Napa Valley Transportation Authority

625 Burnell Street
Napa, CA 94559

NAPA VALLEY TRANSPORTATION AUTHORITY

Agenda - Final

Thursday, March 3, 2022
10:00 AM

SEE COVID-19 SPECIAL NOTICE

Paratransit Coordinating Council (PCC)

**********COVID-19 SPECIAL NOTICE**********

PUBLIC MEETING GUIDELINES FOR PARTICIPATING VIA PHONE/VIDEO CONFERENCING

Consistent with California Assembly Bill 361 and Government Code Section 54953, due to the COVID-19 State of Emergency and the recommendations for physical distancing, the Napa Valley Transportation Authority (NVTA) Paratransit Coordinating Council (PCC) meeting will be held virtually. To maximize public safety while still maintaining transparency, members of the public may observe and participate in the meeting from home. The public is invited to participate telephonically or electronically via the methods below:
1) To join the meeting via Zoom video conference from your PC, Mac, iPad, iP 882 3261 2915

2) To join the Zoom meeting by phone - dial 1-669-900-6833, enter meeting ID: 882 3261 2915 If asked for the participant ID or code, press #.

Public Comments
Members of the public may comment on matters within the purview of the Committee that are not on the meeting agenda during the general public comment item at the beginning of the meeting. Comments related to a specific item on the agenda must be reserved until the time the agenda item is considered and the Chair invites public comment. Members of the public are welcome to address the Committee, however, under the Brown Act Committee members may not deliberate or take action on items not on the agenda, and generally may only listen.

Instructions for submitting a Public Comment are on the next page.

Members of the public may submit a public comment in writing by emailing info@nvta.ca.gov by 5:00 p.m. the day before the meeting with PUBLIC COMMENT as the subject line (for comments related to an agenda item, please include the item number). All written comments should be 350 words or less, which corresponds to approximately 3 minutes or less of speaking time. Public comments emailed to info@nvta.ca.gov after 5 p.m. the day before the meeting will be entered into the record but not read out loud. If authors of the written correspondence would like to speak, they are free to do so and should raise their hand and the Chair will call upon them at the appropriate time.

1. To comment during a virtual meeting (Zoom), click the "Raise Your Hand" button (click on the "Participants" tab) to request to speak when Public Comment is being taken on the Agenda item. You must unmute yourself when it is your turn to make your comment for up to 3 minutes. After the allotted time, you will then be re-muted. Instructions for how to "Raise Your Hand" are available at https://support.zoom.us/hc/en-us/articles/205566129-Raise-Hand-In-Webinar.

2. To comment by phone, press "*9" to request to speak when Public Comment is being taken on the Agenda item. You must unmute yourself by pressing "*6" when it is your turn to make your comment, for up to 3 minutes. After the allotted time, you will be re-muted.

Instructions on how to join a Zoom video conference meeting are available at: https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Meeting

Instructions on how to join a Zoom video conference meeting by phone are available at: https://support.zoom.us/hc/en-us/articles/201362663-Joining-a-meeting-by-phone

Note: The methods of observing, listening, or providing public comment to the meeting may be altered due to technical difficulties or the meeting may be cancelled, if needed.

All materials relating to an agenda item for an open session of a regular meeting of the NVTA PCC are posted on the NVTA website 72 hours prior to the meeting at: https://nctpa.legistar.com/Calendar.aspx or by emailing info@nvta.ca.gov to request a copy of the agenda.

Materials distributed to the members of the Committee present at the meeting will be available for public inspection after the meeting. Availability of materials related to agenda items for public inspection does not include materials which are exempt from public disclosure under Government Code sections 6253.5, 6254, 6254.3, 6254.7, 6254.15, 6254.16, or 6254.22.

Americans with Disabilities Act (ADA): This Agenda shall be made available upon request in alternate formats to persons with a disability. Persons requesting a disability-related modification or accommodation should contact Kathy Alexander, NVTA Deputy Board Secretary, at (707) 259-8627 during regular business hours, at least 48 hours prior to the time of the meeting.

Note: Where times are indicated for agenda items, they are approximate and intended as estimates only, and may be shorter or longer as needed.

Acceso y el Titulo VI: La NVTA puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Autoridad. Para solicitar asistencia, por favor llame al número (707) 259-8627. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

Ang Accessibility at Title VI: Ang NVTA ay nagkakaloob ng mga serbisyo/akomodasyon kung hilingin ang mga ito, ng mga taong may kapansanan at mga indibiduwal na may limitadong kaalaman sa wikang Ingles, na nais na matugunan ang mga bagay-bagay na may kinalaman sa NVTA PCC. Para sa mga tulong sa akomodasyon o pagsasalin-wika, mangyari lang tumawag sa (707) 259-8627. Kakailanganin namin ng paunang abiso na tatlong araw na may pasok sa trabaho para matugunan ang inyong kahilingan.

1. Call To Order

2.a Roll Call

2.b **AB 361 Remote Meeting Authorization (Kathy Alexander)** ***(Pages 8-11)***

Recommendation: That the Paratransit Coordinating Council approve holding the March 3, 2022 and May 5, 2022 meetings remotely in accordance with NVTA Resolution 21-30 which finds that COVID-19 emergency conditions persist and warrant that NVTA hold all open and public meetings remotely in accordance with Government Code section 54593, subdivision(e) and other applicable provisions of the Brown Act for remote only teleconference meetings.

Estimated Time: 10:05 a.m.

Attachments: Staff Report.pdf

3. Public Comment

4. Committee Member Comments

5. Staff Comments

Note: Where times are indicated for the agenda items they are approximate and intended as estimates only, and may be shorter or longer, as needed.

6. PRESENTATIONS

6.1 **Emergency Preparedness and Evacuations Presentation (Leah Greenbaum, County of Napa Office of Emergency Services)**

Recommendation: The County of Napa Office of Emergency Services and the Napa County Sheriff's Office will provide a presentation on emergency preparedness and evacuations. Information only

Estimated Time: 10:10 a.m.

6.2 **NVTA Project Update (Rebecca Schenck)**

Body: The PCC will receive an update on NVTA's projects.

Estimated Time: 10:30 a.m.

7. CONSENT AGENDA

7.1 **Meeting Minutes of March 3, 2022 PCC Meeting (Kathy Alexander)** ***(Pages 12-14)***

Recommendation: PCC action will approve the March 3, 2022 meeting minutes.

Estimated Time: 10:40 a.m.

Attachments: Draft Minutes.pdf

8. REGULAR AGENDA ITEMS

8.1 **Federal Transit Administration Section 5310 Project Recommendation (Rebecca Schenck)** ***(Pages 15-16)***

Recommendation: That the Paratransit Coordinating Council recommend to the Napa Valley Transportation Authority Board approval of the Federal Transit Administration (FTA) Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program for Napa County and Napa Valley Transportation Authority's (NVTA's) grant application.

Estimated Time: 10:45 a.m.

Attachments: Staff Report.pdf

8.2 **Vine Transit Update (Libby Payan)** ***(Pages 17-22)***

Recommendation: The PCC will receive an update on Vine Transit operations.

Estimated Time: 10:55 a.m.

Attachments: Staff Report.pdf

8.3 **Fare Coordination and Integration Study (Libby Payan)** ***(Pages 23-132)***

Recommendation: The PCC will receive an overview of the Fare Coordination and Integration Study. Information only

Estimated Time: 11:00 a.m.

Attachments: Staff Report.pdf

9. FUTURE AGENDA ITEMS

10. ADJOURNMENT

10.1 Approval of Next Regular Meeting Date of May 5, 2022 and Adjournment.

I, Kathy Alexander, hereby certify that the agenda for the above stated meeting was posted at a location freely accessible to members of the public at the NVTA offices, 625 Burnell Street, Napa, CA by 5:00 p.m., on Thursday, February 24, 2022.

Kathy Alexander (e-sign) 02-24-22

Kathy Alexander, Deputy Board Secretary

Glossary of Acronyms

AB 32	Global Warming Solutions Act
ABAG	Association of Bay Area Governments
ACFR	Annual Comprehensive Financial Report
ADA	American with Disabilities Act
APA	American Planning Association
ATAC	Active Transportation Advisory Committee
ATP	Active Transportation Program
BAAQMD	Bay Area Air Quality Management District
BAB	Build America Bureau
BART	Bay Area Rapid Transit District
BATA	Bay Area Toll Authority
BRT	Bus Rapid Transit
CAC	Citizen Advisory Committee
CAP	Climate Action Plan
CAPTI	Climate Action Plan for Transportation Infrastructure
Caltrans	California Department of Transportation
CASA	Committee to House the Bay Area
CBTP	Community Based Transportation Plan
CEQA	California Environmental Quality Act
CIP	Capital Investment Program
CMA	Congestion Management Agency
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMP	Congestion Management Program
CalSTA	California State Transportation Agency
CTA	California Transit Association
CTP	Countywide Transportation Plan
CTC	California Transportation Commission
CY	Calendar Year
DAA	Design Alternative Analyst
DBB	Design-Bid-Build
DBE	Disadvantaged Business Enterprise
DBF	Design-Build-Finance
DBFOM	Design-Build-Finance-Operate-Maintain
DED	Draft Environmental Document
EIR	Environmental Impact Report
EJ	Environmental Justice
EPC	Equity Priority Communities
ETID	Electronic Transit Information Displays
FAS	Federal Aid Secondary
FAST	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GHG	Greenhouse Gas
GGRF	Greenhouse Gas Reduction Fund
GTFS	General Transit Feed Specification
HBP	Highway Bridge Program
HBRR	Highway Bridge Replacement and Rehabilitation Program
HIP	Housing Incentive Program
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
HR3	High Risk Rural Roads
HSIP	Highway Safety Improvement Program
HTF	Highway Trust Fund
HUTA	Highway Users Tax Account
HVIP	Hybrid & Zero-Emission Truck and Bus Voucher Incentive Program
IFB	Invitation for Bid
ITIP	State Interregional Transportation Improvement Program
ITOC	Independent Taxpayer Oversight Committee
IS/MND	Initial Study/Mitigated Negative Declaration
JARC	Job Access and Reverse Commute
LCTOP	Low Carbon Transit Operations Program
LIFT	Low-Income Flexible Transportation
LOS	Level of Service
LS&R	Local Streets & Roads
LTF	Local Transportation Fund
MaaS	Mobility as a Service
MAP 21	Moving Ahead for Progress in the 21st Century Act
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
ND	Negative Declaration
NEPA	National Environmental Policy Act
NOAH	Natural Occurring Affordable Housing
NOC	Notice of Completion
NOD	Notice of Determination
NOP	Notice of Preparation

Glossary of Acronyms

NVTA	Napa Valley Transportation Authority
NVTA-TA	Napa Valley Transportation Authority-Tax Agency
OBAG	One Bay Area Grant
PA&ED	Project Approval Environmental Document
P3 or PPP	Public-Private Partnership
PCC	Paratransit Coordination Council
PCI	Pavement Condition Index
PCA	Priority Conservation Area
PDA	Priority Development Areas
PID	Project Initiation Document
PIR	Project Initiation Report
PMS	Pavement Management System
Prop. 42	Statewide Initiative that requires a portion of gasoline sales tax revenues be designated to transportation purposes
PSE	Plans, Specifications and Estimates
PSR	Project Study Report
PTA	Public Transportation Account
RACC	Regional Agency Coordinating Committee
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RFP	Request for Proposal
RFQ	Request for Qualifications
RHNA	Regional Housing Needs Allocation
RM 2	Regional Measure 2 Bridge Toll
RM 3	Regional Measure 3 Bridge Toll
RMRP	Road Maintenance and Rehabilitation Program
ROW (R/W)	Right of Way
RTEP	Regional Transit Expansion Program
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
SAFE	Service Authority for Freeways and Expressways
SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act-A Legacy for Users
SB 375	Sustainable Communities and Climate Protection Act 2008
SB 1	The Road Repair and Accountability Act of 2017
SCS	Sustainable Community Strategy
SHA	State Highway Account
SHOPP	State Highway Operation and Protection Program
SNTDM	Solano Napa Travel Demand Model
SR	State Route
SRTS	Safe Routes to School
SOV	Single-Occupant Vehicle
STA	State Transit Assistance
STIC	Small Transit Intensive Cities
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TCM	Transportation Control Measure
TCRP	Traffic Congestion Relief Program
TDA	Transportation Development Act
TDM	Transportation Demand Management Transportation Demand Model
TE	Transportation Enhancement
TEA	Transportation Enhancement Activities
TEA 21	Transportation Equity Act for the 21st Century
TFCA	Transportation Fund for Clean Air
TIP	Transportation Improvement Program
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIRCP	Transit and Intercity Rail Capital Program
TLC	Transportation for Livable Communities
TLU	Transportation and Land Use
TMP	Traffic Management Plan
TMS	Transportation Management System
TNC	Transportation Network Companies
TOAH	Transit Oriented Affordable Housing
TOC	Transit Oriented Communities
TOD	Transit-Oriented Development
TOS	Transportation Operations Systems
TPA	Transit Priority Area
TPI	Transit Performance Initiative
TPP	Transit Priority Project Areas
VHD	Vehicle Hours of Delay
VMT	Vehicle Miles Traveled

March 3, 2022
PCC Agenda Item 2.b
Continued From: New
Action Requested: APPROVE

NAPA VALLEY TRANSPORTATION AUTHORITY

Paratransit Coordinating Council Agenda Memo

TO: Paratransit Coordinating Council

FROM: Kate Miller, Executive Director

REPORT BY: Kathy Alexander
(707) 259-8627 / Email: kalexander@nvta.ca.gov

SUBJECT: AB 361 Requirements for Remote Public Meetings

RECOMMENDATION

That the PCC approve holding the March 3, 2022 PCC meeting and the May 5, 2022 PCC meeting via teleconference as the existing emergency declaration continues, which permits relaxed remote meeting allowances in accordance with AB 361.

BACKGROUND

AB 361 allows local legislative bodies to hold remote meetings during a proclaimed state of emergency if state or local officials have imposed or recommended measures that warrant holding meetings remotely.

On February 16, 2022, the NVTA Board adopted Resolution 22-07, directing NVTA staff to continue monitoring the status of the Governor's state of emergency proclamation, state and local orders related to social distancing, and health and safety conditions related to COVID-19, and confirm that said conditions persist that warrant remote only meetings pursuant to the provisions of paragraph Government Code section 54953, subdivision (e)(3). Staff recommends the PCC consider extending the time during which it may continue to meet by teleconference without compliance with paragraph (3) of subdivision (b) of section 54953 of the Brown Act.

ATTACHMENT

1) NVTA Board Resolution 22-07

NAPA VALLEY TRANSPORTATION AUTHORITY

RESOLUTION No. 22-07

A RESOLUTION OF THE NAPA VALLEY TRANSPORTATION AUTHORITY (NVTA) MAKING FINDINGS REAUTHORIZING REMOTE TELECONFERENCE MEETINGS AND DECLARING ITS INTENT TO CONTINUE REMOTE TELECONFERENCE MEETINGS PURSUANT TO GOVERNMENT CODE SECTION 54953

WHEREAS, the Napa Valley Transportation Authority (NVTA) is committed to preserving and nurturing public access and participation in meetings of the Board;

WHEREAS, all legislative body meetings of NVTA are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and observe the Commission conduct its business; and

WHEREAS, Governor Newsom signed AB 361, amending the Brown Act, including Government Code section 54953(e), which makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition of AB 361 is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, such conditions now exist in the State, specifically, the Governor of the State of California proclaimed a state of emergency on March 4, 2020, related to the threat of COVID-19, which remains in effect and Executive order N-1-22; and

WHEREAS, on September 27, 2021, the Napa County Executive Officer and Public Health Officer jointly recommended social distancing measures and that all boards and commissions continue meeting remotely, in whole or in part, in order to help minimize the spread and transmission of COVID-19 and its variants; and

WHEREAS, due to the seriousness of the current pandemic situation, the Napa County Executive Officer and Public Health Officer has required that all unvaccinated persons wear facial coverings indoors, and recommend that all persons, regardless of vaccination status, wear facial coverings indoors; and

WHEREAS, the Board found on January 19, 2022 pursuant to Resolution 22-02 that the COVID-19 emergency has caused, and will continue to cause, conditions of peril to the safety of persons that are likely to be beyond the control of services, personnel,

equipment, and facilities of NVTA, and found that meeting in person for meetings of all NVTA legislative bodies would present imminent risks to the health or safety of attendees, and thus the Board invoked the provisions of AB 361 to allow for remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, the Board of Directors does hereby find that emergency conditions persist within the County of Napa due to the COVID-19 emergency, the state of emergency continues to directly impact the ability of the members to meet safely in person, and the Governor's state of emergency proclamation, state regulations and local recommendations related to social distancing continue.

NOW, THEREFORE, BE IT RESOLVED THAT THE NAPA VALLEY TRANSPORTATION BOARD DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:

1. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

2. The Board hereby finds that meeting in person for meetings of all NVTA related legislative bodies subject to the Ralph M. Brown Act would present imminent risks to the health and safety of attendees.

3. Staff is hereby directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings of the Board and all NVTA legislative bodies in accordance with Government Code section 54953, subdivision (e) and other applicable provisions of the Brown Act for remote only teleconference meetings.

4. Staff is further directed to continue to monitor the health and safety conditions related to COVID-19, the status of the Governor's state of emergency, the state regulations related to social distancing, and the local orders related to health and safety, and present to the Board at its next regularly scheduled meeting the related information and recommendations for remote only meetings pursuant to the provisions of paragraph Government Code section 54953, subdivision (e)(3), and to consider extending the time during which the Commission may continue to meet by teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

THE FOREGOING RESOLUTION WAS DULY AND REGULARLY ADOPTED by the Board of Directors of the Napa Valley Transportation Authority, at a regular meeting held on February 16, 2022, by the following vote:

Alfredo Pedroza, NVTA Chair

Ayes:
Garcia(2),Joseph(2),
Canning(1),Sedgley(5),
Pedroza(2),Ramos(2),
Dohring(1),Ellsworth(1)
Knight(1),Dunbar(1)

Nays: None

Absent: Kraus(1),Alessio(5)

ATTEST:

Laura Sanderlin
Laura Sanderlin, NVTA Board Secretary

APPROVED:

DeeAnne Gillick
DeeAnne Gillick, NVTA Legal Counsel

March 3, 2022
PCC Agenda Item 7.1
Continued From: New
Action Requested: Approval

Napa Valley Transportation Authority

625 Burnell Street
Napa, CA 94559

Meeting Minutes - Draft
Paratransit Coordinating Council (PCC)

REFER TO COVID-19 SPECIAL NOTICE

Thursday, January 6, 2022 **10:00 AM**

1. Call To Order

Chair Weir called the meeting to order at 10:01 a.m.

2.a Roll Call

Present: 5 - Doug Weir
Julie Spencer
Lisa DeRose-Hernandez
Tom Collette
Betty Rhodes
Absent: 1 - Beth Kahiga

2.b AB 361 Remote Meeting Authorization (Kathy Alexander) *(Page 7)*

MOTION BY SPENCER, SECOND BY RHODES to APPROVE holding the January 6, 2022 and March 3, 2022 PCC meetings via teleconference as the existing emergency declaration continues which permits relaxed remote meeting allowances in accordance with AB 361. Motion was approved with the following vote:

Aye: 5 - Chairperson Weir, Member Spencer, Member DeRose-Hernandez, Vice Chair Collette, and Member Rhodes

Absent: 1 - Member Kahiga

3. Public Comment

Public comment received from Justin Hole.

4. Committee Member Comments

None

5. Staff Comments

Rebecca Schenck extended apologies on behalf of Leah Greenbaum, from the County of Napa, who needed to postpone her presentation on evacuation plans to the March 3, 2022 meeting.

6. PRESENTATIONS

6.1 Emergency Preparedness and Evacuations Presentation (County of Napa Office of Emergency Services and Napa County Sheriff's Office)

Postponed to the March 3, 2022 meeting.

7. CONSENT AGENDA

7.1 Meeting Minutes of November 4, 2021 Paratransit Coordinating Council Meeting (Kathy Alexander) *(Pages 8-10)*

MOTION by DEROSE-HERNANDEZ, SECOND by COLLETTE to APPROVE the November 4, 2021 Meeting Minutes. Motion was approved with the following vote:

Aye: 5 - Chairperson Weir, Member Spencer, Member DeRose-Hernandez, Vice Chair Collette, and Member Rhodes

Absent: 1 - Member Kahiga

8. REGULAR AGENDA ITEMS

8.1 Transit Manager's Update (Rebecca Schenck) *(Pages 11-12)*

Rebecca Schenck provided the following updates:

- **The November 2021 Vine service changes**
- **The status of funding for Senior Transportation Needs Assessment**
- **5310 Grant Program - applications are due March 2, non-profits may apply. Funds must be used to enhance mobility for seniors and disabled persons.**
- **The Vine Maintenance Facility Groundbreaking will be held February 18; PCC members are invited**
- **NVTA released the Invitation for Bids (IFB) for the Vine Trail St. Helena to Calistoga segment**
- **Caltrans released the IFB for the Soscol Junction project**

8.2 Transit Ambassador and Shared Vehicle Programs Overview (Libby Payan) *(Pages 13-14)*

Libby Payan provided an overview of the Transit Ambassador Program that included:

- **An overview of the Transit Ambassador Program**
- **The items covered during a one-on-one training**
- **The impact of COVID-19 on the program**
- **Future plans for enhancing the Transit Ambassador Program**

Ms. Payan also provided an overview of the Shared Vehicle Program, the purpose, the agency using the program and number of rides provided during the COVID-19 pandemic.

Ms. Payan invited feedback from the Committee for promoting the programs.

Committee members suggested posting a flyer about the Transit Ambassador Program at the Transit Center and the park and rides, as well as providing the flyer to schools, senior centers, senior residential facilities - particularly for "welcome packets", mobile home parks, etc.

Member Rhodes offered to write an article regarding the Transit Ambassador Program for her newspaper column.

Public comment was provided by Justin Hole.

9. FUTURE AGENDA ITEMS

- **Overview of the Metropolitan Transportation Commission Fair Integration Study**
- **Update on Senior Transportation Needs Assessment Funding**

10. ADJOURNMENT

10.1 Approval of Next Regular Meeting Date of March 3, 2022 and Adjournment.

Meeting was adjourned at 10:37 a.m.

_____

Kathy Alexander, Deputy Board Secretary

March 3, 2022
PCC Agenda Item 8.1
Continued From: NEW
Action Requested: ACTION REQUIRED

NAPA VALLEY TRANSPORTATION AUTHORITY
PCC Agenda Letter

TO:	Paratransit Coordinating Council (PCC)
FROM	Kate Miller, Executive Director
REPORT BY:	Rebecca Schenck, Program Manager- Public Transit (707) 259-8636 | rschenck@nvta.ca.gov
SUBJECT:	Federal Transit Administration Section 5310 Project Recommendation

RECOMMENDATION

That the Paratransit Coordinating Council recommend to the Napa Valley Transportation Authority Board approval of the Federal Transit Administration (FTA) Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program for Napa County and Napa Valley Transportation Authority's (NVTA) grant application.

EXECUTIVE SUMMARY

The California Department of Transportation (Caltrans) released a Call for Projects in January 2022 for the FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program. Approximately $18 million dollars is available for small urban and rural areas statewide with applications due to Caltrans by March 2, 2022. Eligible project sponsors are non-profit organizations and under certain circumstances, government agencies. Eligible projects include capital projects, including vehicle and other dispatch equipment, and mobility management services for elderly and disabled populations.

NVTA is requesting FTA Section 5310 funds to replace six (6) Vine Go ADA paratransit vehicles that have outlived their useful lives with new vehicles. If successful, the grant will provide up to $368,500 in new funding.

NVTA held a public hearing at its meeting on February 16, 2022 to seek input from the public and to determine whether any other non-profit organizations are available to operate the services that NVTA will provide with the vehicles.

FISCAL IMPACT

Is there a Fiscal Impact? Yes, the estimated cost to replace six (6) paratransit vehicles can be as high as $670,000. If successful, the grant will provide funding of $368,500. Transportation Development Act Funds will be used to fund the balance.

BACKGROUND AND DISCUSSION

The FTA Section 5310 competitive grant program provides funding for capital and mobility management projects to non-profit agencies for transportation services, seniors, and persons with disabilities. These funds are available to non-profit organizations serving the elderly and/or people with disabilities.

When no non-profit agencies are willing, able or eligible to provide the proposed grant funded services, in this case, complementary paratransit services, a public agency may seek funding. NVTA has been the recipient of FTA Section 5310 funds in the past, most recently for the purchase of three (3) paratransit vehicles back in 2018.

Shortly after Caltrans announced the notice of funding availability, NVTA presented the information at its January 6, 2022 Paratransit Coordinating Council meeting and sent email communication to local non-profits and social services agency with instructions on how to file an application directly to Caltrans.

The NVTA Board held a public hearing to accept and authorize the Executive Director or designee to submit a FTA Section 5310 grant application to Caltrans to fund vehicles that will replace paratransit vehicles that have outlived their useful lives. Collabria Care, a local non-profit organization in Napa County, is also applying for vehicles to serve its own clients and respective programs from the FTA Section 5310 program.

The public has 30 days to comment on the FTA Section 5310 grant submittal from the time NVTA posts the public hearing notification.

ATTACHMENTS

None

March 3, 2022
PCC Agenda Item 8.2
Continued From: New
Action Requested: INFORMATION

NAPA VALLEY TRANSPORTATION AUTHORITY

Paratransit Coordinating Committee Agenda Memo

TO: Paratransit Coordinating Council

FROM: Kate Miller, Executive Director

REPORT BY: Libby Payan, Senior Program Planner/Administrator
(707) 259-8782 / Email: lpayan@nvta.ca.gov

SUBJECT: Vine Transit Update

RECOMMENDATION

Information only. This report will provide an update on the operational performance for Vine Transit services for the second quarter (Q2) of Fiscal Year (FY) 2021-22. The report includes an update on operational and service changes related to the pandemic.

FISCAL IMPACT

Is there a Fiscal Impact? - No

BACKGROUND

Summary of Early Pandemic-Related Operational Changes (2020 – 2021)

In March 2020, NVTA made a number of service changes in response to reduced ridership demand associated with the coronavirus pandemic and public health orders issued by the State and County of Napa. Specifically, service hours were reduced, fare payment was suspended, seat spacing was introduced, and buses began using rear door only boarding whenever feasible to ensure the safety of riders and drivers.

In mid-March of 2020, weekday service hours on Routes 10 and 11 were reduced to a Saturday schedule. Routes 10X and 11X were suspended – after already showing mixed ridership performance in the months preceding the pandemic. On April 27, 2020, local fixed route services in the City of Napa (A-H) were suspended and transitioned to Stop to Stop On-Demand service for local trips. On May 13, 2020, following the County of Napa's revised Shelter at Home order, NVTA posted notices requiring the use of face coverings

by passengers and staff. All of these service changes remained in effect until August 15, 2021.

Throughout the COVID-19 pandemic, NVTA supported auxiliary Emergency Operation Center (EOC) functions that included meal delivery to residents in isolation and quarantine sites, food bank distribution when distribution centers were closed to the public, and related transportation. These operations ceased on August 15, 2021. NVTA returned to higher level of service and Napa County EOC operations slowed down.

On May 9, 2021, the Vine returned to a weekday schedule on the Routes 10 and 11 (had been running on Saturday schedules since March 2020); implemented a fixed-route/on-demand hybrid which introduced two new fixed routes (Routes N and S), and maintained the existing on-demand service in the City of Napa. The Yountville Trolley and Calistoga Shuttle also extended hours on Friday and Saturday nights.

On August 15, 2021 the Vine reintroduced the Route 11X in response to the Vallejo Ferry's new service in July; and added Routes E and W in the City of Napa. Vine also reinstated a second shuttle in Calistoga and American Canyon and fixed route school trippers in St. Helena and American Canyon.

In response to bus driver shortages, the Vine made additional service changes on November 21, 2021. These changes included extending Route N to service Rohlffs Manor & the Napa Senior Center, and extending run times to 45 minutes (previously 30 minutes) on Routes W and S. The Vine also limited on-demand services in the City of Napa to operate only where a fixed route is not available, and removed low performing trips on Routes 21, 11 and 11X.

Emergency Service Reductions (2022)

Vine Transit operations have not been immune from the increase in COVID cases in the community over the last two months. A number of bus drivers are currently out due to contracting COVID and being exposed to others with COVID. Due to this short-term reduction in the number of available bus drivers, NVTA took steps to reduce service to limit the number of unplanned missed trips. NVTA announced the changes via press release, social media and signs to allow riders to plan ahead to take different trips to reach their destinations over the next two weeks.

As of January 22, 2022, Vine Transit instituted temporary reduced services on its fixed route system and community shuttles. Service changes include:

- Regional Service on the Route 10 Monday-Saturday has been reduced to Saturday Service. Route 10 Sunday service is on the normal Sunday Schedule.
- Sunday Service on the Yountville Trolley has been temporarily discontinued. Service remains the same for all other days of the week.

- All Service on the 11X has been temporarily discontinued.
- Two trips on the Napa BART Express will not run. Route 29 will not go to the El Cerrito Del Norte BART station at 6:00 am or return to the Redwood Park and Ride on the 7:20 am.

These temporary service changes will be lifted on Monday February 21, 2022. On that day, Vine Transit will go back to the schedule that was in place prior to January 22, 2022.

Vine Transit continues to follow recommended health and sanitation requirements. As mandated by the Transportation Security Administration, face masks are required on Vine vehicles, at bus stops, and all facilities through March 18, 2022. Vine buses are thoroughly sterilized each day and frequently touched areas, such as handrails, are cleaned several times daily.

Vine Transit Performance
The first four tables compare ridership across different services in the second quarter of FY 2021-22 (October to December) to the same period in the prior fiscal year. Table 1 shows a 102.19% increase in ridership from 12,654 to 25,585 in the City of Napa from the second quarter of FY 2020-21 to the current fiscal year. This increase is most likely due to the re-introduction of fixed routes (N, S, W & E) in the City of Napa. In the prior fiscal year, there was only on-demand service. One of the purposes of re-introducing those fixed routes was to increase ridership and ease the amount of riders using the on-demand services by transferring them to fixed routes.

Table 1: City of Napa– Comparing Q2 of FY21 & FY22

	FY 20/21	FY 21/22	% Difference	Numerical Difference
Napa Local On-Demand	12,654	6,316	-50.09%	-6,338
Route N	N/A	9,365	N/A	9,365
Route S	N/A	3,084	N/A	3,084
Route W	N/A	5,955	N/A	5,955
Route E	N/A	865	N/A	865
Total Rides	12,654	25,585	102.19%	12,931

Table 2 indicates an overall increase in ridership on the regional and express routes (10, 11, 11X, 21 and 29). The increase in the second quarter between fiscal years 2020-21 and 2021-22 was 22.31% percent. Route 10 showed the largest percentage increase in ridership (29.80%) of all of the regional and express routes.

Table 2: Routes 10, 11, 11X, 21 and 29 Ridership – Comparing Q2 of FY21 & FY22

	FY 20/21	FY 21/22	% Difference	Numerical Difference
Route 10	21,121	27,415	29.80%	6,294
Route 11	21,660	25,482	17.65%	3,822
Route 11X *	N/A	1,524	-	1,524
Route 21	3,641	4,185	14.95%	544
Route 29	8,193	8,194	0.01%	1
Total	**54,615**	**66,800**	**22.31%**	**12,185**

*Route 11X was reinstated on August 15, 2021

Table 3 shows the ridership patterns on the four community shuttles. The combined ridership is up significantly at 111.60% compared to the same quarter in the prior fiscal year. Ridership substantially increased across all the community shuttles in the second quarter of the current fiscal year.

Table 3: Community Shuttles– Comparing Q2 of FY21 & FY22

	FY 20/21	FY 21/22	% Difference	Numerical Difference
Calistoga Shuttle	1,403	3,324	136.92%	1,921
St. Helena Shuttle	704	1,181	67.76%	477
Yountville Trolley	763	984	28.96%	221
American Canyon Transit	1,450	3,652	151.86%	2,202
Total	4,320	9,141	111.60%	4,821

VineGo ridership is also rebounding (57.21%) compared to the same time last year as shown in Table 4. NVTA still has a reduced number of vehicles serving VineGo as ridership remains well below pre-COVID levels. Many of the customers who use VineGo travel for programs that remain suspended during the pandemic such as Collabria Day Program, Napa Senior Center events, and Clinic Olé classes.

Table 4: VineGo Ridership – Comparing Q2 of FY21 & FY22

	FY 20/21	FY 21/22	% Difference	Numerical Difference
VineGo	846	1,330	57.21%	484

Tables 5, 6 and 7, compare the first quarter of FY 2021-22 (July – September) to the second quarter of FY 2021-22 (October – December) to provide additional context on ridership. Table 5 shows an overall slight decrease in ridership (-1.03%) in the City of Napa. The overall decrease is due to the significant drop in on-demand ridership particularly in December 2021 as COVID cases rose and new on-demand restrictions

were put in place to decrease wait times. All the fixed routes increased their ridership. Routes W & S began their service in the middle of Q1 of FY22, compared to a full quarter's worth of Q2 data on those routes.

