



LIGHT RAIL VEHICLE PROCUREMENT PHASE II

Passenger Comfort Updates

SFCTA CAC

April 24, 2019

Key design features

The new trains feature updates from lessons learned on past procurements:

- **Lighter vehicle**—quieter ride for passengers and neighbors
- **Improved interior design:**
 - **Facilitates flow of people**—less blocking the doors
 - **Increased potential standing capacity**—more comfortable ride during peak hours
- **Upgraded passenger information**—know where you are and where you're going
- **Easier to maintain door and step units**—less time spent fixing critical systems

Operations and maintenance enhancements

We've been collecting feedback from operators, maintenance, engineering and the public about all aspects of these vehicles since they first arrived

Operations: *20 enhancements*

- Improved sunshades for enhanced Operator visibility
- Updated operator panel switches to more easily distinguish functionality (e.g., front door versus all door button)
- Updates to passenger information system to clarify messaging

Maintenance: *22 enhancements*

- Updates to wheel design to make wheel-truing easier
- Modify brakes to better distribute force during quick stops
- Changes to panel securements for easier access

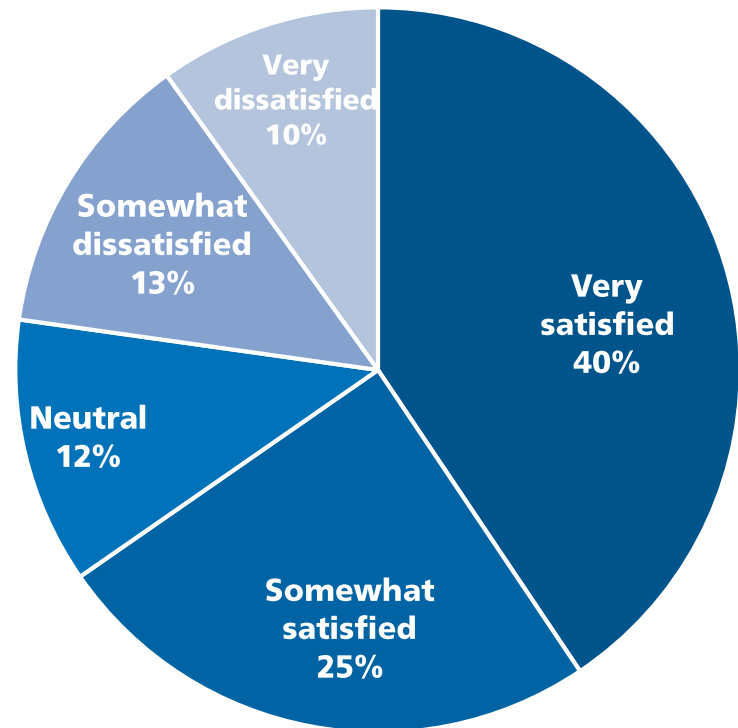
What do riders think of the new fleet overall?

Survey results:
Are you satisfied with the new LRV4s?

