Independent Evaluations:

Objectives & Approach
Findings & Lessons Learned

Independent Evaluation: Goals and Objectives

- **A rigorous, comprehensive evaluation of the MOD demonstrations will deliver a keen understanding of:**

  - Lessons learned and best practices
  - Successful business & partnership models
  - Innovations and strategies
  - Role of public policy
  - Scaling innovations
  - Identifying additional use cases for other contexts

Prepare for and conduct a comprehensive independent evaluation (IE) of the MOD Sandbox Demonstrations

Examine issues and explore opportunities and challenges for public transportation as they relate to technology-enabled mobility services

Evaluate achievement of MOD Sandbox demonstration objectives by testing preestablished hypotheses

ICF

Independent Evaluation: Performance Factors

Performance of MOD Sandbox Demonstrations are evaluated by their effects on variables such as the following:

- Transit ridership
- Vehicle Miles Traveled (VMT)
- Wait times
- Travel times
- Costs
- Access to opportunity
- Accessibility for persons with disabilities
- Equity
- User satisfaction

Independent Evaluation: Methodology

Shaheen, Martin, Cohen

Bay Area Rapid Transit (BART)

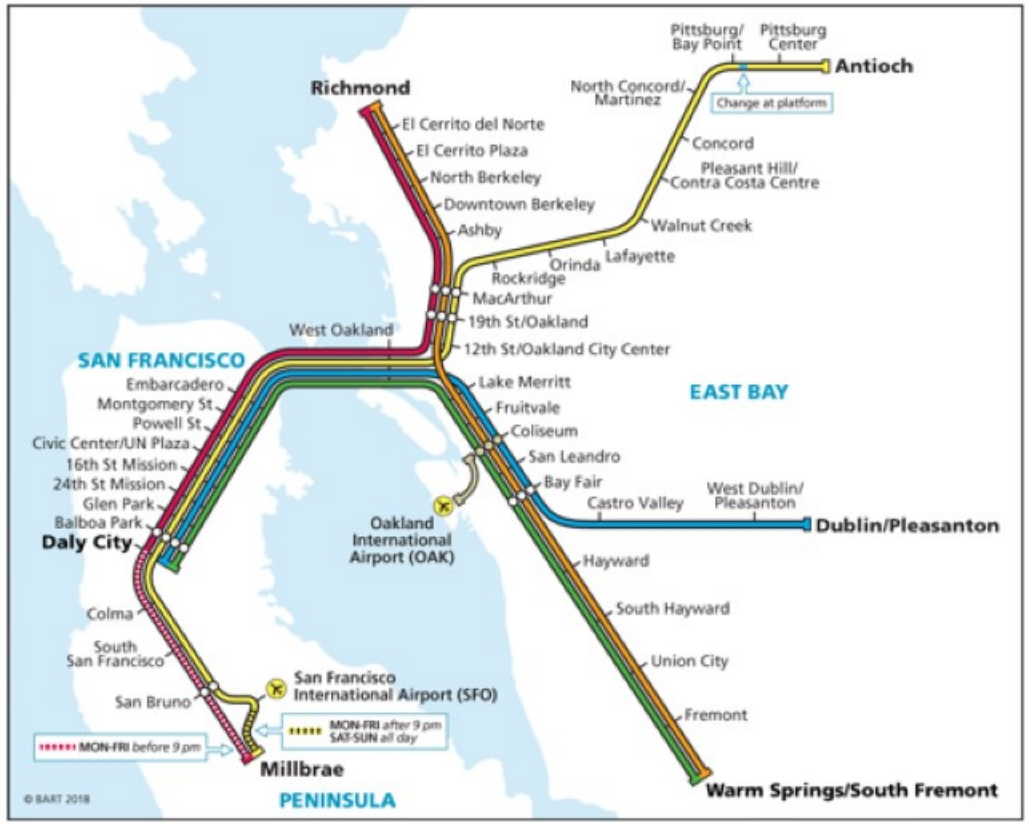
Integrated Carpool to Transit

BART: Carpool to Public Transportation

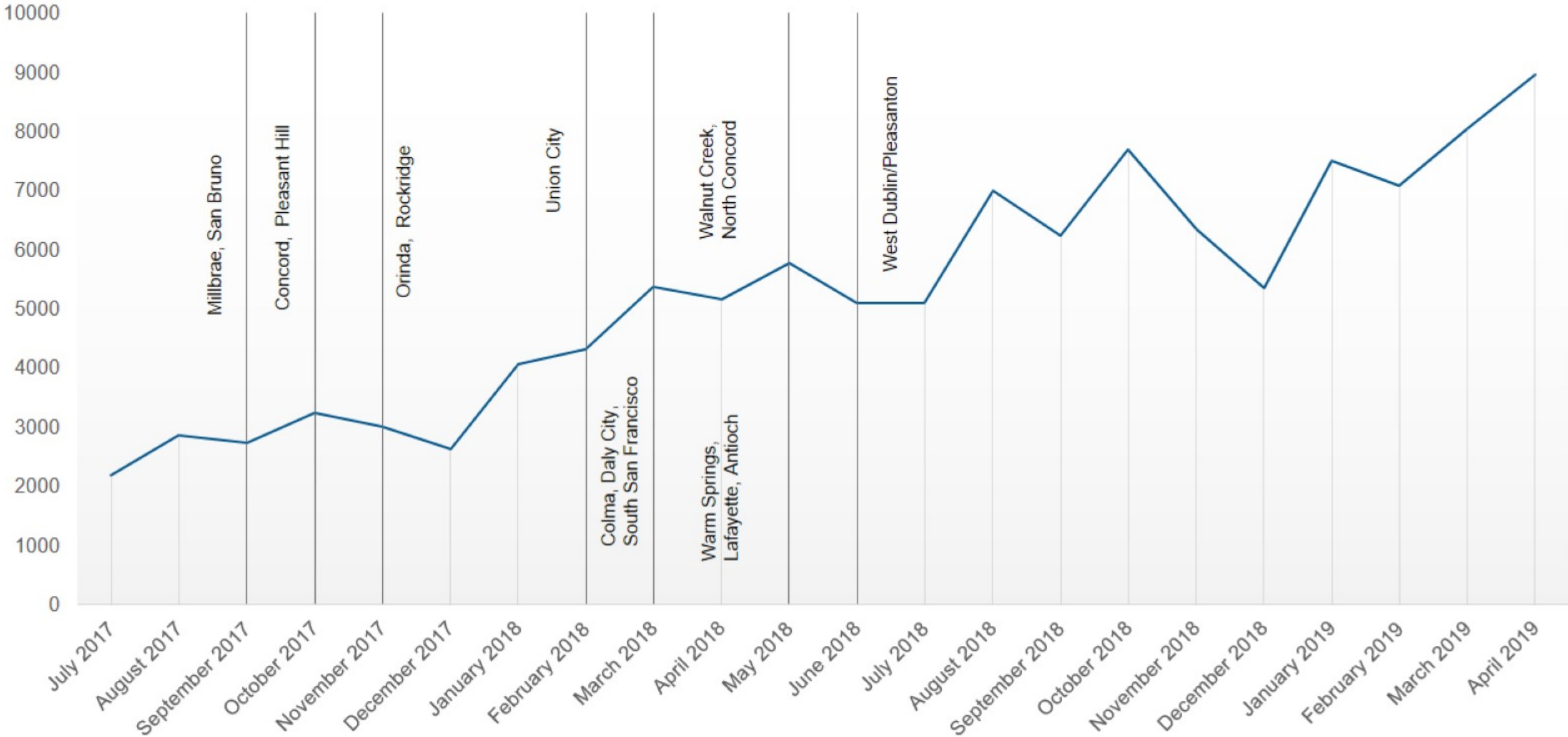
PROJECT OBJECTIVES

- Improve carpool access to BART
- Increase BART ridership
- Reduce the cost of carpool parking enforcement
- Reduce rate of misuse of carpool parking spaces
- Distribute BART demand over the morning peak commute period
- Improve access to BART parking
- More efficiently manage BART parking
- Reduce vehicle miles traveled (VMT)
- Reduce traveler costs and increase BART revenue

