



SFMTA



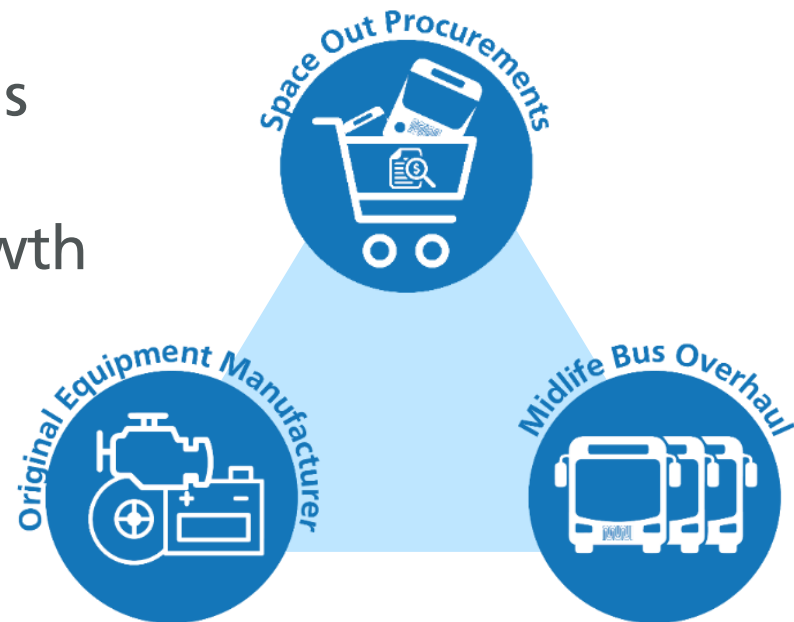
Fleet Update

SFMTA Board of Directors

July 20, 2021

Principles

- Maintain consistent fleet average age
- Performance-based procurements
- Develop robust maintenance standards
- Align with City's sustainability goals
- Anticipate and accommodate growth
- Maintain a spare ratio of 20%



Meet the Fleet



Meet the Fleet: Motor Coaches



60' Articulated Hybrid Coaches (224)



40' Hybrid Coaches (312)



32' Hybrid Coaches (30)



40' eBuses (12)

Meet the Fleet: Trolley + LRV



40' Trolley Coaches (185)



60' Articulated Trolley Coaches (93)



LRV4 – Seimens (68)



Breda (retirement underway, 143 currently)

Meet the Fleet: Cable Cars & Historic Streetcars



PCC Streetcars – Single and Double Ended



Milan



Other Vintage Streetcars



Cable Cars

Meet the Fleet: Paratransit



Paratransit

- 131 Cutaways
- 22 Minivans
- 10 Sedans

Meet the Fleet: Non-Revenue



Go4



Sedan & Passenger Trucks



Specialty Vehicles (e.g. Bucket Truck)



Specialty Vehicles (e.g. Freightliner Truck)

