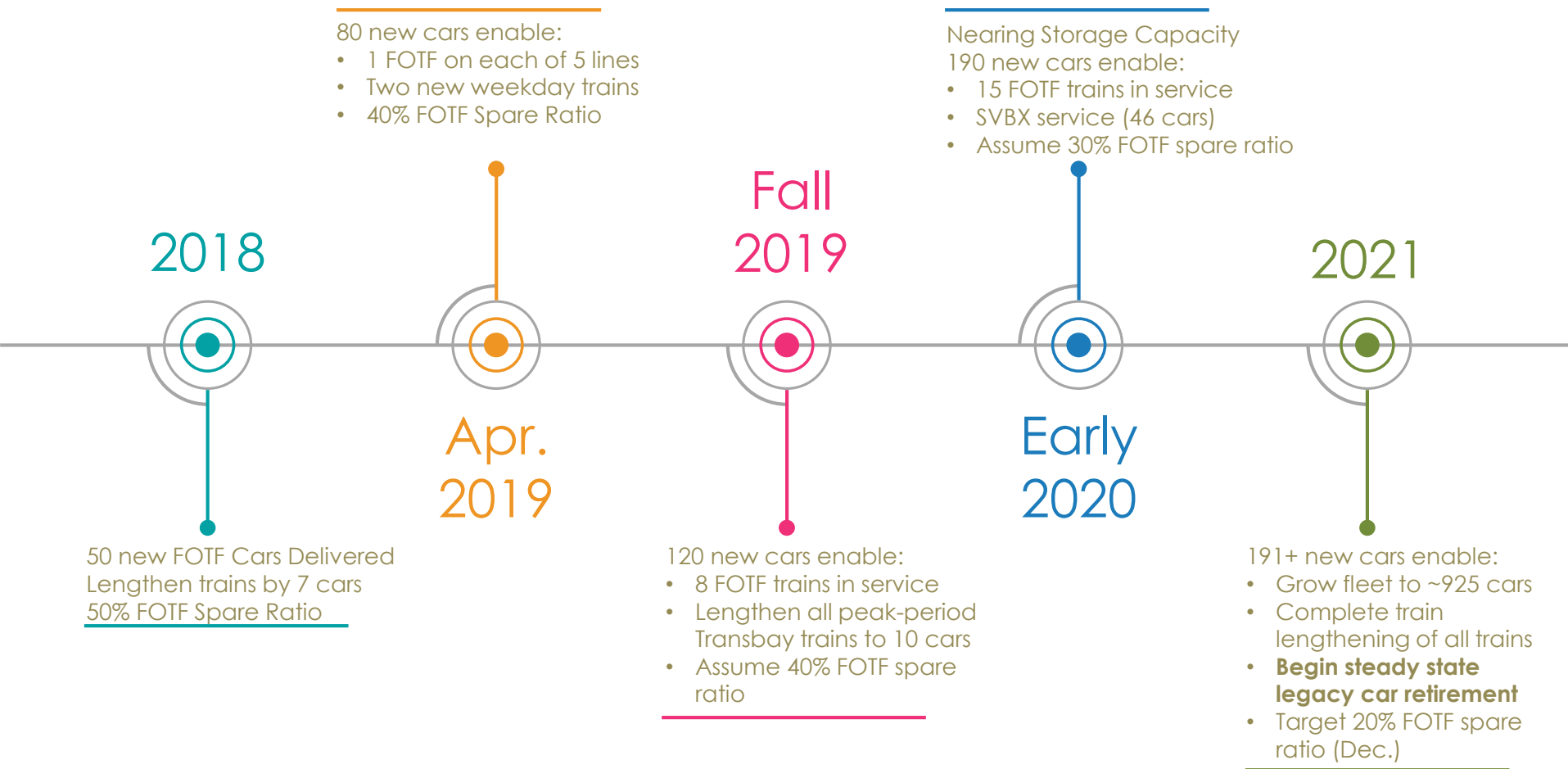


# BART Legacy Fleet Decommissioning

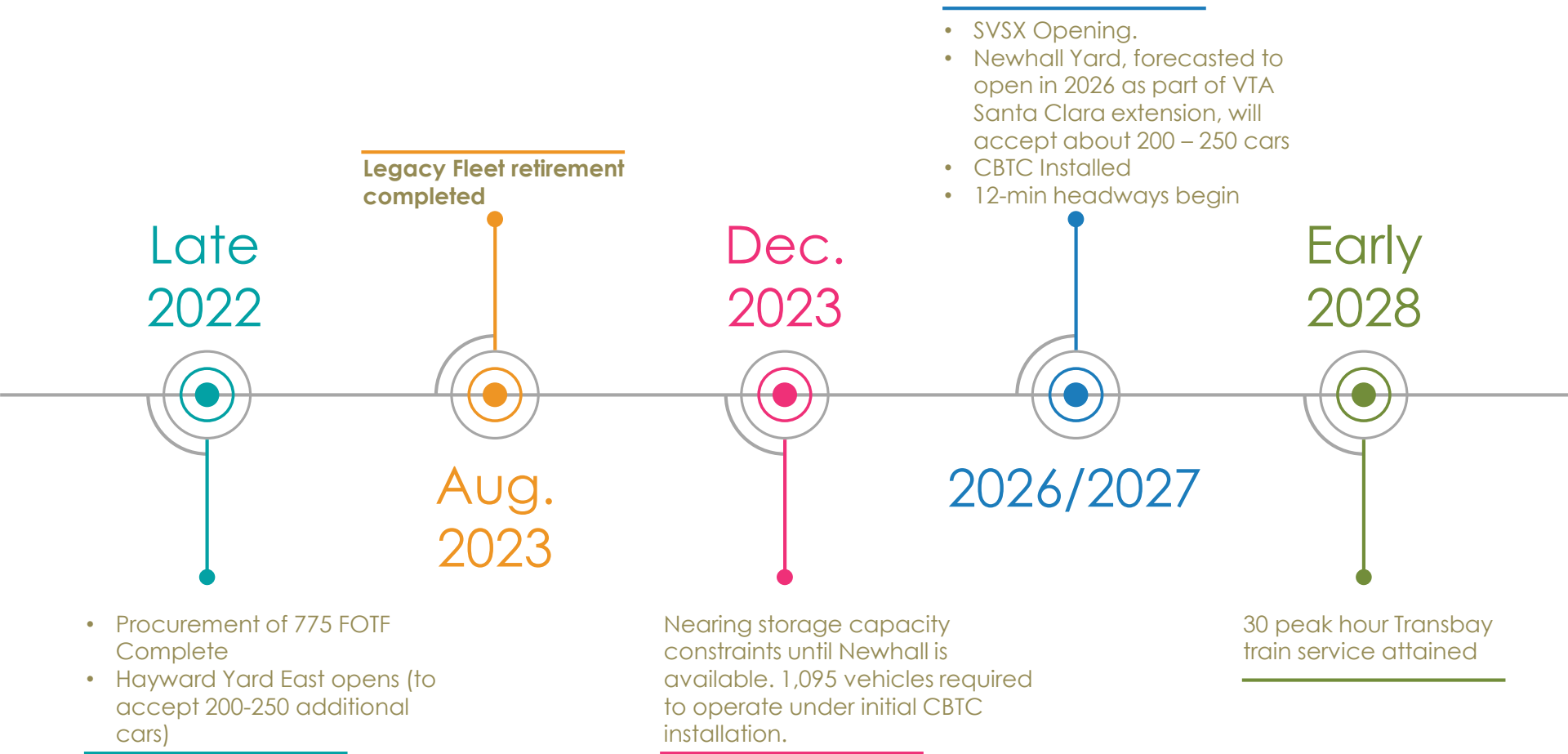


January 10, 2019

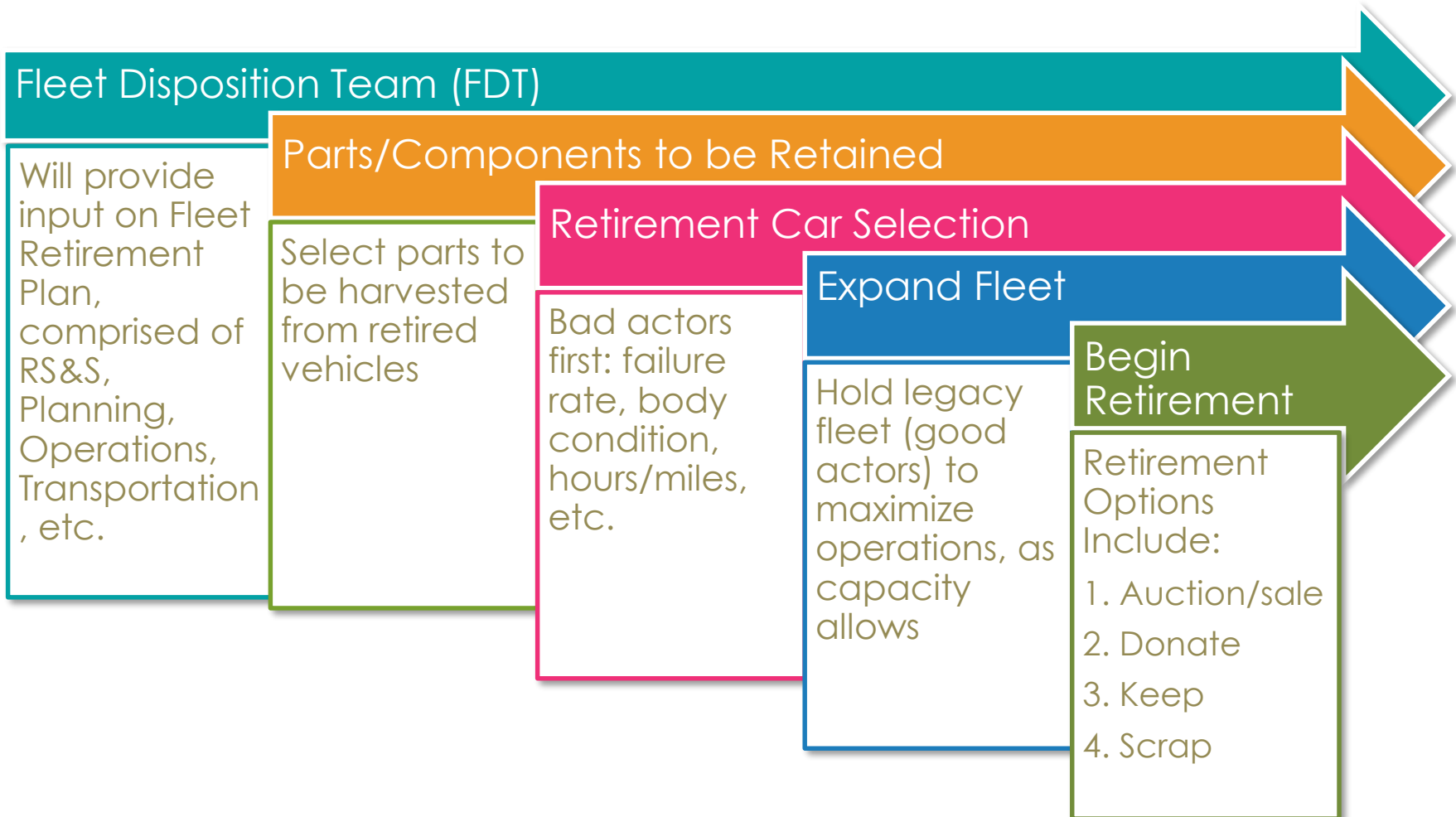
# ANTICIPATED TIMELINE



# ANTICIPATED TIMELINE



# DECOMMISSIONING PROCESS OVERVIEW



# BART STAKEHOLDERS

Rolling Stock & Shops	<ul style="list-style-type: none"> <li>Overall project responsibility</li> <li>Coordination within departments and vendors</li> <li>Contract Administration</li> <li>Establish processes and desired outcomes</li> </ul>
Fleet Disposition Team	<ul style="list-style-type: none"> <li>Car selection</li> <li>Preparation, parts removal</li> <li>Final equipment securement for over-the-road transport and handoff to the contractor</li> </ul>
Financial Planning	<ul style="list-style-type: none"> <li>Ensure FTA financial commitments have been met</li> <li>Receive sale or scrap value into General Fund</li> </ul>
Procurement	<ul style="list-style-type: none"> <li>Assists with the disposition of cars (auction, donation, scrap)</li> <li>Advertises cars for sale</li> <li>Negotiate with external vendors (transportation, recycler)</li> </ul>
