasibility to attract potential Public Funding and Private Financing.

ECCC DPMT Conceptual Routing Plan




Pittsburg Route

Antioch Route

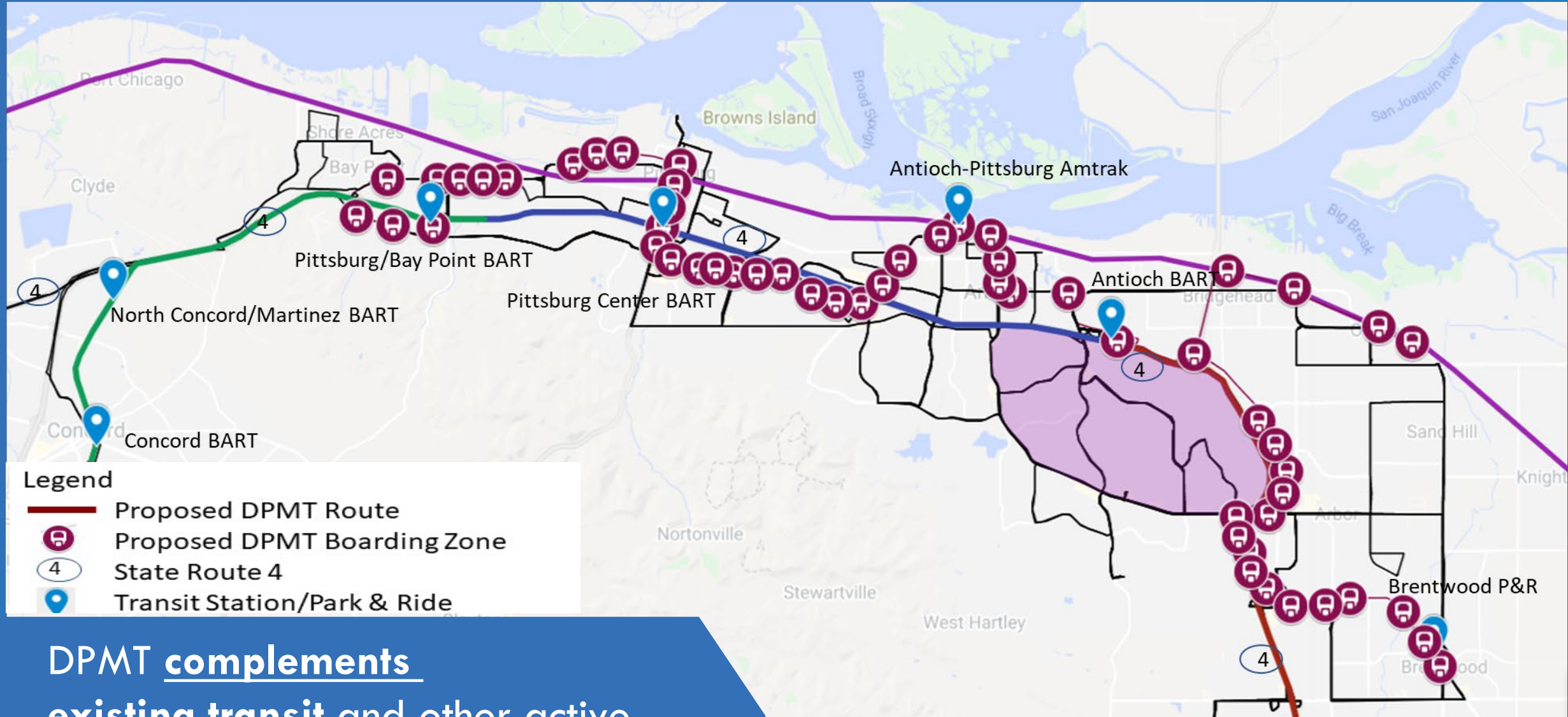
Oakley Route

Brentwood Route

Legend

-  Pittsburg-Bay Point BART to Los Medanos College
-  Los Medanos College to Antioch BART
-  Antioch BART to Future Brentwood Innovation Center
-  Future Brentwood Innovation Center to The Streets of Brentwood
-  Future Brentwood Innovation Center Loop
-  The Streets of Brentwood to Brentwood Park and Ride
-  SR-4 to Future Oakley Park and Ride
-  Neroly Road to Future Oakley Park and Ride
-  Future Oakley Park and Ride to Future Regional Park

