Industry Day-

DYNAMIC PERSONAL MICRO TRANSIT

Tim Haile, Executive Director, CCTA

Presented to Industry Professionals

February 8, 2022

Agenda

1. Project Team and Introductions
2. Overview of CCTA and Tri Delta Transit
3. Summary of Feasibility Study
4. DPMT Project Procurement and Deliver Strategy
5. Q and A

Project Team

- Tim Haile, PE, Executive Director (CCTA)
- Stephanie Hu, PE, Director, Projects (CCTA)
- Jeanne Krieg, CEO (Tri Delta Transit)
- David McCray, Legal Counsel (CCTA)
- Brent Butzin, Legal Counsel (Kaplan Kirsch)
- Adam Giuliano, Legal Counsel (Kaplan Kirsch)
- Frank Furger, CCTA Project Management Consultant
- Joy Bhattacharya, CCTA Project Management Consultant

About CCTA

CCTA.NET

- Local Transportation Authority organized under the Local Transportation Authority and Improvement Act - Contra Costa Ordinance 88-01 and amended by Ordinance 06-02
- Board is comprised of 11 Commissioners
- Plan, fund, and implement innovative transit programs that strengthen Contra Costa County's diverse communities and improve the lives of residents
- County's designated Congestion Management Agency, responsible for putting programs in place to manage traffic levels
- FY 2021-22 budgeted $59.4 million for projects and $69.4 million for congestion management programs

CONTRA COSTA transportation authority

Who We Are

Contra Costa, California

- Public agency formed by voters in to manage county's transportation sales tax program and transportation planning efforts.
- Responsible for maintaining and improving the county's transportation system by delivering critical transportation infrastructure projects.
- Managing entity of autonomous vehicle (AV) testing site: GoMentum Station.

What We Do

PEDESTRIAN
Improvements to sidewalks, crosswalks, trails, and paths

LOCAL STREETS
Smooth traffic flow on major roads and make surface improvements such as pothole repairs

BUSES
Invest in a reliable, comfortable and convenient bus network

SAFE ROUTES TO SCHOOLS
Focus on programs and projects aimed at bicycle and pedestrian safety for K-12 students

FERRIES
Expand ferry system by looking to ferries as an alternate commute method between West County and San Francisco

BICYCLE
Invest in safe routes and infrastructure improvements for bicyclists

BART
Improve BART service and stations, extend routes and increase parking

HIGHWAYS
Complete Contra Costa's highway system, and improve air quality and noise protection along corridors

INNOVATIVE SOLUTIONS
Implement smart transportation infrastructure to reduce congestion and encourage greener travel

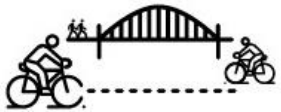
PROGRAMS FOR SENIORS AND DISABLED
Enhance transit options to improve mobility for seniors and people with disabilities

2004
MEASURE J
PASSED

CALDECOTT TUNNEL
fourth bore opens

I-680
IMPROVEMENTS
express and auxiliary lanes opened

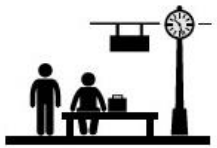
ROAD WIDENING
Kirker Pass Road and Vasco Road