Legal	<ul style="list-style-type: none"> <li>Ensure legal compliance, etc.</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>Outreach to provide information and find public desires for vehicle retirement</li> <li>Fleet retirement announcement and ceremony</li> </ul>

# FEDERAL REQUIREMENTS

Per FTA Circular 5010.1E, Grant Management Requirements:

“After the useful life of federally assisted property is reached, or the property is no longer needed for the original Award, rolling stock and equipment with a current market value exceeding \$5,000 per unit, or unused supplies with a total aggregate fair market value of more than \$5,000, may be retained or sold. FTA is entitled to an amount calculated by multiplying the current market value, or net proceeds from sales, by FTA’s percentage of participation in the cost of the original purchase.”



**Federal Transit  
Administration**

# FEDERAL REQUIREMENTS

In addition to the decommissioning process, cross-departmental coordination will need to occur to inform the FTA of this process through the following reports:

- **Spare Ratio Justification**
- A **Rolling Stock Status Report** (describing fleet selected to be disposed of, and remaining Federal interest in cars)
- The **Contingency Fleet Plan**. A contingency justification and a specific maintenance plan to keep CF in a state of ready-reserve (in case fleet needs to re-enter service)
- The **Transit Asset Management** (TAM) Plan
- **National Transit Database** (NTD) reporting
- **Transit Award Management System** (TrAMS) reporting

# LEGACY FLEET COMPOSITION

Series	Cars	Manufacturer	In-Service Date	FTA Funding	Years Rehabilitated	Years Eligible for Retirement*
A2	59	Rohr Industries	1970's	FTA funded rehab only 70.47%	1998	2018
					2002	2022
B2	380			FTA funded rehab only 70.47%	1998	2018
					2002	2022
C1	150	Alstom	1985	FTA funded 54.89%	2015	
			1988		2018	
C2	80	Morrison-Knudsen	1993	No FTA participation	2018 (No FTA Participation)	
			1995		2021 (No FTA Participation)	

\*Per FTA minimum Federal useful life and/or agreed upon useful life.