Transportation Services with DPMT

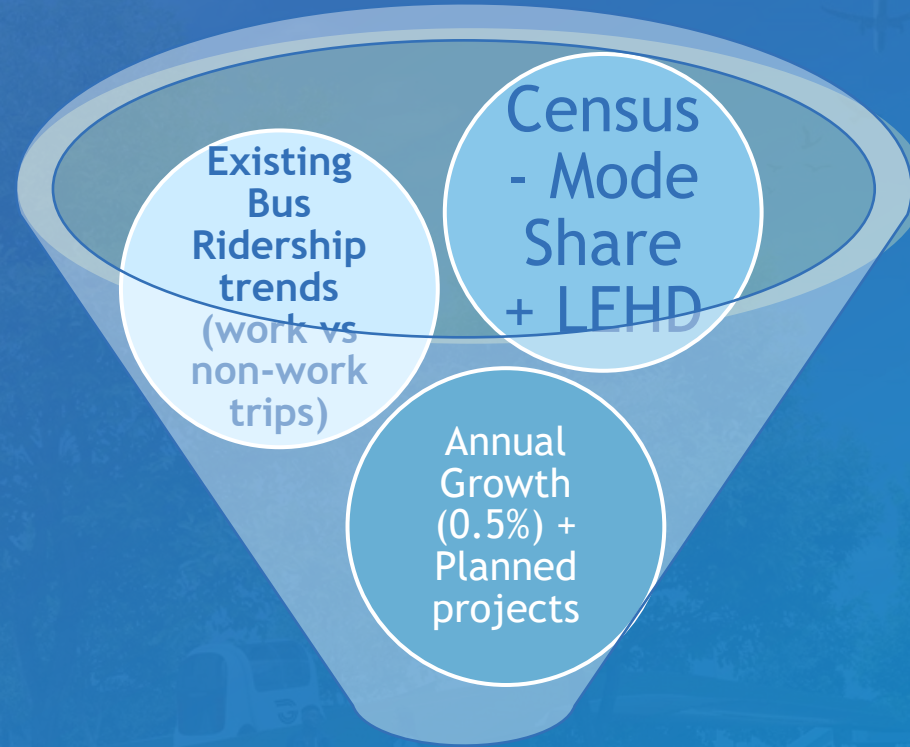


DPMT complements
existing transit and other active
transportation modes

The background image shows a modern transit station with a blue-tinted overlay. In the upper part, there are signs for 'GLYDWAYS 1', '2', '3', and '4'. Below these, the text 'DEMAND ANALYSIS AND PROJECTED RIDERSHIP' is prominently displayed in white. The lower part of the image shows a transit vehicle, a person on a bicycle, and a person walking, all within the station environment.