Table 5 City of Napa Ridership – Comparing Q1 of FY22 & Q2 of FY22

	Q1 FY 22	Q2 FY 22	% Difference	Numerical Difference
Napa Local On-Demand	12,654	6,316	-50.09%	-6,338
Route N	6,114	9,365	53.17%	3,251
Route S	2,932	3,084	5.18%	152
Route W (*started Aug 15th*)	3,693	5,955	61.25%	2,262
Route E (*started Aug 15th*)	458	865	88.86%	407
Total	**25,851**	**25,585**	**-1.03%**	**-266**

Ridership decreased over the prior quarter on the regional routes by 9.41% as seen in Table 6. Route 11X is the only route that increased its ridership. However, it was re-introduced on August 15, 2021 in the middle of Q1 of FY 22 so the 1,418 ridership figure doesn't cover the entire quarter. These drops in ridership could be caused by typical seasonal declines in ridership during the months of November & December as the weather cools down and there are more holidays and less demand for regional service.

Table 6: Routes 10, 11, 21 & 29 Ridership – Comparing Q1 of FY22 & Q2 of FY22

	Q1 FY 22	Q2 FY 22	% Difference	Numerical Difference
Route 10	31,806	27,415	-13.81%	-4,391
Route 11	26,945	25,482	-5.43%	-1,463
Route 11X (*started on Aug 15)*	1,418	1,524	7.48%	106
Route 21	4,909	4,185	-14.75%	-724
Route 29	8,663	8,194	-5.41%	-469
Total	**73,741**	**66,800**	**-9.41%**	**-6,941**

For the community shuttles, ridership decreased on almost all services compared to the first quarter of the current fiscal year as seen in Table 7. The decreases in ridership is most prevalent in Calistoga where ridership tends to peak in September with a lot of tourist ridership and fall in December with only one shuttle, less tourist and a long school vacation. The increase in ridership on American Canyon Transit is most likely due to students attending school for in-person learning for all three months of the second quarter.

Table 7: Community Shuttles– Comparing Q1 of FY22 & Q2 of FY22

	Q1 FY 22	Q2 FY 22	% Difference	Numerical Difference
Calistoga Shuttle	3,777	3,324	-11.99%	-453
St. Helena Shuttle	1,215	1,181	-2.80%	-34
Yountville Trolley	1,021	984	-3.62%	-37
American Canyon Transit	3,079	3,652	18.61%	573
Total	**9,092**	**9,141**	**0.54%**	**49**

Another contributing factor across local and regional fixed route and community shuttles was the high number of missed trips due to driver shortages starting in September 2021. NVTA went from under 20 missed trips per month from January to August 2021, to between 80 and 110 missed trips from September to December 2021 across all services.

VineGo ridership remained almost identical when compared to the previous quarter of the current fiscal year as seen in Table 8. NVTA has recently seen an uptick in VineGo applications and renewals, therefore VineGo ridership is expected to rise as more people become eligible. However, with the current spike in COVID cases we expect to see the demand drop in the short-term since many VineGo riders are considered higher-risk individuals.

Table 8: VineGo Ridership – Comparing Q1 of FY22 & Q2 of FY22

	Q1 FY 22	Q2 FY 22	% Difference	Numerical Difference
VineGo	1,346	1,330	-1.19%	-16

In prior reports, staff also provided a table showing on-time performance for the nine fixed route services that NVTA operates. However, due to the transition between the old Avail Computer Aided Dispatch/Automatic Vehicle Locator (CAD/AVL) system to the new GMV CAD/AVL system, the data is incomplete. In the third quarter for FY 21-22, all Vine buses will all be on the GMV system and staff will have a full picture of on-time performance and provide a report to you.

ATTACHMENTS

None

March 3, 2022
PCC Agenda Item 8.3
Continued From: New
Action Requested: INFORMATION

NAPA VALLEY TRANSPORTATION AUTHORITY

Paratransit Coordinating Council Agenda Memo

TO: Paratransit Coordinating Council

FROM: Kate Miller, Executive Director

REPORT BY: Libby Payan, Senior Program Planner/Administrator
(707) 259-8782 / Email: lpayan@nvta.ca.gov

SUBJECT: Fare Coordination and Integration Study

RECOMMENDATION

Information only. This report will provide an update on The Metropolitan Transportation Commission's (MTC) Fare Coordination & Integration Study.

FISCAL IMPACT

Is there a Fiscal Impact? - No

BACKGROUND

Fare policy is among several factors that have constrained the growth of transit ridership in recent years. Current fare policies are informed by funding and governance models that incentivize locally-focused fares. Each agency sets its own fare structure, prices, products, concessions, customer experiences' goal and policies. These components, managed in an isolated matter, create barriers in terms of affordability and complexity of navigating the system, particularly for cross boundary and multi-agency trips, and limit the potential benefits of long-range investment and service plans. As a result, fare coordination and integration has a role to play in restoring transit ridership, supporting recovery from the COVID-19 pandemic, and delivering the transportation system the Bay Area needs for its coming decades of growth.

The Metropolitan Transportation Commission (MTC), in partnership with transit agencies across the Bay Area, launched the Business Case for Fare Coordination & Integration Study (FCIS) in 2020. The study accommodates all nine counties in the Bay Area and takes into consideration current conditions and future projections (which can be uncertain)

related to transportation systems, policies and projects. The goals of this study, which was carried out from July 2020 – September 2021, include:

1) Do current fare policies suppress ridership and/or impede ridership growth for travelers that could make use of multiple operators?
2) Are there potential regional fare coordination and integration policies that can increase ridership?

The study, developed under a Business Case framework, was delivered through collaboration between the region's transit agencies alongside technical analysis that included modeling, public and stakeholder research and policy research. The business case employs four dimensions to evaluate possible strategies:

1) Strategic – Why pursue fare integration?
2) Socio-Economic – What is the value of fare integration?
3) Financial – What are the financial requirements for successful integration?
4) Delivery & Operations – How can fare integration be implemented & managed?

The FCIS is overseen by a special Fare Integration Task Force that was formed in early 2020. The Task Force is a Special Committee of the Clipper Executive Board, it meets every other month, and it includes members of the Clipper Executive Board, with additional members representing the chair of the Bay Area County Transportation Agencies, as well as small transit operators. Our Executive Director, Kate Miller, serves as a representative for NVTA on the Task Force.

Key Findings of the FCIS

There are fare integration options that offer a cost-effective, equitable way to promote transit, especially in coordination with a broader user-focused regional strategy.

- **Potential to drive ridership**: Modeling suggests that fare structure changes could drive a small but significant increase in transit ridership (2-6% depending on the strategy & revenue recovery level)
- **Cost-effective**: Ridership benefits of targeted integration strategies appear reasonably cost efficient (~$2-3 per new trip) as compared to alternatives such as global fare discounts ($3/trip) or service enhancement and system optimization (~$3-15/trip)
- **Positive social return on investment** – Analysis suggest investment in fare integration would have a positive social return on investment through benefits such as lower Vehicle Miles Traveled and travel time savings
- **Balanced equity impacts** – Fare integration strategies appear compatible with regional equity goals. Analysis indicates equity priority communities (formerly

called communities of concern) would receive a proportional share of the benefits of most strategies

- **High uncertainty** – There is uncertainty in the findings due to both the inherent uncertainty of modeling as well as post-pandemic uncertainty

Summary of Recommendations

1) Advance a pilot project to explore effects of integration in a post-COVID environment

   This recommendation can be implemented through an employer or institutional pass, and/or as an individual pass. Both options provide an opportunity to demonstrate ridership gains and user experience benefits in an environment of uncertainty.

   An employer or institutional pass would be applicable to all agencies where institutions or employers buy all-you-can-ride passes for all constituents. Pricing would be based on business location for a long-term project but can be simplified for a subsidized pilot. Importantly, the pass would require careful design and mitigation to achieve equity balance for low-income riders and would be priced to achieve subsidy parity with other fares.

   An individual pass would include multiple agencies, allowing multi-agency users the same high-volume discounts now available to single-agency riders. Pricing for this pass would be based on user-selected fare multiplied by a standard factor. For example, a $3.00 pass costs $3 x 18 round trips per month ($108). All trips up to $3 are covered. Any trip that costs over $3 would require the user to pay the difference (For example, if the rider went on a trip that was $5, they would only need to pay $2 – the difference between $3 & $5). This pass is comparable to multi-agency pass offerings in the Seattle region (“PugetPass”) & the Washington D.C. region.

2) Implement no-cost and reduced cost transfers beginning in 2023, coinciding with the Clipper 2 deployment

   This recommendation includes free or reduced cost transfer region-wide and can be implemented for various types of local and regional trips. For local-local or local-regional connections, customers would only pay for the most expensive segment. For regional-regional connections, a transfer discount about equal to the minimum fare or the local bus fare would be applied. This would eliminate price barriers between agencies and create a more seamless transfer experience for riders.

3) Adopt a long-term plan to reach a Tier 3 level of integration, which aligns regional services under one fare structure

This recommendation involves a shared fare-by-distance structure for all regional services (rail, ferry and regional express bus). This would require new agreements or governance structures for regional service, some new Clipper equipment, and change management for some regional customers. Further assessments and costs of a single distance-based fare structure should be undertaken for regional services. Additionally, continued study of this option will help evaluate its impacts on post-COVID ridership, its role in the region and a funding strategy for regional services.

Next Steps

To move the first recommendation forward, the FCIS team has established a special working group to advise on initial pilot design and assist in the development of an implementation and project management team. The MTC Commission has expressed interest in providing some funds to support the pilot, although questions remain about the scale of the pilot and what the operator and MTC's appetite is for risk and uncertainty. If the Fare Integration Task Force is supportive, the FCIS team will continue preliminary pilot work and report back with implementation and a project management plan

To move the second recommendation forward, the FCIS team is seeking additional guidance from the Fare Integration Task Force on whether there is broad support for developing a proposal to fund and deliver this action. If there is support, the FCIS team will return to the Task Force with possible next steps on this recommendation for consideration

After the formal FCIS is approved, the Task Force will likely continue to meet on a regularly scheduled basis (Likely less frequently) to provide direction and oversight of the delivery of the FCIS project recommendations.

If you have any specific questions, comments or feedback, feel free to get in touch with one or both of the co-project managers listed below.

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ATTACHMENTS

(1) Bay Area Fare Coordination and Integration Study – Draft Business Case Summary
(2) Fare Coordination/Integration Study and Business Case Appendix – Business Case Findings

Bay Area Fare Coordination and Integration Study

Draft
Business Case Summary

Acknowledgments

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Additional acknowledgements:

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Table of Contents

1.

Introduction

Purpose of Study

This document presents a summary of the Business Case for Fare Coordination and Integration Study (FCIS). This study was launched in 2020 by the Bay Area's transit agencies and MTC to explore the following:

- Do current fare policies suppress ridership and/ or impede ridership growth for travelers that could make use of multiple operators?
- Are there potential regional fare coordination and integration policies that can increase ridership?

The study was delivered through collaboration between the region's transit agencies alongside technical analysis that included modelling, public and stakeholder research, and policy research. This document is one of the key deliverables for the FCIS . It evaluates benefits, costs, risks, and requirements for six fare policy options to provide a technical evidence base to support decision makers in identifying a potential path forward for fare integration. The fare policies and options explored in this business case have been scoped and analyzed at a 'strategic level', meaning the document is intended to compare options and select polices for further review and development. Future studies will be required to refine the scope and impact estimates for options that are advanced to the next stage of development.

Disclaimer on COVID-19

The COVID-19 pandemic has had a profound impact on transportation demand and travel patterns. The long-term impacts of the pandemic are currently unknown and there is insufficient data to accurately forecast their impacts. The study made use of ridership data and Clipper data from 2019 to inform all analysis and business case development. 19. As a result, they do not model the impact or potential long-term outcomes of the current global pandemic.

There is currently insufficient data or information available to allow the models employed in this business case to reasonably analyze the impact of the COVID-19 outbreak on this project or for the models to be used to comment on the expected changes in the forecasts described in this business case. Where possible, scenario analysis was used to assess the potential impacts of COVID-19 on study findings. Readers of this business case should consider its findings in this context and analysis included in this business case should be updated as pandemic recovery progresses.

FCIS Scope and Time-lines

The FCIS accommodates the nine counties within the Bay Area and its 27 transit operators serving more than 1.7 million passengers per day. It also takes into consideration current conditions and future projections (which can be uncertain) related to transportation systems, policies, and projects. This document summarizes the study, its methodology, analyses, and findings that were carried out from July 2020 to September of 2021.

The work followed a six-stage project plan:

- Problem Definition and Goals
- Existing Conditions and Market Analysis
- Identification of Barriers to Riding Transit
- Alternatives/ Options Development
- Alternatives Analysis/Business Case Evaluation
- Reporting and Delivery Planning

Business Case Structure

The study was developed under a Business Case framework based on comprehensive insights that support and assess different fare integration and coordination policy options. The structure uses a systematic approach to understand benefits and risks tied to each of the options. Its objective is to support decision-making and investment-thinking for achieving fare integration.

The Business Case employs four dimensions to evaluate possible strategies: strategic, socio-economic, financial, and delivery and operations.

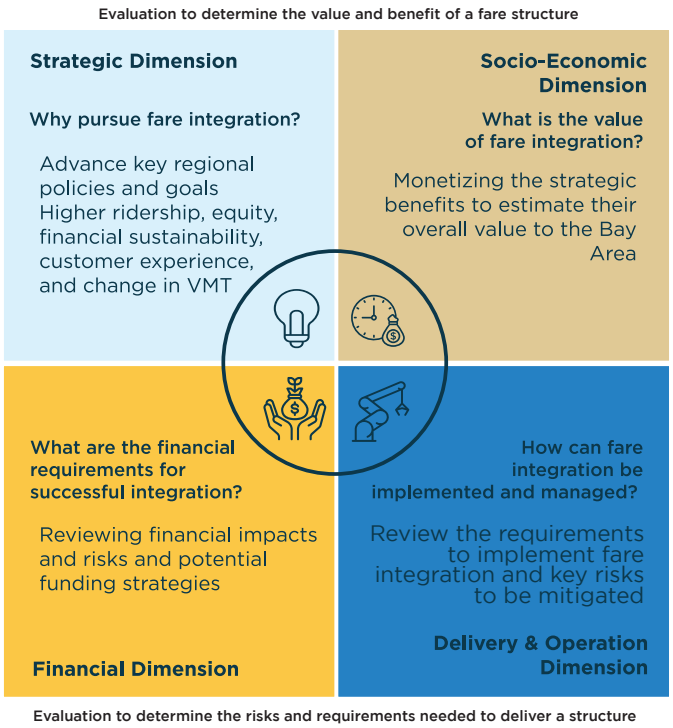
The Business Case used four approaches across all four dimensions, to weave a comprehensive analysis and determine a set of recommendations for each of the strategy options.

The approaches are:

- **Forecasting and Modelling** - used for understanding how each tier or option could impact ridership revenues and potential wider benefits
- **User Research** – used to inform how different tiers or options should be assessed, and solicit wider perspectives on fare structure change
- **Stakeholder Engagement** – used to inform how different tiers or options should be assessed and solicit wider perspectives on fare structure change
- **Agency Engagement** – used to inform how different tiers or options should be assessed and confirm key strategic, financial, and implementation considerations

The results of this methodology are meant to assess if a particular fare coordination and integration strategy is worth pursuing or not, based on its benefits and challenges. The Business Case is designed to support agencies with decision-making through a structured and comprehensive way.

Figure 1.1 Business Case Dimensions



How to use this document

The remainder of this document is composed by the following sections:

Chapter/Description	Questions Answered by Chapter
Section 2 The Case for Change – a summary of the central challenges fare integration could face and provides key data points that demonstrate the barrier exists	Is there a central problem that fare integration could address? Are there opportunities to increase ridership in the region that fare integration could action?
Section 3 Alternatives – a summary of the fare integration tiers and options included in the Business Case	What range of policies were considered? How were they developed?
Section 4 Strategic Case – an evaluation of how each tier or/and option aligns with policy goals regarding fare coordination and integration	What is the socio-economic value of the options? Do they increase regional welfare
Section 5 Economic Case – an evaluation of each tier or/and option based on the social value for local communities and the whole region	What is the socio-economic value of the options? Do they increase regional welfare?
Section 6 Financial Case – an evaluation that addresses the impact of fare integration to funding for transit policies and projects	What are the financial requirements for each option? What is the financial value for money (cost per new rider) of each option?
Section 7 Implementation Case – an evaluation of the requirements to successfully deliver each tier and/or option	What management, operations, infrastructure, and customer changes are required for each option? What are the risks for each option?
Section 8 Business Case Conclusions – a summary of the Business Case and its findings and recommendations	What are the consequences and trade-offs of each option? What did the study identify as potential next steps?

2.

The Case for Change

The Problem Statement

Fare policy is among several factors that have constrained the growth of transit ridership in recent years. Current fare policies are informed by funding and governance models that incentivize locally-focused fares. Each agency sets its own fare structure, prices, products, concessions, customer experiences' goals, and policies. These components, managed in an isolated manner, create barriers in terms of affordability and complexity of navigating the system, particularly for cross boundary and multi-agency trips, and limit the potential benefits of long-range investment and service plans. As a result, fare coordination and integration has a role to play in restoring transit ridership, supporting recovery from the COVID-19 pandemic, and delivering the transportation system the Bay Area needs for its coming decades of growth.

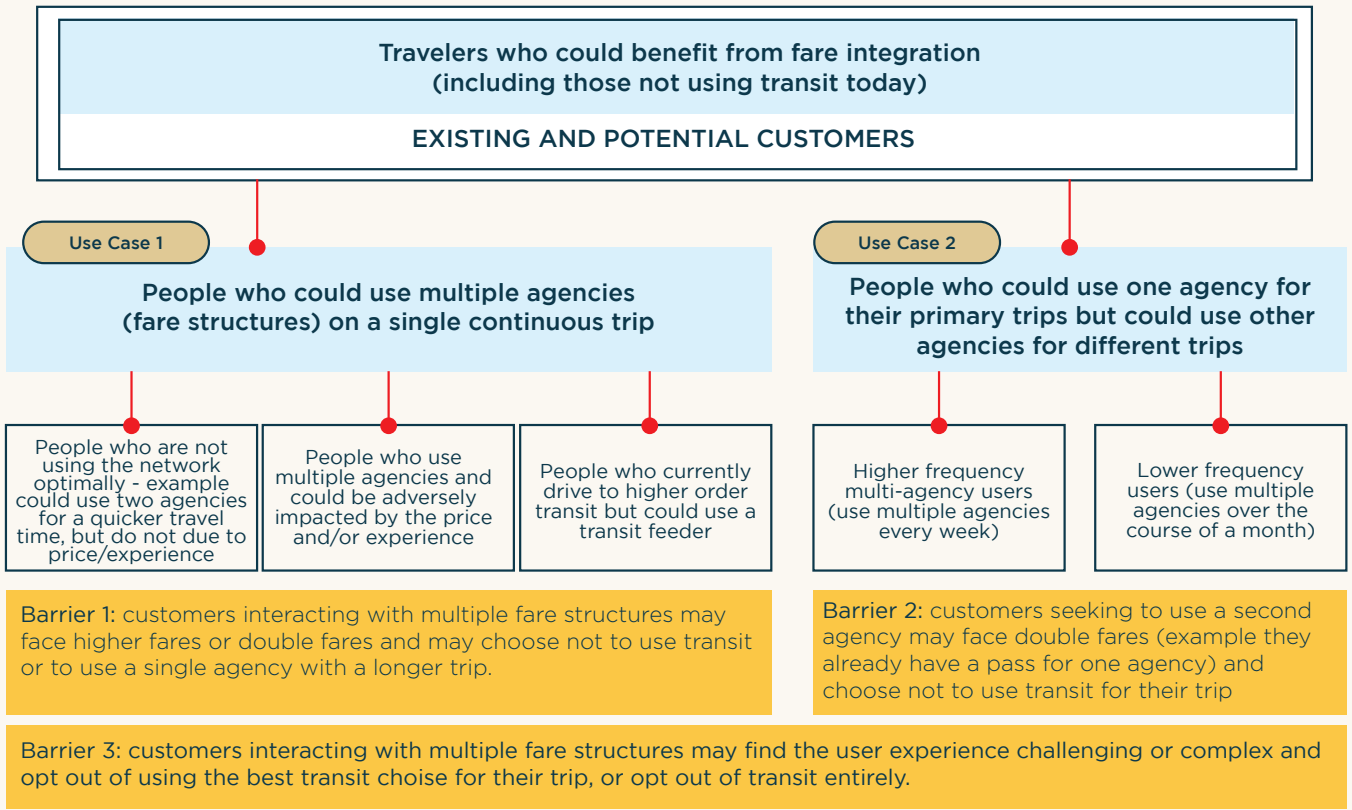
Figure 2.1 Four key Issues that impact ridership

CUSTOMER VALUE	Current fare policies can lead to a disconnect between the fare charged and the value a customer places on their trip.
PAYMENT EXPERIENCE	Current fare products, passes, payment technologies, and payment experiences may not be legible.
EQUITY	Current fares may not consistently meet the needs of Equity Priority Communities.
FUTURE TRANSIT	Current fares may not optimize the ridership and benefits of proposed transportation investments.

How does this problem suppress ridership?

These four fare barriers impact transit ridership through two general use cases:

Figure 2.2 Understanding Customer Experience through User Cases



Issue 1: Value

Analysis of travel behavior in the Bay Area combined with insights from user research provided the basis for understanding how customers value transit in the Bay Area. Pre-covid transit data showed that while only a small percentage of the region's transit users interact with multiple fare systems, the barriers faced are nevertheless complex and significant.

According to survey and Clipper data, less than 10 percent of daily transit riders transfer between operators within a single trip. Over the course of a day, about 14 percent use multiple operators. The majority of riders use BART, Muni and AC Transit as their primary operator.

Only about 1 percent of daily Clipper cards interact with more than two agencies (primary agency plus two additional). Therefore, very few people are making transfer likely to use more than one operator daily.

Transfer patterns indicate that pre-Covid riders were using feeder service to access regional services like BART and Caltrain.

- 20 percent of transfer trips occur between BART and Muni
- An additional 10 percent of transit trips occur between AC Transit and BART
- 6 percent of transfer trips occur between Muni and Caltrain

Although a smaller percentage of total transfer trips in the region, customers in the East Bay, Napa Solano region, and Union City are also more likely to use more than one operator daily. Clipper analysis indicated that more than 20 percent of the customers riding these services used one or more operator.

Figure 2.3 Daily Clipper Card Usage on Single and Multiple Operators (Source: Clipper Data, 2019)

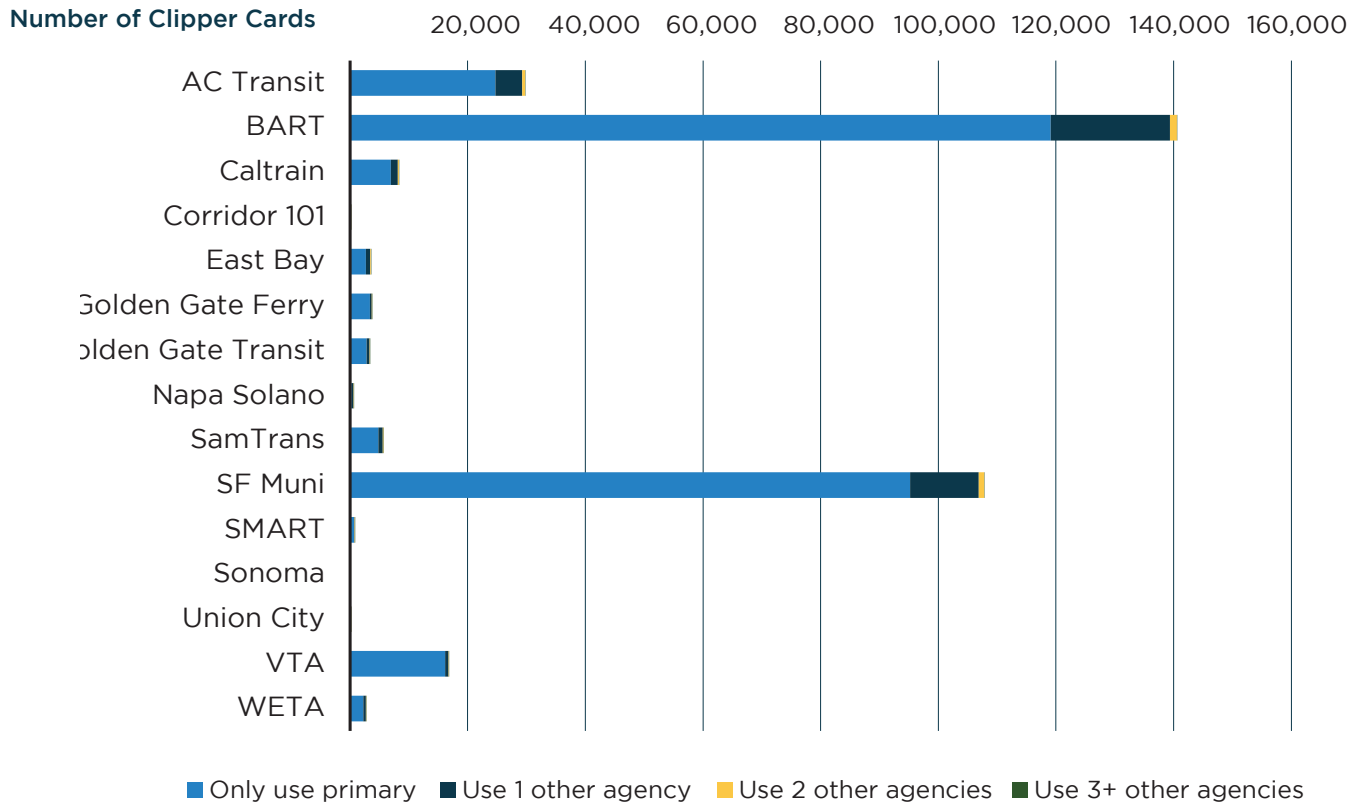
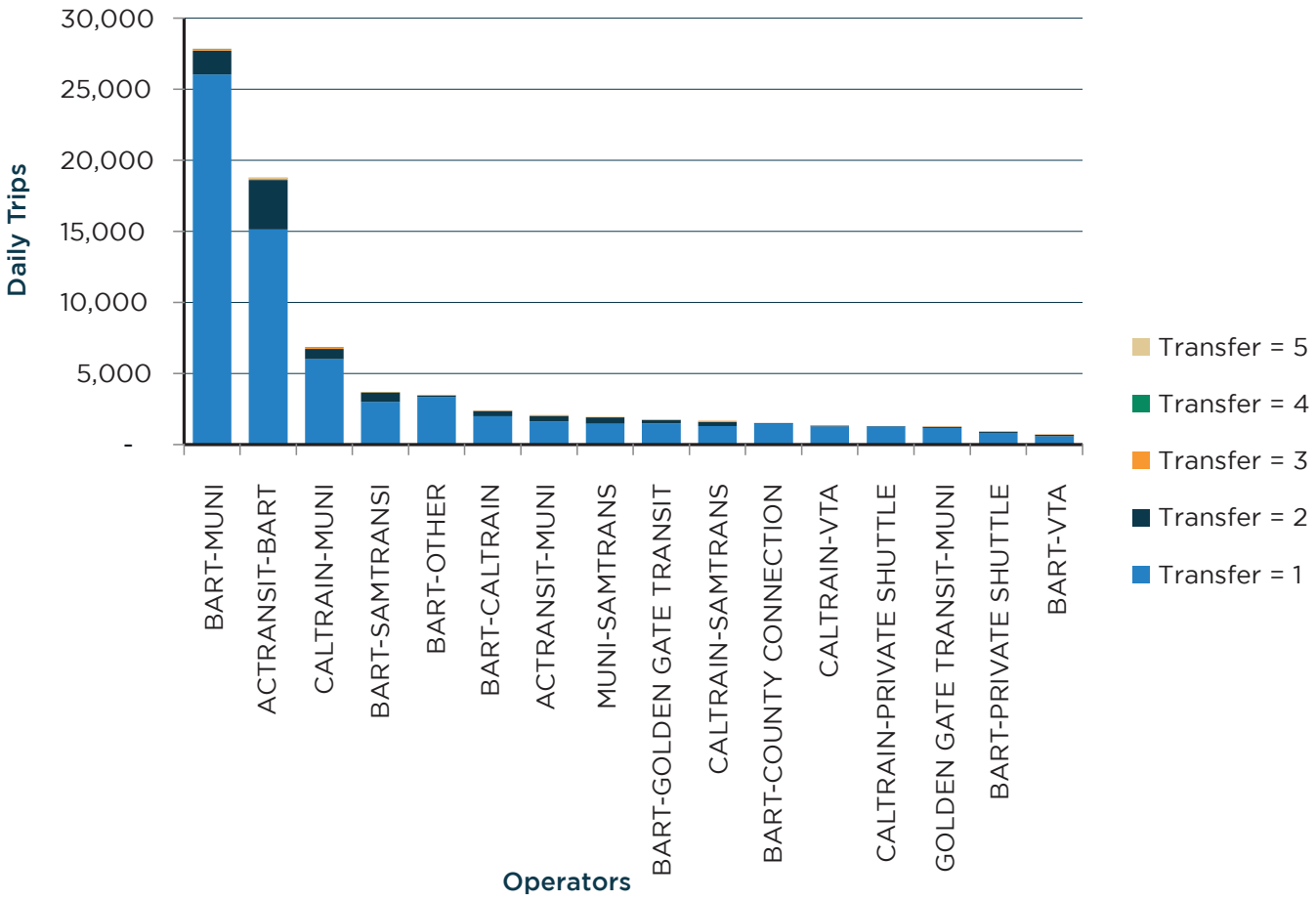


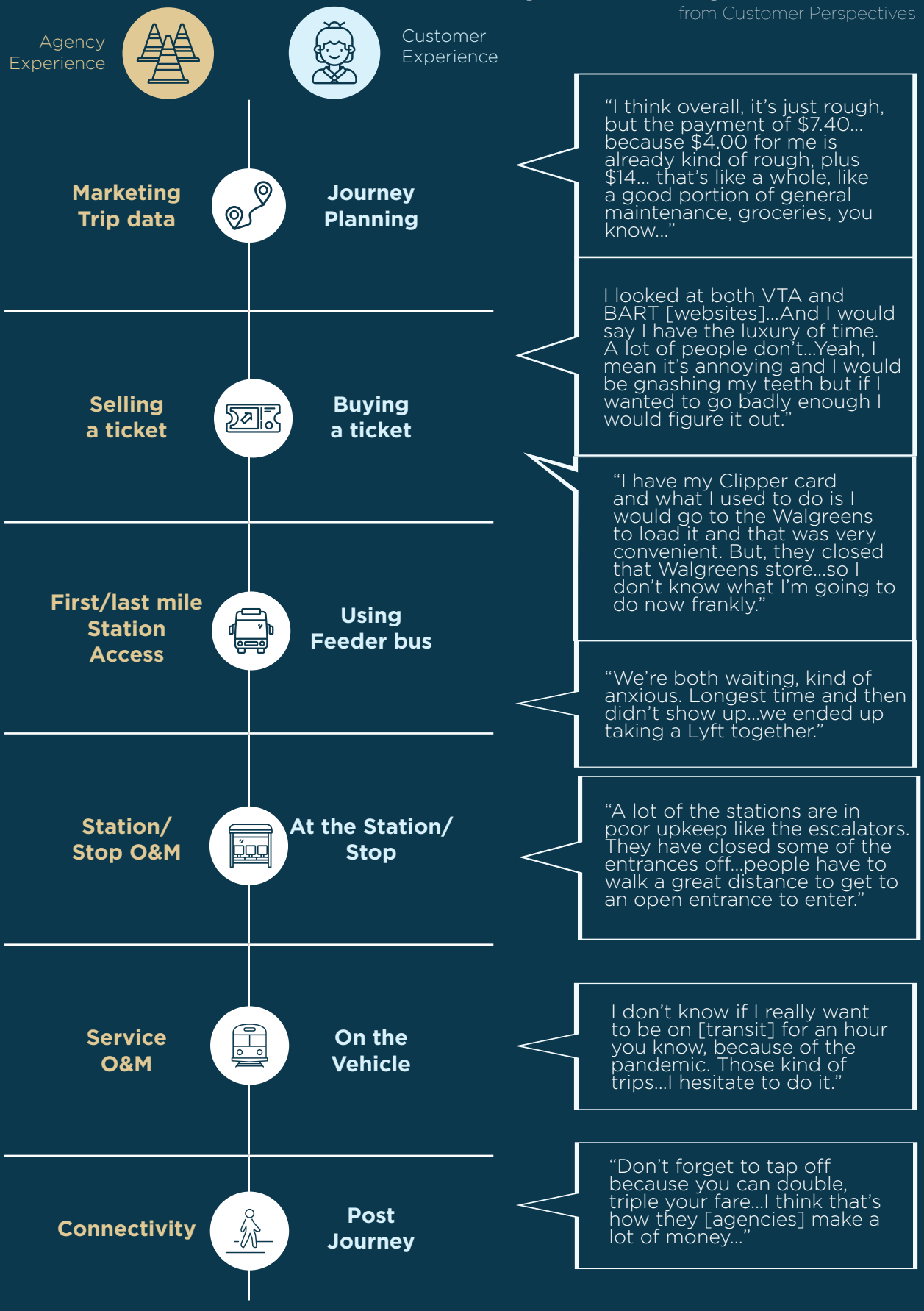
Figure 2.4 Number of transfers between operators by agency (Source: MTC Onboard Survey, 2015)



Issue 2: Customer Experience

User research showed that transit riders determine the value of transit in relative terms to other modes and other experiences. Reliability was most often cited as the most important determinant of customer value. Nevertheless, user testimonials suggest that fares can play a significant role in increasing affordability and usability for transit riders.