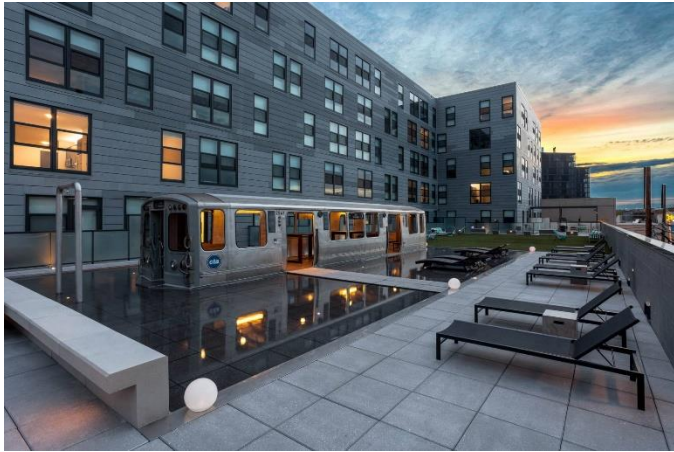


# RETIREMENT OPTIONS

- a. Auction - Sell vehicles to another transit operator who will use the vehicles in operation
- b. Disposal for recycling/scrap to the highest bidder
- c. Create a BART car museum, sell/donate cars to existing rail museums, etc.
- d. Donate car(s) to emergency response forces, U.S. Army for exercises, drills, etc.
- e. Donate car(s) to local technical school to encourage trade students to learn rail car technology



# RETIREMENT OPTIONS



- f. Sell car(s) for re-use as housing, Air BNB, as a restaurant, etc.
- g. Donate or sell the car(s) for use as homeless shelters or temporary shelters (i.e. Redwood Valley Fire Recovery has requested them)
- h. Donate or sell the car(s) for use as art projects or another similar repurposing
- i. Sell parts of the car(s) (pieces as memorabilia)
- j. Retain/Mothball some of the fleet for special service
- k. Bury a carbon steel subway fleet in the ocean for use as part of an artificial reef (the aluminum composition of the BART fleet prevents this from being feasible)



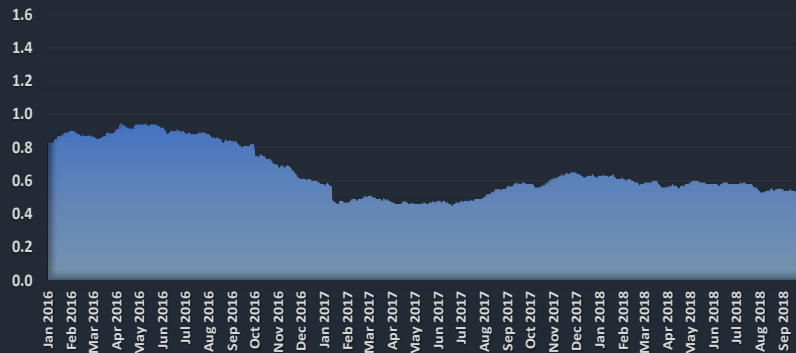
# CAR SELECTION CRITERIA

The car selection criteria for decommissioning will take into consideration the following, at a minimum:

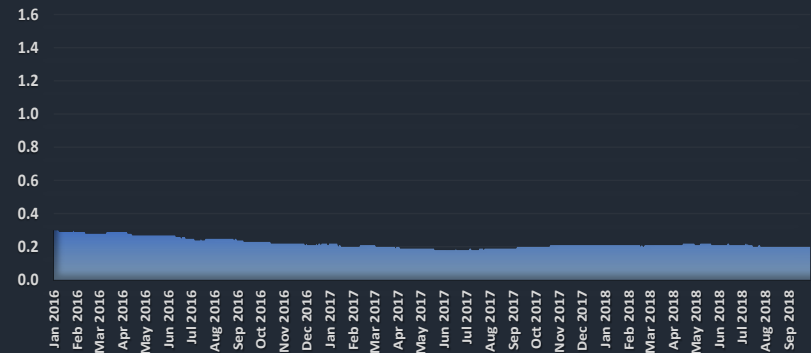
- Reliability – Mean Time Between Incident (MTBI) and MBTI rate/1,000 hours over a 12 and 24-month period. Decommission “Repeaters” or bad actors that impact service reliability.
- Availability – Long term holds due to accident damage.
- Exterior and interior condition
- Hours
- Time remaining on key components
- Status of component overhauls
- APSE type