DEMAND ANALYSIS AND PROJECTED RIDERSHIP

Ridership Demand Estimate



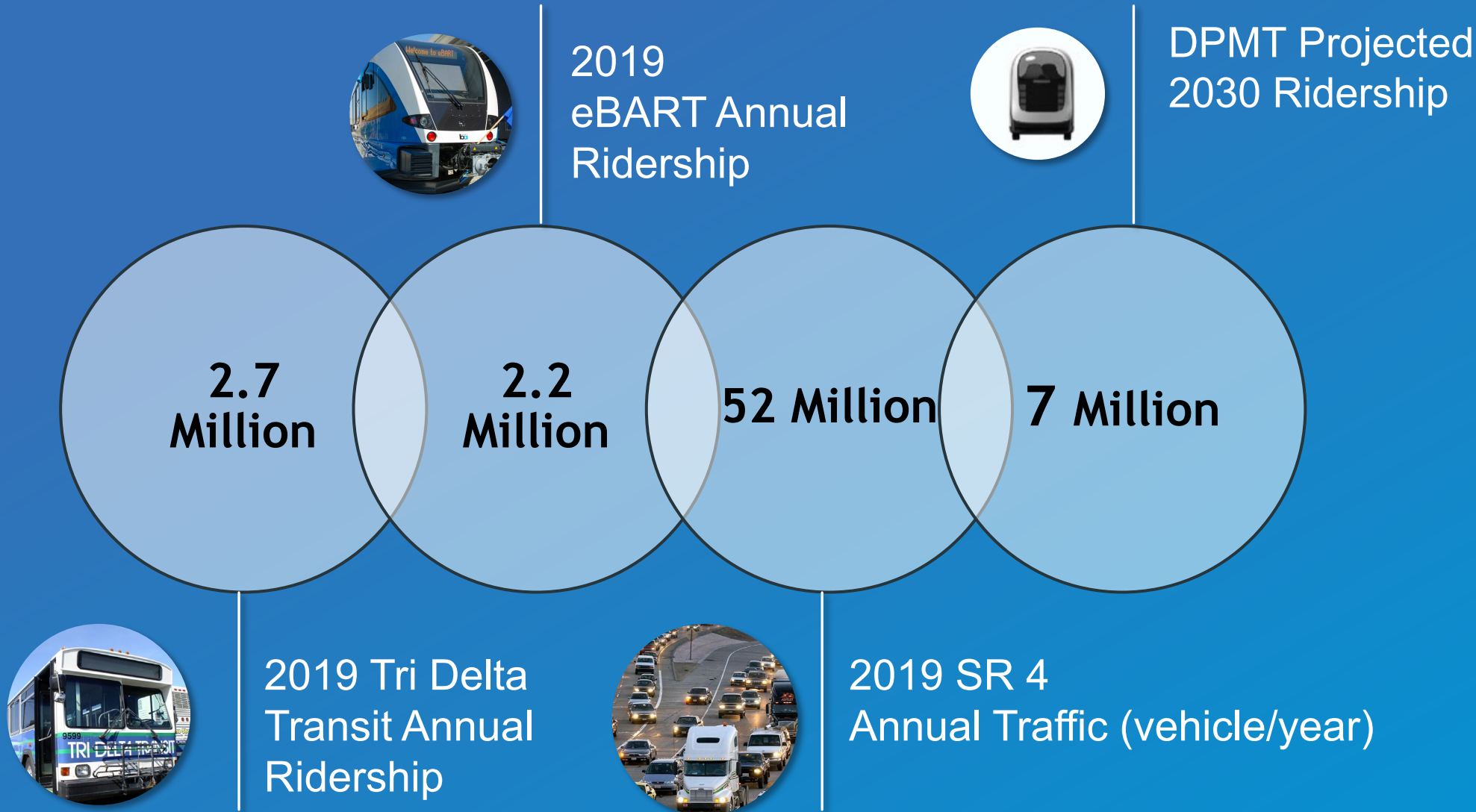
13 M (Potential Demand)