BICYCLE AND PEDESTRIAN
IMPROVEMENTS
Treat Blvd and San Pablo Dam Road

HIGHWAY 4
IMPROVEMENTS

BART EXTENSIONS
to Pittsburg City Center and Antioch



TRAIN STATION
Richmond

I-680/SR-4
IMPROVEMENTS

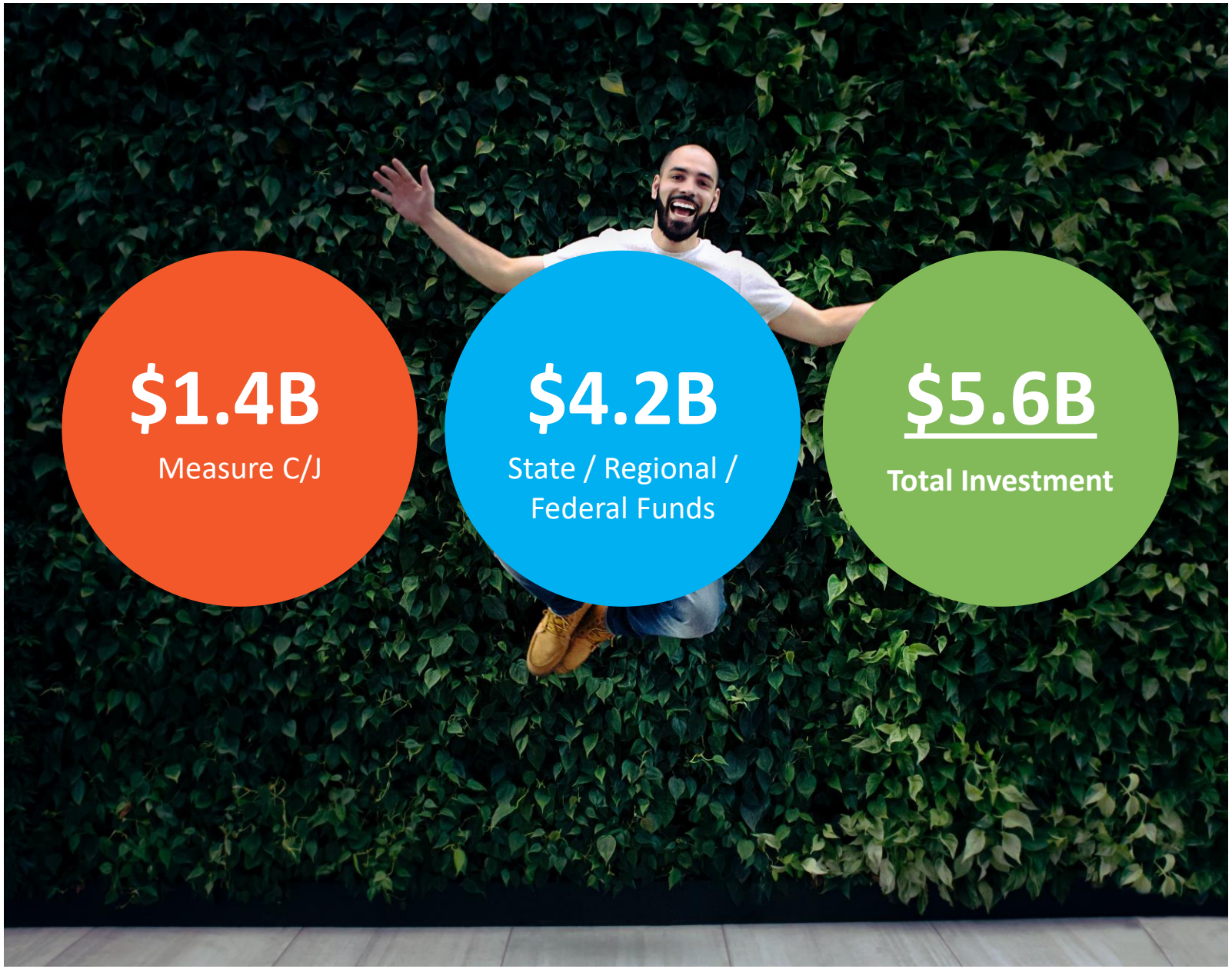
EXPANDED AND
IMPROVED TRAILS

MORE
INVESTMENTS
TO COME

Leverage Local Funding

3:1

LEVERAGING RATIO



About Tri Delta

TRIDELTATRANSIT.COM

- Joint Powers Authority under Government Code §§ 6500
- Board is comprised of a 11 Board Members
- Provides nearly 2 million transit trips each year to a population of approximately 315,000 residents throughout the 225 square miles in Eastern Contra Costa County
- Majority of operating funds come from state and local sources

TRI DELTA TRANSIT

Project Background

EAST CONTRA COSTA COUNTY LOCATION MAP

- Pittsburg
- Antioch
- Oakley
- Brentwood
- Unincorporated Contra Costa County

Project Background – East Contra Costa County Demographics

- Home to approximately 303,485 residents
- Median age 36 years

Pittsburg/Antioch Demographics (pop. 163,744)

- **51%** Female
- **49%** Male
- Median Household Income - **$66, 817**
- **15%** Persons below poverty line

Oakley/Brentwood Demographics (pop. 139,741)

- **51%** Female
- **49%** Male
- Median Household Income - **$107,760**
- **7.3%** Persons below poverty line

Project Background

EAST COUNTY TRANSIT PRIORITIES

East County Transit Goals

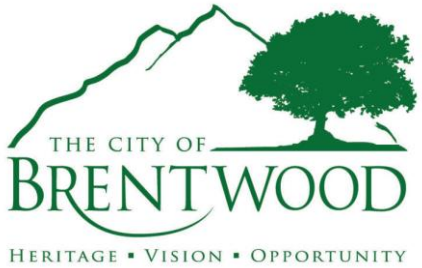
- Improve transit user experience
- Respond to equitable access needs
- Support economic development
- Prepare for future, innovative transit options
- Communicate benefits of transit with the public
- Solve first mile/last mile connection challenges