Figure 2.5 Understanding Customer Fare Barriers from Customer Perspectives



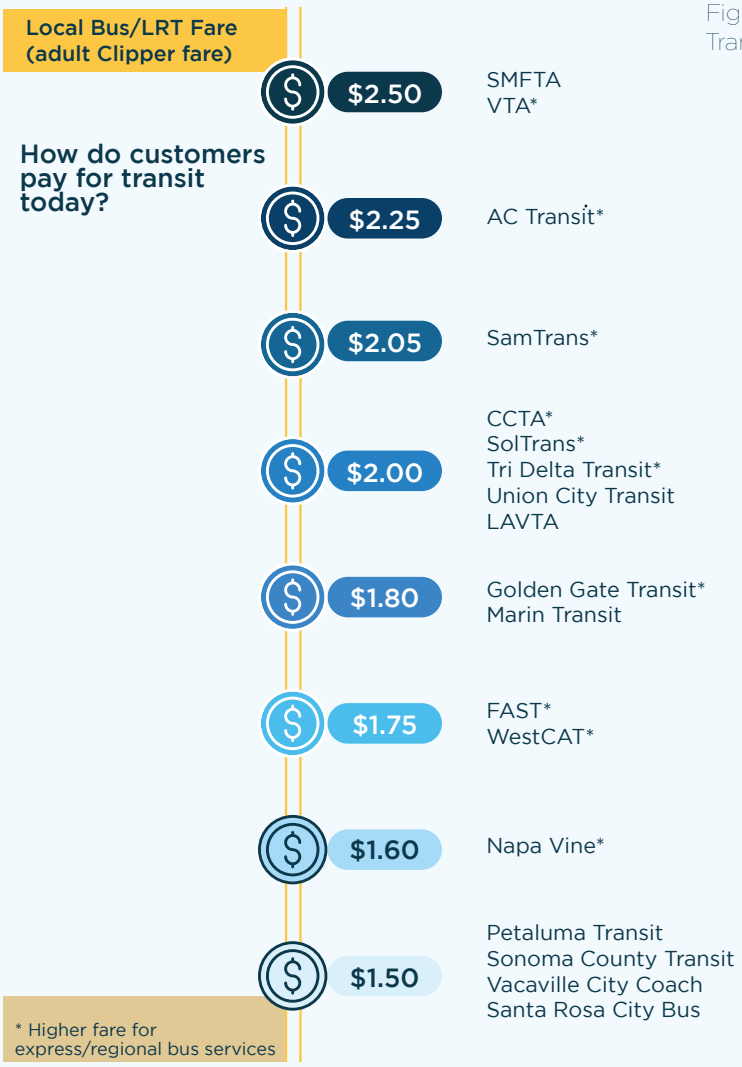
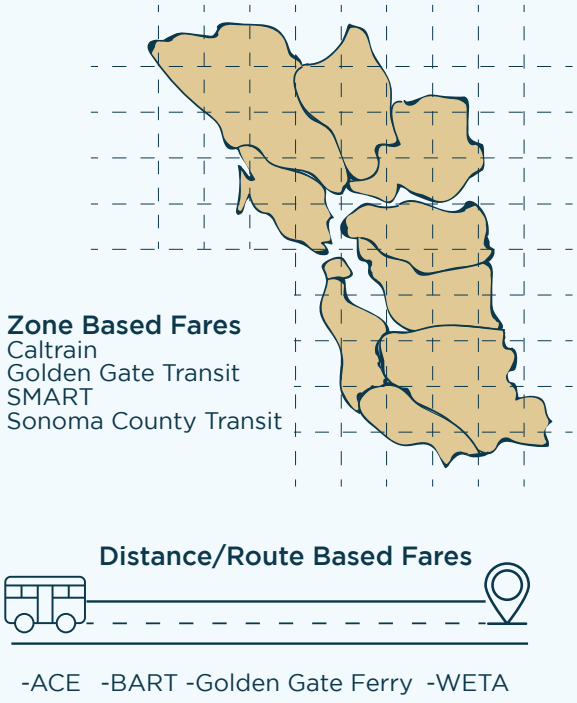


Figure 2.4 Overview of Current Transit Fares and Products



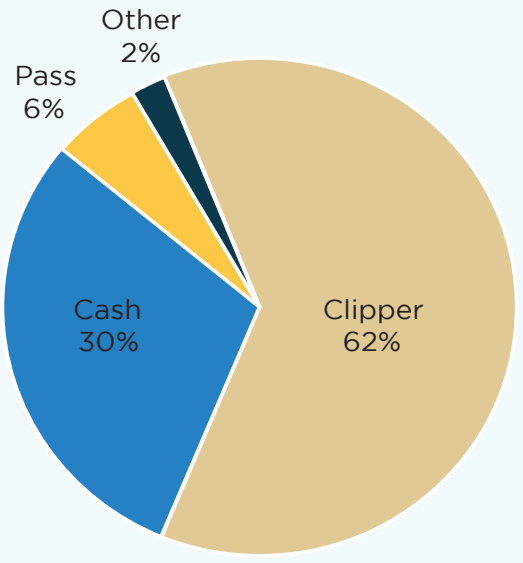


Figure 2.6 Fare Product usage
Source: MTC Onboard Survey, 2019)

Issue 3: Equity

Fare barriers have a disproportionate impact on vulnerable populations, which can include low-income individuals, people of color, people with disabilities, older adults/seniors, and "transit dependent" people who have low rates of vehicle ownership. Nearly half of Bay Area transit riders qualify as low income and they also make the majority of transfer trips.

- Roughly 48 percent Bay Area transit users report an annual household income of less than $50,000 and more than 60 percent of riders are non-white/minorities.
- The share of low-income and minority riders varies by transit agency. Nearly 99 percent of riders on Santa Rosa Bus and City of Rio Vista qualify as low-income compared to roughly 30 percent of riders on BART. More than half of Bay Area agencies serve a majority low-income customer base.
- SFMTA Muni service alone accounted for nearly half of all boardings by low-income persons.
- Thus, some agencies may serve a disproportionately low-income customer base, other agencies provide the most transit rides for low-income transit riders in the region.

Transit riders who qualify as low-income make roughly 52 percent of transfer trips that include one transfer. The percentage increases to 57 percent for transit riders make three or more transfers.

By definition, transit costs incur a higher cost-burden on low-income transit riders. Pass products and concessions can be designed to make transit more affordable; however Bay Area pass products typically require payment up-front, which can be challenging. As a result, many low-income riders still opt for cash payment and therefore don't benefit from the Clipper discounts.

Figure 2.7 Share of annual boardings by low-income transit riders by agency (Source National Transit Database, 2019)

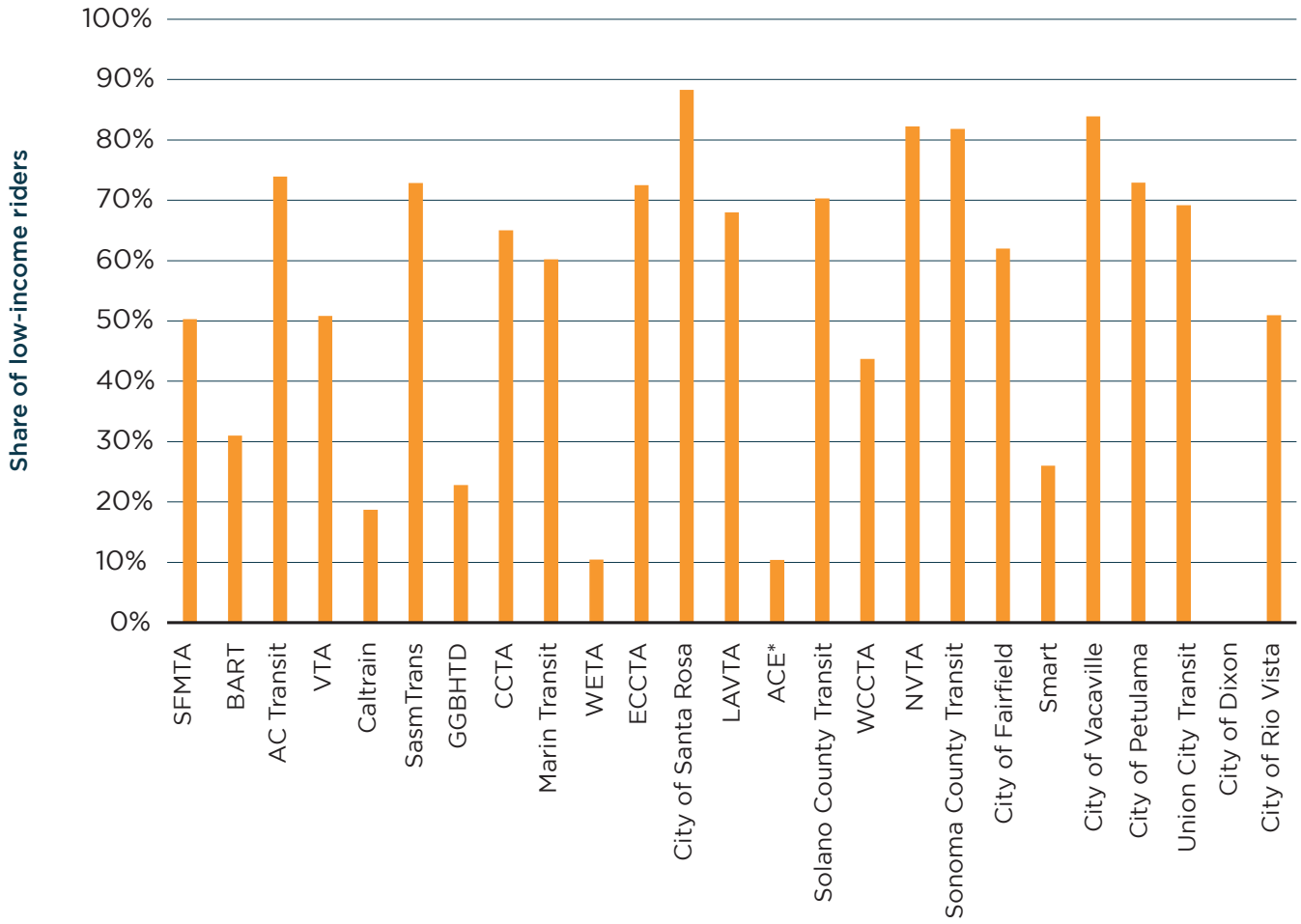
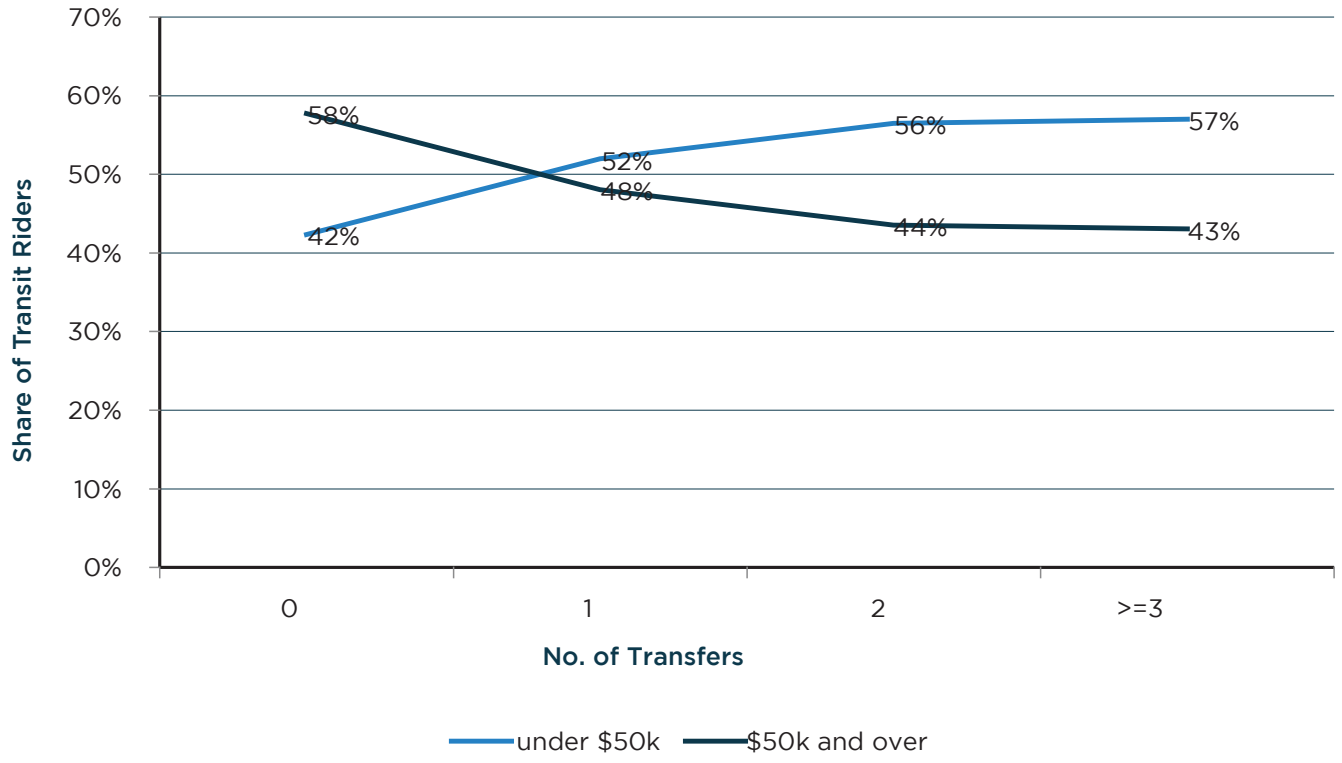


Figure 2.8 Percentage of transfer trips by household income (Source: MTC Onboard Survey, 2015)



In addition, the challenges of affordability were well-documented in the user research among low-income transit riders.

When pursuing fare integration, special attention needs to go into fare changes or increases, and technology-based approaches (such as relying solely on apps or cards) to assure that vulnerable groups are not affected by the implementation of strategies, on the contrary, they should be benefited from them.

Issue 4: Future Transit

Fare integration has the potential to help optimize future transit investments and alter future transit service design and delivery. The study considered how a selection of projects proposed under Plan Bay Area 2040 and explored how each investment could produce a better return on investment based on fare integration's potential to augment ridership.

3.

Alternatives

Fare Integration Tiers

The fare integration business case evaluated six different policy options organized into four tiers of integration. Policy options were intentionally selected to demonstrate the range of integration approaches available, spanning those that required minimal change to existing fare structures and policies at individual agencies as well as those requiring more dramatic transformation.

The tiers illustrate how changes to local and regional fare structures may unlock new benefits for the Bay Area. Each tier builds upon the previous tier with further changes. Tier 1 could be applied to the existing fare structures in the region or as part of each higher tier.

	Tier 1: Overlays to the existing fare structure	Tier 2: Free and Discount Transfers	Tier 3: Regional Change	Tier 4: Regional and Local Change
Changes to Fares	Explored benefits of introducing new pass and cap products to the existing system or as part of other tiers.	Explored benefits of adding free and discount transfers for multi-agency trips, eliminating double payments.	Explored the additional benefits that could be unlocked by bringing regional services under one unified fare structure, while maintaining a region-wide system of transfer discounts.	Explored significant changes to both regional and local fares through introduction of new concepts such as cellular zones and unified flat fare for local services throughout the region.
Changes to Agency Control of Fares	No changes to agency authority, new passes or products could receive funding	No changes to agency authority, discounts could receive funding	Regional agencies would either agree to fares or a central entity could control fares	Would require all agencies to agree to a single fare formula or for a centralized entity to control fares

Alternative Development Process

The Alternative Development process began with the identification of roughly 20 fare policies, which were refined through an initial screening to the final six policies described below for further evaluation and testing. The shortlist screening process eliminated options based on high-level criteria:

- Whether the policy addressed existing fare barriers or created new ones
- Improved customer experience
- Equity impacts
- Support for future transit investments
- Challenges in delivery

Examples of policy options that were not considered as a result of this screening include:

- Fare by distance on all regional and local modes: presented technical challenges for delivery and would have negative operational impacts on local buses.
- Corridor pricing: potential to create further equity issues and does not fully address study problem statement.

The final six policy options were determined to be viable approaches based on the initial screening and were recommended for further testing and evaluation. Multiple of variants of each policy were tested through modelling using the MTC Transportation Model 1.5 as well as off-model Clipper analysis.

Tier	Policy Option	What was tested	Examples
Tier 1: Overlays to the existing fare structure	Option 1.1 Individual Pass ("Puget Pass" Modell)	Policy Option 1 included multiple pass/cap variations: » Trip-based caps (daily, weekly and monthly) assuming local to regional transfers free » Value-based caps (daily, weekly, and monthly) assuming local to regional transfers free » Tiered pass products (local only, all-inclusive) » Individualized monthly pass (Puget Pass) based on customer's preferred trip, multiplied by factor of 36. Customer pays difference when making trips that exceed this preferred trip value.	» Monthly trip cap of 35, 40 or 50 trips on any local or regional service. Trips over this amount are free. » Daily value cap of $5, $10 or $15 on any local or regional service. Trips over this amount are free. » Individualized monthly pass set to $4 trip value. Monthly pass is $144; customer only pays additional fare for trips valued over $4.
Tier 2: Free and Discount Transfers	Option 2.1 No-cost transfers (local/local, local/regional)	Policy Option 2 applied a 100% discount for transfers from local services to other local services and from local services to regional services.	» Free transfer from SamTrans local service to VTA local service (pay only one fare) » Free transfer from AC Transit local service to BART (pay only BART fare).
	Option 2.2 No-cost transfers (local/local, local/regional, regional-regional)	In addition to the local to local and local to regional discount included in Option 2, this policy applies a discount for transfers between regional operators.	» Discount (no cost) transfer from Caltrain to BART » Discount (no cost) transfer from regional bus to ferry
Tier 3: Regional Change	Option 3.1 Unified Fare by Distance for Regional Service Only	Under Policy Option 3b, regional rail, bus and ferry services were unified under a common fare by distance curve.	» Caltrain-BART trip is priced based on the BART price per mile. » WETA-Muni trip is priced per mile for ferry, with a free transfer to Muni services.
Tier 4: Regional and Local Change	Option 4.1 Unified Fare by Distance for Regional Services + Local Fare	Fare Policy Option 4 applied a single fare by distance curve to all regional operators and introduced a local flat fare based on the weighted average. No transfers fees were applied when transferring from local to regional services. Multiple subsidy scenarios tested.	» Caltrain-BART trip is priced based on the BART price per mile. Transfers to/from local bus services are free. » For a local bus trip using SamTrans and Muni service, customers play a single flat fare.
	Option 4.2 Small zones for all service	Fare Policy Option 5 applied a cellular zone concept (81 total zones) to all regional and local services. Multiple subsidy scenarios tested: $100m/year, $70m/year, 12.5m/year.	» Trips on AC Transit and BART services are priced by number of zones travelled. » Trips on a single local operator like Santa Rosa Bus or SolTrans are also priced by number of zones travelled.
	Option 4.3 Large Zones + local flat fare	Fare Policy Option 6 applied a larger zone concept (36 zones) to regional service providers and introduced a local flat fare based on the weighted average. Two levels of subsidy tested.	» For trips on AC Transit and BART services, customers pay for BART trip based on number of zones travelled. Transfer to/from local AC Transit service is free. » Trips on a single local operator like Santa Rosa Bus or SolTrans are priced by a region-wide local flat fare.

4.

Strategic Case

Summary of the Strategic Case

The Strategic Case evaluates each option using four "strategic dimensions" based on the stated policy goals for fare coordination and integration. The four strategic dimensions used in the strategic evaluation are:

Ridership Development – assessing the extent to which each option can increase ridership by removing fare integration barriers;

Vehicle Miles Traveled (VMT) Reduction – assessing how each option supports regional and State goals for VMT reduction;

Equity Impact – assessing the impacts and benefits of each option to equity policies and objectives; and

Customer Experience – assessing how each option will impact traveler experience.

Strategic Evaluation

Fare Integration has the potential to increase daily ridership by 11,500 to 30,200 with low investment and by 44,000 to 68,800 with high levels of investment.

Benefit 1: Increased Ridership

What is the benefit?

This benefit assesses the extent to which each option and tier generate increased ridership in the Bay Area. This involves a review of changes to total trips in the region as well as a review of trips within a single county (intra-county) and between counties (inter-county). This benefit was analyzed using the regional transportation model.

Option Comparison

Each of the fare integration options were analyzed by tier to determine their impact on ridership for both the Bay Area (Figure 4.1) as well as inter- and intra-county trips (Figure 4.2).

Figure 4.1 Ridership Development - Bay Area Wide Perspective

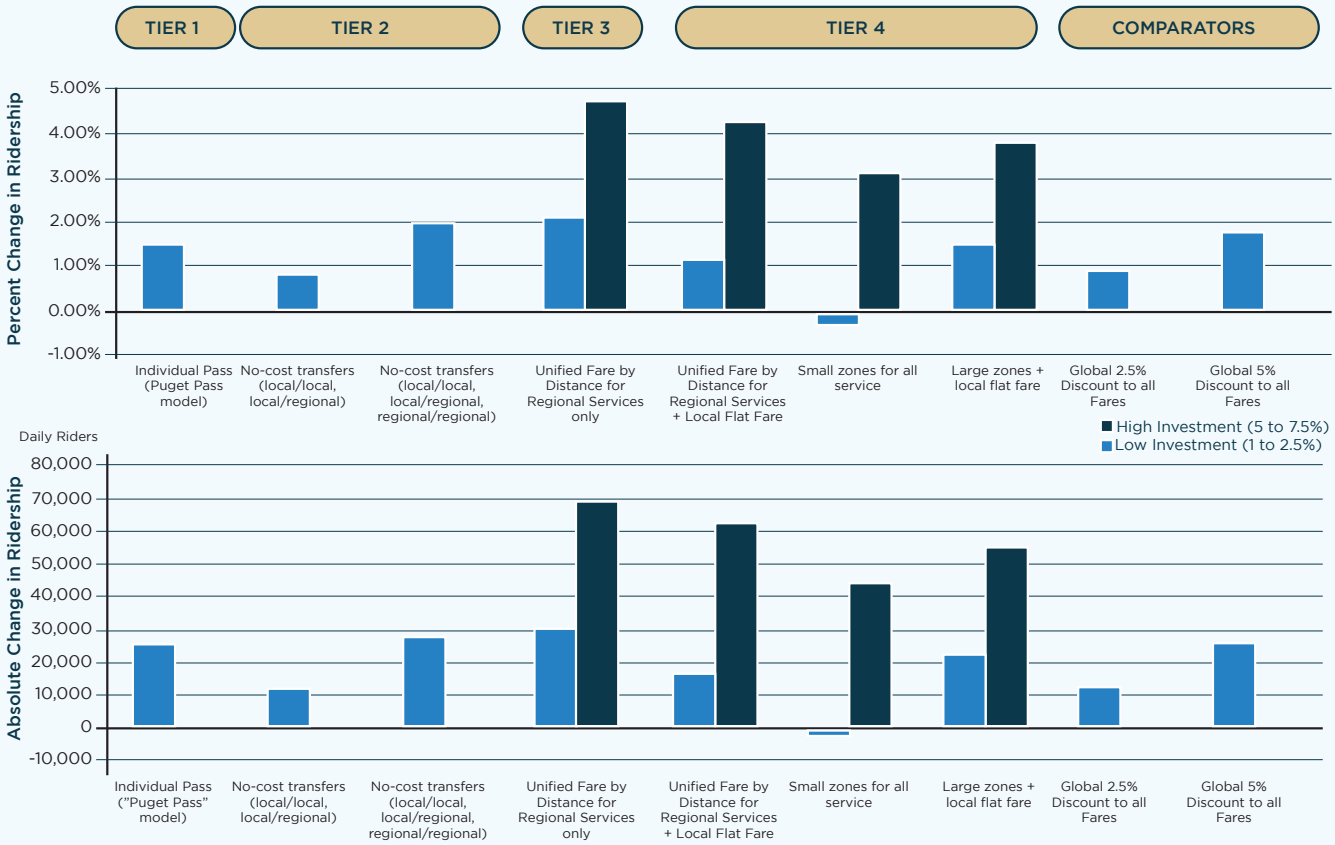
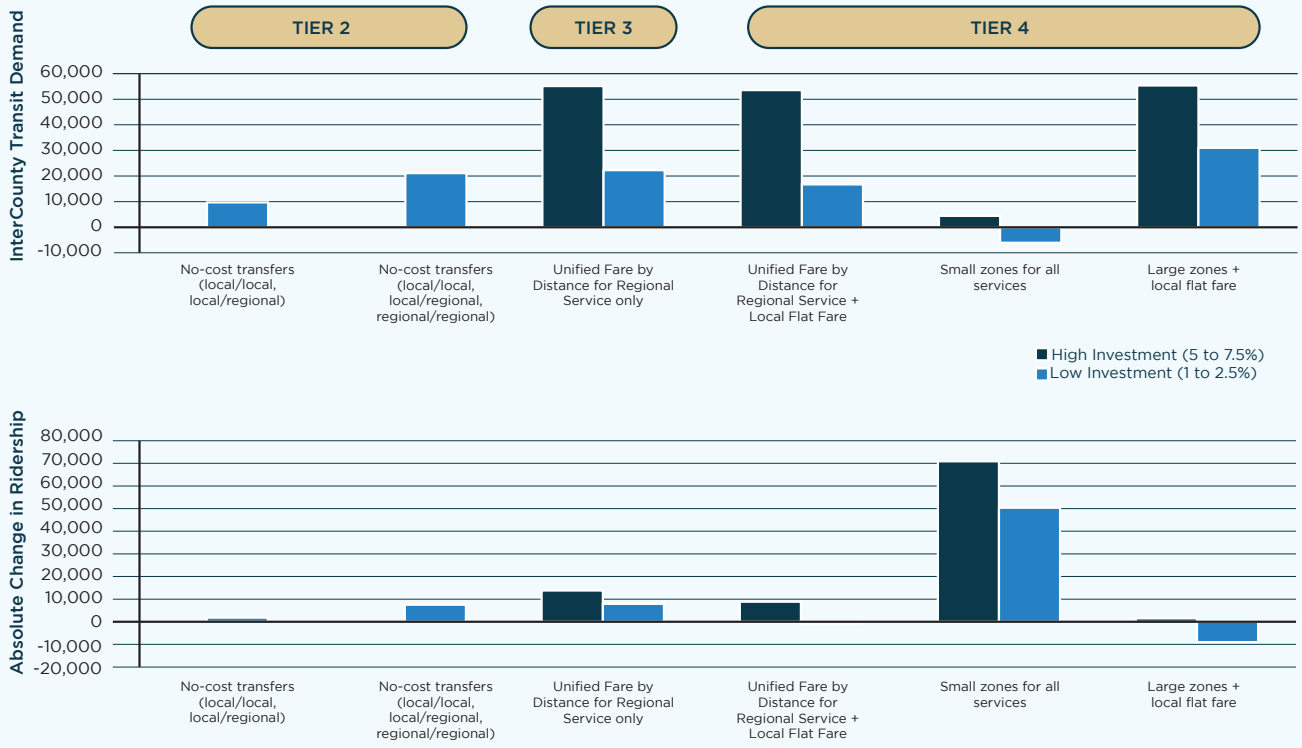


Figure 4.2 Ridership Development - Inter and Intra County Trips



Key Insights on Benefit 1

Figure 4.1 note the following conclusions for region-wide trips:

- Low Investment: As shown in Figure 4.1, options in Tiers 1 and 2 only impact customers who face an integration price barrier and can generate between 0.75% to 2% more ridership with a low level of investment. These options have a ceiling for ridership growth compared to higher tiers because they do not directly impact trips that do not use multiple agencies. Tier 3 can generate comparable ridership as Tier 2 (2%) at low investment, while Tier 4 tends to generate lower levels of ridership (range of ridership losses to a 1.5% gain).
- High Investment: Tier 3 has the highest ridership potential of the options (+4.7%) as it allows seamless use of all regional services along with free transfers between local and regional services. Tier 4 tends to perform poorer as it requires price changes for local services that may lead to ridership losses on some local operators (total impacts range from +3% to 4.2%)

Figure 4.2 notes the following conclusions for intercounty trips:

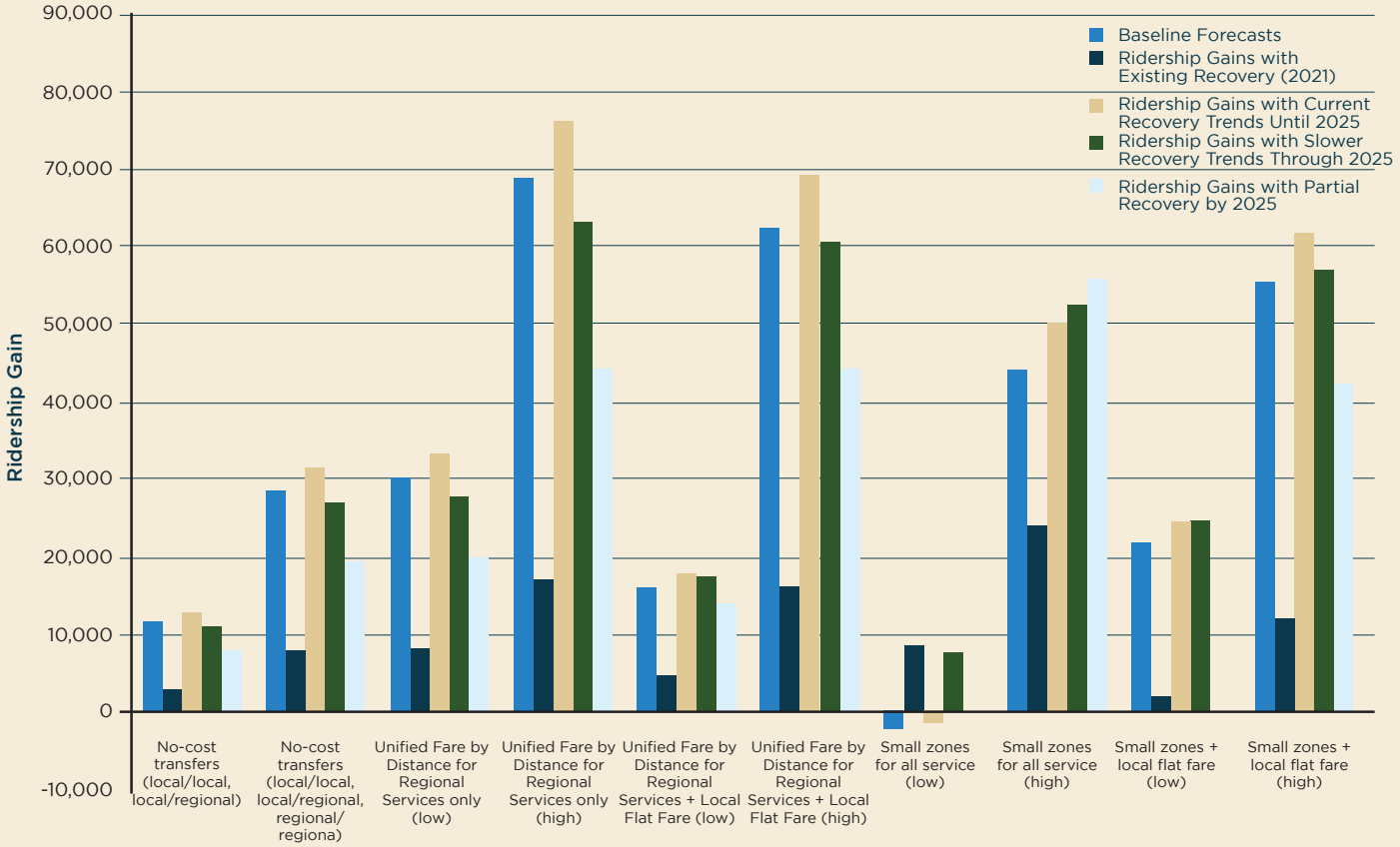
- As seen in Figure 4.2, no cost transfer options (Tier 2) promote inter-county ridership (~11,000 to 25,500 passengers per day) with limited intra-county gains.
- At a high level of investment, Tier 3 generates nearly 69,000 new riders per day of which 55,000 are inter-county trips. With low investment this option can generate 30,000 trips a day, of which 22,000 are inter-county.
- At $70 million per year of new subsidy, small zones for all services generates intra-county and/or singer operator ridership (about 50,000 trips per day). This option loses ridership at lower levels of subsidy, and with high subsidy gains intra-county but loses inter county ridership.

COVID-19 Recovery and Integration Ridership

A set of COVID-19 recovery scenarios were developed to explore how different extents of recovery by 2025 could impact option ridership gains. Figure 4.3 illustrates ridership gains for five scenarios:

1. Baseline ridership forecasts
2. Ridership gains if the option was delivered with existing extent of recovery
3. Ridership gains if recovery continued a similar trajectory as today until 2025
4. Ridership gains with a slower recovery (recovery rates are 50% of what has been observed)
5. Ridership gains with a partial recovery (no are in the Bay Area is 100% at 2019 levels by 2021).

Figure 4.3 COVID-19 Recovery and Integration Ridership



This assessment illustrates that lower levels of recovery has more severe impacts to performance for options with higher inter-county travel (unified fare by distance, with large zones).

Benefit 2: Vehicle Miles Travelled Reduction

Fare Integration has the potential to reduce regional vehicle miles travelled by 120,000 to 260,000 a day with low investment and by 170,000 to 847,000 under high investment.

What is the benefit?

