

Program Evaluation and Audit

C-Line Electric Bus Audit

October 2021



Introduction

Background: The C-Line electric bus pilot project used new technology and experienced implementation challenges. Funds for the project came from a unique FTA grant program

Objective: Ensure purchases complied with grant requirements, review contractor program management, and identify lessons learned for future similar projects.

Scope: June 2019 – December 2020

Methodology: Interviews with staff and desk review of the grant agreement/application, procurement documents, and pre award/post-delivery audits.

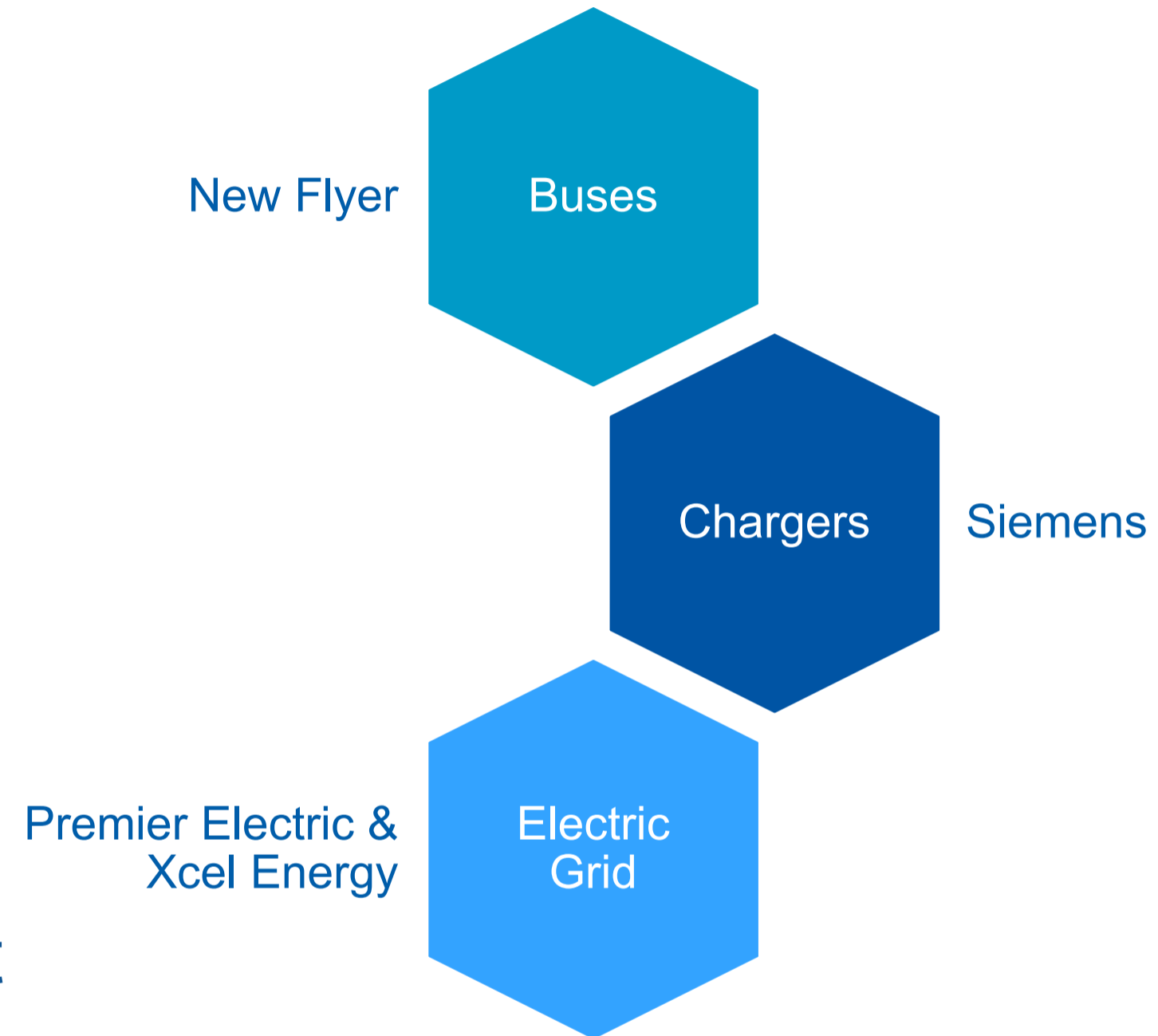
OBSERVATIONS

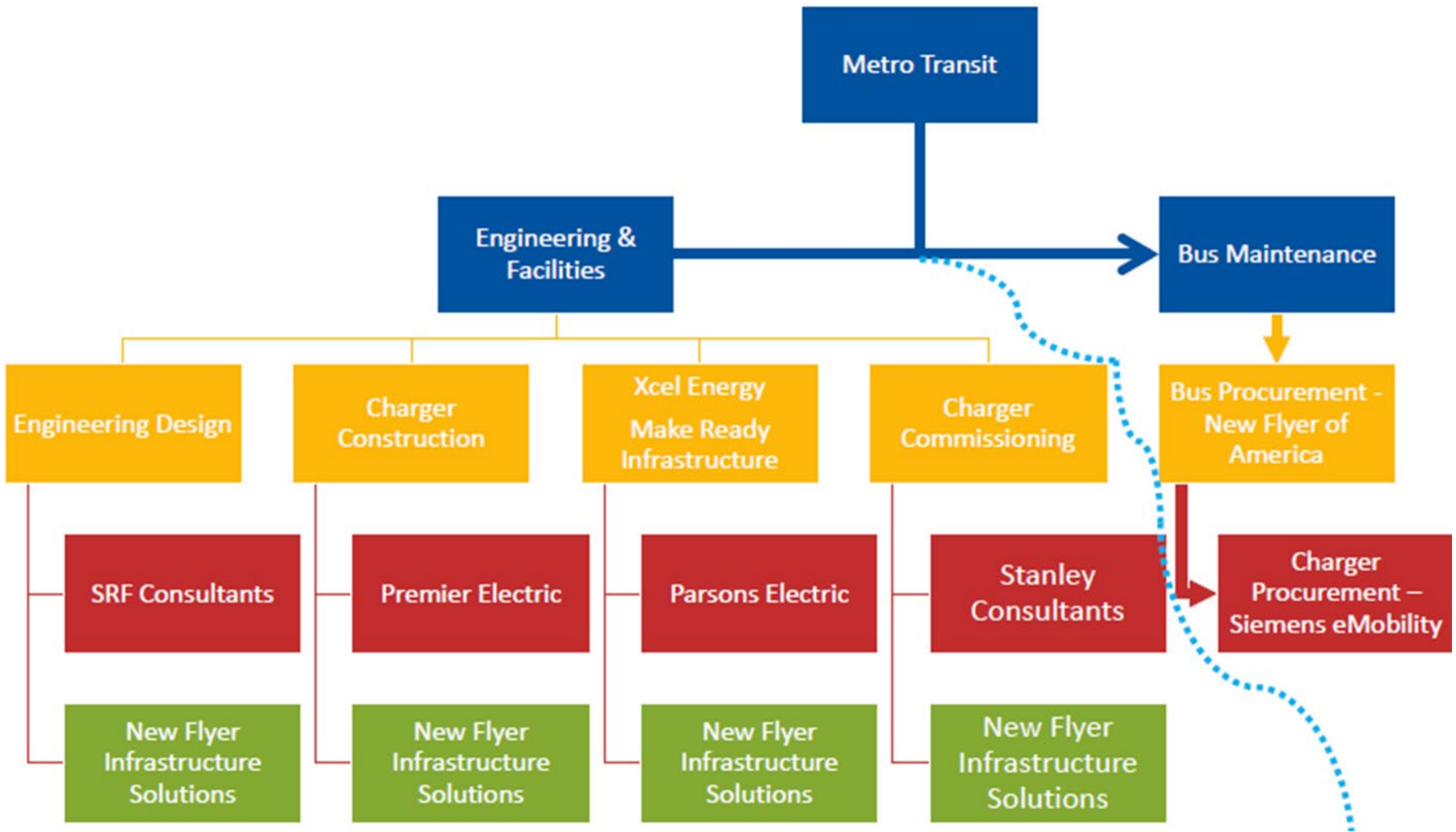
Project Manager Best Practices

- No observed compliance issues with Lo-No or Buy America requirements
- Battery subcontractor was tied into the contract with New Flyer
- Lessons Learned Document completed and shared
- Pursuit of warranty claim led to an extended warranty at no additional cost

Lessons Learned Document

- Feedback was positive and estimated performance was reasonable when buses worked
- Electric buses purchases are for a **system**, not a unit
 - Subcontracting led to a complex organizational chart
 - Chargers are a key component and need special engineering





Changing Environment: MT Plans and Purchases

- New bus purchases in 2021
 - 143 diesel in March
 - 8 Proterra electric
- State transportation bill funds to develop zero-emission transition plan
- Consultant hired



Changing Environment: BEBs

- Proterra more experienced than New Flyer
- Rising proportion of alternative fuel public transit vehicles nationwide (1.4% in 2020, 0.4% in 2017)
- Increasing number of organizations conducting similar pilot tests

Conclusion

- MT was compliant with federal rules
- Challenges to be expected with new technology
- Audit may return to future BEB projects as they emerge

Questions?