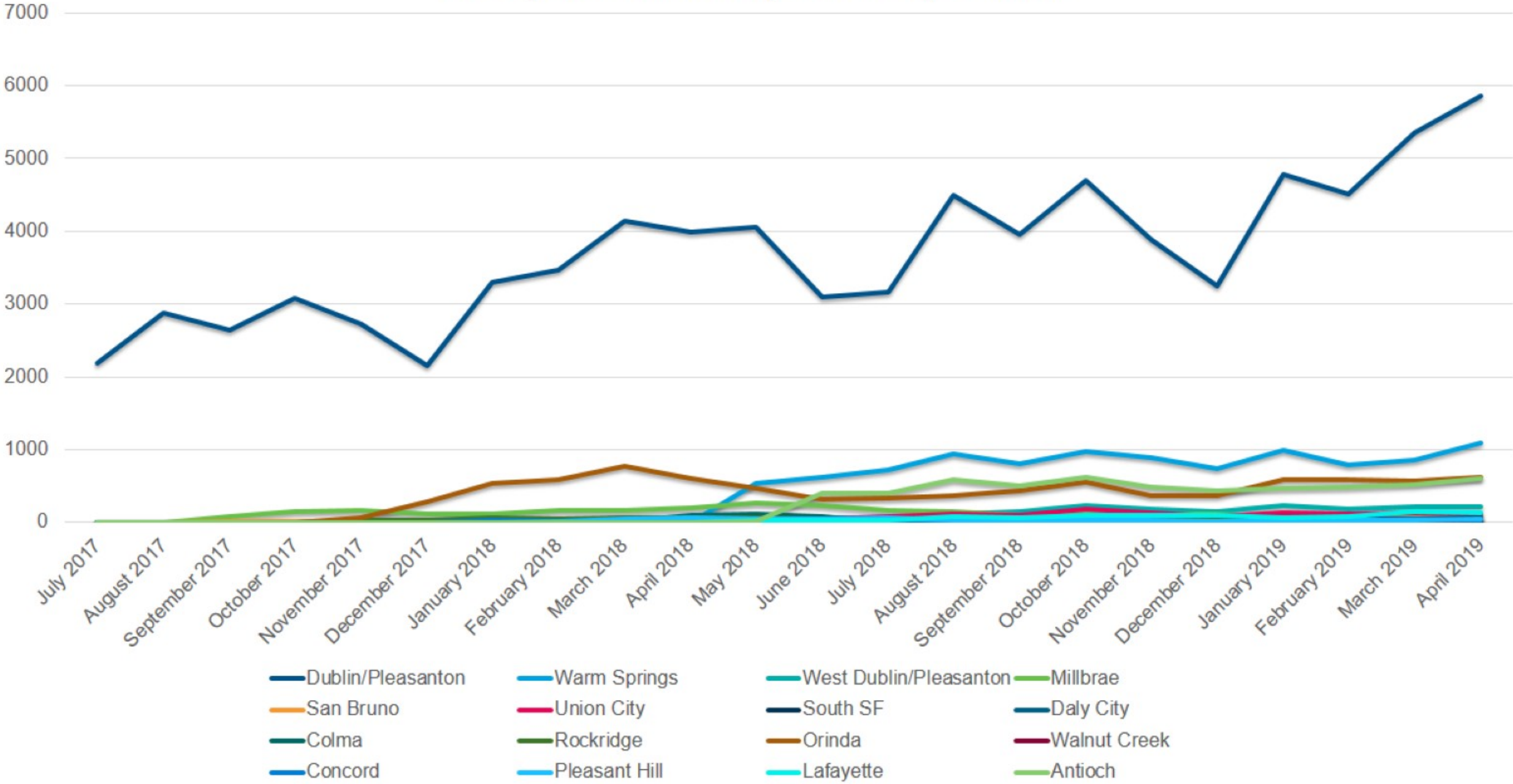
BART SYSTEM MAP



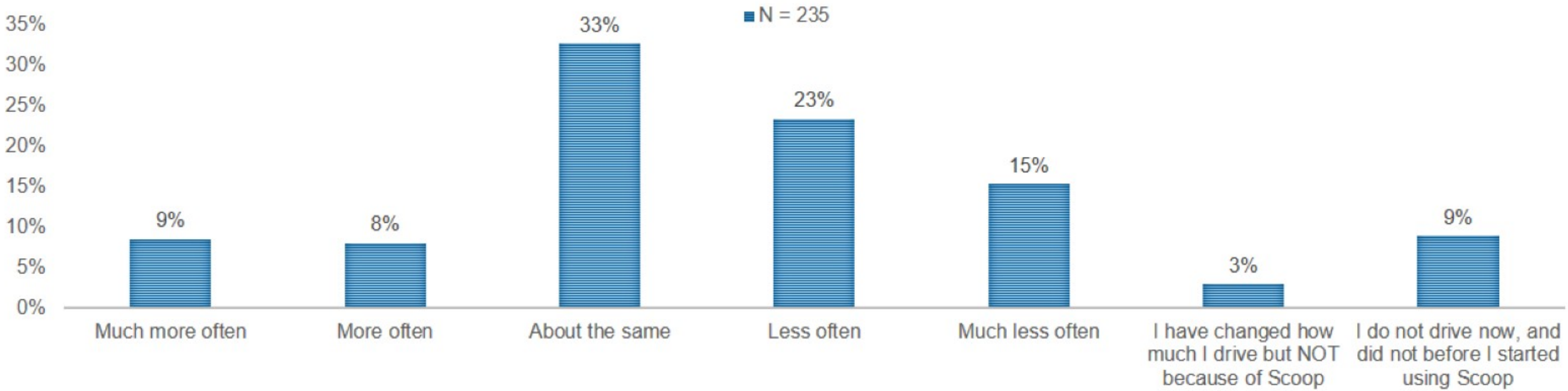
Total Carpoolers Using Scoop to BART



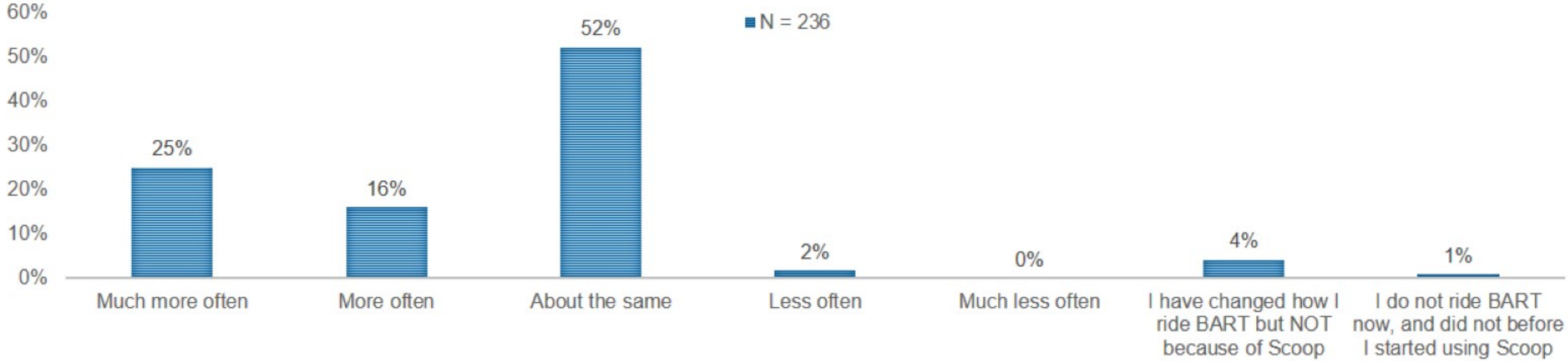
Scoop to BART Carpoolers by Station



AS A RESULT OF SCOOP, WOULD YOU SAY THAT YOU DRIVE YOUR PERSONAL VEHICLE:



AS A RESULT OF SCOOP, WOULD YOU SAY THAT YOU RIDE BART:



BART: Carpool to Public Transportation

FINDINGS

- Carpooling increased to and from BART stations
- A considerable share of Scoop users shifted away from single occupancy vehicle trips resulting in lower VMT
- Users increased frequency of BART use as a result of Scoop
- Carpool trips to BART were more widely spread over the morning hours
- The cost of enforcement per carpool space decreased given the large number of dedicated carpool spaces added
- Scoop lowered the cost of travel for some users

LESSONS LEARNED

- Operating a legacy carpooling program alongside the MOD Sandbox carpooling program caused some carpooler confusion requiring increased verification and reversal of citations
- Partners learned they had different definitions of "qualifying carpools"
- Concern about long-term viability of public-private partnerships when fees change notable at contract renewal

