



METROPOLITAN
TRANSPORTATION
COMMISSION

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Memorandum

Agenda Item 3

TO: Operations Committee

DATE: March 7, 2014

FR: Executive Director

W. I. 310-2700

RE: Contract Change Order – Implementation of Clipper® on Transit Operators in the East Bay and 101 Corridor and Integration of Next Generation Vehicle Devices: Cubic Transportation Systems, Inc. (\$8,300,000)

Project Status Report

Attachment 1 includes information about current Clipper® system operations.

Contract Actions

Staff recommends that the Operations Committee authorize the Executive Director or his designee to negotiate and enter into the following contract action.

Contract Change Order – Implementation of Clipper® on Transit Operators in the East Bay and 101 Corridor and Integration of Next Generation Vehicle Devices: Cubic Transportation Systems, Inc. (\$8,300,000)

The Clipper® fare payment system is currently available on eight transit agencies (AC Transit, BART, Caltrain, Golden Gate Transit and Ferry, SamTrans, SFMTA, VTA and San Francisco Bay Ferries), and accounts for 45 percent of all transit fares paid on Bay Area transit operators. MTC is currently deploying Clipper® to Marin Transit and the transit operators in Napa and Solano Counties (Soltrans, FAST, Vacaville City Coach, RioVista, and Napa VINE). The Clipper® Contractor, Cubic Transportation Systems, Inc. (Cubic), expects to complete the expansion work for Marin Transit in October 2014 and for Napa and Solano County operators in August 2014.

Under this Change Order, Cubic will expand the Clipper® fare collection system to include the following transit operators in the East Bay and along the 101 Corridor in Sonoma County:

East Bay	101 Corridor
<ul style="list-style-type: none"> • County Connection • WestCAT • Wheels • Tri Delta Transit 	<ul style="list-style-type: none"> • Santa Rosa City Bus • Sonoma County Transit • Cloverdale Transit • Petaluma Transit • Healdsburg Transit

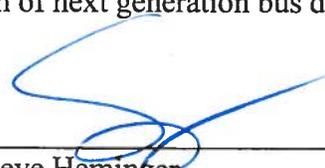
Under this Change Order, Cubic will install and configure Clipper[®] fare collection equipment on East Bay and 101 Corridor operator vehicles, install wireless networks to support upload and download of Clipper[®] data at each bus yard, and install ticket office terminals (retail devices) and handheld card readers for fare inspection. Cubic will supply all required materials necessary for installation of the equipment.

Due to obsolescence of certain components of our existing devices (card readers and driver consoles), Cubic is unable to provide additional units of our existing vehicle devices. Therefore, under the scope of this Change Order, Cubic will integrate next generation devices into the Clipper[®] system for deployment to the East Bay and 101 Corridor operators. These devices will also be used to support the ongoing operational needs of the current Clipper[®] operators. Work required to integrate the next generation devices includes adaptation of existing software to function on the new hardware, as well as the design of new wireless networks to support data exchange at bus yards.

Given the long lead time to obtain next generation devices and modify the current device applications to run on the next generation devices, the Committee approved a Change Order in December 2013 allowing Cubic to commence work on the portion of the device integration that had already been defined and priced, up to a maximum of \$300,000, pending final pricing of the full work scope. The Change Order approval request in this memorandum allows Cubic to complete all remaining work associated with the device integration.

Cubic expects to complete the implementation for East Bay operators by the end of December 2015, and the 101 Corridor operators by the end of February 2016. To incentivize schedule adherence, MTC plans to include incentive and liquidated damages provisions in the Change Order. Up to \$500,000 of the \$8,300,000 would be used for incentive payments in the event Cubic meets the most aggressive implementation schedule. Liquidated damages up to \$250,000 would be assessed if Cubic is late in delivering the system.

Staff recommends that the Operations Committee authorize the Executive Director or his designee to negotiate and enter into a contract change order or change order amendment with Cubic Transportation Systems, Inc., in the amount of \$8,300,000 to deploy Clipper[®] to the East Bay and 101 Corridor operators, including integration of next generation bus devices.