DPMT Feasibility Study

- Feasibility Study completed in April 2021, following initial outreach to CCTA and East County Cities.
- Feasibility Study analyzed the viability and benefits of a potential DPMT system deployment in East Contra Costa County.
- Feasibility Study assumed Glydways technology as the demonstration technology for implementation of DPMT system.
- CCTA and Tri Delta commencing formal procurement process.
- Procurement will not require Glydways technology. All technologies meeting Project goals are encouraged.

East County Dynamic Personal Micro Transit (DPMT) Project Participants

- Feasibility Study undertaken by Cities of Antioch, Brentwood, Pittsburg, Oakley, and Contra Costa County

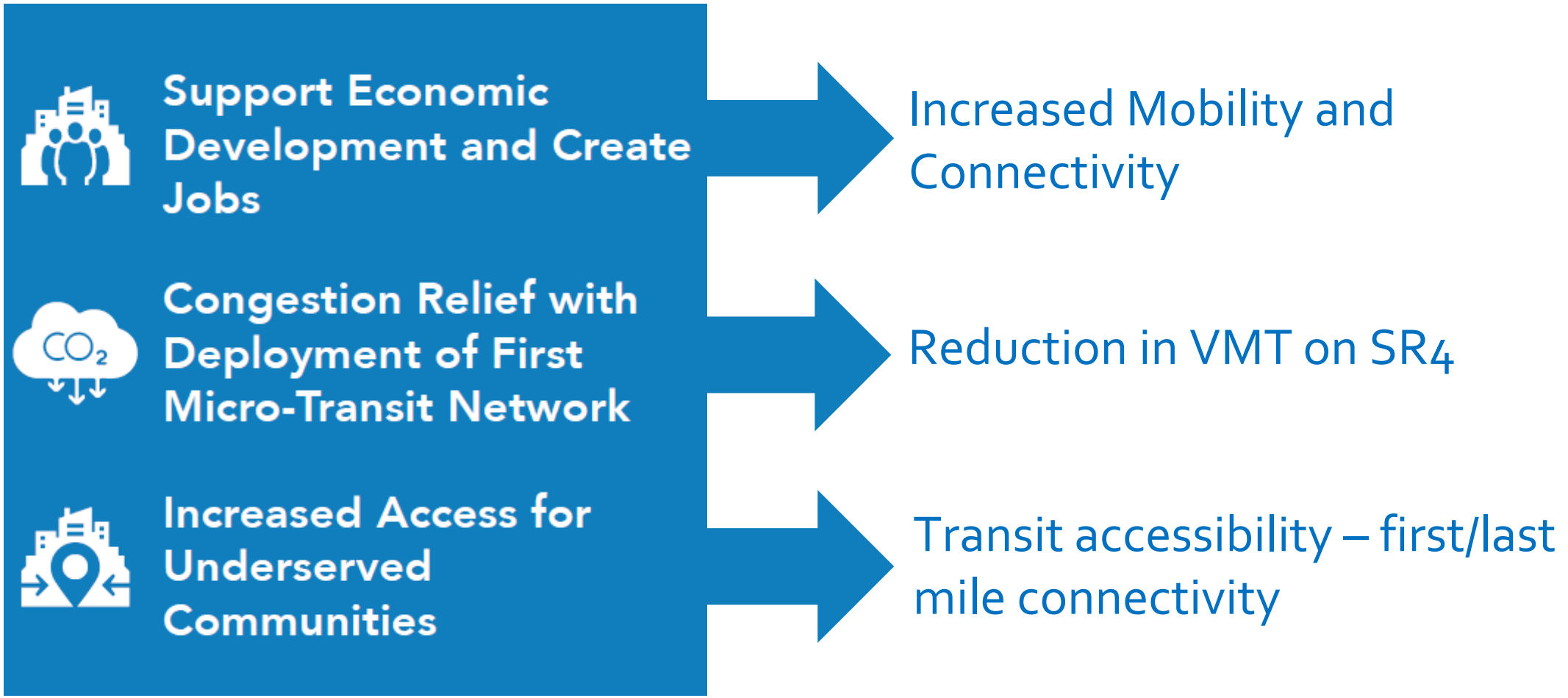


Feasibility Study

BACKGROUND AND TRANSPORTATION CONTEXT

- Feasibility study was a collaboration among cities of Pittsburg, Brentwood, Oakley, and Antioch, along with Contra Costa County.
- Current transportation modes in East County include roadways, rail transit, and bus transit.
- Statistics (2019 survey):
  - Driving alone – 71%
  - Carpooling – 16%
  - Public transit – 6%
  - Bicycling/walking – 2%