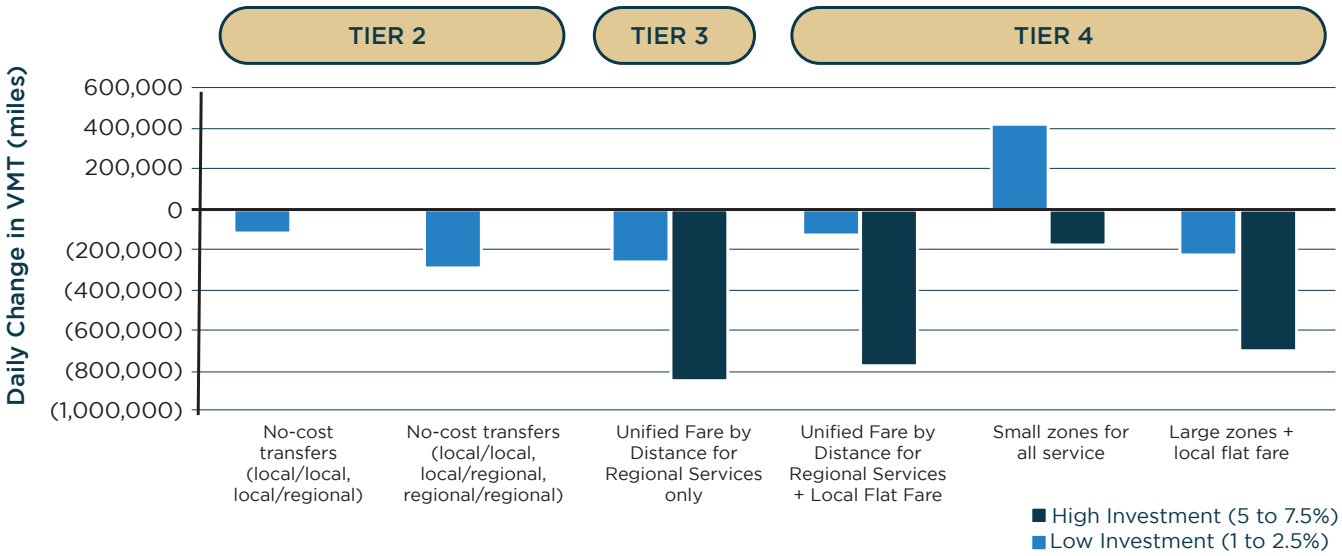
Reducing vehicle miles travelled (VMT) is a key policy theme at the local, regional, and State level. VMT reductions vary between options based on the types of trips that are generated by fare policy changes.

Option Analysis

Figure 4.4 shows the VMT reduction per tier option.

As shown in Figure 4.4, Tier 2 and Tier 3 tend to have higher VMT reduction per new trip because most trips are longer distance trips using a combination of regional and local modes. Unified fare by distance options have the highest VMT reduction as their ridership growth is focused on the regional network and includes longer distance travel. The small zones option generates mostly shorter distance Muni trips and has a net loss of about 6,000 inter-county trips, so its impact on VMT is lower.

Figure 4.4 Vehicle Miles Travelled Reduction



Benefit 3: Equity Impact

What is the benefit?

The strategic evaluation also takes into consideration the equity impacts of different fare structures, by evaluating quantitative data provided by the TM 1.5 model outputs to determine how travel behavior varies by household income groups:

- How would new subsidy be distributed between household income groups?
- How are fare increases distributed between household income groups?
- How are fare decreases distributed between household income groups?
- Do the fare structures change the modes used by travelers based on household income?

Option Comparison

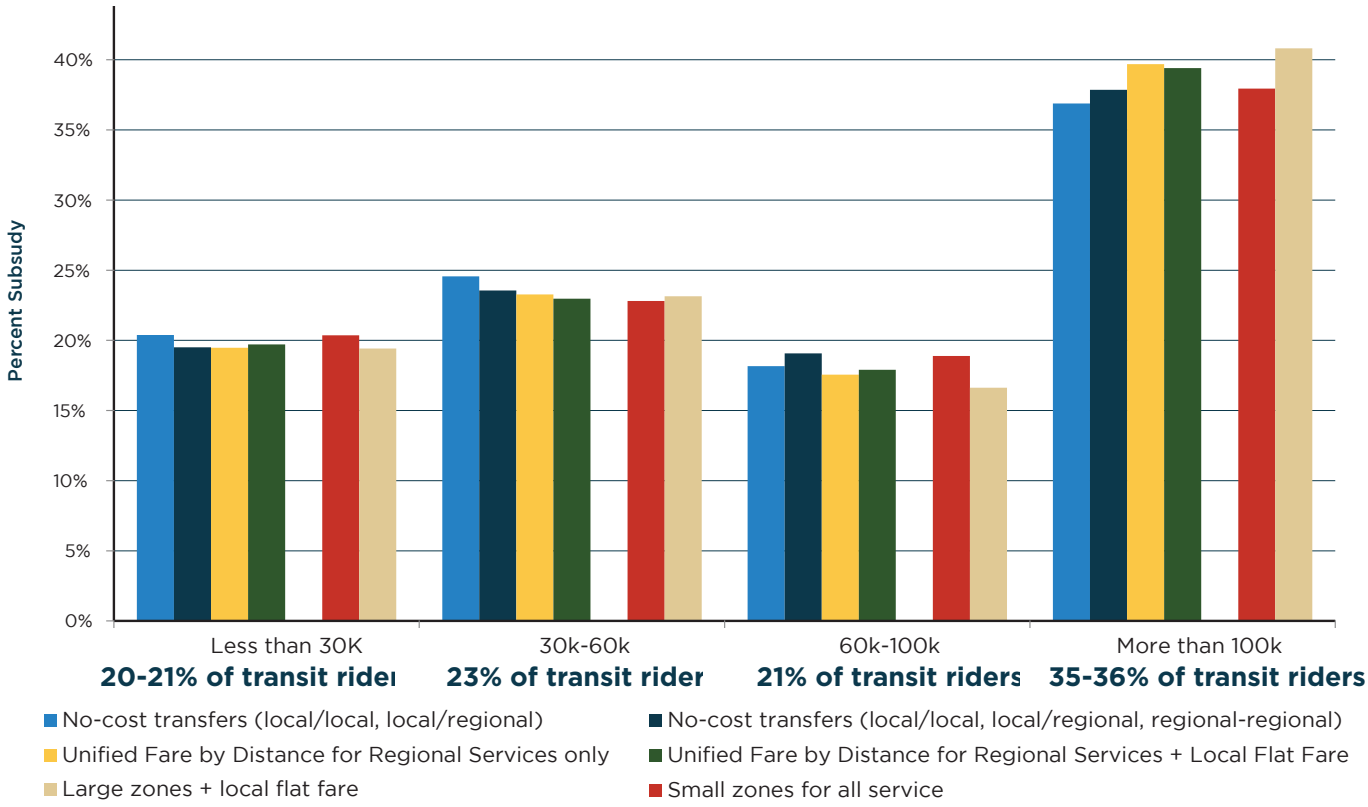
Model outputs were analyzed to understand how dollars invested in lower fares were distributed among income groups, as shown in Figure 4.5.

Tier 2

Tier 3

Tier 4

Figure 4.5: Equity Impact - Share of Subsidy Compared to Share of Ridership



Level of subsidy invested in each income band only varies slightly between options. GenerallyGenerally, level of subsidy aligns with proportion of riders in each income category, with the exception of $60,000-$100,000, where investment is lower than the proportion of riders in this category.

Fare Increases Across Income Groups

This assessment focused on the number of customers paying more under each option and their average fare increases. Fare increases and decreases can be attributed to shift in mode (for example, from bus to rail) as well as increases in the price of the trip on a specific mode.

Figure 4.6 Percent of Riders Experiencing Increase in Fares

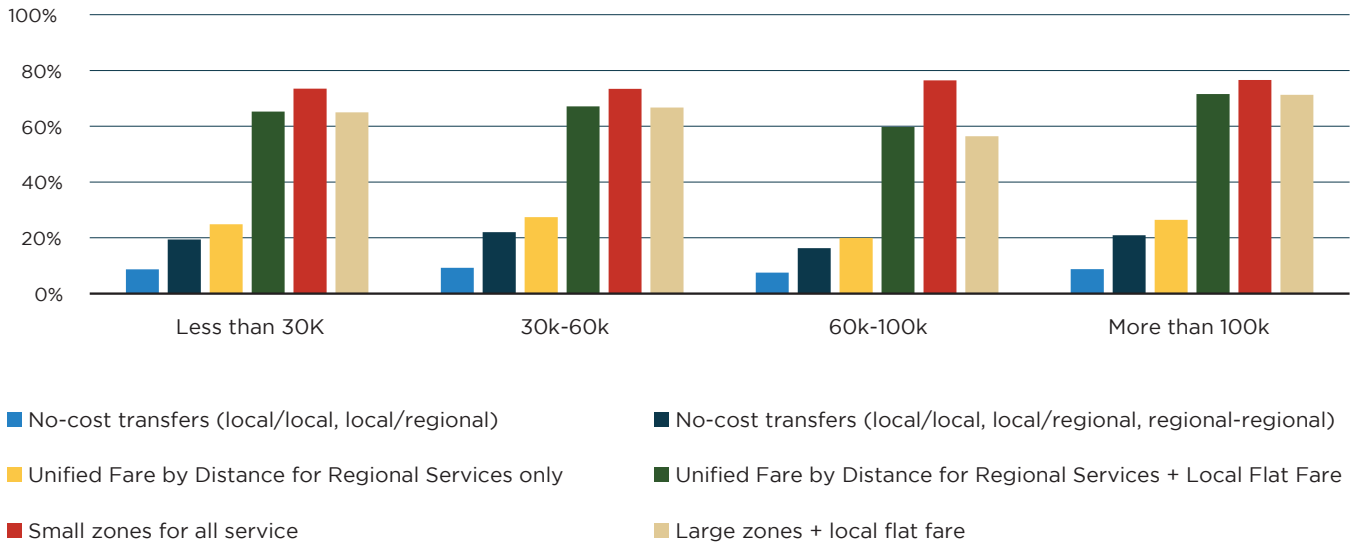
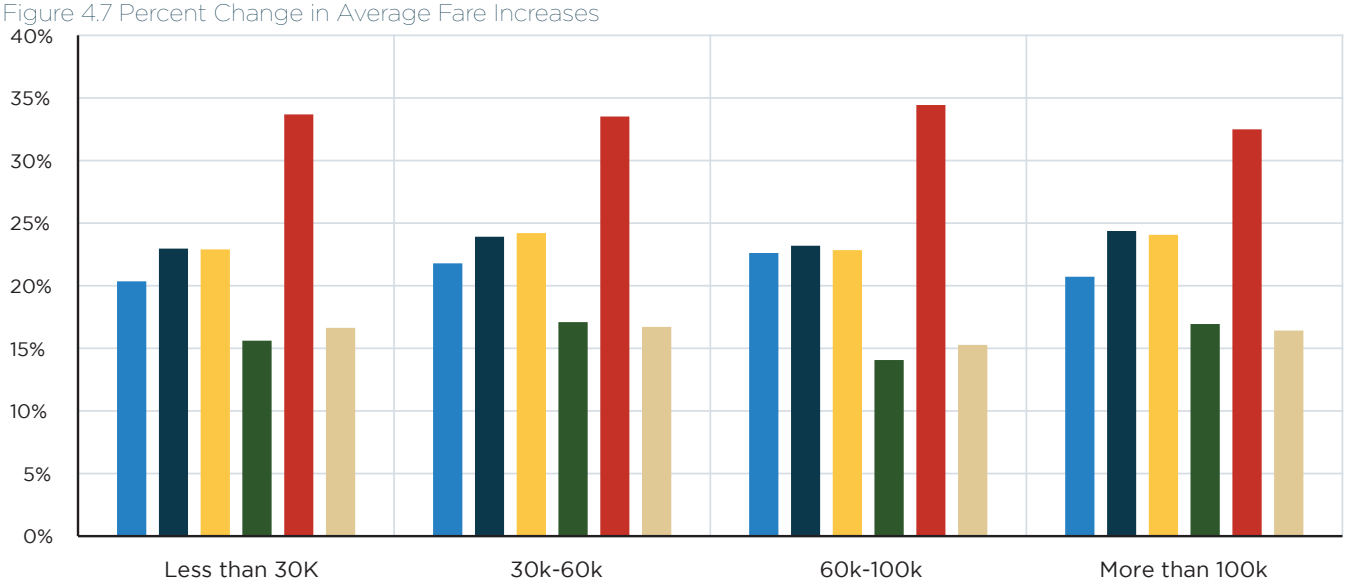


Figure 4.7 Percent Change in Average Fare Increases



This assessment notes that:

- Tier 4 options tend to have more customers across all income groups paying more. The small zones option also shows the steepest increase in average fares (more than 30 percent) in comparison to , however unified fare by distance with a local flat fare and large zones with a local flat fare have lower average fare increases than lower tiers and small zoneswhich each saw a roughly 15 percent increase in fares.
- Tier 4 options tend to have more customers paying more in the lower income bands than the higher income bands.
- Tier 3 results in fewer customers than Tier 4 paying more, with impacts that are generally consistent across the income groups.

Fare Decreases Across Income Groups

This assessment focused on the number of customers paying less under each option and their average fare decreases, , as shown in Figure 4.8 (number of customers receiving a fare decrease) and Figure 4.9 (average percent decrease in fare for customers receiving a decrease).

Figure 4.8 Percent of Riders Experiencing Decrease in Fares

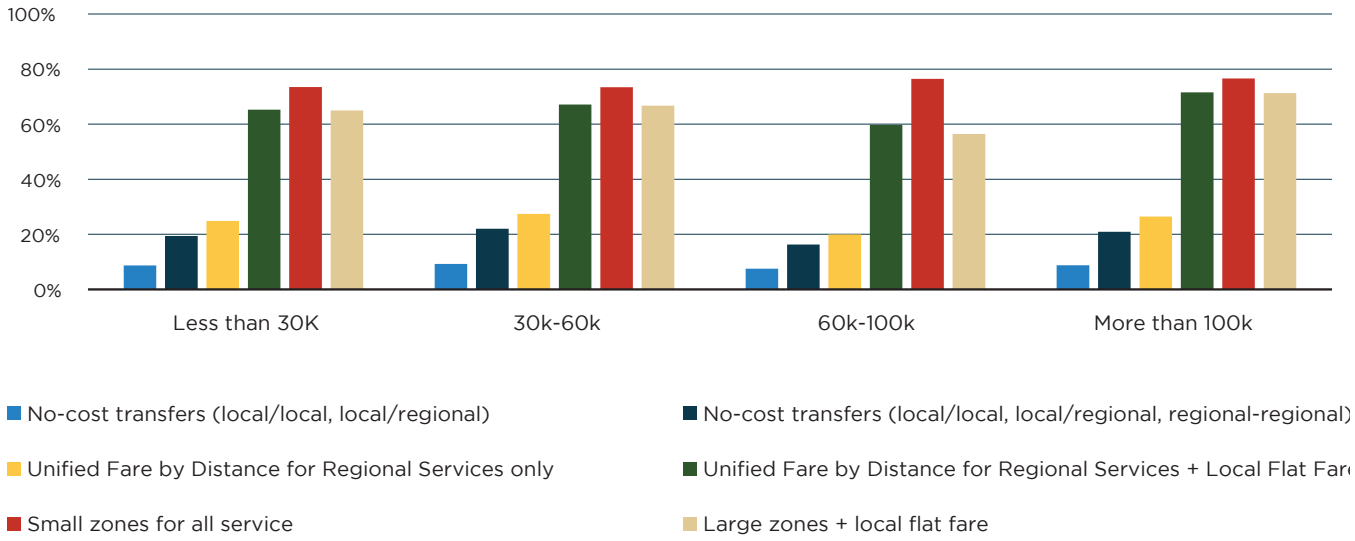
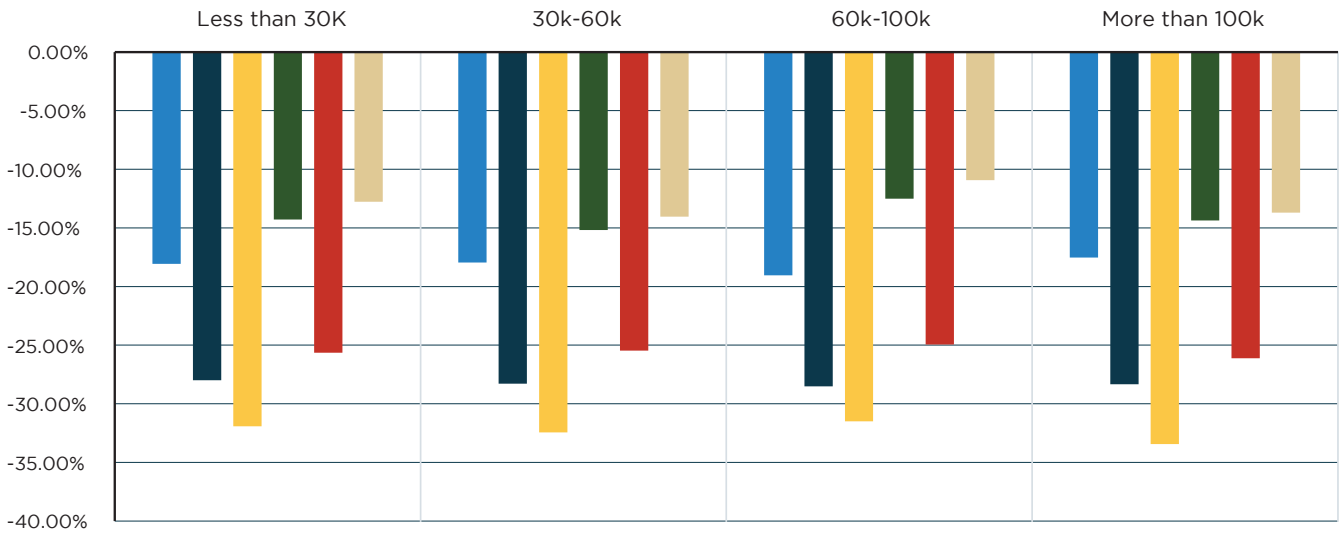


Figure 4.9 Percent Change in Average Fare Decreases



This assessment notes that:

- » Tier 4 options tend to have more customers paying less, with the number of customers paying less equally distributed between income levels
- » Tier 2 and Tier 3 have fewer customers paying less but offer greater fare reductions than Tier 4

Mode shift across income groups

Additional analysis was conducted to understand how mode choice changed because of fare policies, specifically whether changes could make rail services more accessible to lower income riders, as shown in Figure 4.10 (passengers changing from bus to rail) and Figure 4.11 (passengers switching from rail to bus).

Figure 4.10 Percent of Transit Riders Switching Modes (Bus to Rail)

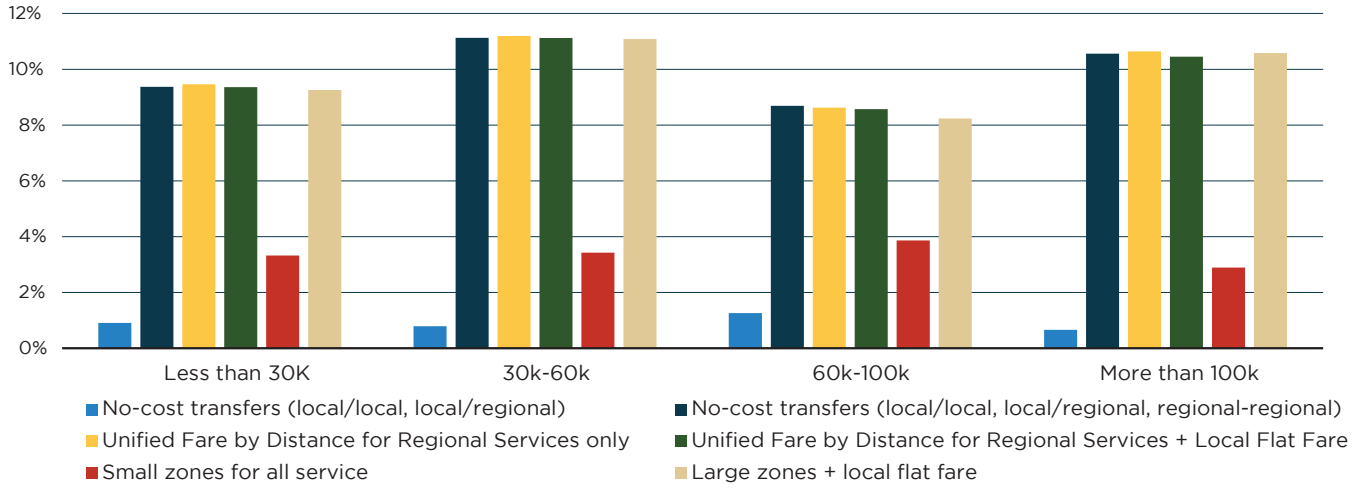
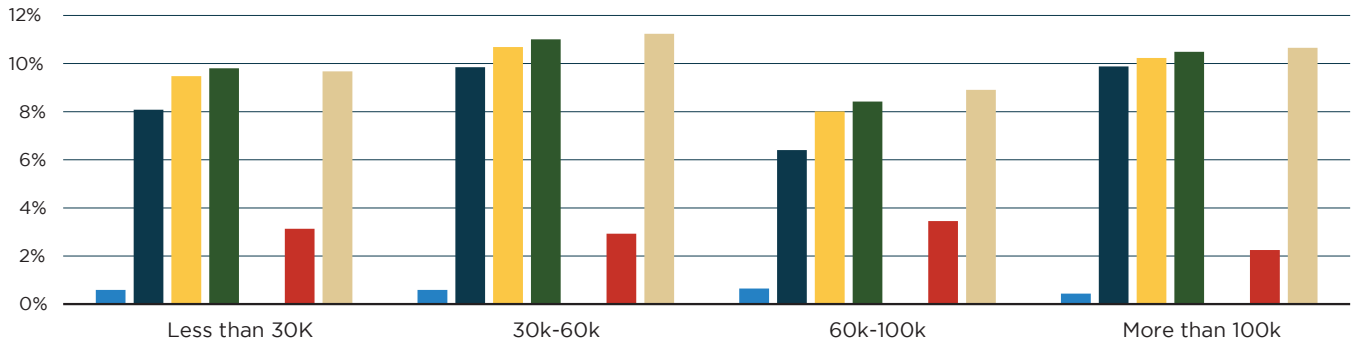


Figure 4.11 Percent of Transit Riders Switching Modes (Rail to Bus)



As seen in Figures 4.10 and 4.11, for Tier 2, more people switched from using bus to rail than from rail to bus across all income groups. This pattern continues for Tiers 3-4, except for the lowest income group. For Tiers 3-4, the "Less than $30k" were slightly more likely to switch from rail to bus (0.01% to 0.40% more switching to bus).

Benefit 4: Enhanced Customer Experience

What is the benefit?

The problem statement for the FCIS identified customer experience as a key integration barrier. The FCIS team worked extensively with travelers to identify how this barrier impacts their use of multiple operators (either for one trip or for different trips over the course of a week/ month) and how they perceived each option. Customers were asked to review each option under a range of scenarios and provide rankings and qualitative feedback on its value, fairness and legibility.

Option Comparison

The metric synthesizes this customer research to define:

- The likely impacts that each option will have to traveler experience and traveler willingness to use multiple operators
- Key customer identified pros and cons of each option

The following types of customer experience are explored:

1. **Overlays** – passes (transit pass at various price levels) and caps (fare cap based on number of trips or at a certain price)
2. **Transfer Discounts** – free or discounted transfers between local and/or regional transit
3. **Regional Change** – common distance-based or zone-based fare system for regional transit
4. **Regional and Local Change Zones on All Modes** – common distance-based or zone-based fare system for all Bay Area transit

Customer Impacts Summary

Table 4.1 provides an overview of each of the scenarios and their customer experience evaluation.
This summary shows that Tier 2 – the unified fare by distance for regional services only performs most favorably across all evaluation metrics, while Tier 4 with small zones for all service is the least favorable.

Table 4.1 Customer Impacts Survey

Tier	Option	Value	Legibility	Fairness
1	Caps and Passes	Generally positive	Mixed feedback - some passes may be more complicated to understand than others	Generally positive
2	Unified Fare by Distance for Regional Services only	Generally positive	Generally positive - some concerns about learning multiple fares and figuring out which one is discounted	Generally positive
3	Unified Fare by Distance for Regional Services + Local Flat Fare	Generally positive	Mixed feedback - stated need for tolls to interpret structure (similar to BART today)	Generally positive
4	Small zones for all service	Mixed feedback, trending negative - concerns on how zones may raise fares for local services and for travelers who don't use multiple agencies	Mixed feedback - some recognition of improved understandability, however general concerns about the number of zones and ability to determine fare	Mixed feedback, trending negative - concerns on how zones will impact fares that are flat today or use fare by distance (BART)
4	Unified Fare by Distance for Regional Services + Local Flat Fare and Large zone +local flat fare	Generally positive	Generally positive	Mixed feedback - some concerns about fare increases

Strategic Case Summary

Table 4.2 illustrates how each option performs to meet daily ridership growth, equity impacts, and customer experience goals, as described in this chapter.

Table 4.2 Strategic Case Summary

Tier	Option	High Investment	Low Investment	Equity Impacts	Customer Experience
1	Individual Pass ("Puget Pass" model)	-	25,00	Requires mitigation -	
2	No-cost transfers (local/local, local/ regional)	-	11,500	Investment is balanced across income levels, with least low income travellers paying more	
2	No-cost transfers (local/local, local/ regional, regional/ regional)	-	27, 610	Investment is balanced across income lev- els, with least 10% of low income travellers paying more and 20% paying less	
3	Unified Fare by Distance for Regional Services only	68,800	30, 200	Investment is balanced across income lev- els, with least 10% of low income travellers paying more and 25% paying less	 *
4	Unified Fare by Distance for Regional Services + Local Flat Fare	62,500	16,100	Investment is balanced across income levels, with 20% of low income travellers paying more but 65% pay less	 *
4	Small zones for all service	44,000	-2,100	Investment is balanced across income levels, with 25% of low income travellers paying more but 73% pay less	
4	Large zones + local flat fare	55,000	22,00	Investment is balanced across income levels, with 35% of low income travellers paying more but 65% pay less	 *

Weaker Performance
Moderate Performance
Stronger Performance
- Not Aplicable
* Some issues to resolve

5.

Economic Case

Economic Case Overview

The Economic Case evaluates each option based on the social value they can realize for local communities and the broader region. These benefits include:

- Traveler benefits – including reduced travel time
- Externalities – including reduction in pollution, congestion, and collisions and improved health

Combined, these metrics answer the questions:

- What are the social benefits of Fare Integration over the next five years in discounted 2021 US dollars?
- Is the level of social value of the option appropriate for the risk and change management required to deliver it?

Economic Analysis Approach

The economic case applies standard transportation economic analysis to monetize the benefits of fare integration on an annual basis. Daily model outputs from Travel Model 1.5 are annualized and monetized based on reduced negative impacts, such as fewer collisions, reduced emissions, reduced expenditure on automobile operations, and reduced congestion resulting from reduced vehicle miles travelled.

These annual benefits are then discounted using a social discount rate that reflects how future benefits are generally perceived to be of lesser value than benefits today. All analysis uses a five-year period starting in 2025 and ending in 2029.

Costs are typically included in economic analysis. At this point costs and cost impacts are under development. Costs reflect the amount of resources (such as equipment or labor) used to operate the transportation system. Subsequent analysis should integrate net new costs, such as new infrastructure or changes in operating costs.

Revenue impacts are not considered in this economic analysis. Economic analysis is focused on the benefits and costs to society as a whole. Changes in fare revenues or subsidy reflect changes in "who pays" for transit but not what the total cost of transit is. For example, under both the low and high investment scenarios, transit level of service and infrastructure remains constant. Increased subsidy is provided to match a decrease in fares and does not reflect increased societal resources (such as labor or materials) being applied to transit. In other words, only net changes in total resource costs should be captured in economic analysis.

Economic Evaluation

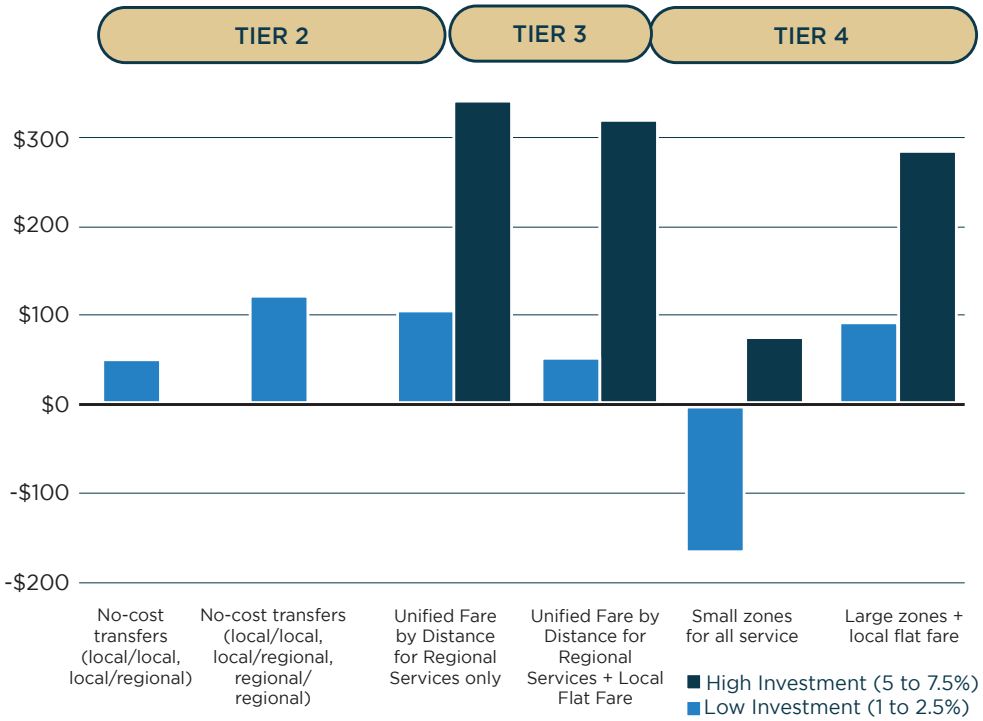
Fare integration can generate a welfare benefit of $50 million to $120 million with low investment and by $70 million to $340 million with high investment over its first five years.

Economic Evaluation Summary

This evaluation notes the following conclusions for decision maker review:

» **Low Investment:** Tier 2 has the highest benefits over the first five years of integration – this is because it does not raise the price for any traveller while Tier 3 and Tier 4 options may require some increase at this level of subsidy. Price increases may cause some travellers to choose automobile, which results in some increases in VMT. Tier 2 does not increase any fares which results in higher VMT reduction. Tier 4 small zones is noted to have a net loss in regional welfare by -$170million over the first 5 years due to an increase in VMT.

» **High Investment:** Tier 3 generates the most significant value to the region ($340 m). Tier 4 offers lower benefits due to price changes to local agencies which results in some lost ridership, as well as generally higher fares for longer distance regional trips.



6.

Financial Case

Summary of the Financial Case

The Financial Case reviews the financial impacts and risks and identifies potential funding strategies. It evaluates each integration option based on three metrics: the required subsidy, the cost per new rider, as well as its cost effectiveness compared to other transit investments.

Combined, these metrics answer the questions:

» What level of financial commitment is required to delivery integration?
» How cost effective is each option?
» How does the subsidy required for integration compare to other options?

Costs in the Financial Case

The study team is reviewing the costs of fare integration. These costs include:

- **changes to operating costs for clipper (due to fare rule changes) and agencies**
- **capital costs for new software and equipment**
- **changes in maintenance and renewal costs for equipment**

These costs require additional detailed analysis that will be conducted as the study advances.

Financial Evaluation

Required Subsidy

Fare policy changes can either increase or decrease revenue generated. The six policy options evaluated decreased fare revenue. Without fare increases, fare integration will would require additional investment or "subsidy" to offset these costs to various transit agencies.