Riders are overwhelmingly satisfied with the new vehicles

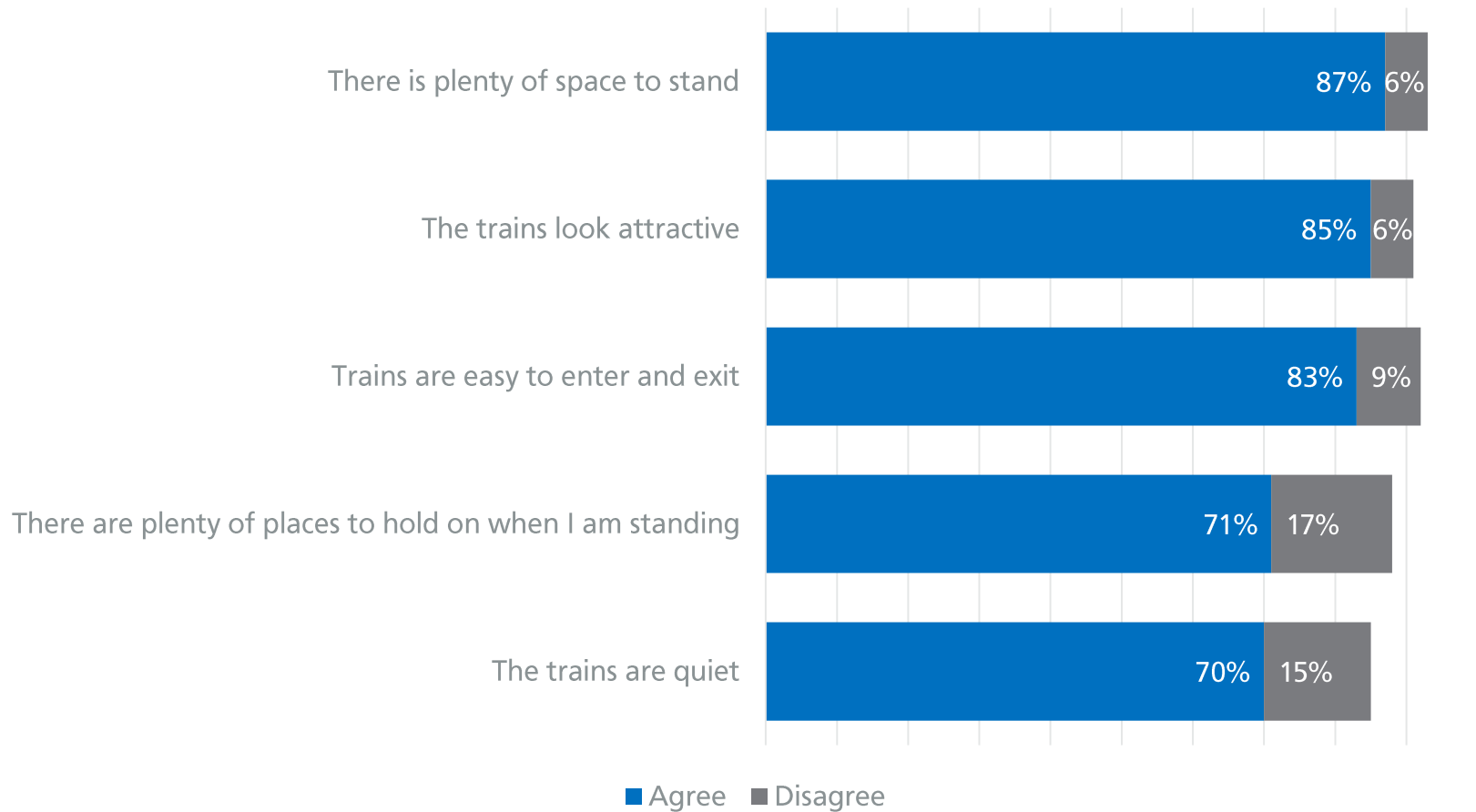
Majority of those surveyed are regular riders, all had first hand experience onboard the new Siemens trains