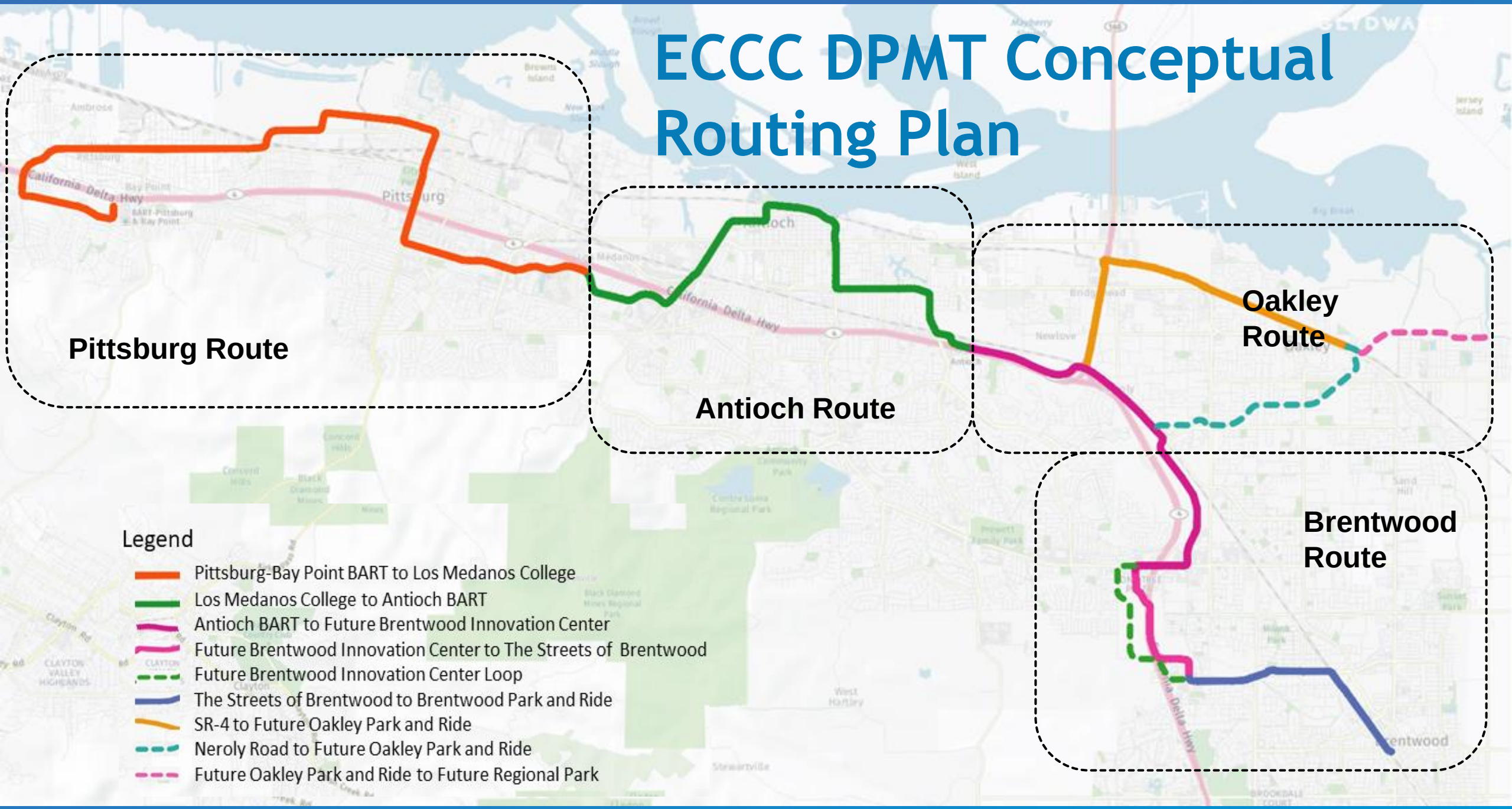
Benefits


Support Economic Development and Create Jobs
Congestion Relief with Deployment of First Micro-Transit Network
Increased Access for Underserved Communities
Increased Mobility and Connectivity
Reduction in VMT on SR4
Transit accessibility – first/last mile connectivity