Prospect Silicon Valley / Palo Alto

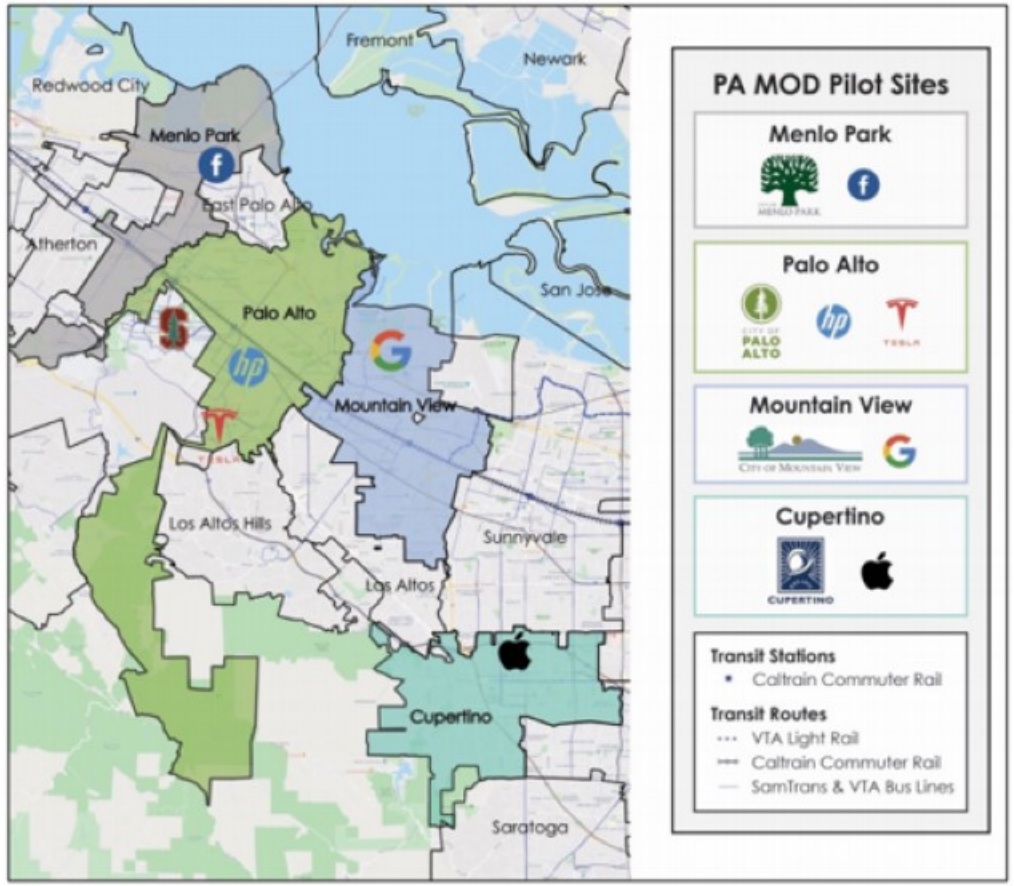
Bay Area Fair Value Commuting Demonstration Project