Steve Heminger

SH: LV

Table 1: Summary of System Usage

	Last Month January 2014	Prior Month December 2013	Prior Year January 2013
Transaction Volume			
Average Weekday Ridership ¹	697,571	627,557	646,832
Fee-Generating Transactions ²	18,809,311	17,058,699	17,147,897
Unique Cards Used	724,521	705,292	607,136
Active Card Accounts	1,383,273	1,340,693	1,319,815
Settled Transit Operator Revenue	\$37,016,492	\$33,481,112	\$33,446,789
Autoload Activity			
Percent of Registered Cards with Autoload	37%	37%	38%
Call Volume			
Customer Service Representative (CSR) Calls	30,011	23,733	27,717
CSR Calls per Unique Card Used	0.04	0.03	0.05
Website Traffic			
Unique Visitors - Standard	142,602	120,162	163,195
Unique Visitors - Mobile	24,276	20,409	N/A
Website Visits - Standard	202,617	166,010	236,093
Website Visits - Mobile	43,371	36,117	N/A
Website Visits per Unique Card Used	0.34	0.29	0.39

Notes on System Usage:

Once again, active card accounts stayed fairly consistent, and unique cards used increased slightly in December, continuing the trend from November.

Average weekday ridership dropped 9.2 percent, and fee-generating transactions dropped 4.5 percent, following the same pattern we saw the last two years during the holiday season. However, average weekday ridership was up 6.4 percent, and fee-generating transactions were up 9.2 percent over the previous December.

Calls to Clipper Customer Service and website traffic both continued to drop. Calls were down 10.1 percent, unique website visitors dropped 3.3 percent, and total website visits dipped 3 percent

¹ Includes average daily number of boardings, including transfers but excluding some Caltrain monthly pass trips (Caltrain only requires monthly pass customers to tag their cards once at the beginning of each month).

² Includes single-tag fare payments, BART and Caltrain exits, Golden Gate Transit entries, add-value transactions, opt-out purse refunds and pass use, including institutional passes. Does not include transfers or transactions where fee value is \$0 (e.g., issuance of free cards, zero-value tags in dual-tag systems, etc.).

Table 2: Weekday Market Penetration Rates³

	Average Weekday Clipper Boardings January 2014	Market Penetration Rate Current Month January 2014	Market Penetration Rate Prior Month December 2013	Market Penetration Rate Prior Year January 2013
AC Transit	61,176	31.0%	27.2%	26.6%
BART	224,587	55.9%	50.8%	49.7%
Caltrain ⁴	10,188	69.8%	63.2%	72.5%
Golden Gate Ferry	6,495	90.0%	91.0%	95.7%
Golden Gate Transit	9,415	44.5%	44.8%	40.3%
SamTrans	15,033	32.4%	30.0%	30.9%
Muni/SFMTA	322,336	42.7%	39.6%	48.1%
VTA	46,562	33.4%	23.4%	24.6%
San Francisco Bay Ferry/WETA	1,778	69.7%	56.2%	40.5%

³ Sources for average weekday ridership used as a denominator to calculate market penetration are: AC Transit – provided by AC Transit, March 14, 2011; BART/Caltrain/Muni/VTA – American Public Transit Association, 3rd Quarter, 2013; SamTrans – provided by SamTrans, December 2010; WETA – Provided by WETA, November 2012. Golden Gate Ferry and Transit market penetration figures provided monthly by Golden Gate Ferry and Transit.

⁴ Calculation of Caltrain market penetration assumes that monthly pass holders board Caltrain twice a day on weekdays. MTC estimates that the 12,712 calendar pass sales during Caltrain's vending window for December passes translated to 25,424 additional Caltrain boardings each weekday.

REQUEST FOR COMMITTEE APPROVAL

Summary of Proposed Contract Change Order

Work Item No.: 310-2700

Contractor: Cubic Transportation Systems, Inc.
Concord, CA

Project Title: Clipper® Implementation on Transit Operators in the East Bay and 101 Corridor and Integration of Next Generation Vehicle Devices.

Purpose of Change Order: Expand the Clipper® regional fare payment system to transit agencies in the East Bay and Sonoma County and integrate new vehicle devices into the system.

Brief Scope of Work: Install hardware, modify software, and complete other tasks to install Clipper® on transit agencies in the East Bay and Sonoma County. Work also includes integrating next generation vehicle devices into the Clipper® system.