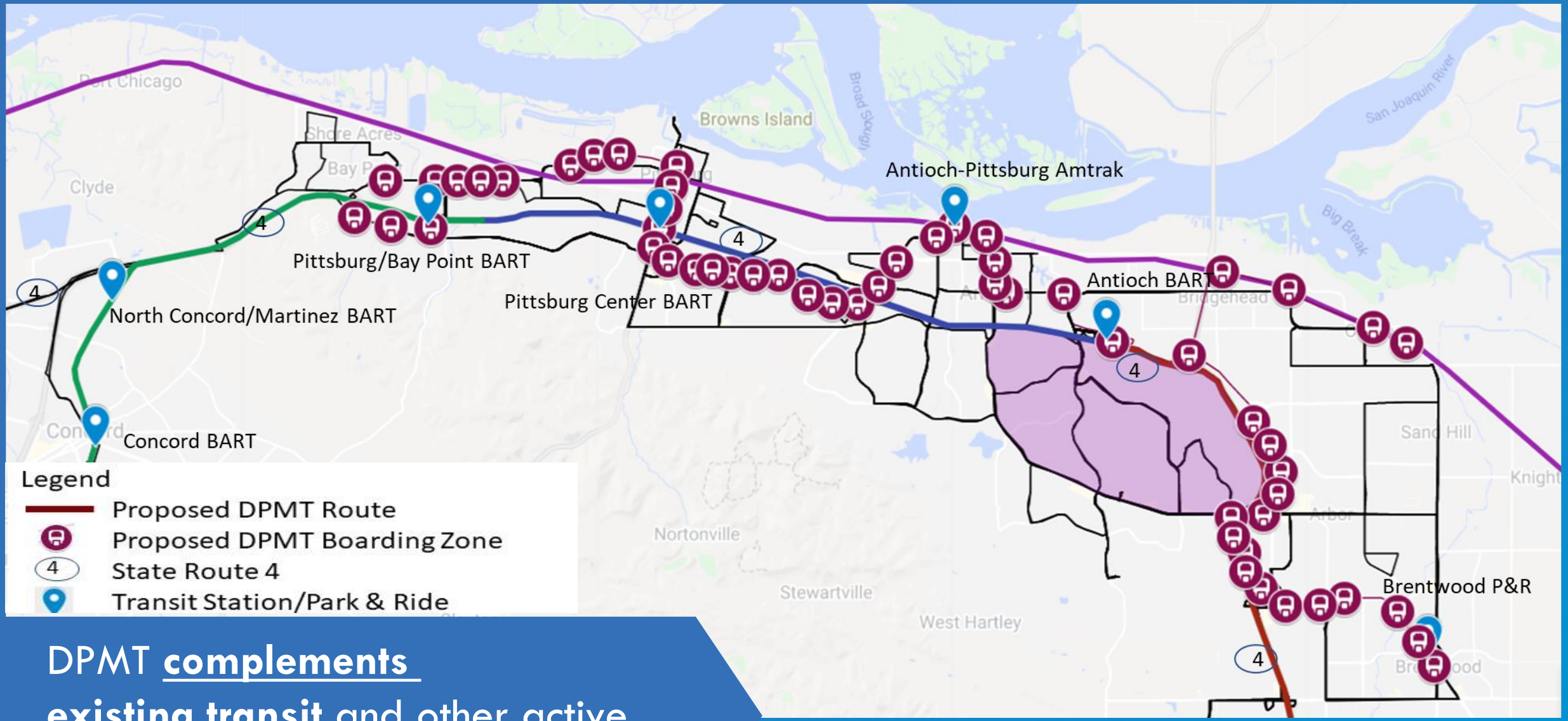
Goals and Objectives -
East County DPMT Feasibility Study Progress