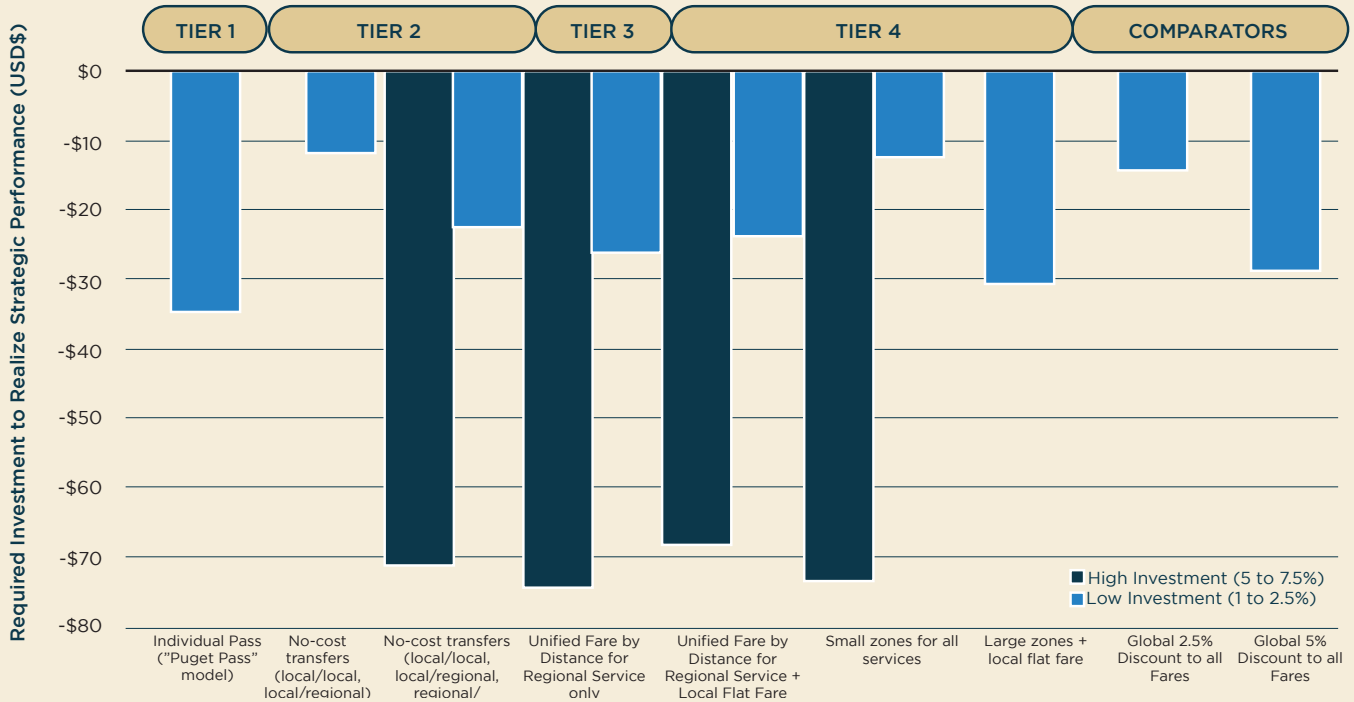
Options under Tier 2-4 were modeled based on the following "subsidy" scenarios:

» Low investment (1 to 2.5% loss of pre-COVID revenue)
» High investment (5 to 7.5% loss of pre-COVID revenue)

In addition, two global discount scenarios were modelled as comparators. These scenarios included:

» 2.5% general reduction in all transit fares
» 5.0% general reduction in all transit fares

Figure 6.1 Required Subsidy



The global discount scenarios help illustrate the relative benefits and cost efficiency of applying subsidy to fare integration in comparison to lowering fares generally across the region.

- Subsidy required for Tier 1 Individual pass is slightly more than other low investment options as well as global comparators at about $35 million per year. If applied in combination with other Tiers, this would require additional subsidy.
- The cost of Tier 2 transfer discounts between all services ranges between $11-$25 million per year.
- Lower investment variants of Tiers 3 and 4 will have some fare increases to offset these losses, while high investment variants of fare by distance with flat local fares, zonal, and zonal with flat local fare options also have fare increases. This is because Tier 2 level subsidy only covers free transfers and does not cover changes to regional-regional trips or local fares that are stipulated in higher tiers.
- Broader standardization of regional fares requires either significant new subsidy or raising fares for many customers to offset lost revenue.

Cost per New Rider

Comparing cost per new rider among various options demonstrates the cost efficiency of each option. As shown in the Strategic Evaluation, for example, Tier 4 options have the potential to significantly increase ridership in high subsidy scenarios. However, as shown in Figure 2.6, the relative value for money is much lower.

- Tier 2 has the lowest cost per new rider, while Tier 3 has a similar cost per new rider at low levels of investment.
- Widespread changes proposed under Tier 4 are more expensive as they lose ridership in some markets and generate growth in others – as level of subsidy applied to small zones decreases, the cost per rider increases as there are more ridership losses in key regional markets.
- Comparator tests illustrate that at a regional scale, direct discounts to the existing structure are likely to have a greater value for money than Tier 4 as they do not raise or lower fares in a structured – but arbitrary – manner.

Relationship between Ridership and Subsidy for Each Option

Across each of the four tiers, ridership gains increase with level of investment and cost per new rider, suggesting that there is a diminishing return on investment but higher overall gains to be realized with more subsidy.

Figure 6.2 Cost per New Rider

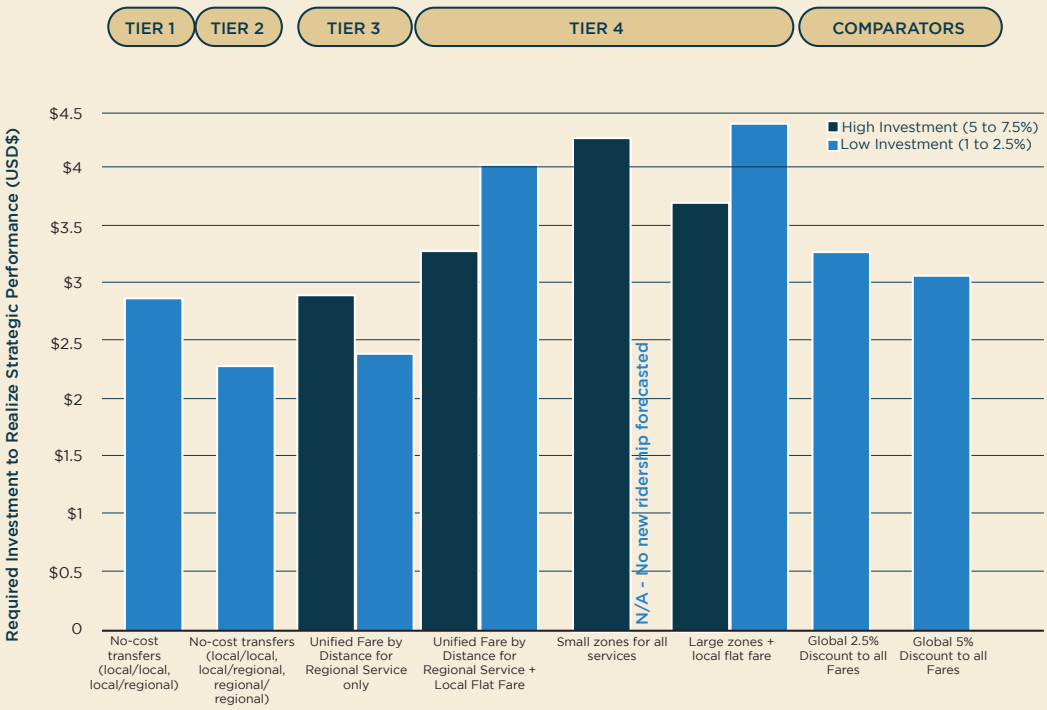


Figure 6.3 Relationship between Ridership and Subsidy

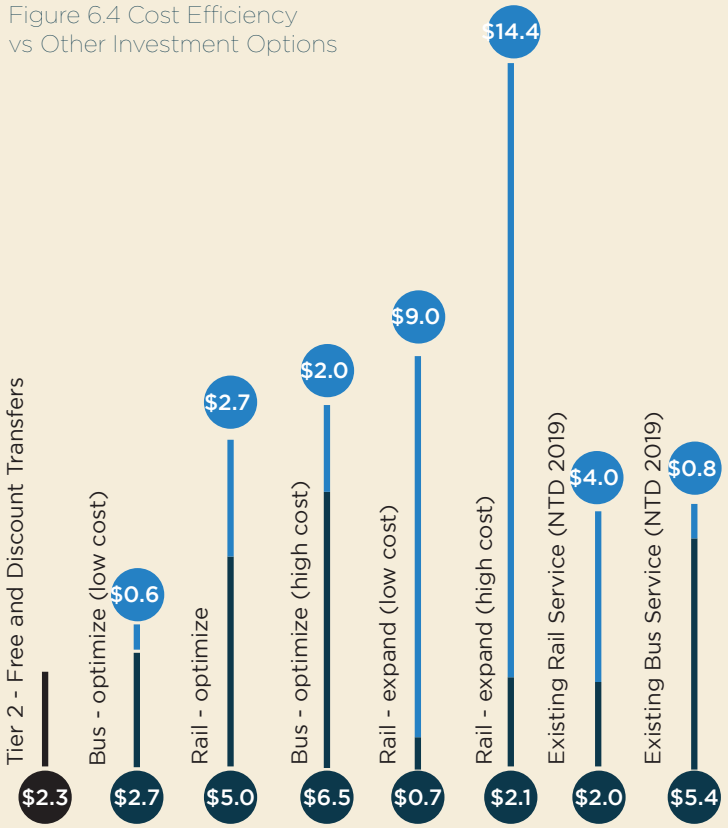
Figure 6.3 shows the relationship between ridership and revenue impact by mapping each of the options at similar levels of revenue impact (percent of revenue lost) and relative ridership increases.

- » At low levels of investment (roughly 1-2% subsidy), Tier 2 and 3 options perform best. Tier 4 (small zones) loses ridership.
- » At high levels of investment (roughly 5-7% subsidy), all Tiers show ridership increases more than 3%. Tier 3 has the highest ridership gains and exceeds Tier 4 options including zones and fare by distance options.

Cost Efficiency vs. Other Investment Options

Investment in fare integration performs favorably when compared with other investments in transit service and capital expansions. For example. the required subsidy for Tier 2 – Inter-Agency Transfer Discounts – has an estimated cost of $2.25 per new trip, which is less than the estimated cost-per-trip of most proposed and active Bay Area transit projects (as modeled in Plan Bay Area 2050 using RTM 1.5.) The revenue impact is also less than the average cost-per-trip of the existing Bay Area transit system as of 2019.

Figure 6.4 Cost Efficiency vs Other Investment Options



7.

Delivery and Operations Case

Summary of the Delivery and Operation Business Case

The implementation case is assessed based on the key changes required across the following dimensions:

- **Management** – how issues, risks, challenges, and changes will be managed over time
- **Technology** – how it is implemented and procured
- **Operations and Infrastructure** – how it will "run" on a day-to-day basis and what infrastructure is required
- **Customers** – what level of change management will be required for customers

Delivery and Operation Evaluation

Tier 1

Tier 1 is anticipated to have low impact on management, as it can be delivered with agency-to-agency agreements or delivered and managed centrally across the region. There will likely be more a more complex revenue allocation approach required if agency to agency agreements are used to manage this tier. It can be delivered with existing technology or with Clipper 2.0. It will require minimal changes to agency infrastructure and operations, as it can be rolled out with operator training and some investment in marketing and communications, either through the agency or centrally. It will also have low impact on customer and change management – if a pass, it will be opt-in and will require marketing and advertising, while a cap option should be broadly advertised but will automatically apply to customers and will not require additional action to access.

Tier 2

Tier 2 will have either a low impact or medium impact on management, depending on the change required. It can either be delivered with agency-to-agency agreements or be managed centrally across the region, which will require a formula for revenue allocation. Tier 2 can be delivered with existing technology on a limited basis or completely with Clipper 2.0 on the initial rollout. It will require minimal changes to agency infrastructure and operations, as it can be rolled out with operator training (to message the discounts) and supporting advertising material. Tier 2 will have a low impact on customers and change management, as the new changes would only have to be explained and will require little action on the part of the customer.

Tier 3

Tier 3 will have either a low impact or medium impact on management, depending on the change. It could either be partially delivered with agency-to-agency agreements, or delivered centrally across the region, which will require one agency to set fares and develop a formula for revenue allocation. It will require Clipper 2.0 as well as new fare setting approaches for one or more agencies. There will be a medium impact to agency infrastructure and operations, as Tier 3 requires new fare collection infrastructure, marketing materials, and staff training for all agencies that are integrated, either on an agency-by-agency basis or centrally. There will also be a medium impact to customers and change management, as the end fare structure will be fare by distance or zones across all regional operators.

Tier 4

Tier 4 will have the highest impact on management, as it requires an overhaul of revenue allocation and/or subsidy/funding allocation. The fare setting authority would need to be a central manager to ensure sustainable change and consistency. Tier 4 will require Clipper 2.0, new fare setting approaches for all agencies, as well as "tap off" or "check out" function on buses in region-wide zones. It will have a high impact on agency infrastructure and operations, as it requires a centralized approach to new fare collection infrastructure, marketing materials, and staff training for all agencies across the region. The "tap off" function on buses could have operational impacts over the short to medium term, and operators will require additional funding to cover shortfalls in fare revenue while maintaining level of service. It will also have a high impact on customers and change management, as customers will have to learn fare by distance/zones for regional trips or flat fare/zone structure for local trips, which are more complex and have wide-ranging chips for that used to be under an operator flat fare.

Tier	Options	Management	Technology	Agency Infrastructure and Operations	Customer Change Management
1	Individual Pass ("Puget Pass" model)	Low	Low	Low	Low
2	No-cost ransfers (local/local, local/regional)	Low/Medium	Low	Low	Low
	No-cost transfers (local/local, local/regional, regional-regional)				
3	Unified Fare by Distance for Regional Services only	Low/Medium	Medium	Medium	Low/Medium
4	Unified Fare by Distance for Regional Services + Local Flat Fare	High	Medium	High	Medium
	Small zones for all service				
	Large zones + local flat fare				

8.

Conclusion

The Conclusion provides a summary of the four evaluation cases and puts forward three recommendations for fare integration programs.

Business Case Summary

STRATEGIC CASE

Key conclusion - fare integration can generate significant ridership gains and VMT reductions while improving customer experience. Further analysis and policy development is required to manage the equity benefits and impacts of fare changes.

Under low investment scenarios, Tiers 1-3 generate the highest ridership and VMT reductions. Tier 1 (1.1 – Individual Pass) can generate up to 25,500 new daily trips, while Tier 2 can generate over 27,000 daily trips (option 2.2). Tier 3 has the highest ridership gains with over 30,000 trips daily trips (option 3.1). Tier 4 has mixed performance – option 4.1 and 4.3 generate 16,000 and 22,000 trips per day, while option 4.2 is forecast to lose 2,000 trips.

Under high investment scenarios, Tier 3 has the strongest performance with nearly 69,000 new daily trips (option 3.1). Tier 4 has a range of performance with 4.1 generating 62,500 daily trips, and 4.2 and 4.1 generating 44,000 and 55,000 trips respectively.

Customer research indicated a generally positive view of Tier 2 and 3, with some feedback and issues to resolve on Tier 4 options.

Bottom line – Tiers 2 and 3 are anticipated to generate similar ridership under low investment; however, if additional funding is available Tier 3 has the strongest strategic performance.

ECONOMIC CASE

Key conclusion – fare integration can generate socio-economic value for the region over five years when delivered with low ($50-$110m) and high investment ($280 to $340).

Under a low investment scenario, Tier 2 has the highest economic value at $120m over five years, while Tier 3 has nearly comparable performance at $110m over five years. Tier 4 performance is mixes – option 4.1 can generate $50m and option 4.3 can generate $90m, while option 4.1 is anticipated to generate -$170m (a net disbenefit).

Under a high investment scenario, Tier 3 has the strongest economic performance with up t $340m generated for the region over five years. Tier 4 can generate $310m (option 4.1), $70m (option 4.2), or $280m (option 4.3).

Bottom line – Tiers 2 and 3 are anticipated to generate similar impact under a low investment scenario; under high investment Tier 3 has the highest economic value of all policies considered

FINANCIAL CASE

Key conclusion – fare integration can generate ridership at a lower cost per new rider than other regional investments.

Under the low investment scenarios, Tiers 2-3 have the lowest cost per new rider, ranging from $2.24 (Option 2.1) to $2.39 (Option 3.1). Options in Tier 4 have a higher cost per new rider ranging from $3.28 to $3.69, with option 4.2 having a net loss in ridership.

Under the high investment scenarios, the cost per new rider for all options increases, reflecting declining financial efficiency. However, the cost per new rider is generally lower than other non-fare integration investments. Tiers 3 has a lower cost per new rider ($2.84 for Option 3.1) than Tier 4 ($4.02-$4.34).

Bottom line – tiers 2 and 3 are anticipated to have the lowest cost per new rider and therefore strongest financial efficiency and value for money. Financial efficiency declines under a high investment scenario for all scenarios, however value for money is still competitive with other regional transit investments.

DELIVERY AND OPERATIONS DIMENSION

Key conclusion – all tiers and options were assessed based on risks and requirements across management, technology, operations and infrastructure, and customer impacts. This noted that while all tiers are deliverable, Tiers 1-2 have the lowest requirements and Tier 4 has the highest.

Tier 1-2 have low risks and impacts across management, technology, infrastructure and operations, and customer impacts.

Tier 3 has low/medium impacts on management and customers, with medium impacts to technology and agency infrastructure and operations. Increased impacts come from integrating regional fares.

Tier 4 has high impacts and risks in the management and infrastructure and operations categories, and medium/high impacts and risks on technology and customers. These risks and requirements are due to the significant changes to local fares called for in this tier.

Bottom line – tiers 1-2 are likely to be less onerous and risky to deliver for the region, while Tier 3 may carry some increased risks or impacts compared to these tiers. Generally, tier 4 is considered the most complex and highest risk to deliver.

Overall Considerations for Fare Policy Development

- Tier 1 can be layered on other tiers and offers strong performance across all dimensions
- Tier 2 has strong performance across all dimensions but has a 'benefit cap'
- Tier 3 offers expanded benefits compared to Tier 2 at higher-levels of investment and comparable benefits at low investment. However, it is more complex to deliver.
- Tier 4 tends to have lower benefits than Tier 3 at high investment and both Tiers 2-3 at low investment. It is also the most complex to deliver due to extensive changes to local fares.

Key Lessons Learned

- In the short term, Tier 2 can be delivered with low investment to unlock a significant portion of the overall potential benefits of fare integration with minimal risk and negative impact to mitigate.
- In the longer term, Tier 3 could be delivered to realize expanded benefits of fare integration. Tier 3 may be a strong later phase for Bay Area fare integration because it requires more significant change and potentially higher levels of investment to deliver upon its full potential compared to Tier 2.

Recommendations

1) Advance Tier 1 Pilot project to explore effects of integration in a post-COVID environment

This recommendation can be implemented through an employer or institutional pass, and/or as an individual pass. Both options provide an opportunity to demonstrate ridership gains and user experience benefits in an environment of uncertainty.

Employer/Institutional Pass

An employer or institutional pass would be applicable to all agencies where institutions or employers buy all-you-can-ride passes for all constituents. This kind of pass program has been successfully modeled in the Bay Area (Caltrain's Go Pass) and in similar regions and could be piloted using the existing Clipper system.

Pricing would be based on business location for a long-term program but can be simplified or subsidized for a pilot. Importantly, the pass would require careful design and mitigation to achieve equity balance for low-income riders and would be priced to achieve subsidy parity with other fares.

This program would engage Bay Area institutions and the business community in the transit system's success and promote commuter market recovery. Implementing this recommendation as a pilot project would allow for an evaluation of a barrier-free all agency transit pass to build toward broader fare integration in 2023.

Individual Pass ("Puget Pass" model)

An individual pass would include multiple agencies, allowing multi-agency users the same high-volume discounts now available to single-agency riders. This pass is comparable to the multi-agency pass offered in the Seattle ("Puget Pass") and Washington D.C. regions, which reduce user friction for multi-agency trips. This option can be implemented in Clipper 2 but would require system changes, namely a multi-agency revenue sharing structure.

Pricing for this pass would be based on user-selected fare (the most common trip value) multiplied by a standard factor. For example, a $3.00 pass costs $3 x 18 round trips per month ($108). All trips up to $3 are covered (a $4 trip would require $1 payment from e-cash). Under this model each new trip would have a $4.25 cost in subsidy, with ridership expected to increase by 1.5% generating $34M in revenue each year.

This multi-tiered structure aims to minimize revenue loss and improve equity performance (ensuring highest-volume rail/ferry riders are not over-subsidized relative to local bus riders). However, an up-front payment may exclude low-income riders. Pairing pricing for the pass with Clipper START fare capping would help mitigate these impacts.

2) Implement no-cost and reduced cost transfers beginning in 2023, coinciding with C2 rollout

This recommendation includes free or reduced cost transfer region-wide and is compatible with an all-agency institutional or employer pass program. A no cost or reduced cost transfer can be implemented for various types of local and regional trips. For local-local or local-regional connections, customers would only pay for the most expensive segment. For regional-regional connections, a transfer discount about equal to the minimum fare or the local bus fare would be applied. This option is readily implementable in the next generation Clipper within existing governance structures. With a $2.25 subsidy per trip, modeling shows a 1.9% increase in ridership generating $22.5M per year in revenue.

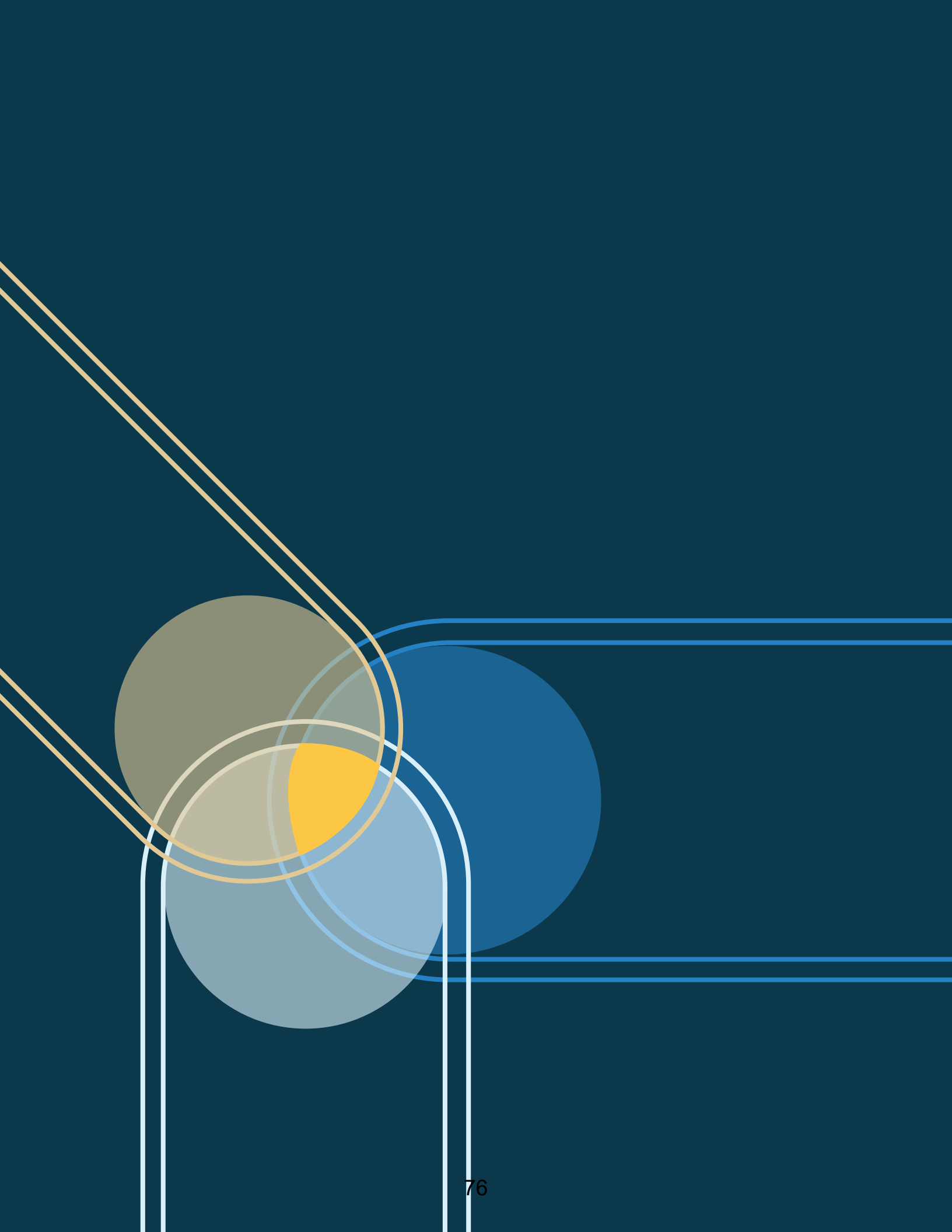
User research showed that reduced or no cost transfers were widely understood and valued by transit customers as they eliminate price barriers between agencies. They also create a more seamless transfer experience by treating inter-agency connections like single-agency connections and allowing regional service to function as a better part of the local network. Overall, discounts delivered clear ridership benefits, which are balanced across income levels.

3) Adopt a long-term plan to reach a Tier 3 level of integration, which aligns regional services under one fare structure

This recommendation involves a shared fare-by-distance structure for all regional services (rail, ferry, and regional express bus). Under a high investment option of $2.84 per new trip, ridership would increase 4.7% with a revenue impact of $70M per year. Under a low investment option of $2.39 per new trip, ridership would increase by 2.1% and generate $26M in revenue each year.

Implementing this structure would require new agreements or governance structures for regional service, some new Clipper equipment, and change management for some regional customers.
The benefits of this structure are balanced across all income levels, and it is a more legible system for regional travelers, infrequent users, and visitors. With this structure there is potential to be part of a broader customer-facing strategy for long-term regional recovery.

Further assessment of the benefits and costs of a single distance-based fare structure should be undertaken for regional services. Additionally, continued study of this option will help evaluate its impacts on post-COVID ridership, its role in the region, and a funding strategy for regional services.



Fare Coordination/Integration Study and Business Case

Appendix – Business Case Findings

Draft
September 2021

Appendix – Business Case Contents

1

2

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4

Business Case Introduction

Network Model Overview

Network models consider all modes available to each traveler for a given trip

The model estimates the number of travellers who will choose each mode based on travel time (including reliability, wait times, access times, and time spent in vehicle) and financial costs (including fares, tolls, fees) for a given trip

The fare modeling approach holds all travel times constant but changes fares to determine how a new fare structure could lead to behavior change

What policy tools can be used to implement fare integration?

Price barriers, learnability/legibility, equity, and affordability can all be influenced through two types of fare integration policy changes.

1 Change how much customers pay for each trip

Fare policies can reprice trips to:

- Incentivize ridership in specific market segments
- Re-balance revenue across different user types- for example – today, customers paying double fares contribute a disproportionate amount of revenue compared to trips paying single fares

2 Change the amount of subsidy

Decision makers can deploy additional subsidy to support fare integration:

- Replacing revenue lost from removing pricing barriers
- Supporting delivery of capital and operational changes required for integration

Throughout this presentation, comparator options of -1 to -2.5% and -5% to -7.5% fare revenue across the region are used to illustrate how direct investment in the existing fare structure compares to investment in the options.

Analysis Approach: Modelling Subsidy Scenarios (Tiers 2, 3, and 4)

A four step analysis process was developed to test each fare option:

1. Test Tier 2 Options using the RTM to estimate level of subsidy required to remove all price-based fare barriers
2. Run global discount comparator scenarios (2.5% and 5% discounts) to be used to contextualize option performance
3. Test Tiers 3 and 4 based on assumed pricing (example: pricing proposals from stakeholders) to determine level of subsidy required
4. Modify Tiers 3 and 4 to reach a similar level of required subsidy as Tier 2

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Tier 1 (Passes and Caps) Analysis

Tier 1 - Overview

Tier 1 Overlays is focused on caps and passes.

A range of passes and caps were modelled using a custom built elasticity model - this included:

- A range of price levels
- A range of trip levels (number of trips before a cap sets in)
- A single regional cap or product
- Tiered caps or products

This model uses pre-COVID Clipper data to explore the number of trips each ‘card’ made on each operator – either as part of a single trip or over the course of the month.

Elasticities were used to assess how different caps and pass products could impact ridership and revenue using the R programing language.

Because caps and passes were assessed with a different model than Tiers 2-4, they are discussed separately in this section.

This sub section includes:

- Overall findings
- Model outputs for:
  - Daily caps
  - Weekly caps
  - Monthly caps
  - Tiered monthly caps
  - An example ‘Puget Pass’ Style Product
- Recommendations for further analysis

Options Overview

Caps and passes can be defined based on the following:

- **Caps –** a product offer where customers receive a discount, or free travel, once a trip based or value based ‘cap’ has been reached

- **Value –** the dollar value applied to a cap or pass (example: $50)

- **Trips –** the number of trips a customer could take before they receive a discount or free travel (example: 35 trips)

Tier 1 – Initial Findings

1. **Trip-based products or caps** tend to achieve as much ridership as a fare-based cap but with much lower revenue impacts.

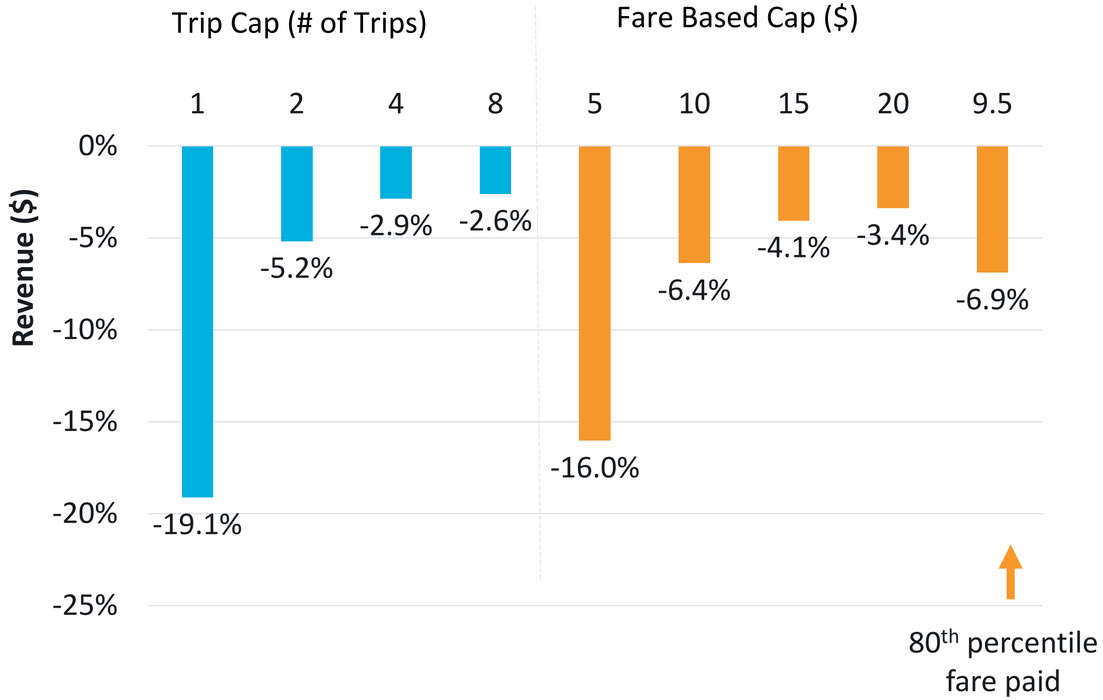
2. **Tiered caps** (local service and all inclusive) generate similar levels of ridership but result in substantially more revenue loss. These are not recommended for further study.

3. A **monthly product based on the Puget Pass** was modelled using Clipper data and included in the Business Case. In this scenario, a transit rider selects the value of their own monthly pass based on their most common/preferred trip. When using transit services that exceed this value, the transit rider only pays the difference in fare.