7 M

**Annual
Ridership
Estimate**



Ridership in Perspective



Emissions Reduction*

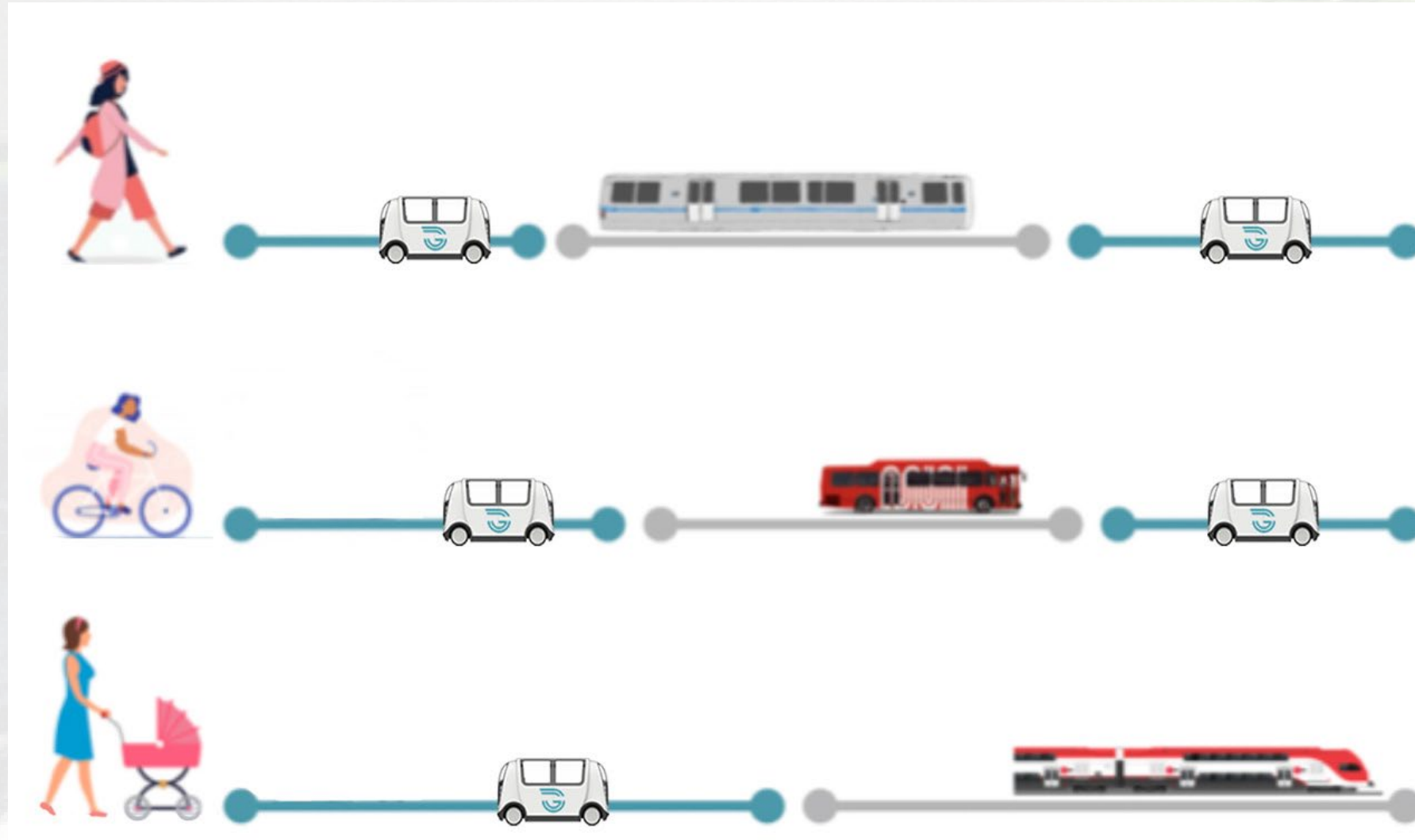


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- ✓ 15x less emissions than cars/buses
- ✓ 6x less emissions than light rail

* Carbon Equivalent emissions over a 30-year lifetime analysis with solar infrastructure:
gCo2e PMT: Glydways: 37, Light Rail: 224, Cars: 573

A Complete Trip (no auto)