- 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

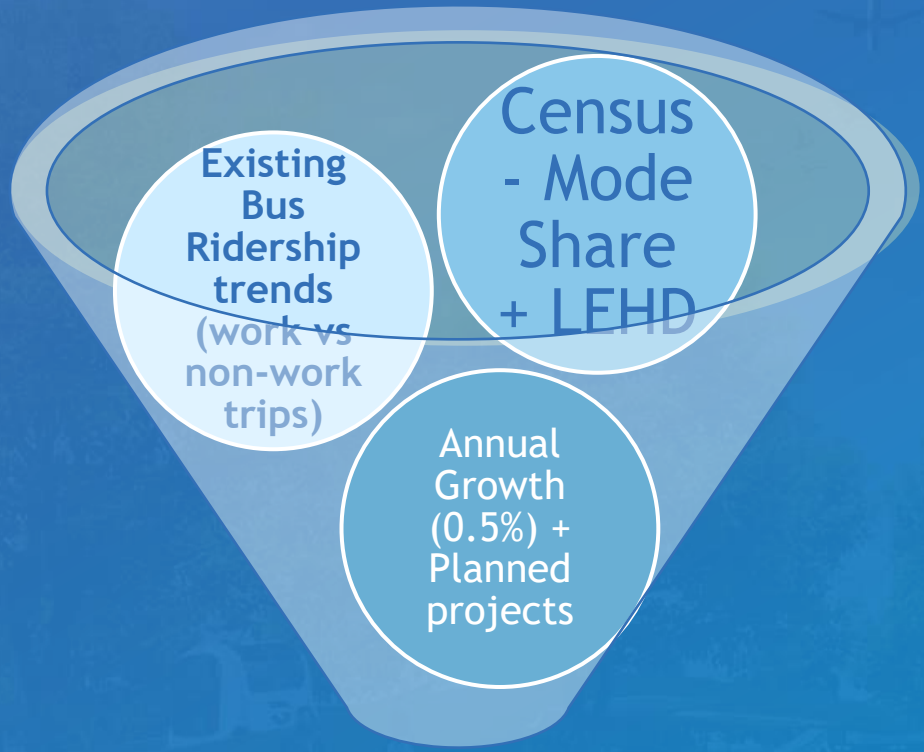


Transportation Services with DPMT



DPMT **complements existing transit** and other active transportation modes

Ridership Demand Estimate



13 M (Potential Demand)

7 M **Annual Ridership Estimate**

Ridership in Perspective

2019
eBART Annual
Ridership

DPMT Projected
2030 Ridership

2.7 Million

2.2 Million

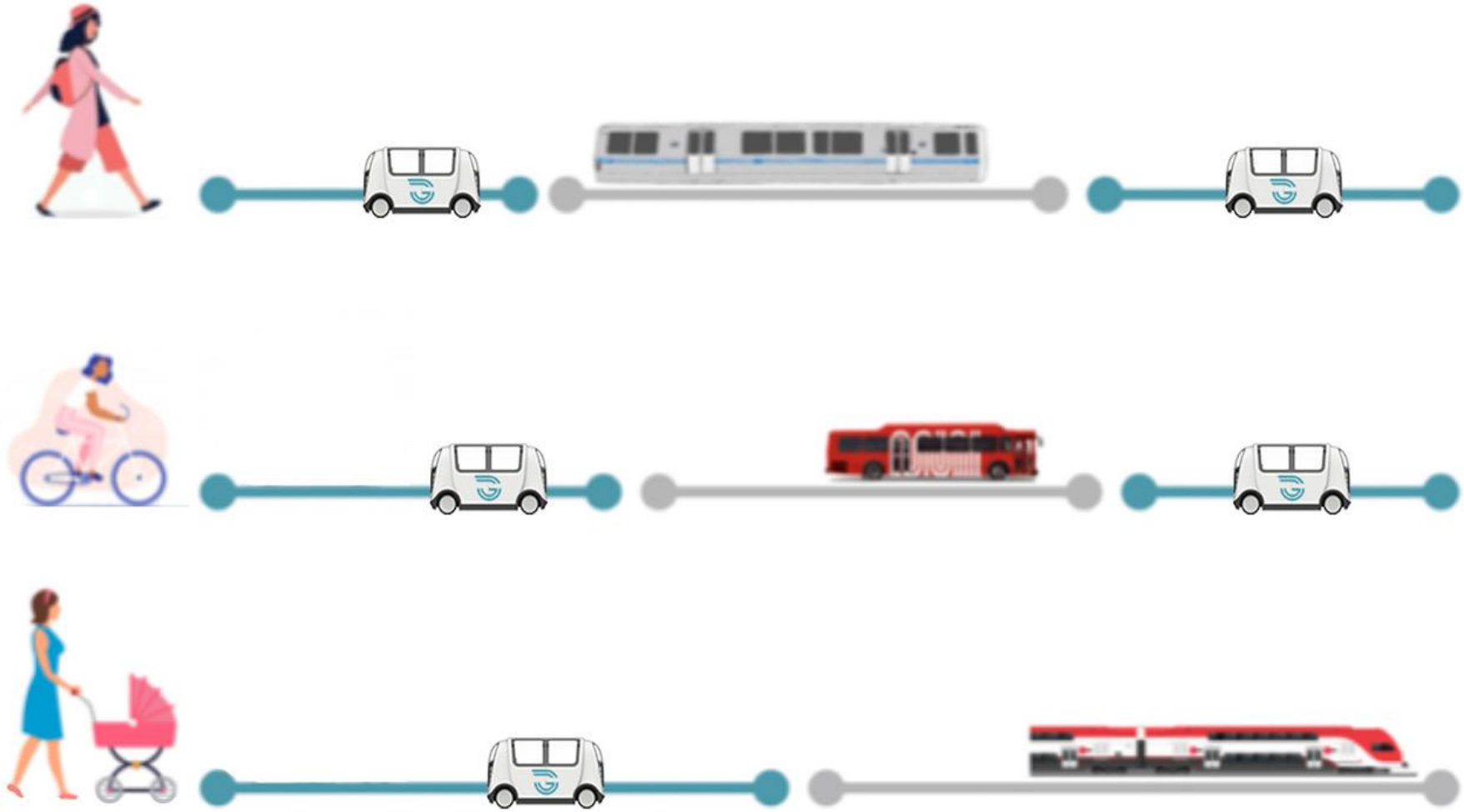
52 Million

7 Million

2019 Tri Delta
Transit Annual
Ridership

2019 SR 4
Annual Traffic (vehicle/year)

A Complete Trip (no auto)



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**

The Technology

FEASIBILITY STUDY ASSUMPTIONS

- Hybrid transportation systems have been proven in other cities with varying success.
- DPMT system features:
  - Direct origin-to-destination service
  - Fully automated vehicles
  - On-demand service (not fixed schedule)
  - 24/7 availability
  - Low cost
  - Exclusive guideways

DPMT System Parameters

PROJECT DETAILS ASSUMED IN FEASIBILITY STUDY

- System to consist of a fleet of driverless electric vehicles on-demand.
- Route to connect key residential, medical, institutional, and business centers.
- Provide access to underserved communities in the area.
- Include civil construction, procurement of proprietary systems and vehicle technology, and a subsequent operations and maintenance phase.
- Deploy as a program of related and coordinated projects.

DPMT
Project Goals

ASSUMED REQUIREMENTS FOR THE PROJECT

- Key Project Parameters:
  - On-demand
  - 24/7
  - Wait times less than 2 minutes for 99% of rides
  - No shared vehicles (1-party ride, non-stop travel, point to point service)
- Product:
  - Fully automated vehicles
  - Plan for GHG neutral operations
  - Made in the USA (Vehicle/Infrastructure)
  - ADA accessible system and vehicles
- Operations:
  - Fully traffic-separated operations
  - Directionally separated tracks
  - Option to operate at grade