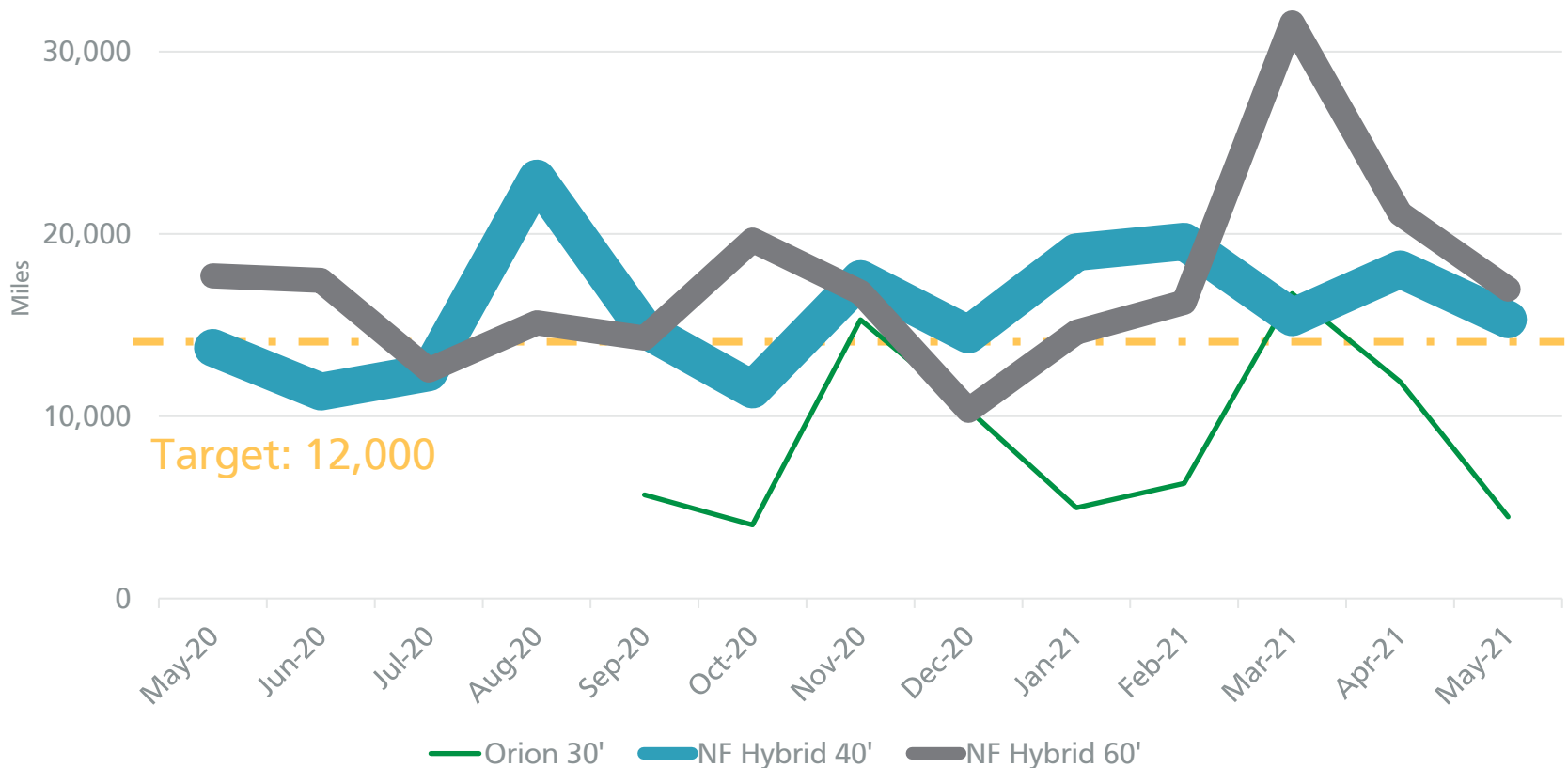
Building-In Reliability



Motor coach reliability

Consistently exceeding reliability targets

Mean Distance Between Failures, MDBF

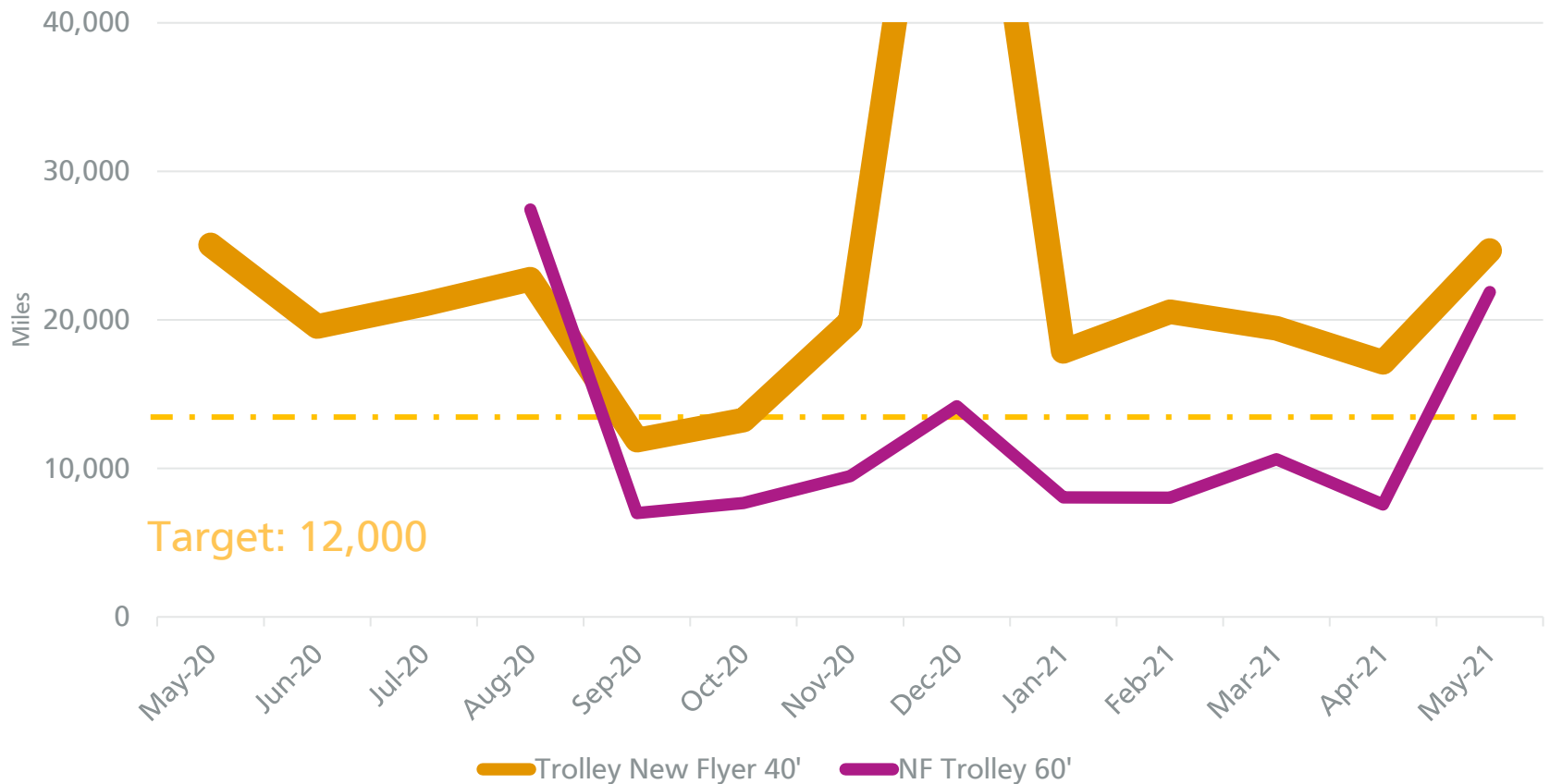


Notes: 30' Orion did not operate from May 2020-August 2020

Trolley coach reliability

60' Fleet reliability improving

Mean Distance Between Failures, MDBF



Mid Life Overhauls

Received no responsive bids to our RFP for Phase I

- Initial procurement strategy not successful, too prescriptive
- Regrouped for a combination of internal and external approach

Two-pronged strategy:

- Conducting targeted system replacements and refurbishments in-house on the oldest 112 coaches (2013)
- Planning to reissue modified RFP for midlife overhaul for remaining 219 phase 1 vehicles



Mid Life Overhauls

Lessons Learned will be incorporated into Phase II / Phase III

Phase II of the overhaul program will include 152 40' motor coaches and 113 60' motor coaches

Phase III will include overhauls of the remaining 33 60'; 185 40' trolley coaches.