Bay Area Fair Value Commuting Demonstration Project

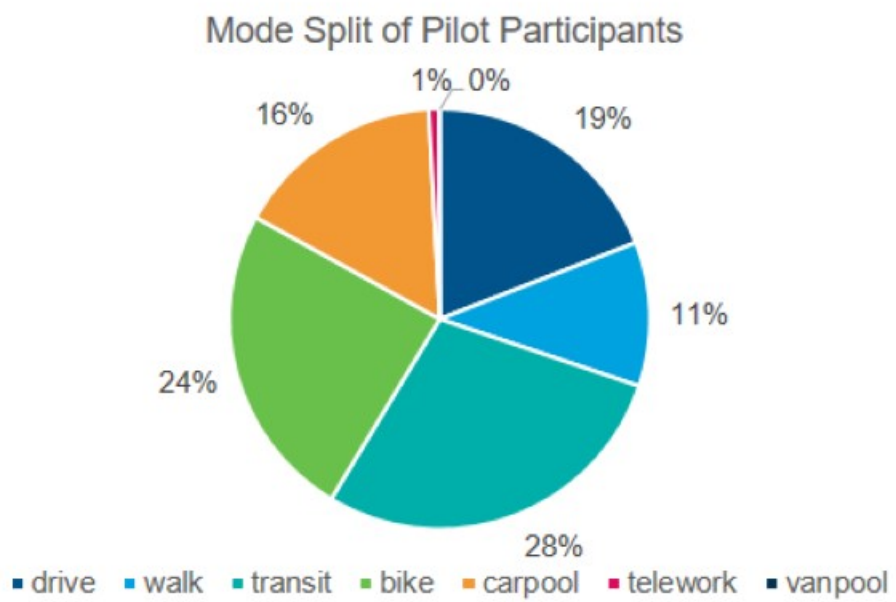
PROJECT OBJECTIVES

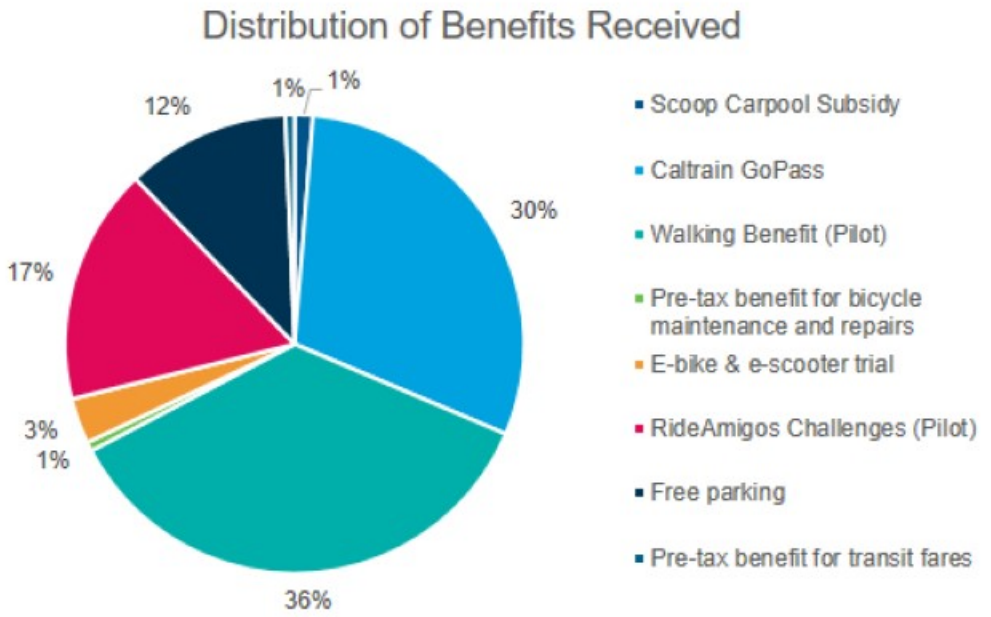
- Use commute trip reduction software and a commuter wallet to automate TDM processes and enable multimodal trip planning and fare payment
- Implement a parking cash-out program with partner employers
- Reduce VMT and SOV commuting
- Encourage commuting by active transportation and public transportation

PENINSULA MAP OF PARTNER CITIES AND REGIONAL EMPLOYERS



Bay Area Fair Value Commuting Demonstration Project





Bay Area Fair Value Commuting Demonstration Project

FINDINGS

- Analysis of before (N=507) and after (N=389) survey data showed that as a result of participating in the pilot:
  - 74% of individuals drove less often
  - 93% of individuals used commuter rail more often
  - 91% of individuals biked more often
  - 73% of individuals walked more often
  - 80% of individuals carpooled more often
- Energy analysis showed that the pilot decreased total energy consumption by 46% and CO2 emissions by 10.2 metric tons.

LESSONS LEARNED

- Stakeholders emphasized the importance of committed partners and institutional champions
- Municipal partners generally agreed that inconvenience and affordability were important mobility challenges that generally created barriers to using public transit and shared mobility.
- Demonstration partners reported that parking cash-out added notable complexities to the MOD project.
  - Different cash-out programs for each employer; ledgering process; etc.
- Late deployment of the commuter wallet makes analyzing its success difficult

Los Angeles County Metropolitan Transportation Authority (LA Metro)