Additional Project Priorities

Additional Priorities

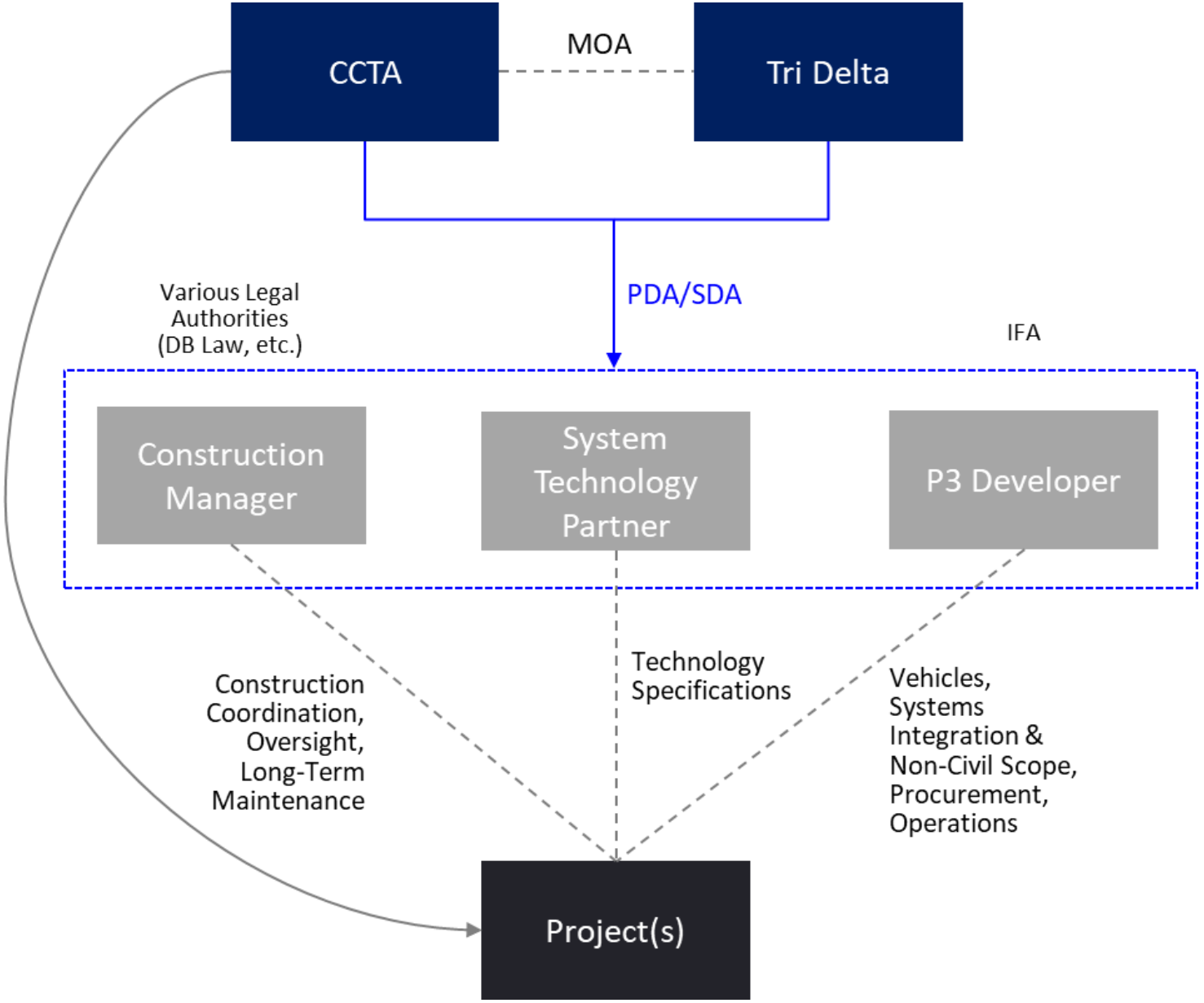
- Technological readiness: Proof of Concept
- Passenger convenience
- Scalability
- Safety
- Environmental sustainability (emissions, carbon efficiency, etc.)
- Fare policies to fit within regional integrated fare structures

Anticipated Delivery Model

- Developer Team to enter into a single "System Pre-Development Agreement" (SPDA)
- During SPDA phase:
  - Identify funding sources for ongoing Project planning and development efforts (including during the SPDA phase);
  - Refine approach;
  - Cost estimates;
  - Lead efforts to secure grant funding;
  - Identify funding sources;
  - Define an initial project for delivery; and
  - Identify initial viable segment
- After the SPDA phase, the Developer Team would likely enter into a "System Development Agreement" (SDA) for design and construction of future phases of the Project(s).

Anticipated Delivery Model

STRUCTURE DIAGRAM



Anticipated Conceptual Delivery Model

ROLE OF MAJOR PARTICIPANTS: Single framework, three roles of major participants.

Role of Major Participants

- Public Private Partnership (P3) developer
- Construction manager
- System technology partner

Anticipated Delivery Model

P3 DEVELOPER

P3 Developer

- Responsible for:
  - Vehicle procurement
  - Non-State-funded work
  - Operations of the Project as it is developed (across phases, if applicable)
- Potentially delivered under the IFA
- Integrated design, systems and vehicle procurement, and operations
- Assumption of revenue risk

Anticipated Delivery Model

CONSTRUCTION MANAGER

Construction Manager

- Responsible for management, delivery, integration, oversight, and ongoing maintenance of:
  - State-funded capital work (specifications to be provided by the System Technology Partner and the P3 Developer)
  - Projects contracted by CCTA outside of the P3 Developer scope
- Potentially delivered under design-build authority

Anticipated Delivery Model

SYSTEM TECHNOLOGY PARTNER

System Technology Partner

- Responsible for [autonomous] technology, program implementation, and integration
- To deliver advanced stage permitting, design, and funding before construction may begin
- “Sits in the middle” between the P3 Developer and Construction Manager
- All projects would be required to adhere to common design and technology standards that apply across all Project phases

Next Steps

Next Steps

- February 8, 2022 – Industry Day
- February 8-11, 2022 – One-on-One Meetings
- April 2022 – RFP Release
- July 2022 – Selection of Development Team
- September 2022 – SPDA Execution

CONTRA COSTA
transportation
authority

Questions?