Historic Overhauls and Restorations



Cable car has inhouse rebuild program

PCC rebuild contract wrapping up; 3 vintage double enders to undergo rebuild this year

Siemens Deliveries

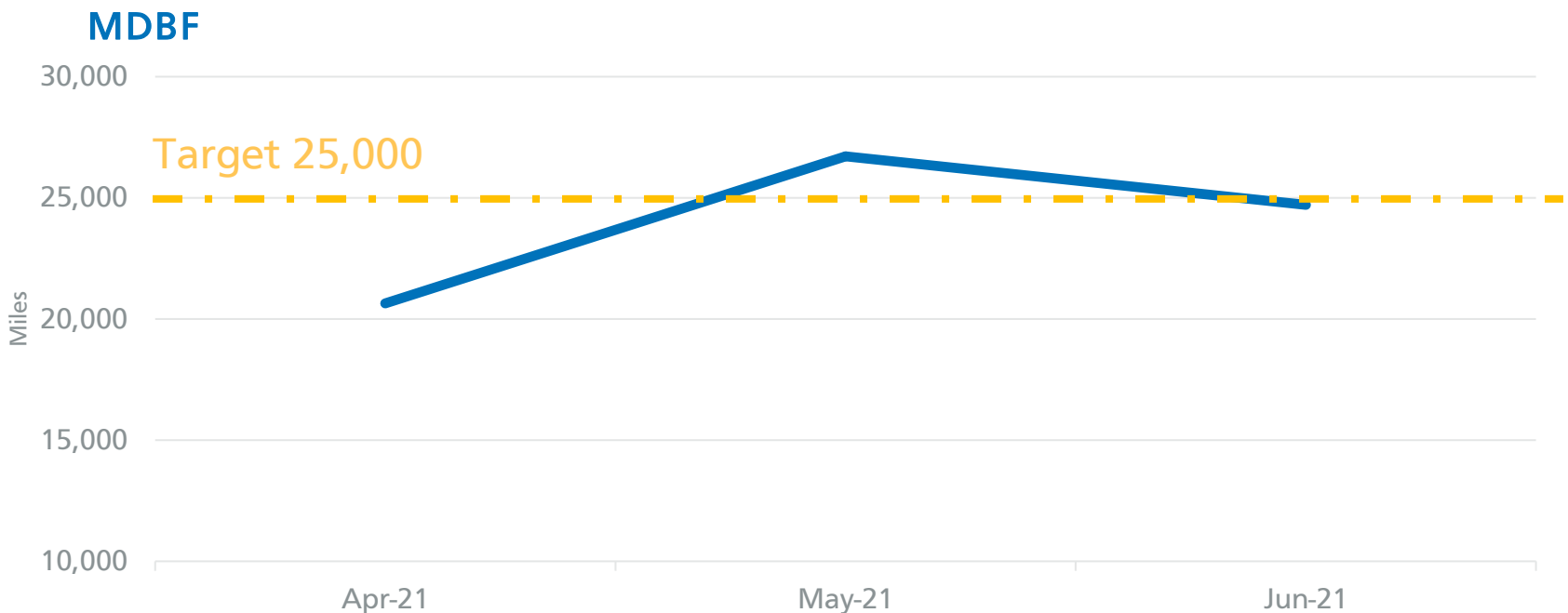
Calendar Years	2017	2018	2019	2020	2021	2022	2023	2024	2025
Expansion #1	68								
Replacement					151				

- We will accept replacement LRVs through 2025
- These vehicles provide:
 - Maintenance efficiencies
 - Improved reliability
 - Comfortable, spacious interior
 - New onboard technology for passenger communications
 - Automated passenger counters



LRV4 Reliability

LRV4 Contract reliability program paused in April 2020 due to low monthly mileage. The program will restart in the fall.



These figures are *not* part of the formal contractual reliability program but demonstrate that fleet performance remains high.