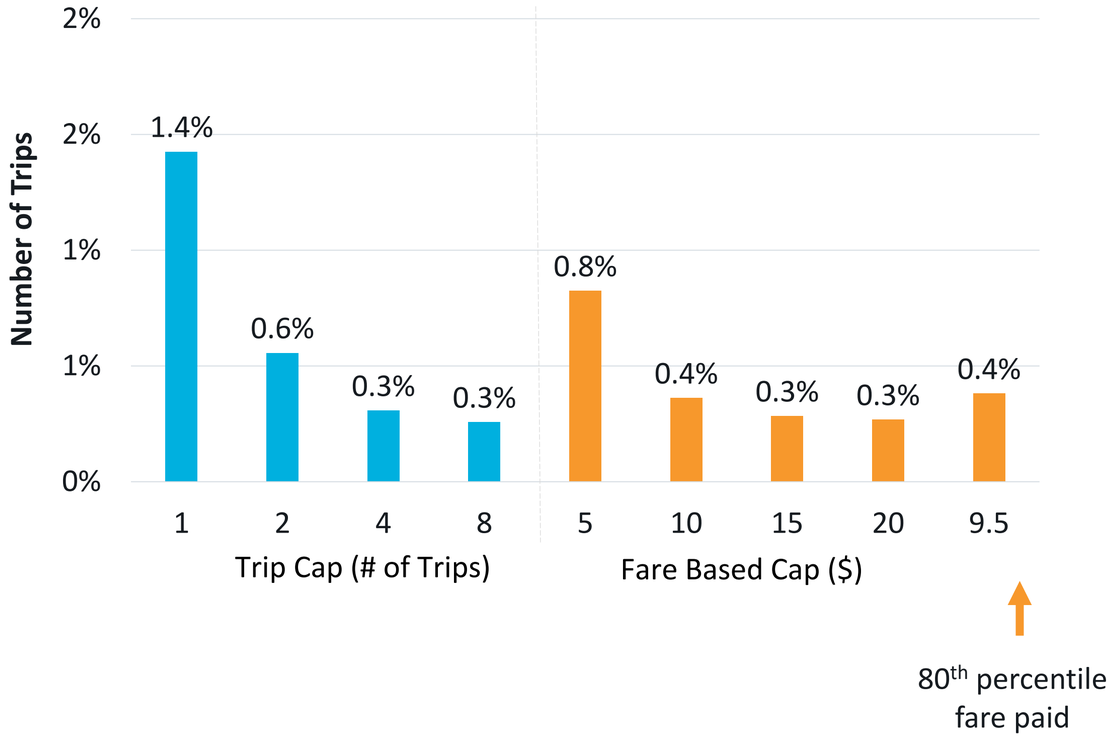
Daily Trip-based and Fare-base Caps

Trip-Based Cap | Fare-Based Cap

Change in Daily Clipper Revenue by Cap Type



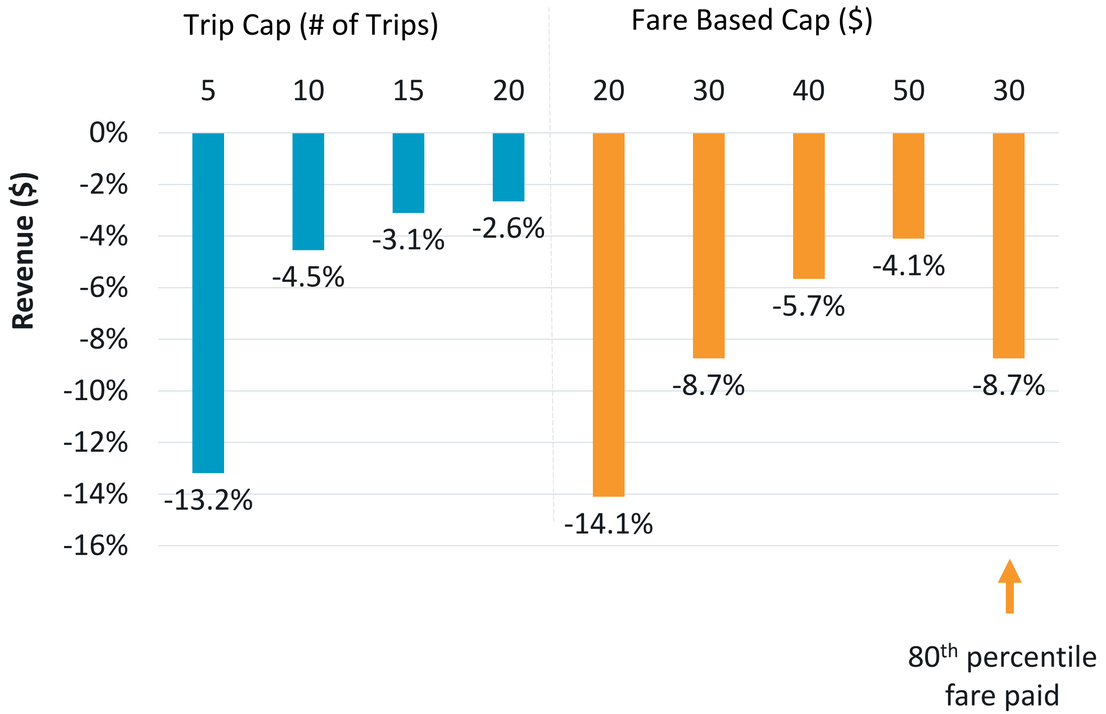
Change in Daily Clipper Trips by Cap Type



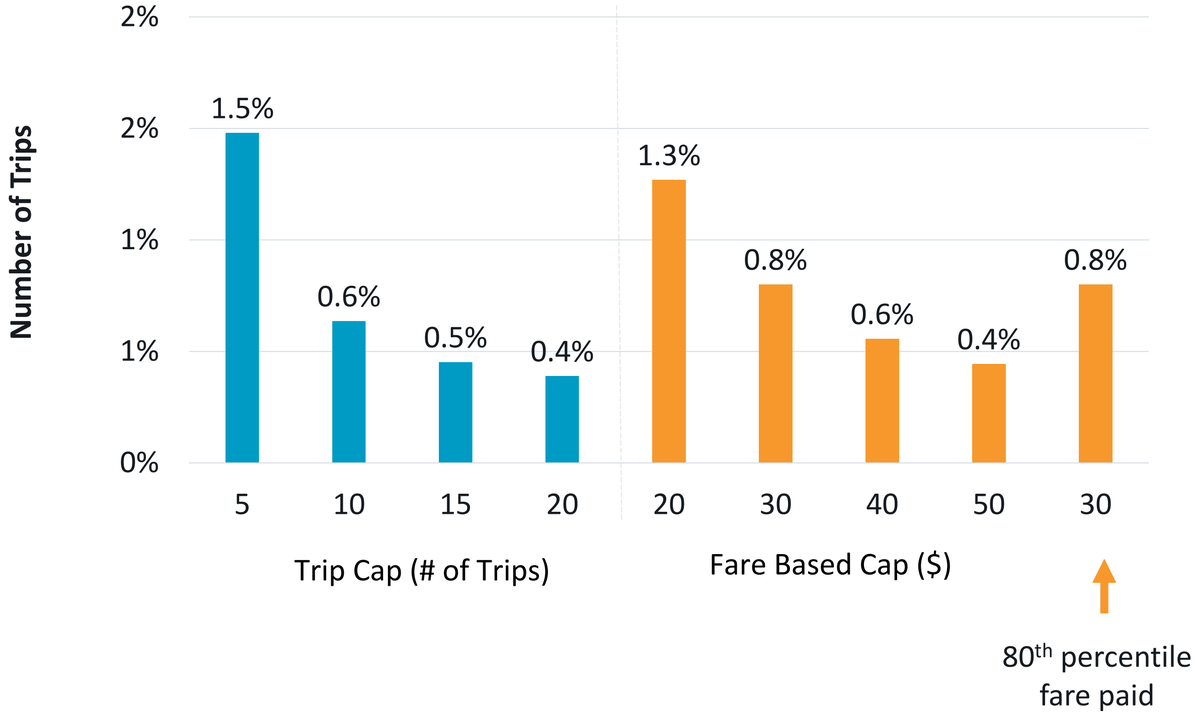
Weekly Trip-based and Fare-base Caps

Trip-Based Cap | Fare-Based Cap

Change in Weekly Clipper Revenue by Cap Type



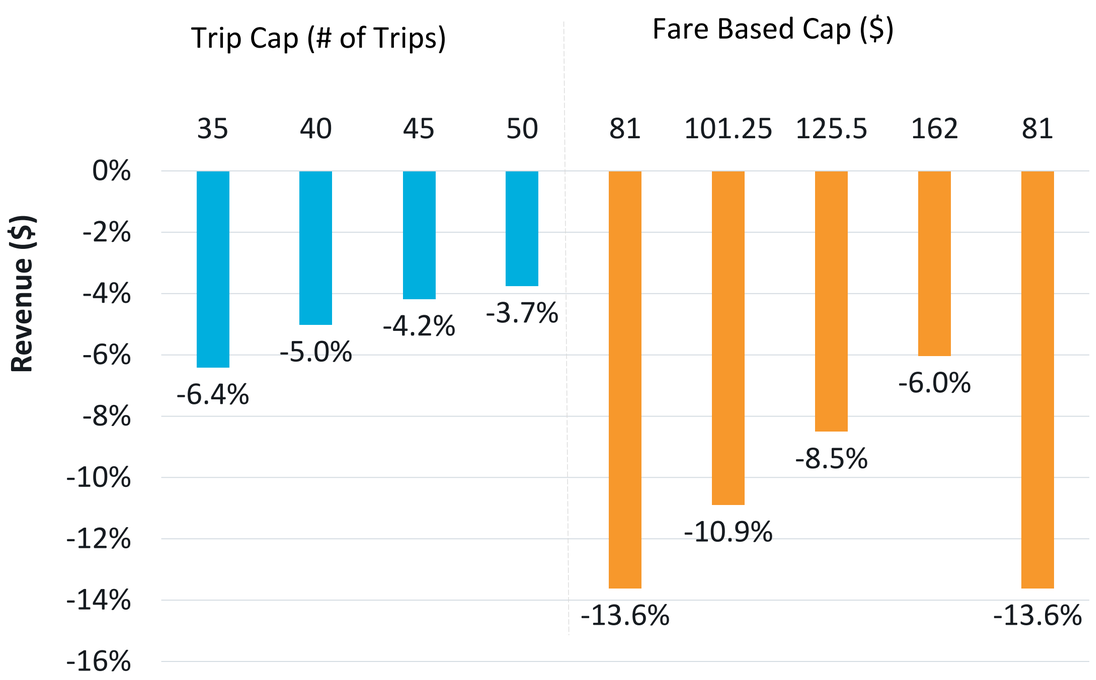
Change in Weekly Clipper Trips by Cap Type



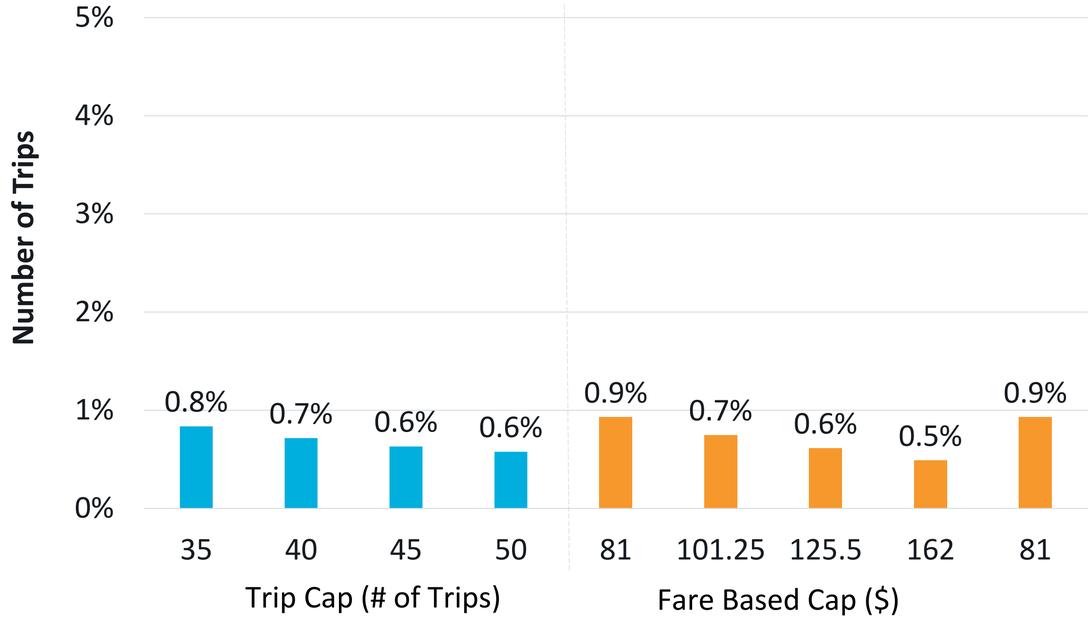
Monthly Trip-based and Fare-base Caps

Trip-Based Cap | Fare-Based Cap

Change in Monthly Clipper Revenue by Cap Type



Change in Monthly Clipper Trips by Cap Type



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Trip-based caps generate similar levels of ridership with less revenue loss, most visible in the monthly comparison.

Puget Pass Styled Monthly Product

3

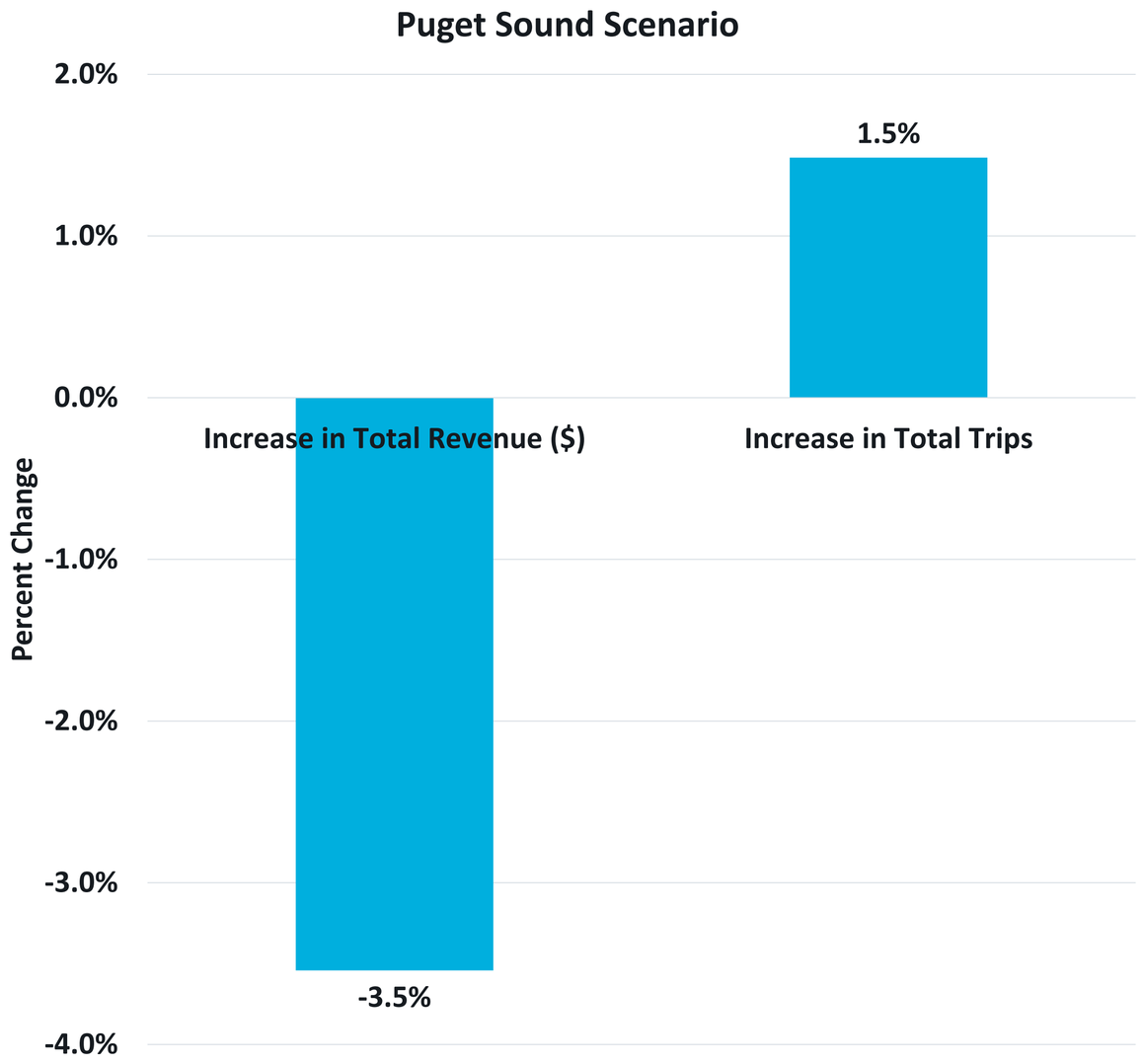
The Puget pass system allows the user to specify their most common trip, which is then capped at 36 trips. Transit riders only pay the additional fare for trips valued more than the most common trip.

Monthly Clipper data was used to model an approximation this product using two factors to determine the most common trip for each Clipper card:

1) most used transit agency
2) most common transfer pair

Additional fare is charged for trips that exceed this common trip amount. The transit rider pays the difference between the additional fare and the common trip value.

Based on comparative performance to value and trip based caps, the Puget Pass style product was included in the business case analysis.



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Business Case Analysis

Strategic Dimension – how do the options support policy objectives?

The Strategic Dimension evaluates each option based on the stated policy goals for Fare Coordination and Integration.

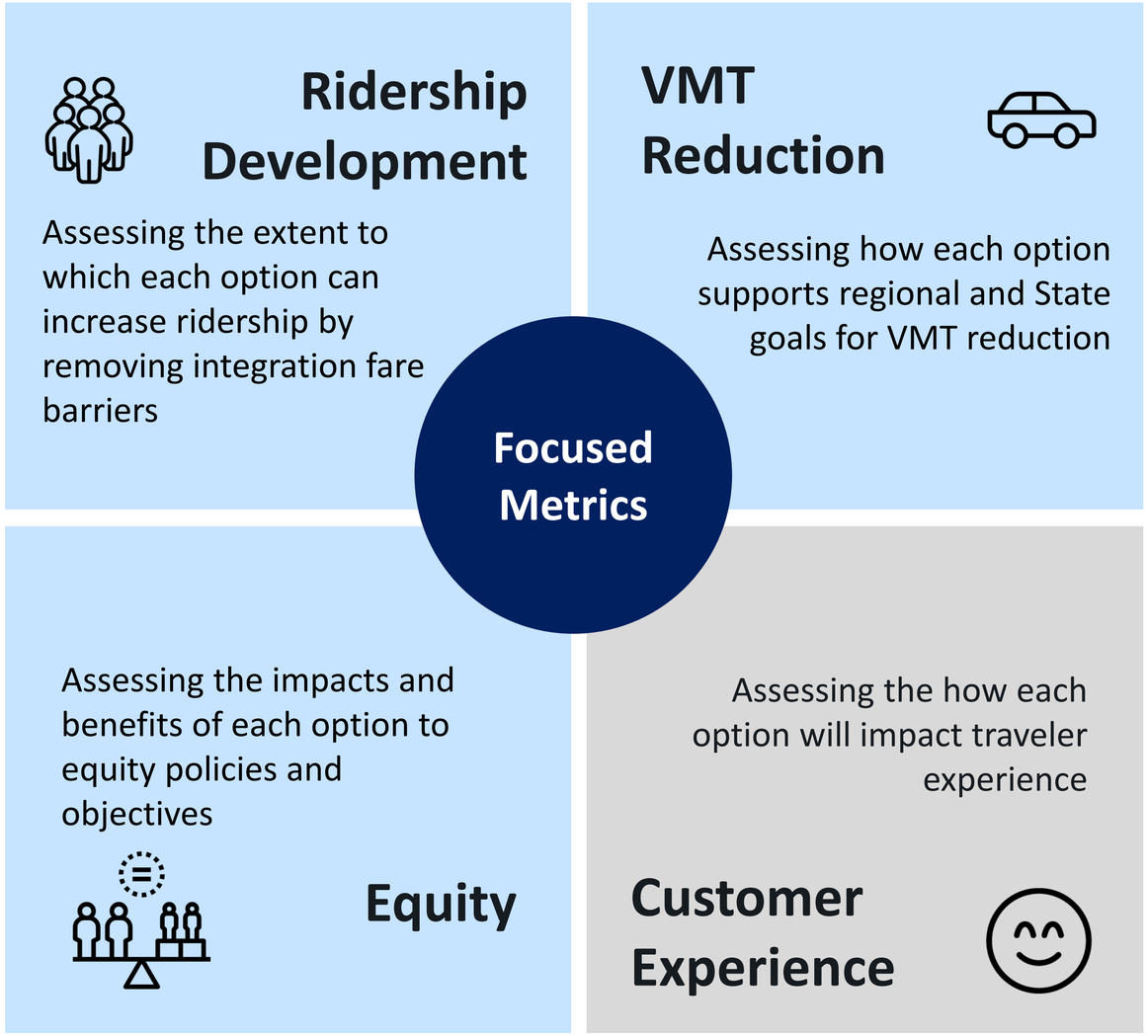
Four focused metrics, derived from the problem statement and broader local/regional/State policies, have been used to assess strategic performance.

Combined these metrics answer the questions:

- *Can Fare Integration address the problem statement?*
- *What are the trade offs between options for addressing the problem statement?*

Legend

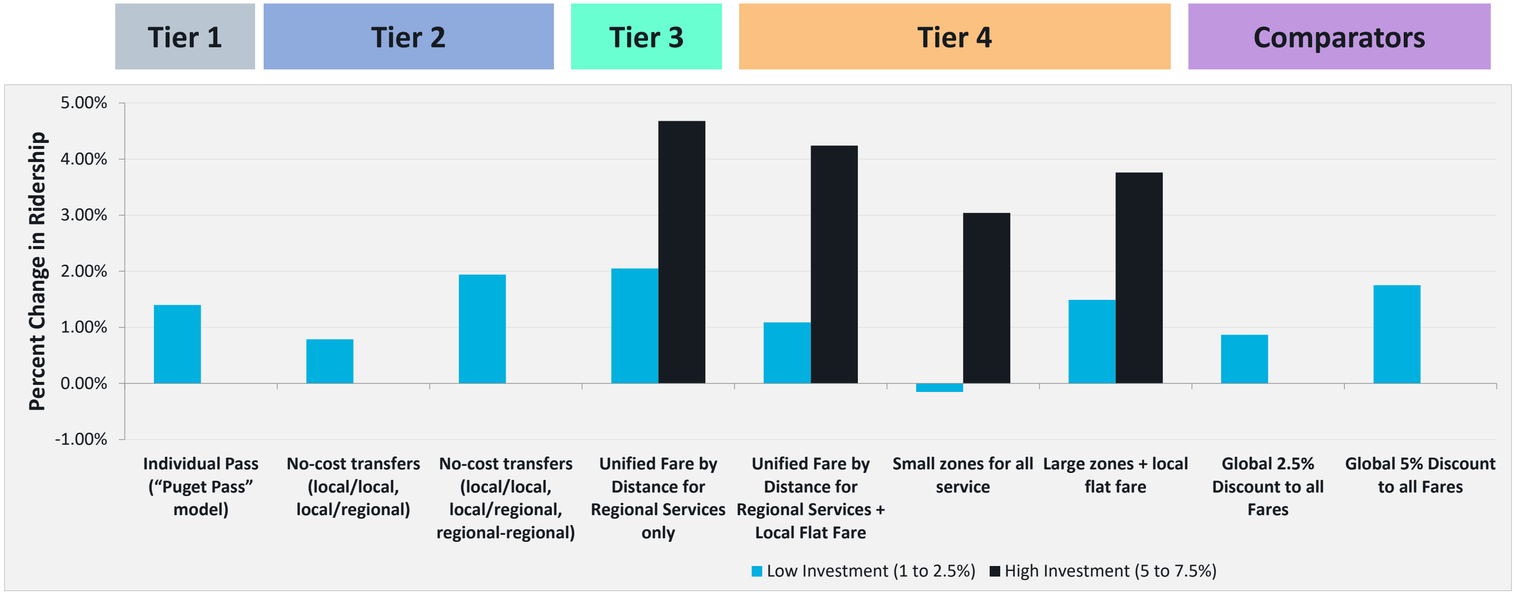
Analyzed with model
Analyzed with Customer Research

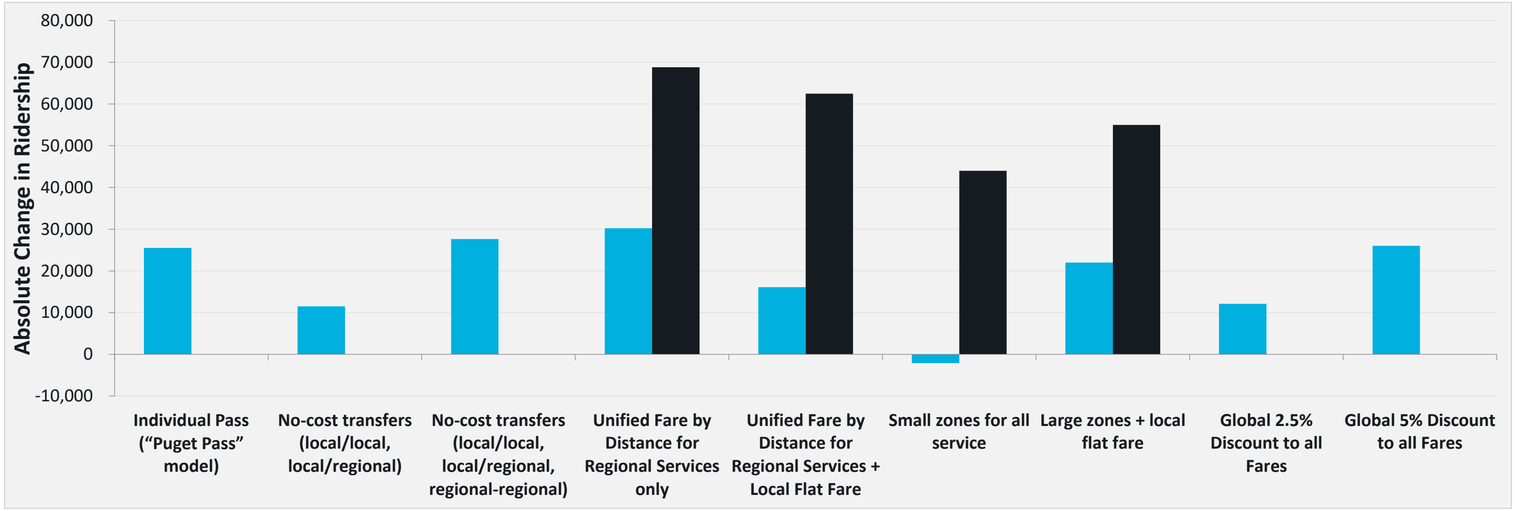


Strategic Metric 1 – Ridership Development – Bay Area Wide Perspective

The figures to the right illustrate overall ridership impact in the Bay Area at different levels of subsidy and notes the following findings:

- Options in Tiers 1 and 2 only impact customers who face an integration price barrier and can generate between 0.75% to 2% more ridership with a low level of investment
- Options in Tiers 3/4 have greater ridership generation potential with higher subsidy with a unified fare by distance for regional services only offering the greatest ridership potential at high levels of investment and comparable ridership to no-cost transfers at low level of investment





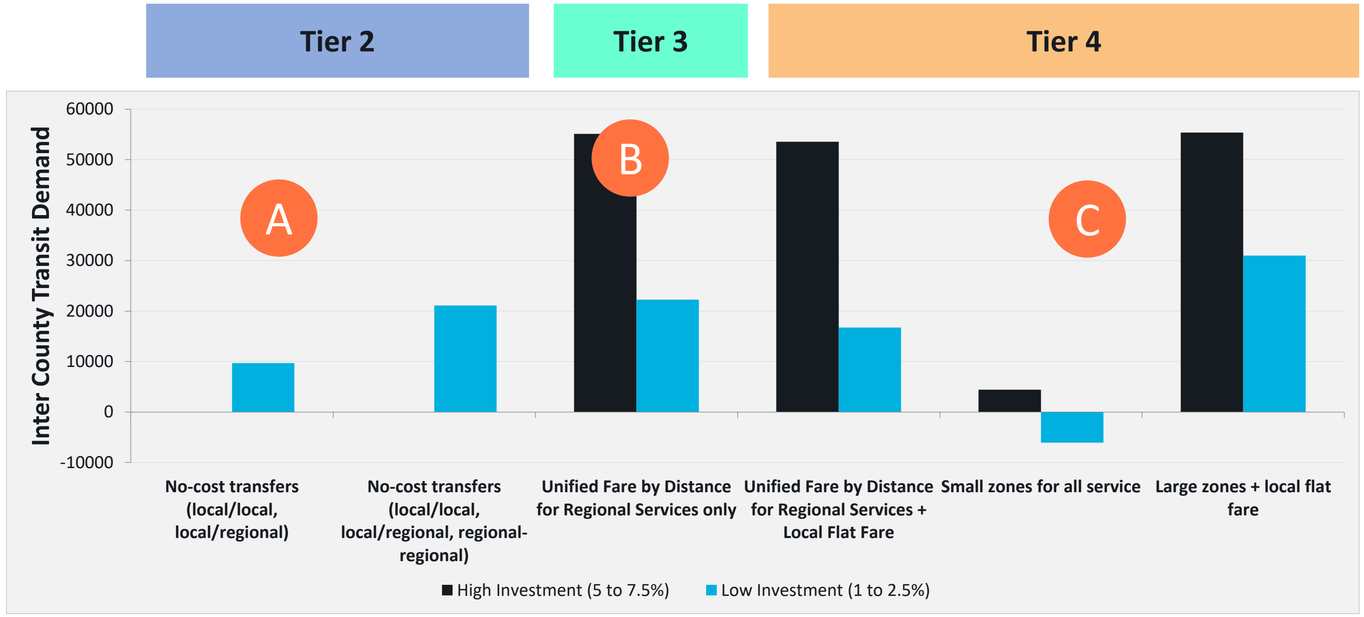
Strategic Metric 1 – Ridership Development – Inter and Intra County Trips

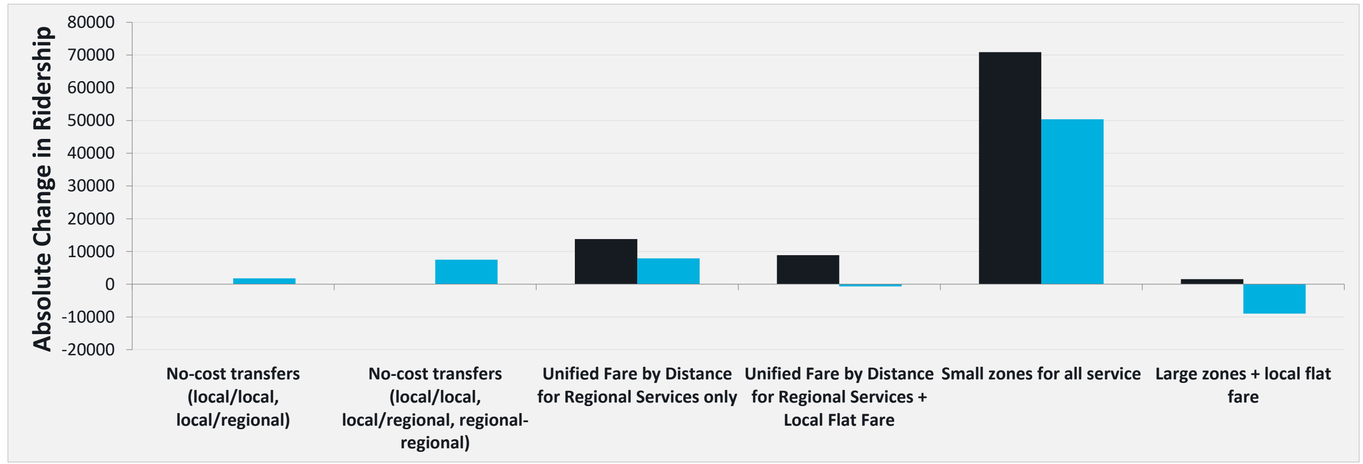
Key Findings

A No-cost transfer options promote inter–county ridership (~11,000 to 25,500 passengers per day) with limited intra-county gains

B At a high level of investment, Tier 3 generates nearly 69,000 new riders per day of which 55,000 are inter-county trips, with low investment it can generate 30,000 trips a day of which 22,000 are inter-county

C At $70m per year of new subsidy, small zones for all services generates intra-county/single operator ridership (~50,000 trips per day). This option loses ridership at lower levels of subsidy, and with high subsidy gains intra-county but loses inter county ridership





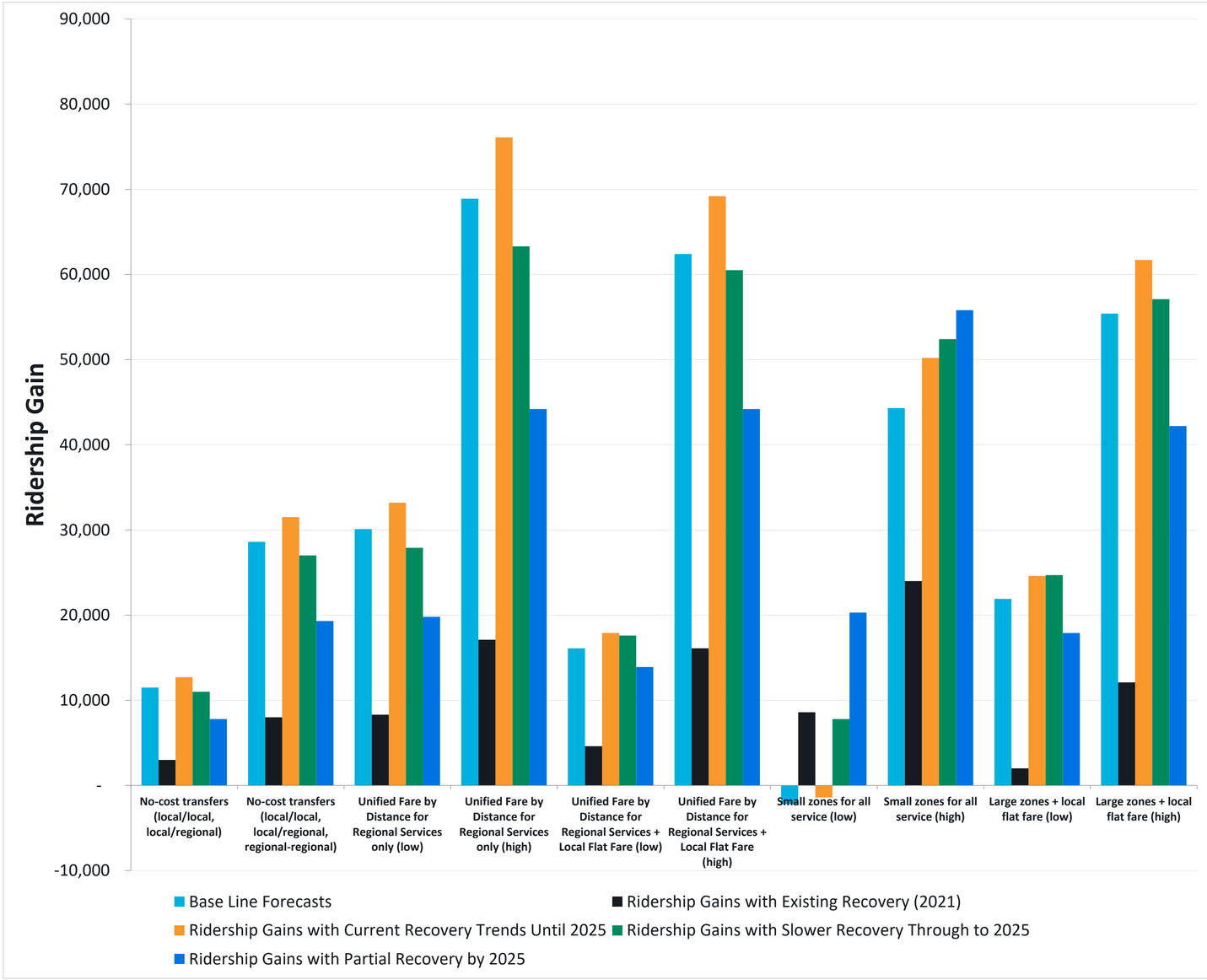
COVID Recovery and Integration Ridership

A set of COVID Recovery scenarios were developed to explore how different extents of recovery by 2025 could impact option ridership gains.