# YEARLY REPEATER RATES BY CAR TYPE

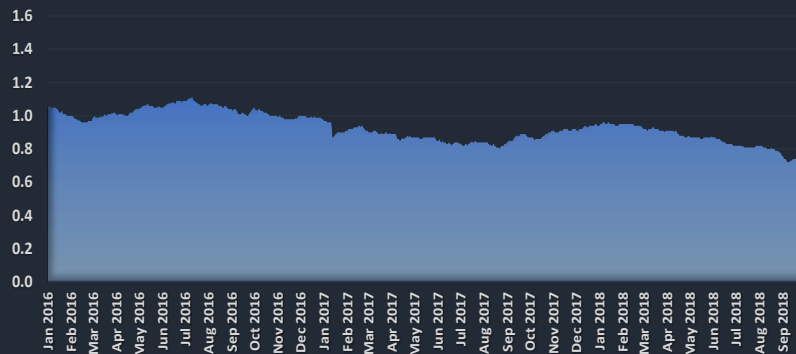
## A Car



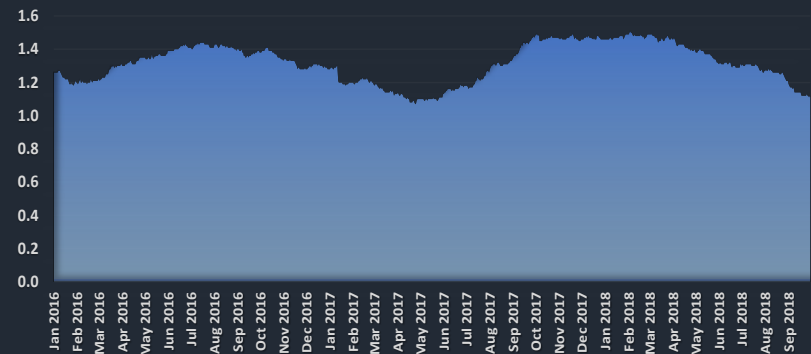
## B Car



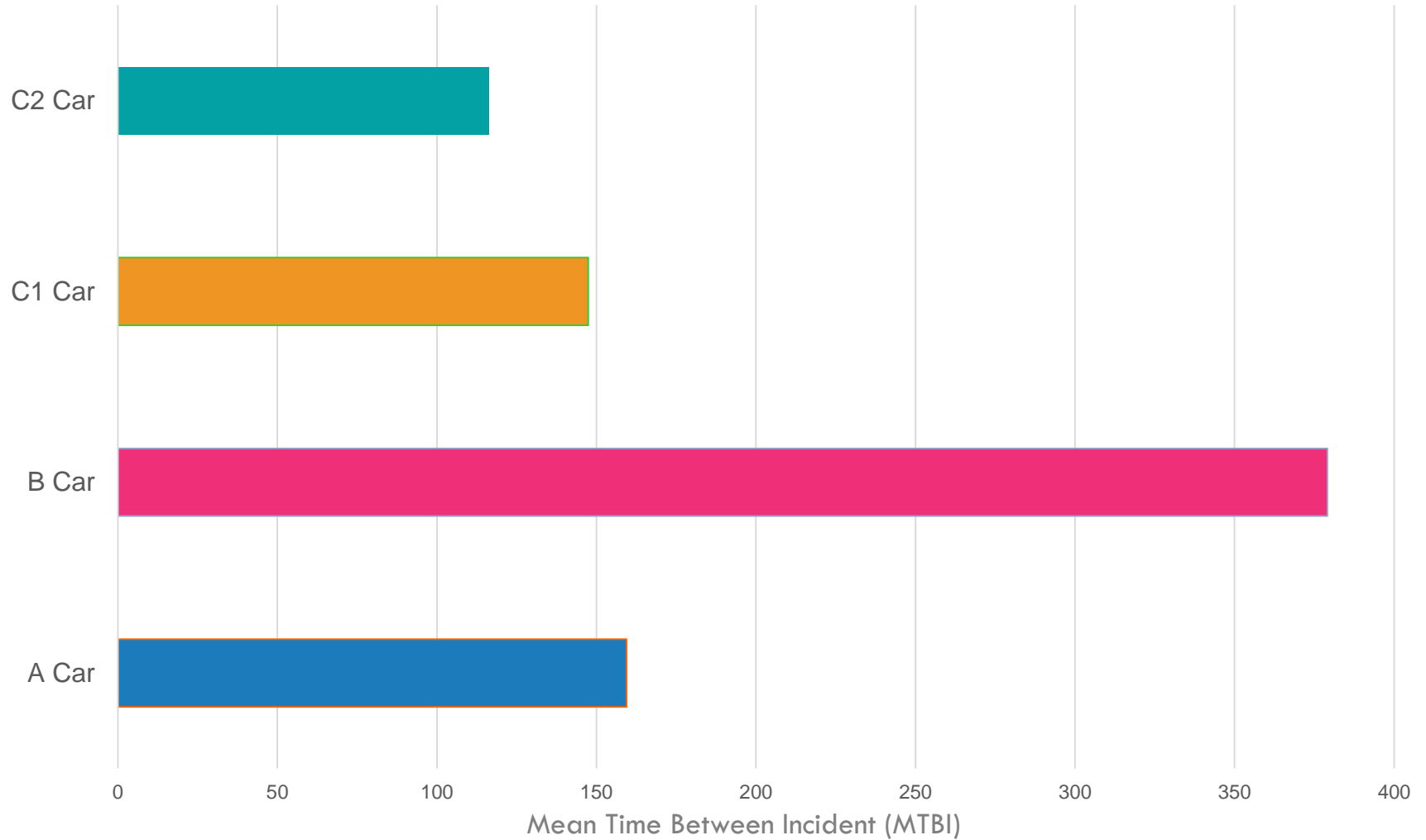
## C1 Car



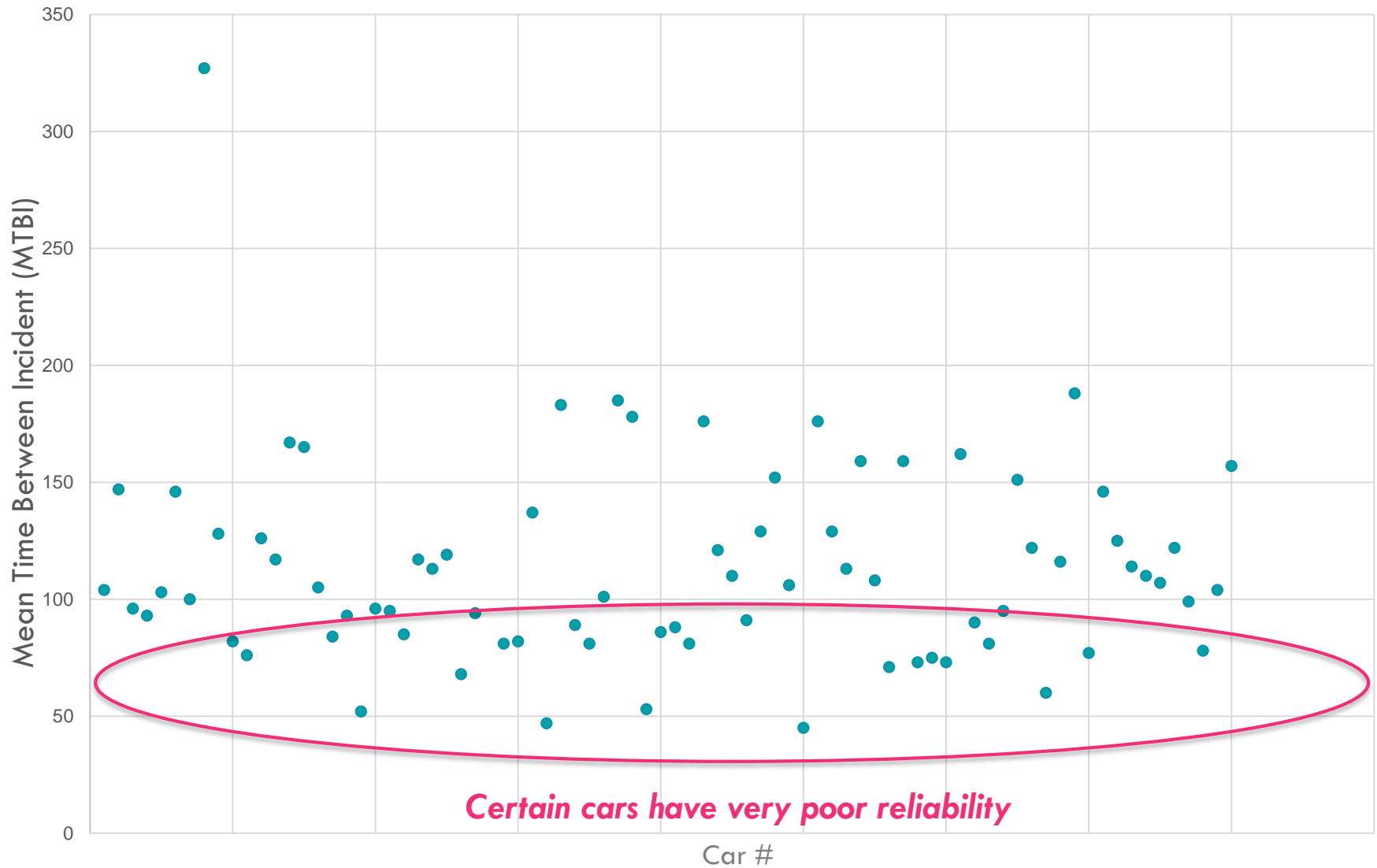
## C2 Car



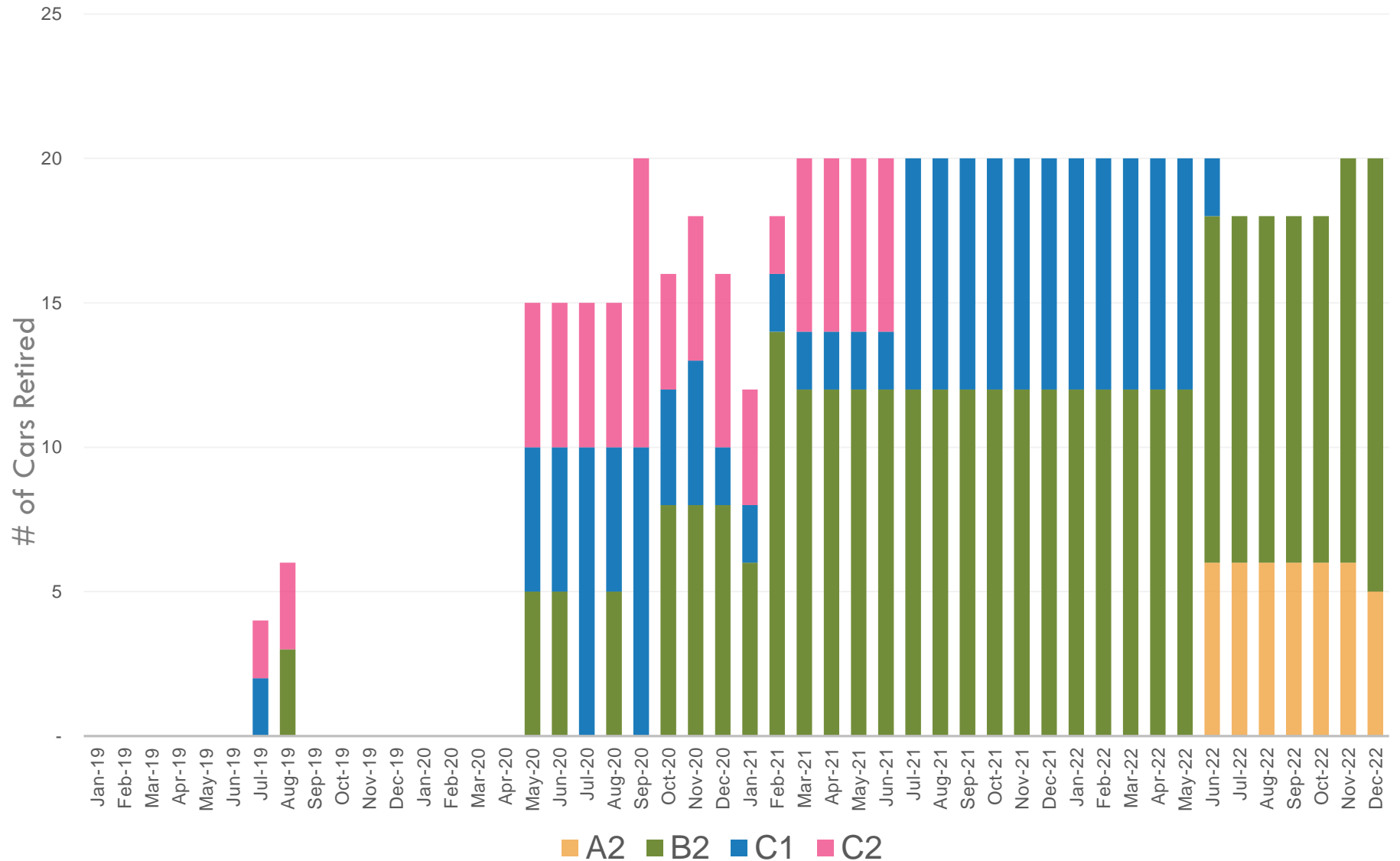
# AVERAGE MTBI BY FLEET TYPE



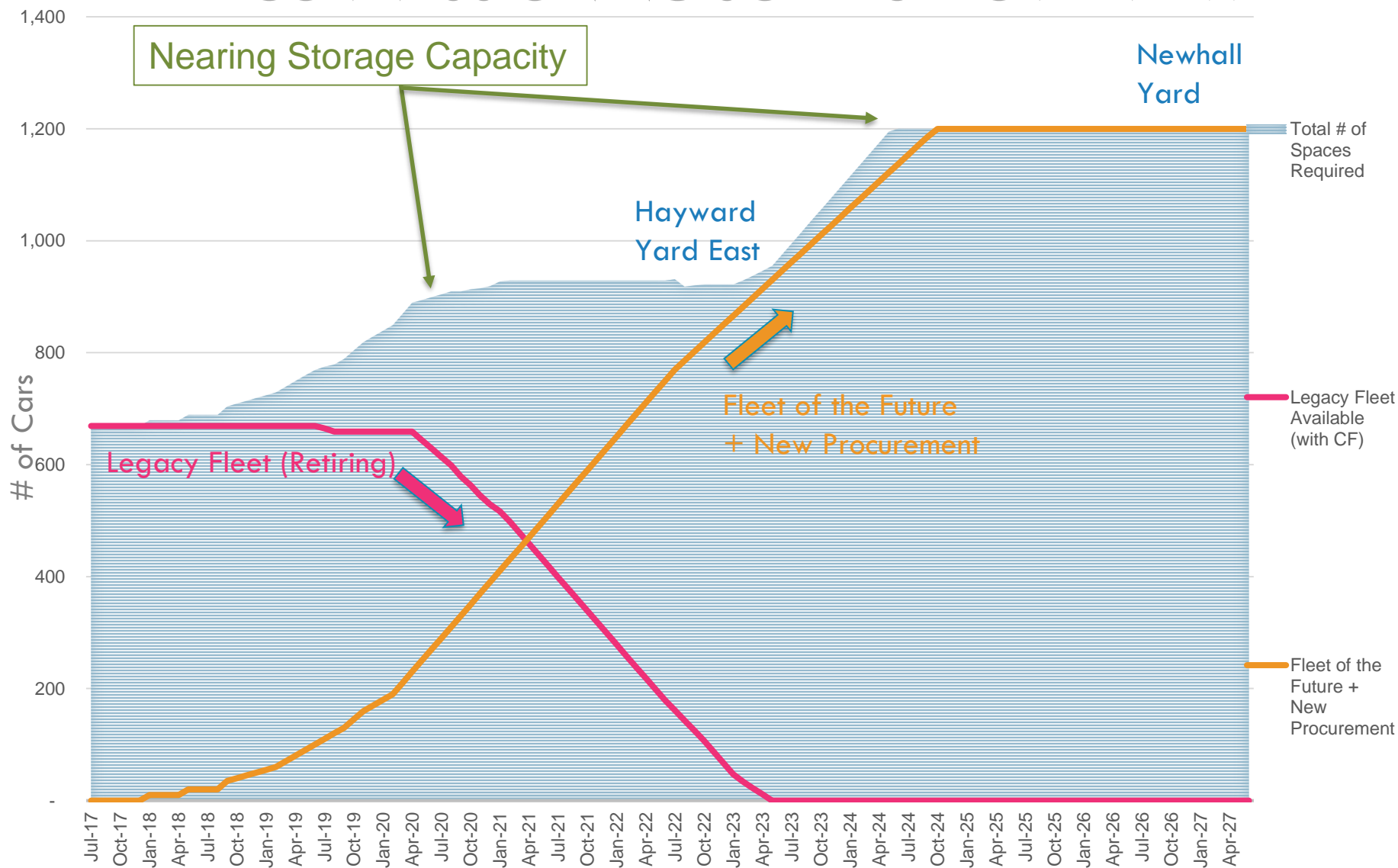
# MTBI OF C2 CARS



# PRELIMINARY FLEET RETIREMENT SCHEDULE



# DECOMMISSIONING SCHEDULE OVERVIEW





# GLOSSARY OF TERMS, ACRONYMS, AND ABBREVIATIONS



- **Automatic Train Control (ATC)** A train protection system that uses electrical signals to manage the location and control train speeds on specific fixed segments of track.