LRV4 Expansion Option: Coming in September

LRV4 Option Opportunity

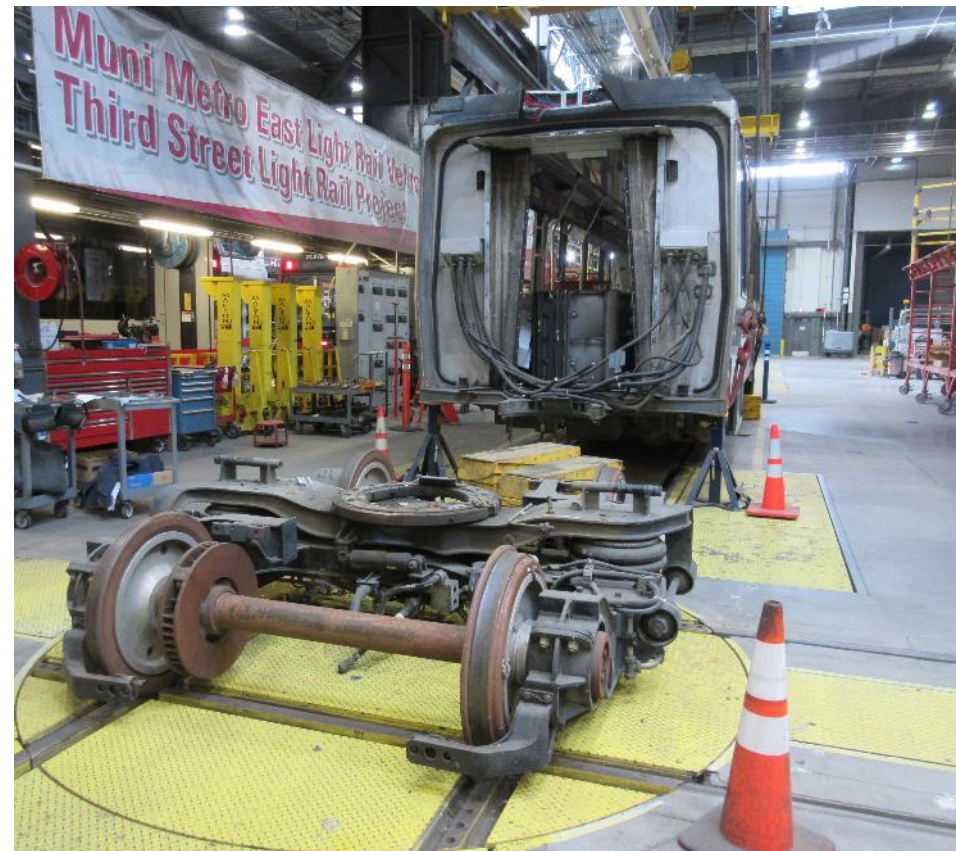
- Have option to procure up to 45 more LRV4, recommend up to 30 vehicles
- Must execute by September 2021 or *opportunity is lost entirely*
- No payment required until 2025: *multiple chances to cancel*

LRV4 Option Benefits

- Provides 2-3 years of recovery data to re-baseline future service needs
- Provides for a road-tested, fully-refined, proven LRV4 design
- Avoids time, expense, distraction of a new procurement
- Avoids small separate expansion fleet for only 25-30 vehicles later
- Preserves a uniform fleet with uniform maintenance practices
- Per vehicle cost dramatically lower than a new procurement (no new design, engineering, production set-up)

Breda Retirement

- During COVID, selected the 40 worst-performing Breda cars for retirement
- Salvaged useable parts which will be reused on the remaining 110 vehicles
- First 6 retirements completed



Breda End-of-Life Overhaul

For remaining Breda fleet, we are performing minor overhaul work to ensure they remain reliable through the end of their retirement in 2025.

A select subset of vehicles will receive the following work based on their history of performance and other system indicators:

- Propulsion system gate driver board replacement addresses the electric motor reliability
- Update master controller which controls combination of complex parts and electronics in the operator cab
- Equip all vehicles with LED headlights to improve operator visibility
- Perform HVAC overhaul to improve reliability

What's Next





Clean Rollin'

- Only 1% of citywide emissions are attributable to Muni
- Early adopter of hybrid vehicles
- Greenest, newest rubber tire fleet in the nation.
- Streetcars, trolley, LRVs and cable cars are zero-emissions, fueled by Hetch Hetchy power
- Evaluating battery electric coaches for compatibility with city's unique needs

Muni's First Battery-electric Pilot Buses Have Arrived!



Next Steps for Fleet Program

- Start receiving replacement LRV4s Fall 2021
- Continue Breda strategic capital investment and retirement program
- Continue e-bus evaluation process
- Complete inhouse midlife overhaul work

Future Approval Requests

	SFMTA Board	BOS
LRV4 Expansion Option	August	September
Midlife Overhaul Contract	Fall 2021	Fall 2021
Vintage Streetcar	Spring 2022	n/a