The figure to the right illustrates ridership gains for five scenarios:

- Baseline ridership forecasts (see previous slides)
- Ridership gains if the option was delivered with existing extent of recovery
- Ridership gains if recovery continued on a similar trajectory as today until 2025
- Ridership gains with a slower recovery (recovery rates are 50% what has been observed)
- Ridership gains with a partial recovery (no area in the Bay Area is 100% at 2019 levels by 2021)

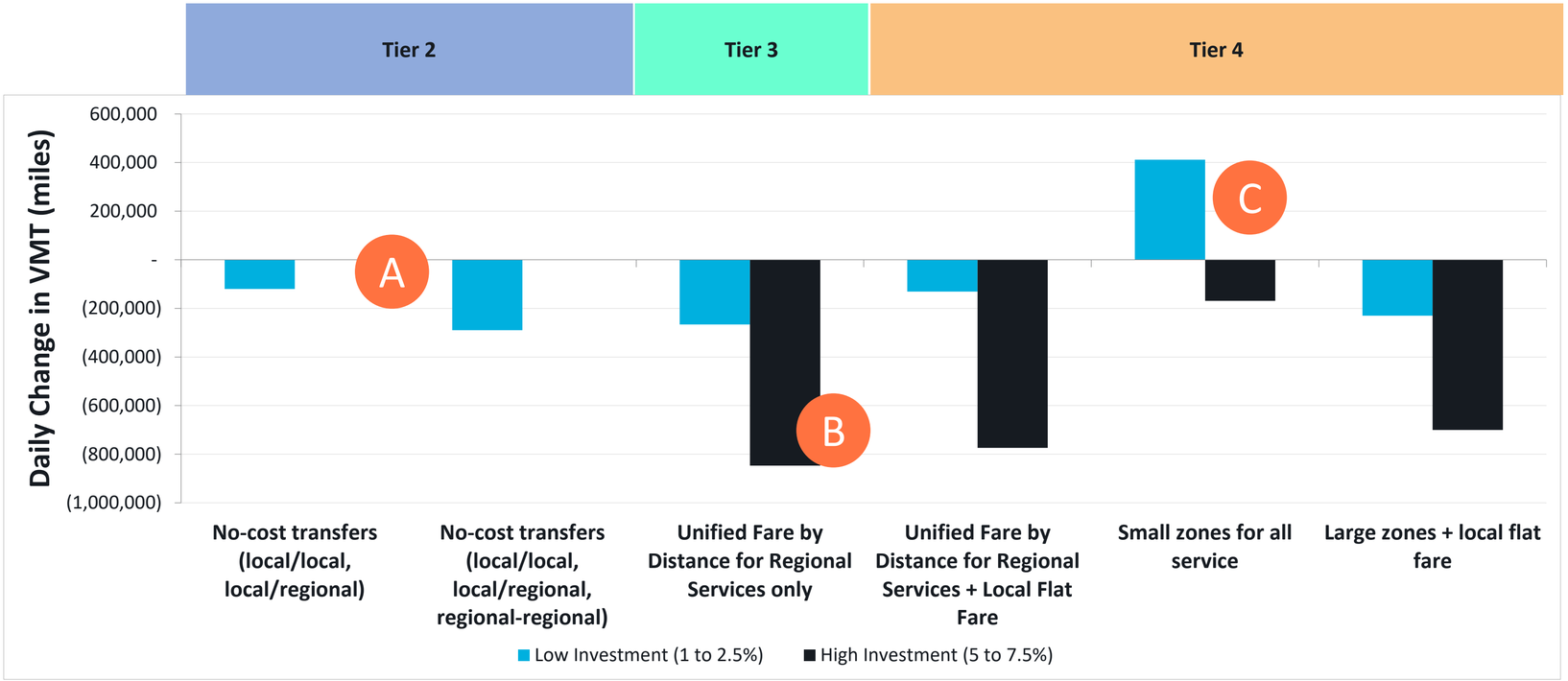
<u>This assessment illustrates that lower levels of recovery has more severe impacts to performance for options with higher</u> intercounty travel (Unified fare by distance, large zones)



Strategic Metric 2 – VMT Reduction

Reducing **vehicle miles travelled (VMT)** is a key policy theme at the local, regional, and State level.

VMT reductions vary between options based on the types of trips that are generated by fare policy changes.



Note - Tier 1 - Individual Pass ("Puget Pass" model) was not included in this analysis as it was not modelled in the regional travel model

Key Findings

A **Tier 2 and Tier 3 tend to have higher VMT reduction per new trip because the majority of trips are longer distance trips using a combination of regional and local modes**

B **Unified fare by distance options have the highest VMT reduction as their ridership growth is focused on the regional network and includes longer distance travel**

C **Small zoners generates mostly shorter distance Muni trips and has a net loss of ~6,000 inter-county trips, so its impact on VMT is lower**

Strategic Metric 3 – Equity

The Strategic Business case focuses on the quantitative data provided by the TM 1.5 model outputs, specifically how travel behavior varies by household income groups:

- How would **new subsidy** be distributed between household income groups?
- How are **fare increases** distributed between household income groups?
- How are **fare decreases** distributed between household income groups?
- Do the **fare structures** change the modes used by travellers based on household income?

Equity implications of fare policy change are multi-dimensional. This study incorporated both quantitative and qualitative analyses to better understand impacts of fare policies on low-income and priority populations in the Bay Area.

These include:

1. Impacts on costs/affordability and access to modes based on income data in the **TM 1.5 Outputs**.
2. Alignment or conflict with existing policies concerning equity in the region through **stakeholder engagement and policy review.**
3. Barriers to travel experienced by transit riders in the region expressed through **User Research.**

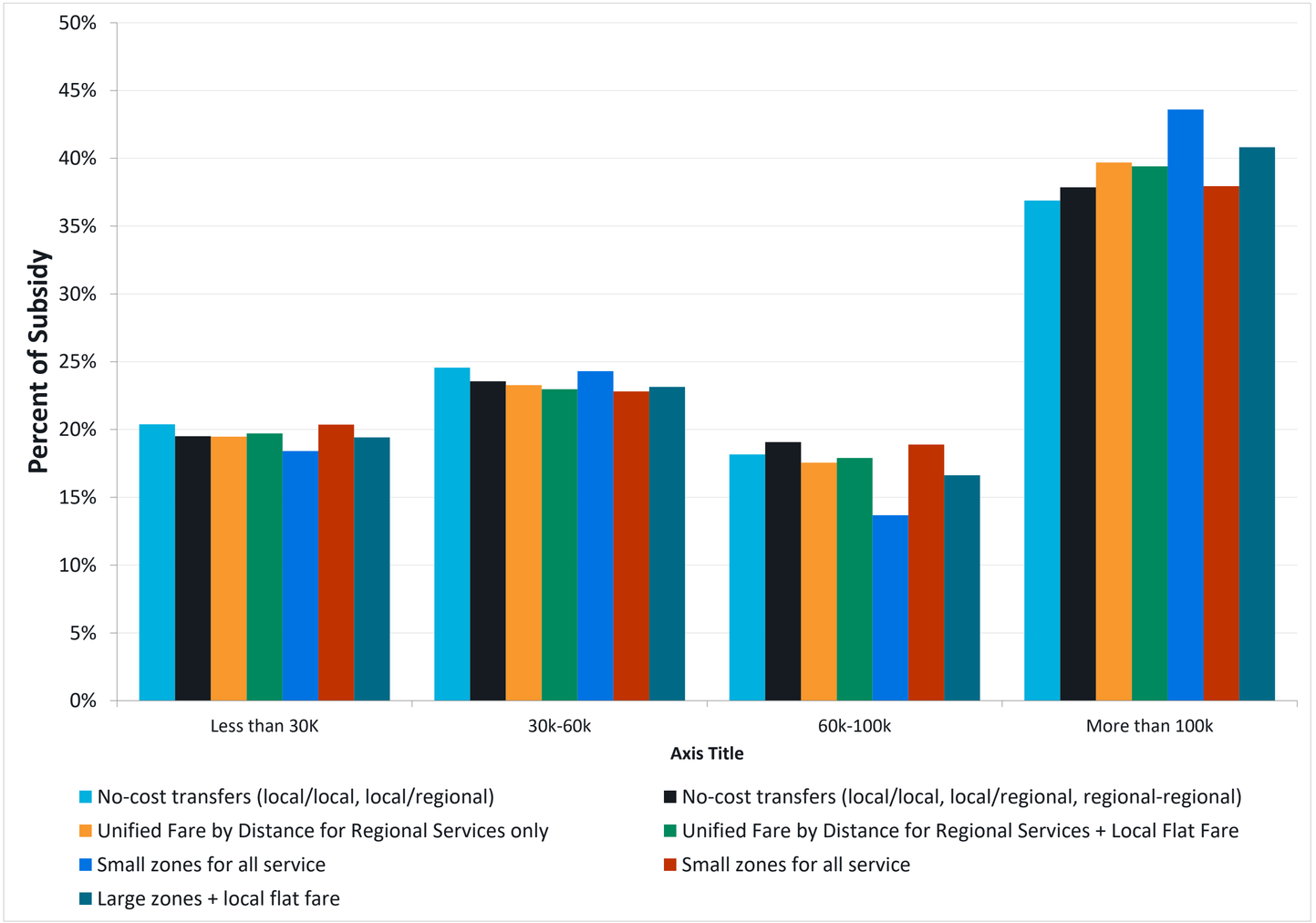
Strategic Metric 3 – Equity Impact (Share of subsidy: share of ridership)

Model outputs were analyzed to understand how dollars invested in lower fares were distributed among income groups.

The following general conclusions were identified:

- Level of subsidy invested in each income band only varies slightly between options

- Generally level of subsidy aligns with proportion of riders in each income category, with the exception of $60k-$100k, where investment is lower than the proportion of riders in this category

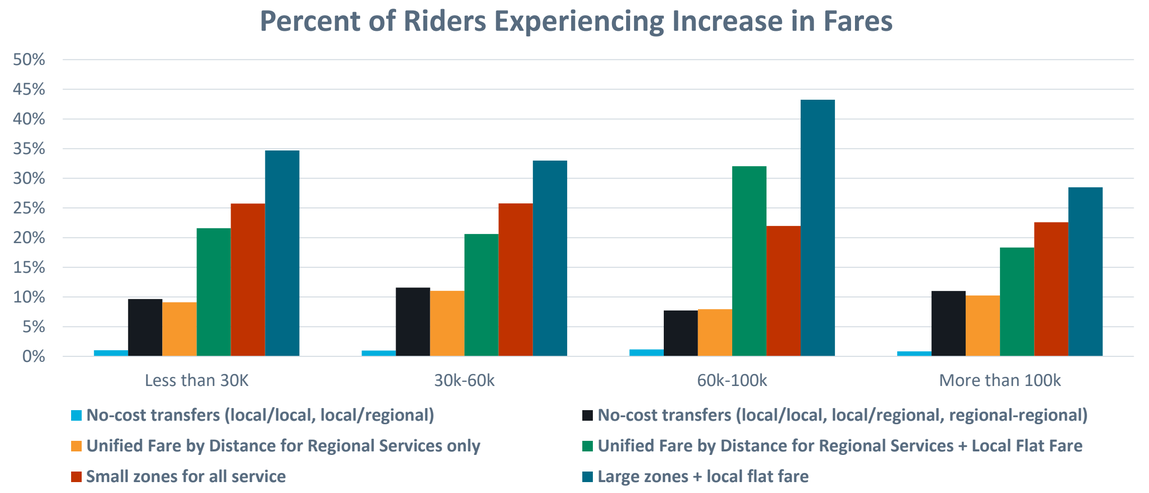


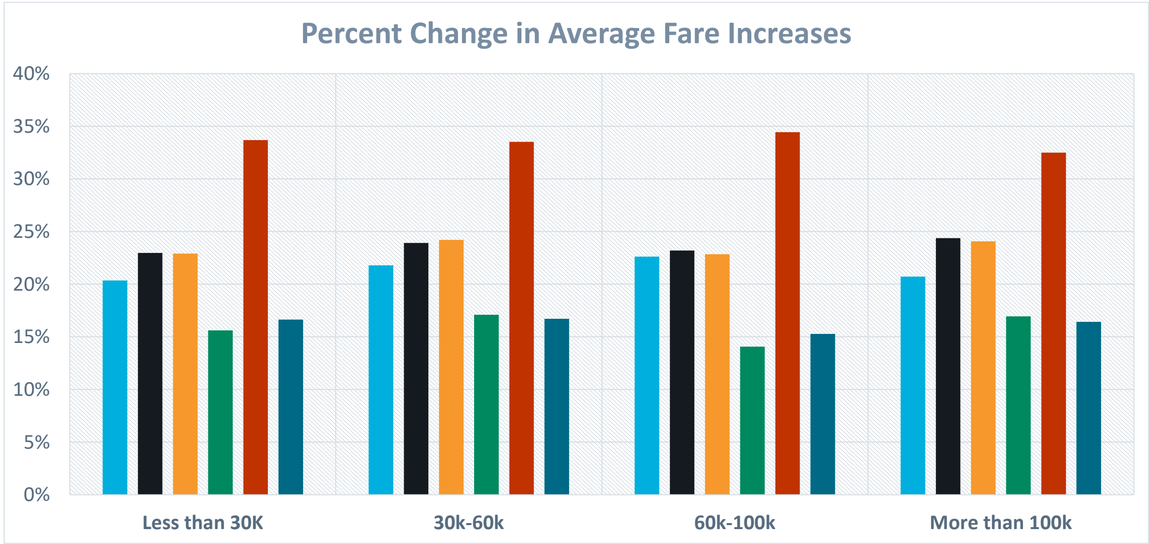
Equity Assessment: Fare increases across income groups

This assessment focused on the number of customers paying more under each option and their average fare increases.

This assessment notes that:

- Tier 4 options tend to have more customers paying more, however unified fare by distance with a local flat fare and large zones with a local flat fare have lower average fare increases than lower tiers and small zones
- Tier 4 options tend to have more customers paying more in the lower income bands than the higher income bands
- Tier 3 results in fewer customers than Tier 4 paying more, with impacts that are generally consistent across the income groups



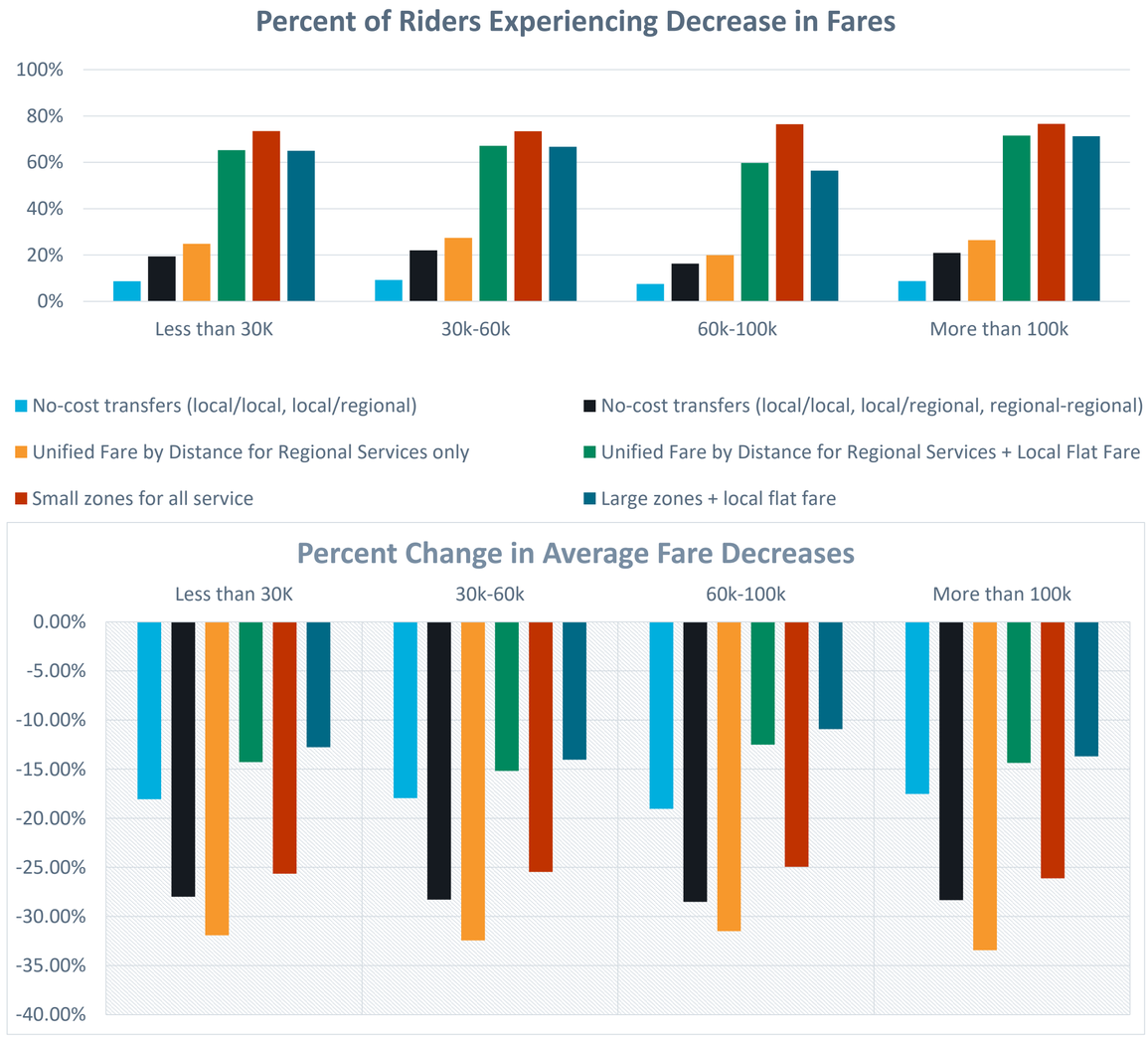


Equity Assessment: Fare decreases across income groups

This assessment focused on the number of customers paying less under each option and their average fare decreases.

This assessment notes that:

- Tier 4 options tend to have more customers paying less, with the number of customers paying less equally distributed between income levels
- Tier 2 and Tier 3 have fewer customers paying less but offer greater fare reductions than Tier 4

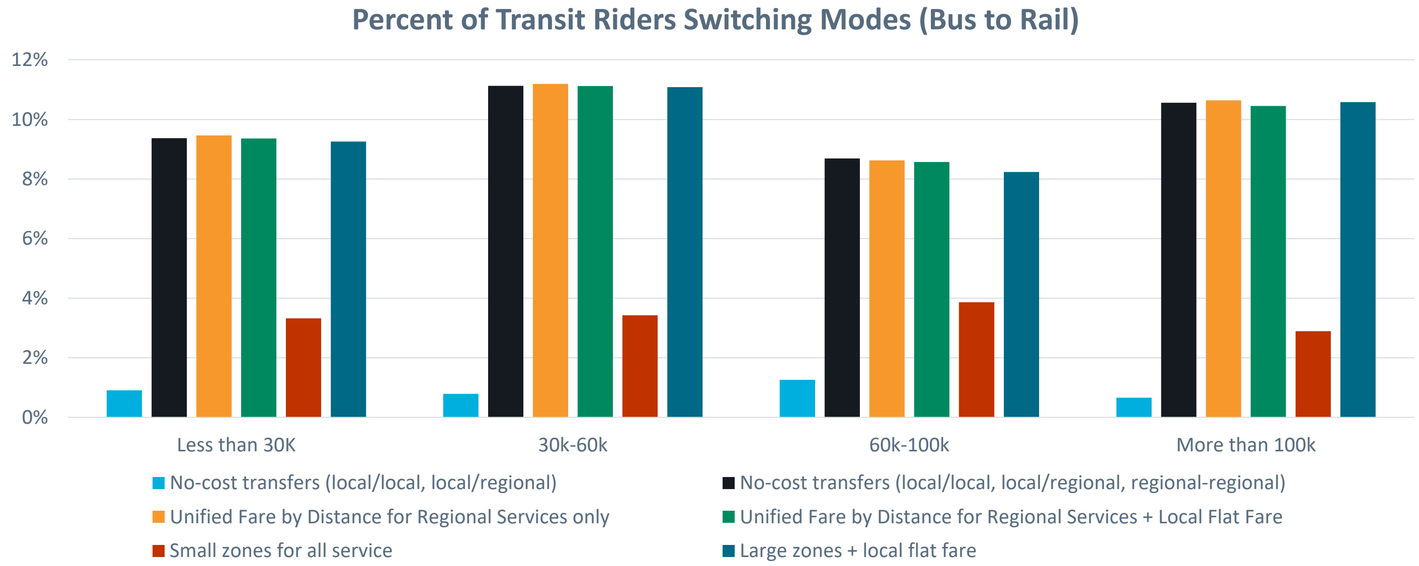


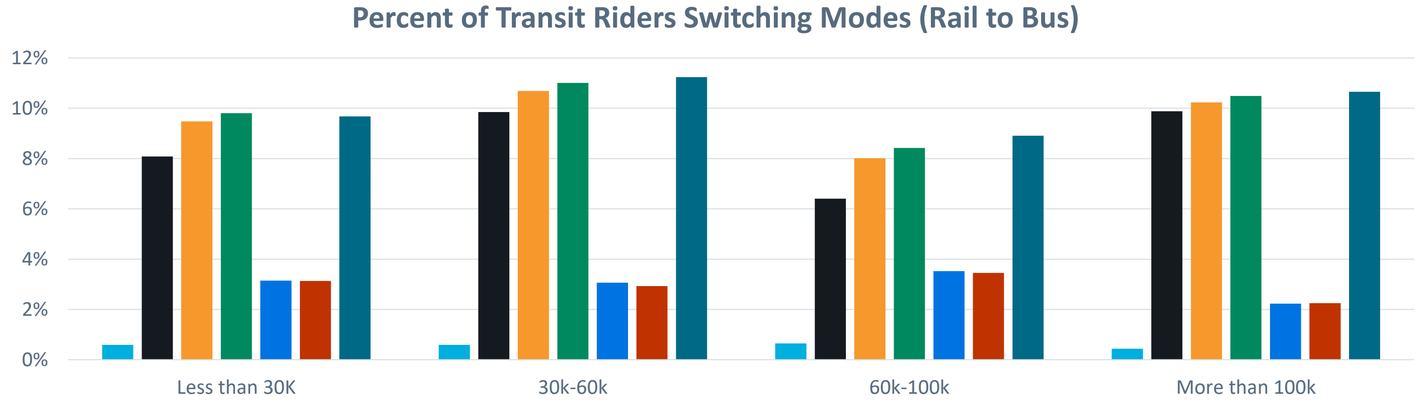
Mode shift across income groups

Additional analysis was conducted to understand how mode choice changed as a result of fare policies, specifically whether changes made rail services more accessible to lower income riders.

Key Findings

- For Tier 2, more people switched from using bus to rail than from rail to bus across all income groups.
- This pattern continues for Tiers 3-4, with the exception of the lowest income group.
- For options Tiers 3-4, the “Less than $30k” were slightly more likely to switch from rail to bus (.01% to .40% more switching to bus).





Strategic Metric 4 – Customer Experience

The problem statement for the FCIS identified **customer experience** as a key integration barrier.

The FCIS team worked extensively with travelers to identify how this barrier impacts their use of multiple operators (either for one trip or for different trips over the course of a week/month) and how they perceived each option.

Customers were asked to review each option under a range of scenarios and provide rankings and qualitative feedback on its value, fairness, and legibility.

This metric synthesizes this customer research to define:

- The likely impacts that each option will have to traveler experience and traveler willingness to use multiple operators
- Key customer identified pros and cons of each option

1 Customer Experience - Overlays

Overall Lessons

For new or infrequent riders, this option may be easier to understand compared to other options as one rule applies to all services.

- Riders perceive caps as greater value than a pass, especially amongst those whose transit trips were random while passes were preferred when the travel routine was predictable and involved frequent trips.
  - Cap: Flexible, feel good about taking extra trips (over the cap) knowing they're "free".
  - Pass: Convenient, peace of mind, assume or expect a significant discount for paying upfront
- Riders' preferred cap/pass duration depend on how they plan and budget (e.g. weekly, monthly)
- Rolling duration for cap/pass maximizes its value, but can be challenging for riders to
- remember the start and end of the duration.

Value

- ❑ Good value as it always guarantees a discount of some sort

Fairness

- ❑ Deemed as most fair most often, including low-income participants.

Legibility

- ❑ **Cap**: participants had issues understanding or had a different understanding of how caps work
- ❑ **Pass**: while not as challenging as caps, some participants did misunderstand or have a different understanding of what passes offered

2 Customer Experience - Transfer Discounts

Overall Lessons

- Riders perceive value in getting part of their trip for free but may feel that the discount is small in comparison to the total trip cost (e.g. paying for a long trip on a regional service).
- While it can be easy to understand conceptually, it may not be easy for a rider to know what to pay unless they know which service is the most expensive.

Value

- ❑ Cap: value comes in free trips after cap and its perceived flexibility
- ❑ Pass: provides peace of mind, but deep discounts expected

Fairness

- ❑ Users did not provide specific input on fairness of transfer discounts

Legibility

- ❑ Conceptually easy to understand but may be impacted if in the future it isn't "only paying for the most expensive part of the trip"

3 Customer Experience - Regional Change

Overall Lessons

- While riders may find it fair to pay by mileage, they also feel fares may be expensive for long trips, even when there is a distance-based cap in place.
- With the cap, riders know their fare will not exceed a certain price, but fares for trips that don't reach the cap may fluctuate more based on distance changes.
- Framing transfers to local services as "free" gives riders a sense of value.

Value

❑ May feel expensive but cap and free transfers to local services are good value

Fairness

❑ Deemed as most fair after no-cost transfers, but this view is not shared by low-income participants

Legibility

❑ Conceptually easy to understand, but will need tools to determine distance/price

4 Customer Experience - Regional + Local Change Zones on All Modes

Overall Lessons

- It is easy to understand and remember the price of fares for local services.
- There are concerns that the single flat fare is higher than current local service prices, making it unfair to some riders in the Bay Area.
- Framing transfers to local services as “free” gives riders a sense of value.
- While riders claim this option is easy to understand, they often don’t consider what happens for regional services or misunderstand that regional services are also a flat fare.

Value

❑ Good value for local-service-only trips, free transfers are good value

Fairness

❑ Concerns about local service fares increasing in certain areas

Legibility

❑ Conceptually easy to understand for trips only pertaining to local services, but erroneously apply the same rule to regional services

Customer Impacts: Summary

Tier	Option	Value	Legibility	Fairness
1	Caps and Passes	Generally positive	Mixed feedback – some passes may be more complicated to understand than others	Generally Positive
2	Unified Fare by Distance for Regional Services only	Generally positive	Generally positive, some concern about learning multiple fares and figuring out which one is discounted	Generally Positive
3	Unified Fare by Distance for Regional Services + Local Flat Fare	Generally Positive	Mixed feedback – stated need for tools to interpret structure (similar to BART today)	Generally Positive
4	Small zones for all service	Mixed feedback, trending negative – concerns on how zones may raise fares for local services and for travellers who do not use multiple agencies	Mixed feedback – some recognition of improved understandability, however general concerns about the number of zones and ability to determine fare	Mixed feedback, trending negative – concerns on zones will impact fares that are flat today or use fare by distance (BART)
4	Unified Fare by Distance for Regional Services + Local Flat Fare and Large zones + local flat fare	Generally positive	Generally positive	Mixed feedback– some concerns about fare increases

Strategic Dimension – Summary

Tier	Option	Daily Ridership Growth		Equity Impacts	Customer Experience
		High Investment	Low Investment		
1	**Individual Pass ("Puget Pass" model)**		25,500	Requires mitigation	**Generally Positive**
2	No-cost transfers (local/local, local/regional)		11,500	Investment is balanced across income levels, with least low income travellers paying more	**Generally Positive**
2	No-cost transfers (local/local, local/regional, regional-regional)		27,610	Investment is balanced across income levels, with least 10% of low income travellers paying more and 20% paying less	**Generally Positive**
3	Unified Fare by Distance for Regional Services only	68,800	30,200	Investment is balanced across income levels, with least 10% of low income travellers paying more and 25% paying less	Generally positive with some issues to resolve
4	Unified Fare by Distance for Regional Services + Local Flat Fare	62,500	16,100	Investment is balanced across income levels, with 20% of low income travellers paying more but 65% pay less	Generally positive with some issues to resolve
4	Small zones for all service	44,000	-2,100	Investment is balanced across income levels, with 25% of low income travellers paying more but 73% pay less	Mixed feedback
4	Large zones + local flat fare	55,000	22,000	Investment is balanced across income levels, with 35% of low income travellers paying more but 65% pay less	Generally positive with some issues to resolve

Legend

Weaker performance	Moderate performance	Stronger Performance	Not Applicable

Economic Dimension – what is the social value of each option?

The Economic Dimension evaluates each option based on the social value they can realize for local communities and the broader region.

These benefits include:

- **Traveler benefits –** including reduced travel time
- **Externalities –** including reduction in pollution, congestion, and collisions and improved health

Combined these metrics answer the questions:

- What are the social benefits of Fare Integration over the next five years in discounted 2021 USD?

- Is the level of social value of the option appropriate for the risk and change management required to deliver it?

Economic Evaluation Summary

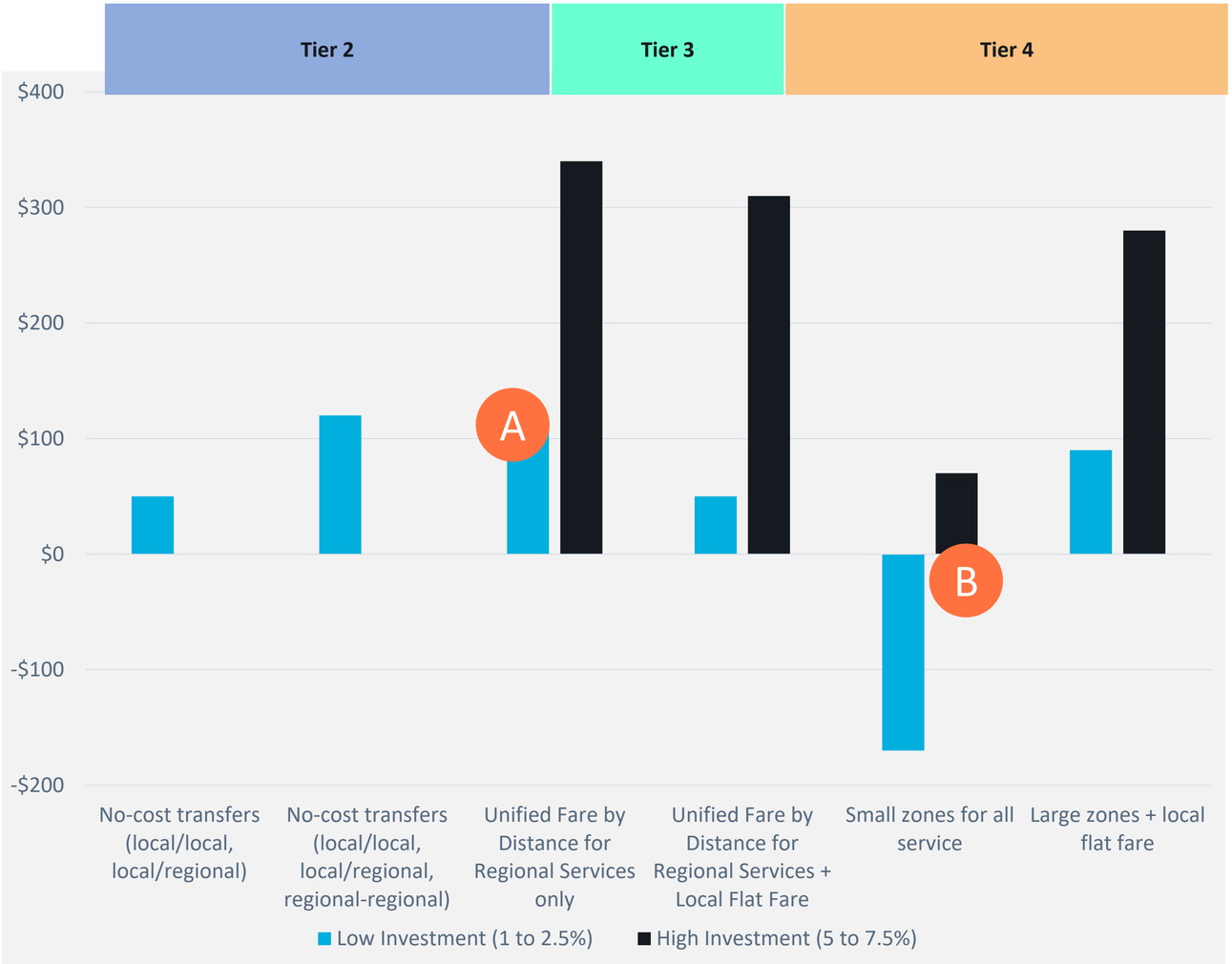
Overall, fare integration is likely to generate significant economic benefits to the region

Key Findings

A Of the low investment options, Tier 2 has the highest benefits over the first five years of integration – this is because it does not raise the price for any traveller (while Tier 3 and 4 options may require some increase at this level of subsidy) which results in higher VMT reduction

B Small zones has net negative economic performance at low levels of investment because it has a net increase in VMT due to a decrease in long distance inter county trips

- Increasing investment leads to higher benefits as it allows for generally lower fares and higher ridership compared to lower investment options



Financial Dimension – what is the financial impact of each option?