Estimated Project Cost: This Change Order: \$8,300,000
Total actual capital contract value including Change Orders prior to this Change Order: \$131,646,402
Total actual capital contract value with this Change Order: \$139,946,402

Funding Source: STP, CMAQ, STA, TCP, Regional Measure 2 Capital, TPI

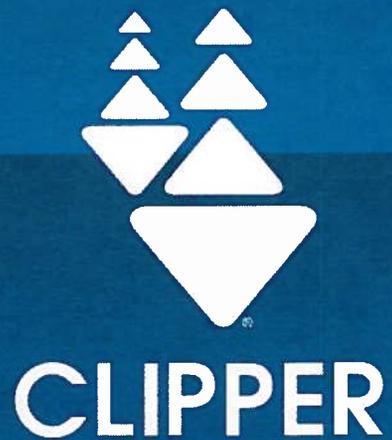
Fiscal Impact: Funds included in the FY 2013-14 agency budget; TPI and Small Operator STP/CMAQ funds subject to approval by Programming and Allocations Committee and MTC Commission in March 2014.

Motion by Committee: That the Executive Director or his designee is authorized to negotiate and enter into a Contract Change Order or Change Order Amendment with Cubic Transportation Systems, Inc. for the purposes described herein and in the Executive Director's March 7, 2014 memorandum, and the Chief Financial Officer is authorized to set aside \$8,300,000 for such Contract Change Order or Change Order Amendment, subject to approval of TPI and Small Operator STP/CMAQ funds as described above.

Operations Committee:

Jake Mackenzie, Chair

Approved: Date: March 14, 2014



Clipper® Update

- Expansion to East Bay and 101 Corridor Operators
- Planning for Next Generation System

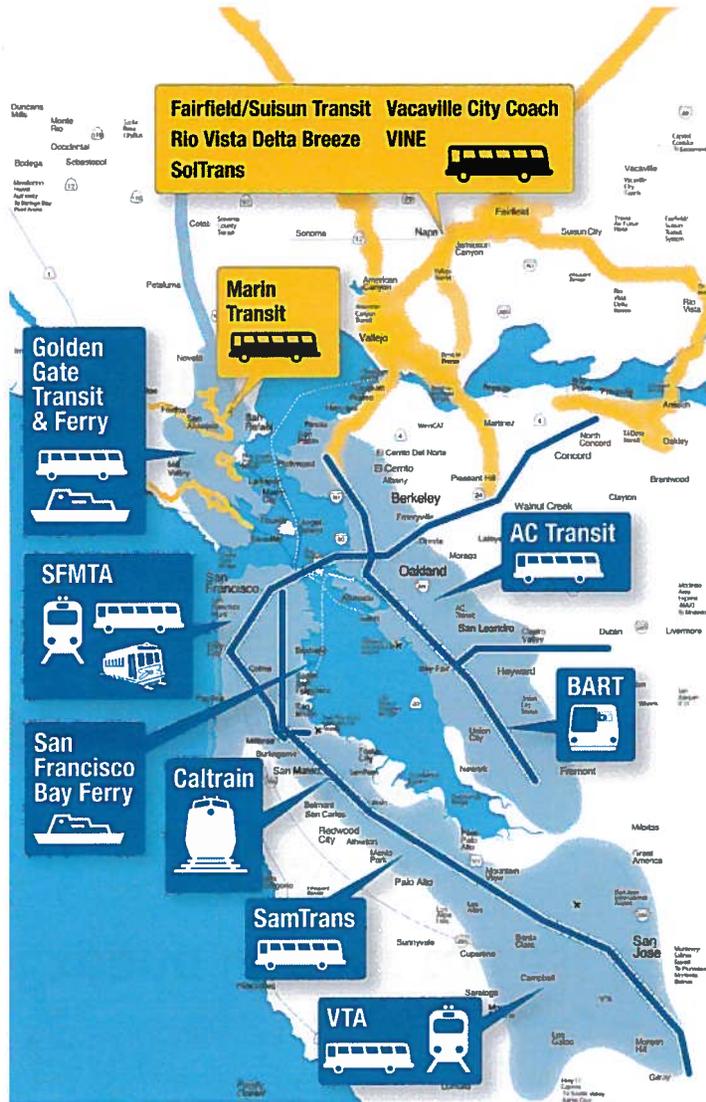
March 14, 2014

Expansion to East Bay and 101 Corridor Operators



CLIPPER

Clipper® Program Overview



- Operating on 8 systems that together account for 95% of regional transit rides
 - 45% market share
 - 1.4 million active cards
 - Processing \$37M+/month
- Expansion to 6 more systems to be completed in 2014



Today's Approval Request

- Expand Clipper to East Bay and 101 Corridor Operators

East Bay

- County Connection
- WestCAT
- Wheels
- Tri Delta Transit

101 Corridor

- Santa Rosa City Bus
- Sonoma County Transit
- Cloverdale Transit
- Petaluma Transit
- Healdsburg Transit