In all categories we surveyed, people are more satisfied than dissatisfied



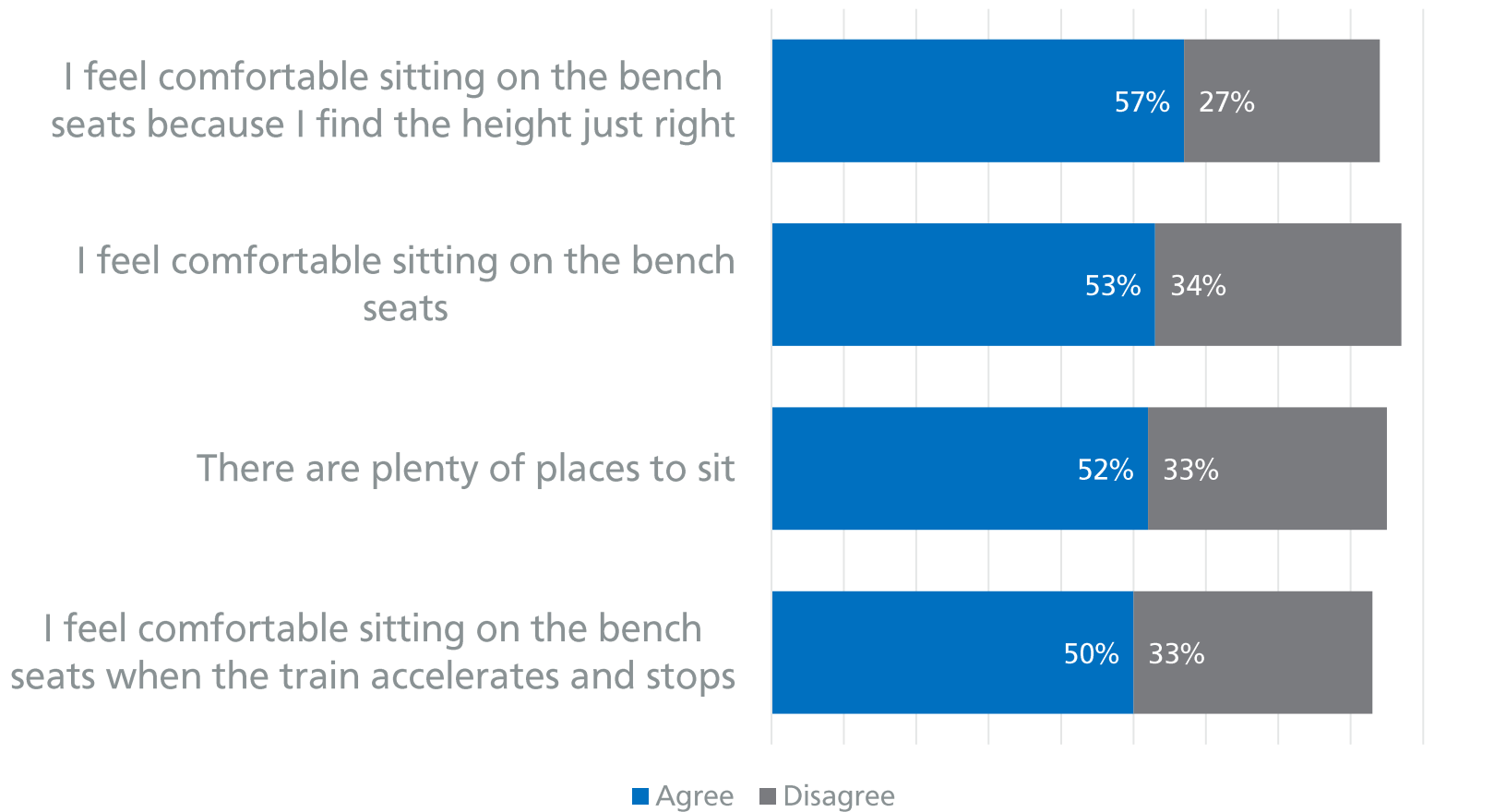
n=340

Where we've got it right



n=340

What we heard: Room for improvement



n=340

Focus group feedback

The **seats are very uncomfortable**, slippery and capacity is not defined by seat dents.

Most passengers **like the handholds** and want **one to three more** of them per vertical pole, dividing space at varying heights to accommodate different rider heights.

Some **like the wider aisle** created by the sideways-facing seats for people to **travel through more easily**.

Recommend **SFMTA place signs on the outside of the trains** to remind incoming riders to **let passengers off the train before entering the train**.

Special considerations

We wanted to make sure important voices weren't being lost in the crowd:

Customers with disabilities

- Similar overall satisfaction levels as all respondents
- High levels of approval for ease of access and egress
- Much higher levels of dissatisfaction with the seats

Shorter riders: 5'4" (162cm) or less

- Similar overall satisfaction levels as all respondents
- Lower levels of satisfaction with the height of seats

Passenger comfort updates

Options for changes were developed to address customer feedback in the following categories:

- Additional handholds
- Seating type
- Interior seating layout

Additional Handholds

Archways
Provide handholds in center of aisle



Hand Straps
Provide multi-length hand straps



Seating type

New seating design will be used on replacement fleet to provides increased definition and addresses customer feedback, existing vehicles will be retrofit



Bench style



Individual style

Lower seating height by 2" where possible



Seating layout

FLEET	INTERIOR DESIGN MODIFICATION
50 replacement	Convert half of longitudinal seats to single transverse
101 replacement	Convert half of longitudinal seats to double transverse
68 expansion	Retrofit bench seating style to Freedman seats, convert half of longitudinal seats to single transverse

First 50: Convert half of seats to single transverse seats



Second 101: Convert half of seats to double transverse seats