Benefits



**Support Economic
Development and Create
Jobs**

Increased Mobility and
Connectivity



**Congestion Relief with
Deployment of First
Micro-Transit Network**

Reduction in VMT on SR₄



**Increased Access for
Underserved
Communities**

Transit accessibility – first/last
mile connectivity



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FINANCIAL PLAN

Planning Level DPMT Costs

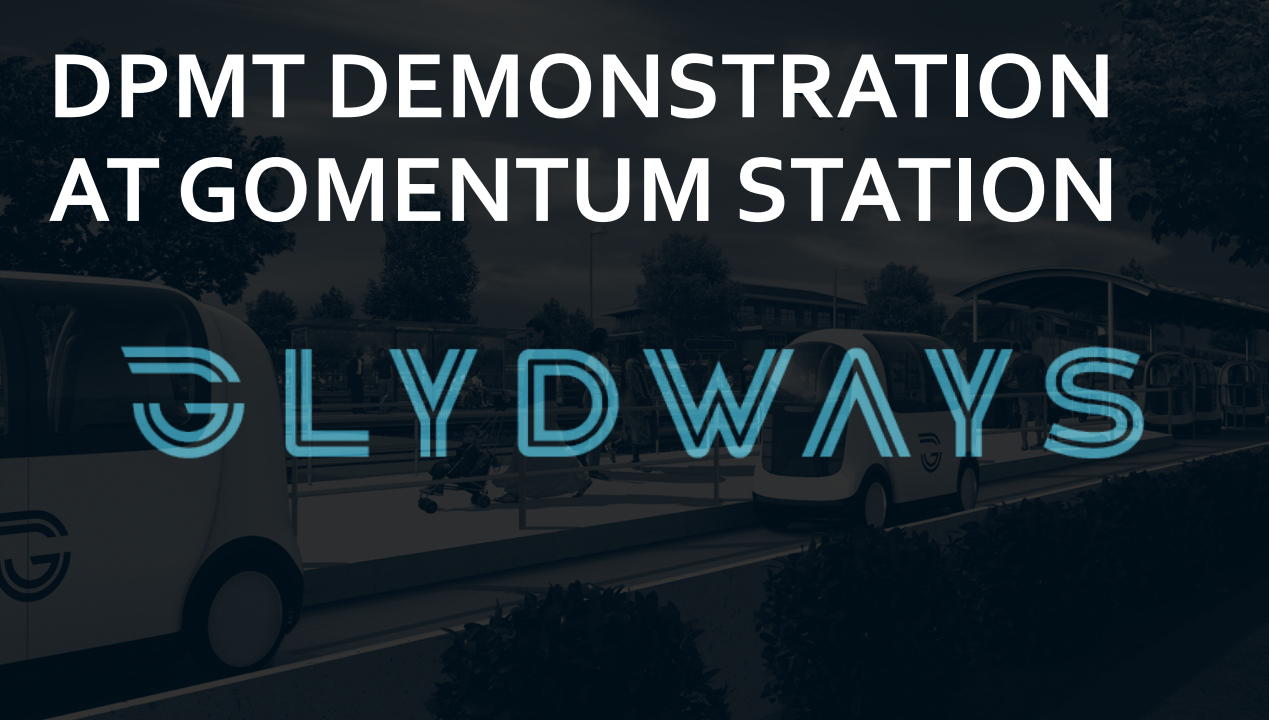
DPMT Segment	At-Grade Segment Length	Elevated Segment Length	Guideway Cost (in millions)	Garage /Central Control Cost (in millions)	Vehicle/Batteries Cost (in millions)	Development Costs (in millions)	Total Capital Cost (in millions)
Pittsburg	2.01 miles	7.6 miles	\$163.4	\$6.4	\$8.3	\$17.6	\$195.7
Antioch	1.7 miles	4.6 miles	\$101.6	\$3.3	\$4.3	\$12.0	\$121.2
Oakley and Brentwood	7.7 miles	5.1 miles	\$109.3	\$5.3	\$7.4	\$12.0	\$134.0
Total	11.41 miles	17.3 miles	\$374.3	\$15.0	\$20.0	\$41.6	\$450.9