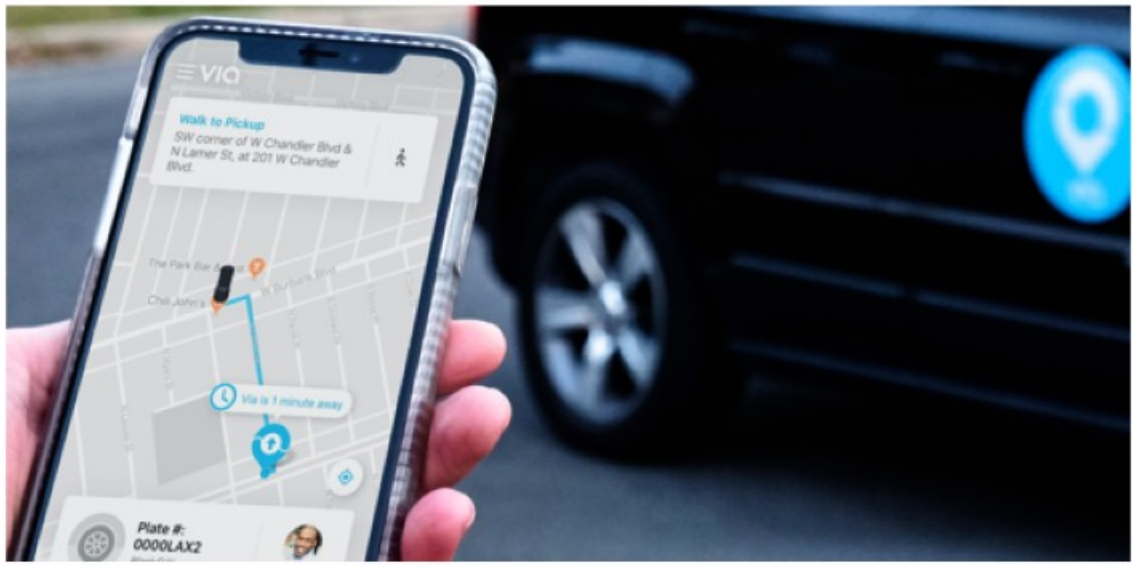
First/Last Mile Partnership with Via

LA Metro: First/Last Mile Partnership with Via

PROJECT OBJECTIVES

- Expand mobility and promote equity
- Increase public transit ridership and use
- Improve access/egress to/from transit stations
- Reduce congestion and GHG emissions from private vehicles
- Improve mobility for people with disabilities

VIA APP



LA Metro: First/Last Mile Partnership with Via

FINDINGS

- Public transit use generally increased across stations as a result of Via
- Via also generally replaced key FMLM modes to/from stations (e.g., modes that were more expensive, took longer, less convenient, etc.)
- A small but sizable number of respondents traveling to/from stations increased their public transit usage (and ridership) due to Via
- For persons with disabilities who are unable to drive, average travel times generally improved in Los Angeles

LESSONS LEARNED

- Challenging to achieve goals and high ridership with these use cases, ridership may not be the best metric
- TNC vendor was replaced due to contract issues and the inability to come to agreement on data sharing and other terms
- Via was selected as the substitute vendor; LA Metro asked them to execute a terms agreement and outlined expectations for both parties prior to developing a SOW and a contract

Crosscutting Findings

Crosscutting Findings

- More research is needed to determine if MOD partnerships complement or compete with public transit; likely varies by local context and other factors
- MOD partnerships can reduce or increase VMT and GHG emissions, largely dependent on mode split (e.g., are people shifting from buses or SOVs to carpooling)
- Public agencies and private sector partners were ambitious in project designs, resulting in delays, rescoping, and down-sizing projects
- Some agencies like the ability to name partners without a traditional procurement method, while others would have preferred to issue a request for proposal to solicit prospective vendors
- Several public agencies noted challenges in working with private vendors (e.g., contracting, data agreements, etc.)
- A number of public agencies expressed ongoing concerns about the reliability of private sector partners (e.g., overpromising, changing business models, etc.)
- Agencies experienced post-demonstration challenges (e.g., financial sustainability, COVID-19, and regulatory requirements (i.e., drug/alcohol testing)

Thank You!

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Independent Evaluation Reports Available at:
https://www.transit.dot.gov/research-innovation/fta-reports-and-publications
and http://www.innovativemobility.org

FTA Mobility on Demand (MOD) Sandbox Program:
https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program