- Remaining implementations: Union City Transit



Clipper Expansion - Background

- Staff proposed roll out strategy to remaining operators in Jan 2012
- Key goal: streamline to contain costs
 - Simplified business rules
 - Consolidated operator groups
- Factors in prioritizing operator groups
 - Ridership
 - Connectivity to existing Clipper operators
 - Ease of implementation
- Equipment availability



New Equipment Update

- East Bay and 101 vehicles will use next generation equipment
 - Newer network technology
 - Higher memory capacity
- Integration work started in February
- New equipment will also support ongoing operational needs of current Clipper operators



Driver Control Unit



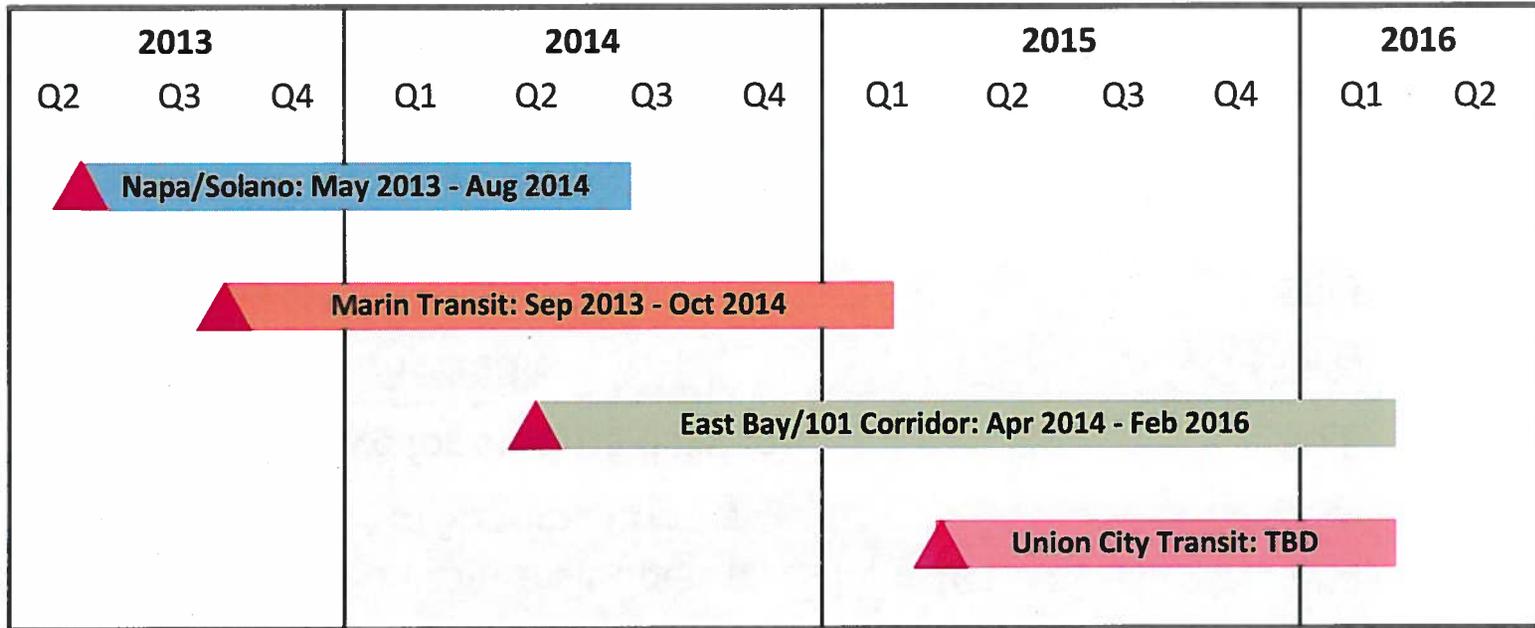
New Reader

Breakdown of Cubic Change Order Price

	Item	Price (\$M)
1	Integration of new equipment	\$1.5
2	Expansion to East Bay transit operators	\$4.4
3	Expansion to transit operators along 101 Corridor in Sonoma County	\$2.4
4	Incentive for on-time delivery	\$0.5
5	Contractor credit	(\$0.5)
	Total	\$8.3