- **Auxiliary Power Supply Equipment (APSE)** Equipment that channels the 1,000-volt current that powers BART trains and takes it to safe levels to power the lighting, air conditioning, etc.
- **Communication-Based Train Control (CBTC)** is a railway signaling system that makes use of the telecommunications between the train and track equipment for the traffic management and infrastructure control. A CBTC system allows trains to operate safely at much closer headways.
- **Consist** A set of coupled revenue vehicles making up a revenue train.
- **Fleet of the Future (FOTF)** The revenue vehicles currently being delivered to replace and expand BART's pre-existing fleet (legacy fleet) of 'A', 'B' and 'C' cars.
- **Federal Transit Administration (FTA)** The agency of the U.S. Department of Transportation which administers the federal program of financial assistance to public transit.
- **Headway** Time interval between vehicles moving in the same direction on a particular route.
- **Mean Time Between Incidents (MTBI)** The average time from when a system fails, until it next fails.
- **Peak Period Service** The level of service delivered during the three-hour periods encompassing greatest passenger demand.
- **Ready Reserve** Train ready and crewed for placement in service in the event a scheduled train becomes inoperable, or to cover some other unplanned disruption of service.
- **Repeater Rate** The same or similar incident occurring within 100 hours of operation.
- **Spare Ratio** The numerical proportion of the number of cars held from service at any time to the number of cars deployed for peak- period service plus those in ready reserve status.
- **Silicon Valley Berryessa Extension (SVBX)** Extension of the BART system commencing at the Santa Clara County line and terminating at Berryessa Station, designed, financed and constructed by VTA.
- **Silicon Valley Santa Clara Extension (SVSX)** Extension of the BART system through Santa Clara County from the Berryessa Station via downtown San Jose to Santa Clara. The approximately six-mile extension includes four new stations and a rail yard. The extension is being designed, financed and constructed by VTA.

QUESTIONS?