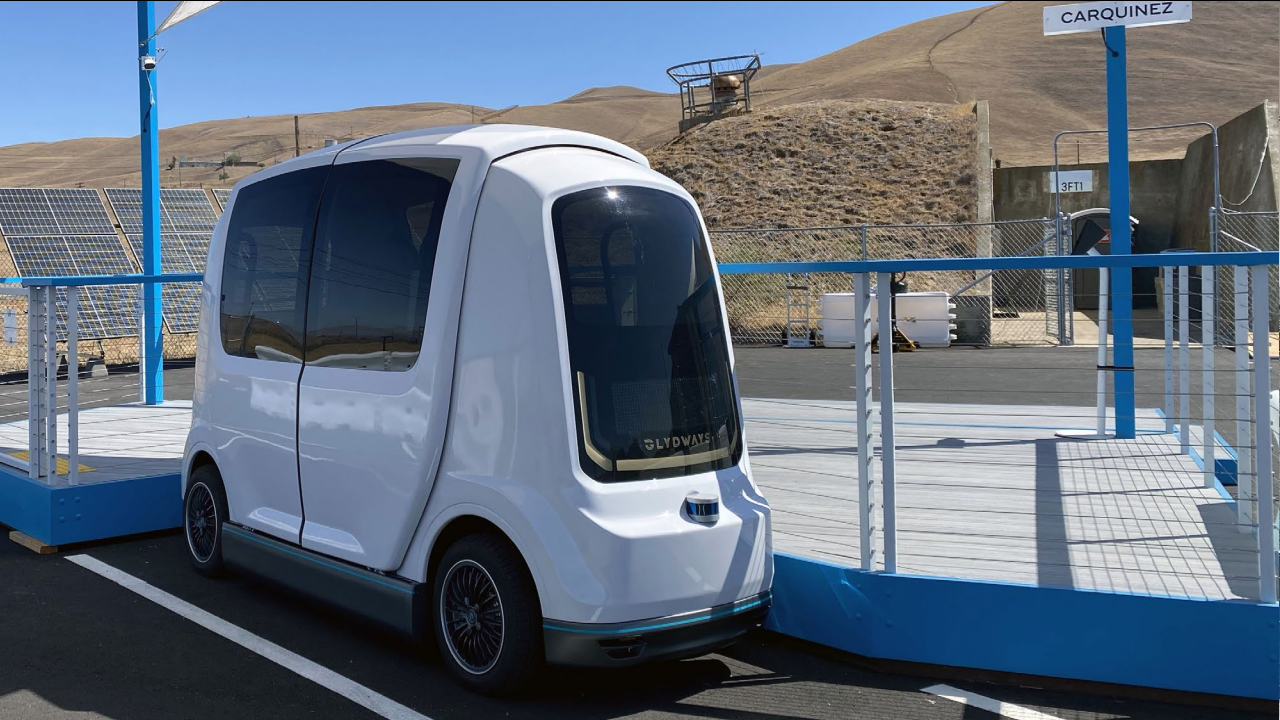
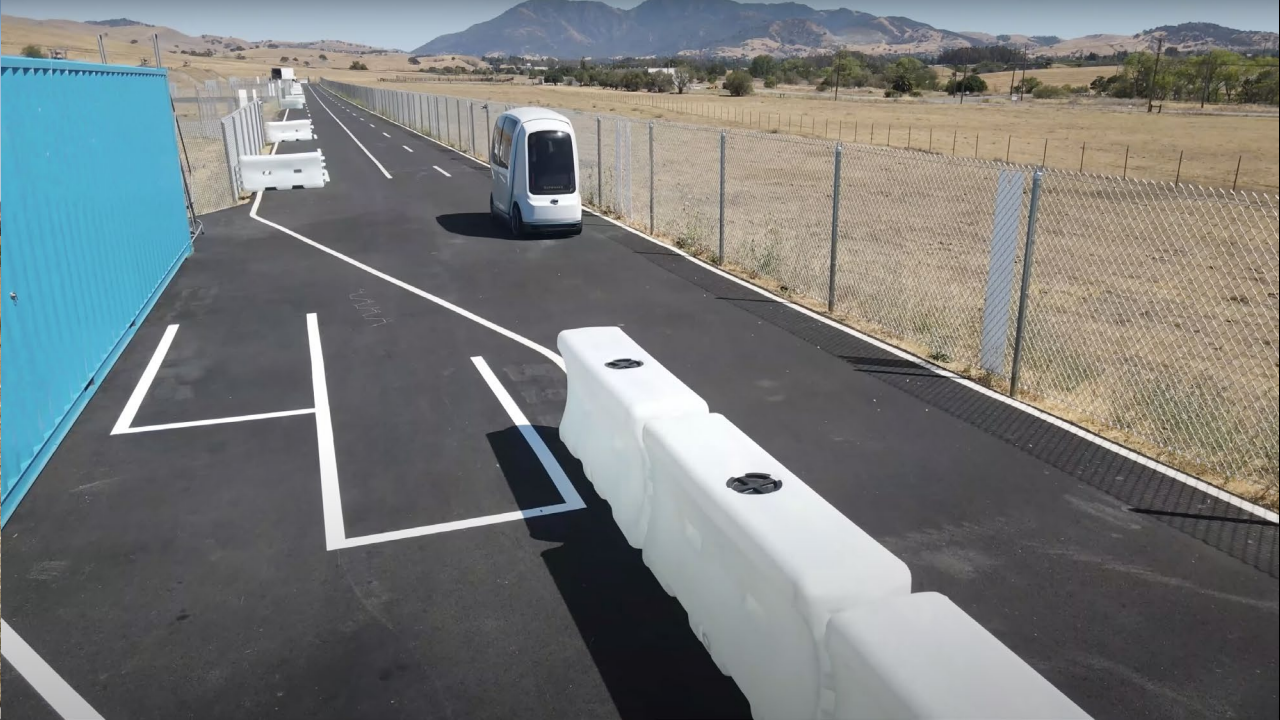
Financial and Implementation Plan

- Explore Private Sector Participation
 - Private Funding to Finance Project
 - Refinement of Cost Estimates
 - Development of Phasing Plan
- Evaluate Grant Funding Opportunities for Project
- Seek Input from Stakeholders
- Continue Testing at GoMentum

DPMT DEMONSTRATION AT GOMENTUM STATION

GLYDWAYS





Next Steps

- Additional Industry Outreach
- Refine Funding Plan and Segmentation
- Expanding Proof of Concept at GoMentum (construction of Phase 2 underway)
- Investigate Delivery Options and P3 Authority



Thank you



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