Cubic's Implementation Schedule



Planning for Next Generation System



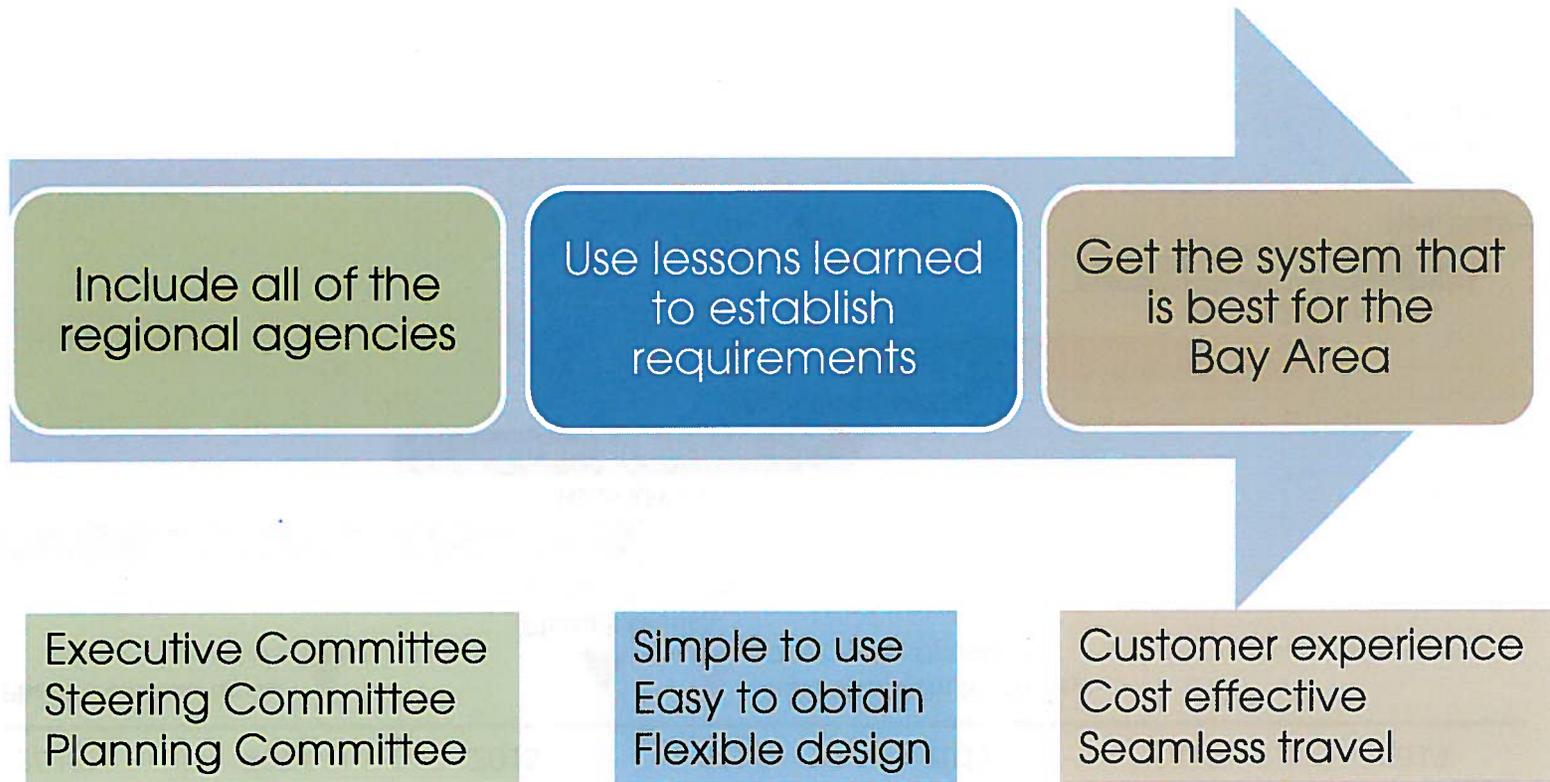
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Planning for the Future of Clipper

- Contract with Cubic ends in November 2019
- System limitations
 - System architecture is from the late 90s
 - Device components approaching end-of-life
 - Complex regional policies limit flexibility
 - Layering in new technologies to integrate with the existing Clipper® system would likely be expensive and risky
- Preparing for new procurement
 - C2 Executive, Steering and Long-Range Committees meeting regularly
 - Work on vision for new system, concept of operations, and fare simplification underway