The Financial Dimension evaluates each option based on its impact to funding for transit.

It is focused on the following impacts:

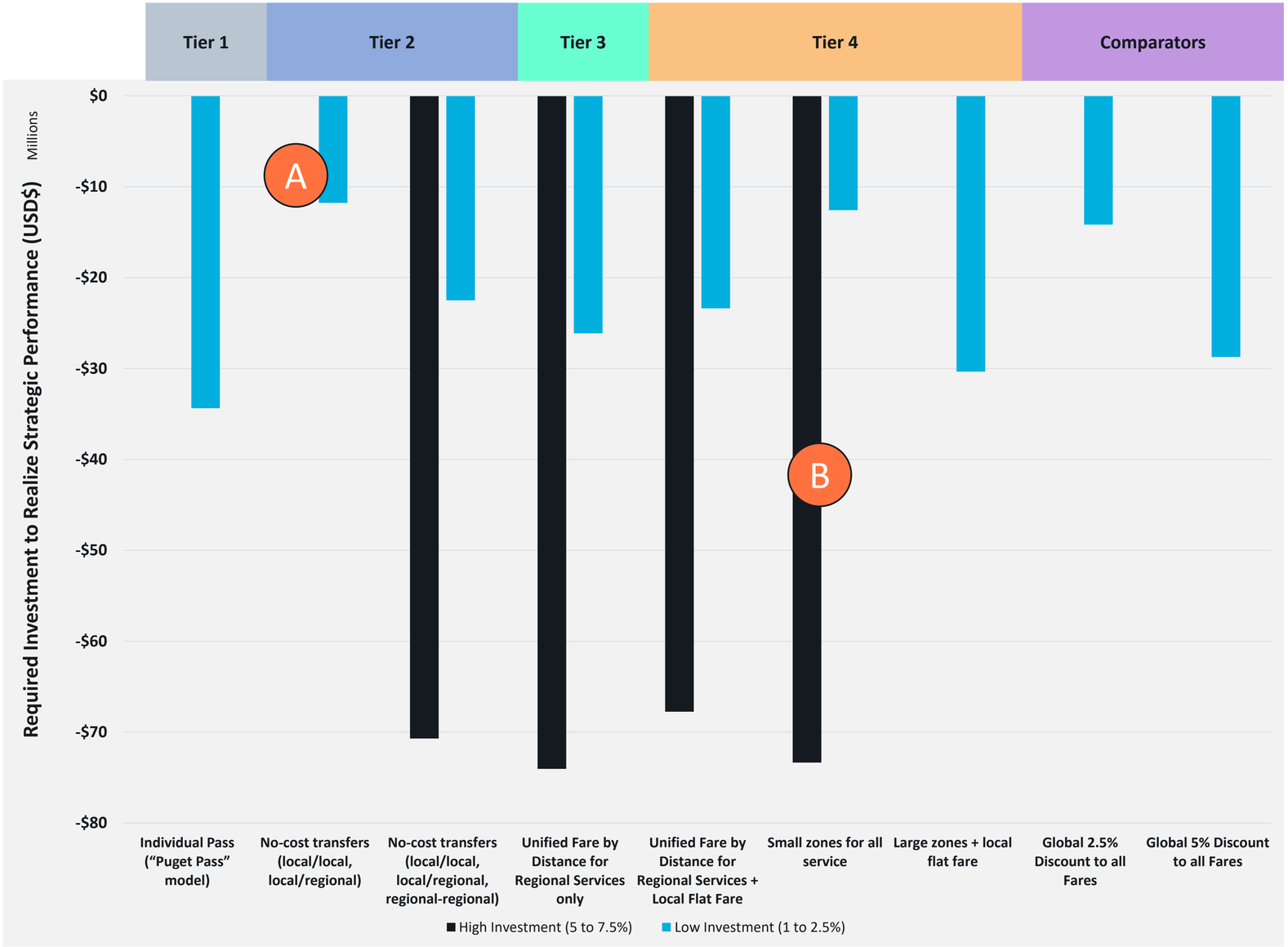
Required subsidy (total)– strategic estimates of the total lost revenue from each fare option

Cost per new rider – the level of subsidy required for each new trip

Combined these metrics answer the questions:

- What level of financial commitment is required to deliver integration?
- How cost effective is each option?
- How does the subsidy required for fare integration compare to other investments?

Financial Metric 1 – Required Subsidy

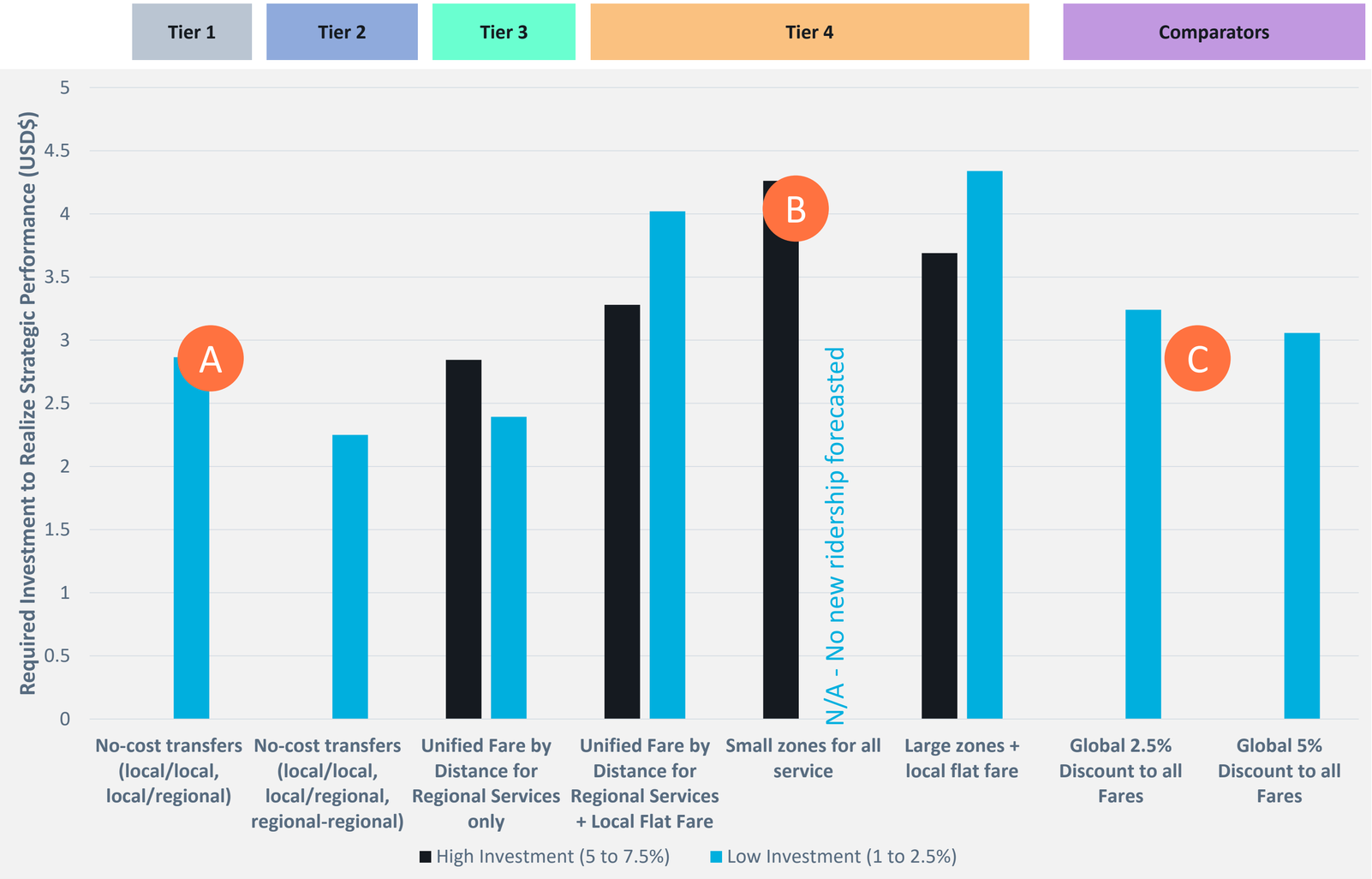


Findings

A The cost of transfer discounts between all services ranges between $11-$25 million per year based on initial estimates

B Broader standardization regional standardization of fares requires either significant new subsidy or raising fares for many customers to offset lost revenue – lower investment variants of Tiers 3 and 4 will have some fare increases to offset these losses, while high investment variants of fare by distance with flat local fares, zonal, and zonal with flat local fares options also have fare increases

Financial Metric 2 - Cost Per New Rider



Findings

A Tier 2 has the lowest cost per new rider, while Tier 3 has a similar cost per new rider at low levels of investment

B Widespread changes proposed under Tier 4 are more expensive as they lose ridership in some markets and also generate growth in others – as level of subsidy applied to small zones decreases the cost per rider increases as there are more ridership losses in key regional markets

C Comparator tests illustrate that at a regional scale, direct discounts to the existing structure are likely to have greater value for money than Tier 4 as they do not raise/lower fares in a structured – but arbitrary – manner

Relationship Between Ridership and Subsidy for Each Option

The graph to the right illustrates the relationship between revenue change (or required subsidy) and ridership impacts for each option.

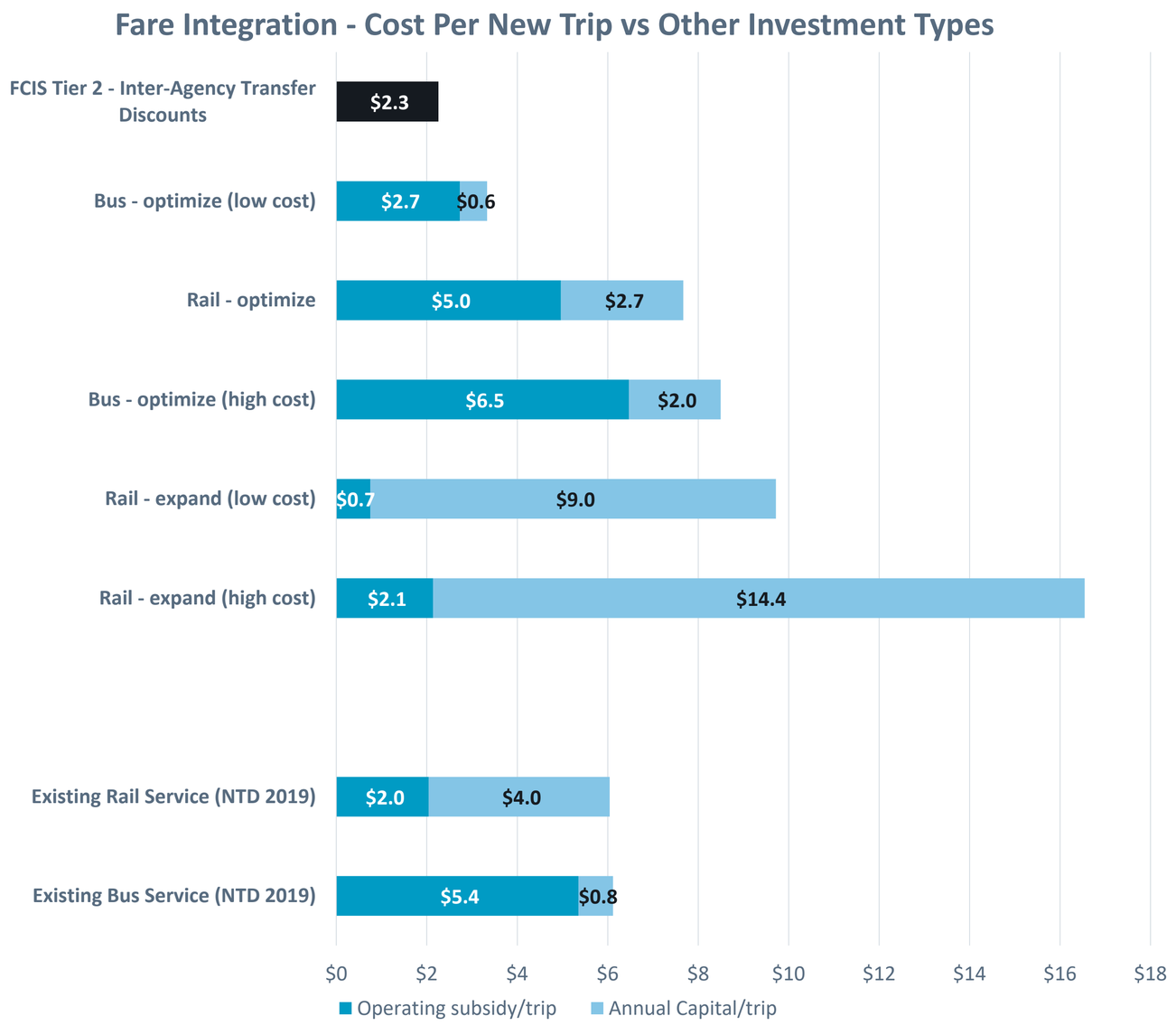
This graph can be used to explore comparative option performance for a set level of subsidy:

- **Low Investment (1-2.5%) -** Tier 2 and Tier 3 generate the most ridership, Tier 4 (small zones) loses ridership
- **High Investment (5% to 7%)** – Tier 3 has the highest ridership gain and exceeds Tier 4 options and 5 (small zones)
- **Ridership gains increase with level of investment as do cost per new, suggesting there is a diminishing return on investment but higher overall gains to be realized with more subsidy**

Financial Evaluation Summary

Options	Revenue Impacts (million USD/year)		Cost Per New Rider	
	High Investment (5 to 7.5%)	Low Investment (1 to 2.5%)	High Investment (5 to 7.5%)	Low Investment (1 to 2.5%)
Individual Pass (“Puget Pass” model)	-$34		$4.35	
No-cost transfers (local/local, local/regional)	-$12		$2.86	
No-cost transfers (local/local, local/regional, regional-regional)	-$23		$2.25	
Unified Fare by Distance for Regional Services only	-$70	-$26	$2.84	$2.39
Unified Fare by Distance for Regional Services + Local Flat Fare	-$74	-$23	$4.02	$3.28
Small zones for all service	-$67	-$13	$4.26	
Large zones + local flat fare	-$73	-$30	$4.34	$3.69

Fare Integration Cost Efficiency vs Other Investment Options



Required subsidy for FCIS Tier 2 – Transfer Discounts - local/local, local/regional and regional/regional) has an estimated cost of $2.25 per new trip.

This revenue impact is less than the estimated cost-per-trip of most proposed Bay Area transit projects (as modelled in Plan Bay Area 2050 using RTM 1.5)

The revenue impact is also less than the average cost-per-trip of the existing Bay Area transit system as of 2019.

Notes:

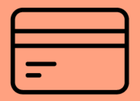
Other transit projects include 18 transit projects in Plan Bay Area selected for this analysis because they are likely or possible uses of regional funds. Only projects proposed by transit agencies and actively under development are included. Estimated fare revenue is subtracted from operating expense calculate operating subsidy.

Operating subsidy of the existing system is based on operating expense minus fare revenue as reported to NTD in 2019. Capital cost is based on the average of capital expenditures as reported to NTD between 2010 and 2019 expressed in 2019 dollars.

Delivery and Operation Dimension – what is required to successfully deliver each option?

Delivery and Operation Dimension assesses each option based on the key changes required across the following dimensions:

Management – how will issues, risks, challenges, and changes will be managed over time?



Technology – how is it implemented and procured?

Operations and Infrastructure– how it will 'run' on a day to day basis and what infrastructure is required?

Customers – what level of change management is required for customers?

1 Overlays – Delivery Requirements

Management – low impact

- ❑ Can be delivered with agency to agency agreements

or

- ❑ Can be delivered and managed centrally across the region → increased revenue allocation and pricing complexity

Technology – low impact

- ❑ Can be delivered with existing technology or with C2

Agency Infrastructure and Operations – low impact

- ❑ Minimal changes – can be rolled out with operator training on the passes with some investment in marketing and communications
- ❑ Could also be marketed and communicated centrally

Customers / change management – low impact

- ❑ If a pass, it is opt in and will require marketing advertising

Or

- ❑ If a cap, the cap should be advertised broadly but will automatically apply to customers and will not require additional action to access

2 Transfer Discounts – Delivery Requirements

Management – low impact / medium impact

- ❑ Can be delivered with agency to agency agreements

or

- ❑ Can be delivered and managed centrally across the region
- ❑ Will require a formula for revenue allocation – either centrally or on agency pair basis

Technology – low impact

- ❑ Can be delivered with existing technology on a limited basis or completely with C2 under the initial roll out

Agency Infrastructure and Operations – low impact

- ❑ Minimal changes – can be rolled out with operator training (to message the discounts) and supporting advertising material
- ❑ Could also be marketed and communicated centrally

Customers / change management – low impact

- ❑ Only customers using multiple agencies are impacted – change management would focus on explaining the discount, although it is applied automatically
- ❑ If a general region-wide discount rule is applied (example: only pay highest fare, only pay regional fare) change management is simpler to roll out

3 Regional Change – Delivery Requirements

Management – low impact / medium impact

- ❑ Can be partially delivered with agency to agency agreements – for example, two regional operators making a single fare structure

or

- ❑ Can be delivered centrally across the region → one manager is responsible for setting fares and developing a formula for revenue allocation

Technology – medium impact

- ❑ Requires C2 and new fare setting approaches for one or more agencies

Agency Infrastructure and Operations – medium impact

- ❑ Requires new fare collection infrastructure, marketing materials, and staff training for all agencies that are integrated
- ❑ This could be done on an agency by agency basis or centrally

Customers / change management – medium impact

- ❑ End fare structure will either be fare by distance or zones across all regional operators – all operators already use a form of fare by distance or zones, so the change management process would focus on helping a select set of customers understand the new structure and make best use of it

4 Regional + Local Change Zones on All Modes – Delivery Requirements

Management – high impact

- ❑ Fare setting authority would need to be transitioned from local agencies and regional agencies to a central manager to ensure sustainable change (agreements are unlikely to sustain a regional fare structure over the long term)
- ❑ Requires an overhaul of revenue allocation and/or subsidy/funding allocation

Technology – medium impact / high impact

- ❑ Requires C2 and new fare setting approaches for all agencies
- ❑ Region wide zones would require tap off or a ‘check out’ function on buses

Agency Infrastructure and Operations – high impact

- ❑ Requires a range of new fare collection infrastructure, marketing materials, and staff training for all agencies across the region – likely requires a centralized approach
- ❑ Check out function on buses could have boarding / alighting impacts and operational impacts over the short to medium
- ❑ As fares change, some operators will require additional funding to cover shortfalls in fare revenue while maintaining level of service

Customers / change management – medium impact / high impact

- ❑ Customers will have to learn fare by distance/zones for regional (see previous slide)
- ❑ Customers will either learn a flat fare for local (limited impact) or a zone structure which is more complex and will have wide-ranging changes for trips that used to be under an operator flat fare

Delivery and Operation Dimension Evaluation Summary

Tier	Options	Management	Technology	Agency Infrastructure and Operations	Customer change management
1	**Individual Pass (“Puget Pass” model)**	**Low**	**Low**	**Low**	**Low**
2	No-cost transfers (local/local, local/regional)	**Low/Medium**	**Low**	**Low**	**Low**
	No-cost transfers (local/local, local/regional, regional-regional)				
3	Unified Fare by Distance for Regional Services only	**Low/Medium**	**Medium**	**Medium**	**Low/Medium**
4	Unified Fare by Distance for Regional Services + Local Flat Fare	**High**	**Medium/High**	**High**	**Medium/High**
	Small zones for all service				
	Large zones + local flat fare				

Legend

Greater Impact

Moderate Impact

Less Impact

Delivery Evaluation Findings - Overall

1

Overlays

- No change to existing structures

2

Transfer Discounts

- No change to existing individual fare structures or prices

3

Regional Change

- Regional operators share common fare structure

4

Regional + Local Change

- Changes to local and regional fares structures

CLIPPER

Could be partially delivered under C1

Requires C2 for complete delivery

Could be delivered through agreements without institutional change

Requires institutional change

Increasing impact on agency infrastructure and operations

Focused solely on price barriers → less customer impact or change management requirements

Changes beyond price barriers→ more customer change management required

1

2

3

4

Summary of Business Case by Tier and Dimension

1 Overlays to Fare Structure
(Incremental Performance when Layered on Tier2)

What was tested?

- Trip-based caps (daily, weekly and monthly) at different trip thresholds (assuming local to regional free transfers)
- Value-based caps (daily, weekly and monthly) at various price points (assuming local to regional free transfers)
- Tiered pass product: local service only, all inclusive
- Puget Pass-styled product where transit rider's monthly pass value is based on most common trip value (multiplied by 36)

What did we learn?

- Tiered passes and caps are required to minimize revenue loss for regional operators while generating new ridership but may be more complex for customers to understand
- Customers are interested in a pass or product that applied to multiple operators
- A single trip cap or monthly pass with a set price for all travelers will either not generate ridership (if priced too high) or lose significant revenue (if priced too low)
- Further work needs to be completed to explore caps vs. passes – this work should explore balancing with ridership potential and available subsidy

Strategic	Economic
Daily Trip Change: **Fare Cap ($162):** +7,300 **Trip Cap (35):** +10,200 **Individual Pass ("Puget Pass" model):** +21,900 **Equity Impact:** Passes require up-front payment, which may exclude lower income riders from benefits. Fare capping offers more equitable benefits.	**Present Value of Economic Benefits:** not completed due to different modelling platform (Clipper data does not include VMT) – anticipated to perform with a similar level as Options 3b high investment.
Financial	**Delivery**
Total required subsidy: **Fare Cap ($162):** $59m/year **Trip Cap (35):** $49m/year **Tiered Pass:** $34m/year **Cost per new rider:** **Fare Cap ($162):** $22.36 **Trip Cap (35):** $13.31 **Individual Pass ("Puget Pass" model):** $4.35	**Overall Assessment:** low impact – readily deliverable with some technology changes and new organizational agreements.

2 Transfer Discounts

No-Cost Transfers

What was tested?

- **No-cost transfers (local/local, local/regional):** 100% discount for all local to local transfers (trips using multiple providers pay only one fare)
- **No-cost transfers (local/local, local/regional, regional-regional):** 100% discount for all local to regional transfers (trips using regional and local only pay the total regional fare)

What did we learn?

- The local to regional transfer market is the largest integration market in the Bay Area, local to local transfers are a smaller opportunity, but can support equity goals and overall fairness

- Combined, discounted transfers could generate up to 13,000 new transit trips a day with the lowest cost per new rider of Tiers 2-4

- These options are the least complex to implement and performed well in customer research, where customers valued their simplicity and reflection of fairness and value (reducing penalties to use multiple operators when required)

Strategic	Economic
Daily Trip Change: **No-cost transfers (local/local, local/regional):** 11,500 trips per day **No-cost transfers (local/local, local/regional, regional-regional):** 25,500 **Equity Impact:** Net savings for equity priority populations; some additional subsidy to higher income riders	**Five Year Present Value of Economic Benefits:** **No-cost transfers (local/local, local/regional):** $50m (2021 USD) **No-cost transfers (local/local, local/regional, regional-regional):** $120m (2021 USD)
Financial	**Delivery**
Total required subsidy: **No-cost transfers (local/local, local/regional):** -$12m/year **No-cost transfers (local/local, local/regional, regional-regional):**$23m/year **Cost per new rider:** **No-cost transfers (local/local, local/regional):** $2.84 **No-cost transfers (local/local, local/regional, regional-regional):** $2.25	**Overall Assessment:** low impact • Readily deliverable within planed Clipper 2 • Requires multi-agency MOU

3 Changes to Regional Service Fares and Local Discounts

Unified Fare by Distance for Regional Services only

What was tested?

- 100% discount for all local to local transfers (trips using multiple providers pay only one fare)
- 100% discount for all local to regional transfers (trips using regional and local only pay the total regional fare)
- All regional services use a single distance or zonal structure (no transfer fees) → test used a BART structure for all services
- Subsidy of $70 million, future tests underway to better compare to T2

What did we learn?

- Has ability to increase ridership beyond Tier 2 to up to 68,000 new trips per day (at $70 million in subsidy) but cost per rider increases, however cost per rider is significantly lower than Tier 4 options
- Additional riders are long distance travellers making use of the combined regional network or use of re-priced regional services
- Customers identified this option is generally perceived as fair and reflects the value of a trip taken, however they noted additional tools would be required to fully understand it
- This option has moderate delivery requirements and could be delivered in stages (example: combining fares for two operators to start) or all at once

Strategic	Economic
Daily Trip Change: **High Investment**: 68,000 **Low Investment:** 30,200 **Equity Impact:** With significant new subsidy, some riders with lower incomes would see fares rise to achieve regional standardization	**Five Year Present Value of Economic Benefits:** **High Investment**: $340m (2021 USD) **Low Investment:** $110m (2021 USD)
Financial	**Delivery**
Total required subsidy: **High investment:** $70 m/year **Low Investment:** $26 m/year **Cost per new rider:** **High investment:** $2.84 **Low Investment:** $2.39	**Overall Assessment:** low impact/medium impact • Requires new agreements or governance structure for regional service • Requires new technology • Requires some regional customers to learn a new structure

4 Changes to Regional and Local Fares

Unified Fare by Distance for Regional Services + Local Flat Fare

What was tested?

- FBD curve for all regional operators
- Single flat fare for all local operators – no transfer fees (100% discount to local fare) when using regional
- Subsidy of $75m/year, , future tests underway to better compare to T2

What did we learn?

- Ridership impacts similar to Tier 3 – although slightly lower as the FBD fare curve for this option must be higher to offset lost revenue from the local flat fare and maintain a comparable subsidy as T3 for comparison
- This option has higher cost per new rider than T3 but lower cost per new rider than small zones, this means it is generally more financially efficient than zones for all modes but less financially efficient than retaining individual local fares with free inter-operator transfers
- Customers noted that a local flat fare would be easier to understand than a free transfer but also noted it may lead to unfair changes in fares
- This option is more complex to deliver than Tiers 2 or 3 due to governance requirements but easier to implement than small zones because it does not require extra readers on each bus

Strategic	Economic
Daily Trip Change: **High Investment**: 62,500 **Low Investment:** 16,100 **Equity Impact:** Without significant new subsidy, some riders with lower incomes would see fares rise to achieve regional standardization	**Five Year Present Value of Economic Benefits:** **High Investment**: $310m (2021 USD) **Low Investment:** $50m (2021 USD)
Financial	**Delivery**
Total required subsidy: **High Investment**: $74m /year **Low Investment:** $23m /year **Cost per new rider:** **High Investment:** $4.02 **Low Investment:** $3.28	**Overall Assessment:** high impact • Requires significant management and governance change for a sustainable structure • Requires significant changes to agency operations • Requires new technology on most regional operators (tap in, tap out)

4 Changes to Regional and Local Fares

Small zones for all service

What was tested?

- 81 zones
- Fares increase based on number of zones travelled
- Zonal ad-fares are the same for all modes
- Three levels of subsidy - $100m/year, $70m/year, $12.5m/year

What did we learn?

- Ridership impacts are complex and vary from operator to operator due to the 'region-wide changes' (where some trips increase and other decrease in fare) included in this proposal
  - **High investment:** this option has a net loss of inter-county trips and gains 44,000 net new trips (of these 50,000 gross are in San Francisco using bus and LRT)
  - **Low investment:** this option has a region wide net loss in ridership (-2,000 trips) but it retains a net gain of 23,000 intercounty trips offset a loss of 25,000 inter-county trips
- This option has the highest cost per new rider and most challenging delivery requirements
- Customers noted that the number of zones included may be hard to understand and that the option does not inherently reflect value and fairness

Strategic	Economic
Daily Trip Change: **High Investment**: +44,000 **Low Investment:** -2,000 (loss) **Equity Impact:** Without significant new subsidy, some riders with lower incomes would see fares rise to achieve regional standardization	**Five Year Present Value of Economic Benefits:** **High Investment**: $70m (2021 USD) **Low Investment: -**$170 (2021 USD)
Financial	**Delivery**
Total required subsidy: **High Investment**: $67m/year **Low Investment:** $13m/year **Cost per new rider:** **High Investment**: $4.26 **Low Investment:** no new riders	**Overall Assessment:** high impact • Requires significant management and governance change for a sustainable structure • Requires significant changes to agency operations • Requires new technology on all local and most regional operators (tap in, tap out) • Requires extensive change management for customers

4 Changes to Regional and Local Fares

Large zones + local flat fare

What was tested?

- 81 zones
- Fares increase based on number of zones travelled
- Zonal ad-fares are the same for all modes
- Two levels of subsidy - $100m/year and $70m/year, , future tests underway to better compare to T2

What did we learn?

- Ridership impacts are complex and vary from operator to operator due to the 'region-wide changes' (where some trips increase and other decrease in fare) included in this proposal
  - At $70m per year, this option has a net loss of inter-county trips and gains 44,000 net new trips (of these 50,000 gross are in San Francisco using bus and LRT)
  - At $10-15M per year, this option has a region wide net loss in ridership (-2,000 trips) but it retains a net gain of 23,000 intercounty trips offset a loss of 25,000 inter-county trips
- This option has the highest cost per new rider and most challenging delivery requirements
- Customers noted that the number of zones included may be hard to understand and that the option does not inherently reflect value and fairness

Strategic	Economic
Daily Trip Change: **High Investment**: 55,000 **Low Investment:** 22,000 **Equity Impact:** Without significant new subsidy, some riders with lower incomes would see fares rise to achieve regional standardization	**Five Year Present Value of Economic Benefits:** **High Investment**: $280m (2021 USD) **Low Investment:** $90m (2021 USD)
Financial	**Delivery**
Total required subsidy: **High Investment**: $73m/year **Low Investment:** $30m/year **Cost per new rider:** **High Investment**: $4.34 **Low Investment:** $3.69	**Overall Assessment:** High impact • Requires significant management and governance change for a sustainable structure • Requires significant changes to agency operations • Requires new technology on all local and most regional operators (tap in, tap out) • Requires extensive change management for customers

Performance Summary – Relative Performance (Tiers 2-4)

Dimension	Metric	Tier 1	Tier 2		Tier 3		Tier 4					
		Individual Pass ("Puget Pass" model)	No-cost transfers (local/local, local/regional)	No-cost transfers (local/local, local/regional, regional-regional)	Unified Fare by Distance for Regional Services only		Unified Fare by Distance for Regional Services + Local Flat Fare		Small zones for all service		Large zones + local flat fare	
Investment			Low	Low	High	Low	High	Low	High	Low	High	Low
Strategic	Change in Trips per Day	25,500	11,500	25,500	68,000	30,200	62,500	16,100	+44,000 (includes 50,000 new intra-county trips but -6,000 inter county trips)	-2,000	+55,000	+22,000
	VMT Change per Day	N/A	-120,000	-290,000	-850,000	-265,000	-775,000	-131,000	0	+412,000	-700,000	-230,000
	Equity	Requires mitigation	Generally positive	Positive/ Mixed	Mixed performance	Mixed performance	Mixed performance	Mixed performance	Mixed performance	Mixed performance	Mixed performance	Mixed performance
	Experience	Generally positive feedback	Generally positive feedback	Generally positive feedback	Generally positive with some issues to resolve		Generally positive with some issues to resolve		Mixed feedback		Generally positive with some issues to resolve	
Economic	Value of Benefits (million 2021 USD)	N/A	$50	$120	$340	$110	$310	$50	$70	-$170	$280	$90
Financial	Subsidy	$34m	$12m	$22.5 m	$70m	$26 m	$74m	$23 m	$67m	$13m	$73m	$30m
	Cost per New Rider	$4.35	$2.86	$2.25	$2.84	$2.39	$4.02	$3.28	$4.26	No new riders	$4.34	$3.69
Implementation	Overall Risk and Impact Assessment	Low impact	Low impact	Low Impact	Medium impact		High impact		High impact		High impact	

Legend

Weaker performance

Moderate performance

Stronger Performance

Not Applicable

Overall Summary: Tier Performance

1

Overlays

- **Strengths –** Readily deliverable
- **Potential Issues and Weaknesses –** Potentially high subsidy, frequency or opt-in based, does not support ridership growth outside of those who purchase the pas or hit the cap

2

Transfer Discounts

- **Strengths –** resolves integration price barriers, simple rules, complete coverage, deliverable under C2
- **Potential Issues and Weaknesses –** customers still interact with multiple structures, does not fully solve experiential barriers

3

Regional Change

- **Strengths –** same as Tier 2, however all regional trips use one structure which may augment customer experience and lead to additional ridership
- **Potential Issues and Weaknesses –** more challenging to implement and manage without governance changes

4

Regional + Local Change

- **Strengths –** one structure for region may improve customer experience
- **Potential Issues and Weaknesses –** Many riders experience fare changes (either higher prices or new subsidy) not directly related to promoting multi-agency travel
- Requires significant governance changes, expanded infrastructure, and change management at the customer and agency level