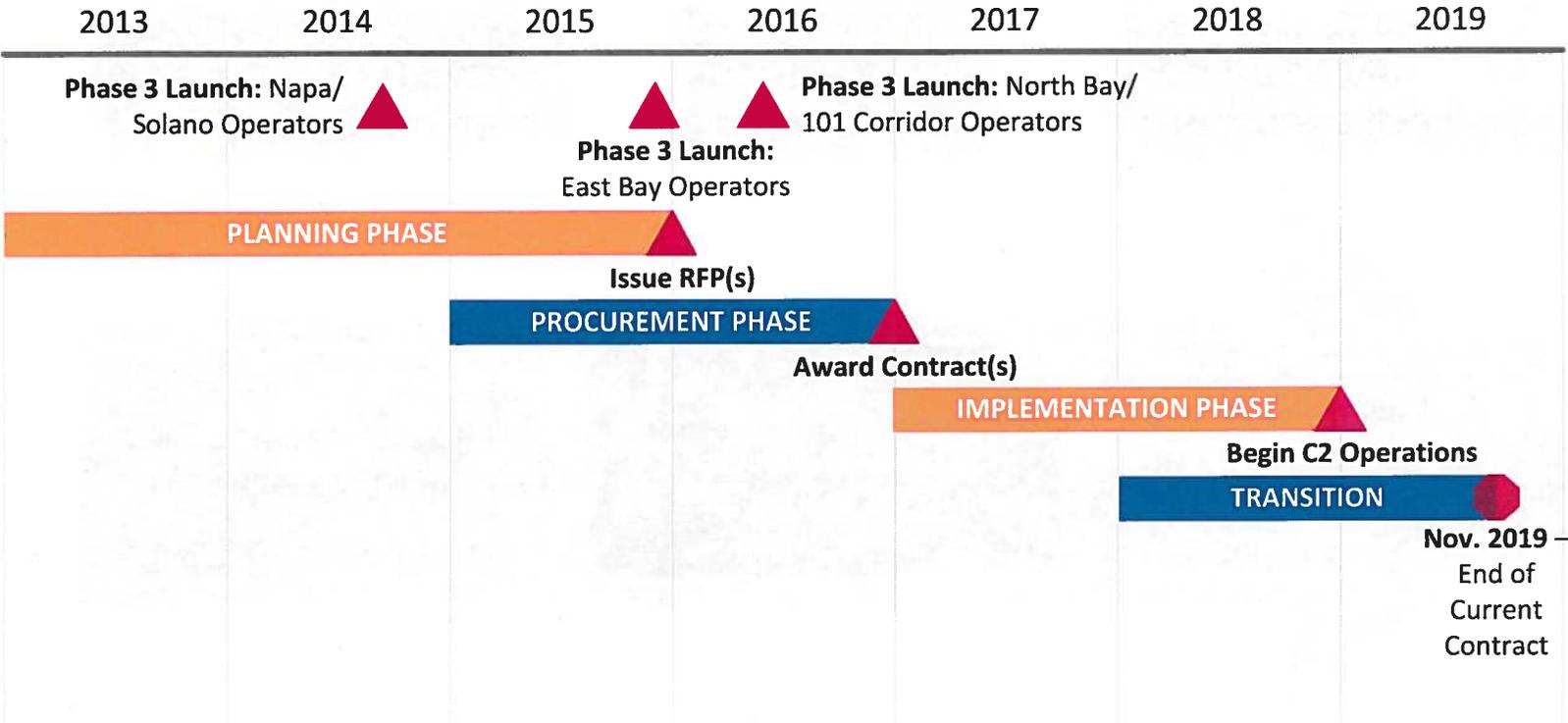


Next Generation Planning



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C2 Schedule – Taking the Time to Do it Right



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New Systems Coming Now

LONDON, CHICAGO, TORONTO, WASHINGTON D.C.



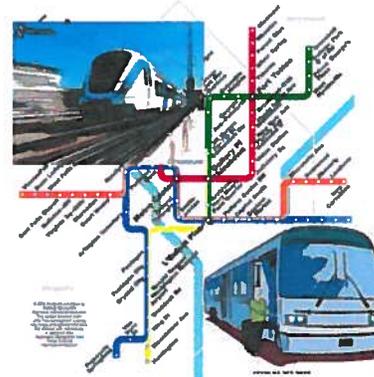
- Easy online sales
- Buy passes, get info on mobile devices



Choice of payment including mobile



Cloud-based information flow



- Simplified regional agency connections
- Affordable operation equals less operator confrontation



Positive Customer Experience

Simple, Flexible, Fast, Accurate