DC Circulator

Electric Bus Pilot Program

APTA Sustainability and Multimodal Planning Workshop
Vancouver, BC CANADA
July 31, 2018

What is the DC Circulator?

- **Six easy to understand routes:**
  - Woodley Park – Adams Morgan – McPherson Square
  - Georgetown – Union Station
  - Georgetown – Dupont Circle - Rosslyn
  - L'Enfant Plaza – Eastern Market
  - Congress Heights – Union Station
  - National Mall
- **4th Largest Regional System**
- **High Frequency Service**
  (all day, 10-minute headways)
- **Simple and affordable fare structure**
  ($1 fare for all routes)
- **Distinctive and comfortable buses**
  (WiFi and USB ports)
- **Approximately 5 million trips in 2017**
- **139 Bus Stop Locations**

Why Electric Buses?

- **DC Circulator was in dire need of fleet replacement**
  - Replace some of the oldest vehicles in the fleet
  - History of poor maintenance practices by private operator

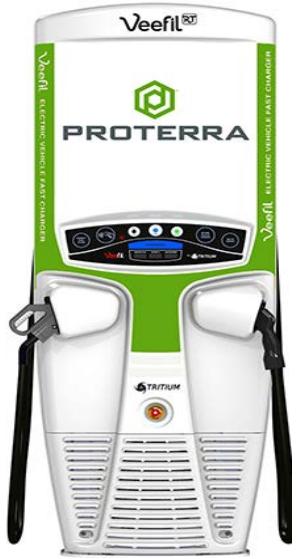
- **Sustainable DC 2.0**
  - Mayor's goal to make DC the most sustainable city in the nation by 2032:
    - Reduce transportation greenhouse gas emissions 60%
    - Increase use of public transit to 50% of all commuter trips in DC

- **Encouragement from Private & Public Stakeholders**
  - Business Improvement District's (BID) influence in DC Circulator system growth
  - Bus Procurement Advisory Group established
  - Importance of learning more about Green Technologies

Project Plan & Procurement Approach

- **Procurement Plan**
  - Define Purchasing Need
    (based on vehicle replacement requirements and system enhancements)
    - 26 New Flyer Vehicles - use clean diesel technology to drastically reduce harmful particulate emissions
    - 14 Proterra Vehicles - run on 100 percent battery electric propulsion, clean, quiet and zero-emission
  - Determine Procurement Method
    - DDOT has never directly purchased Vehicles
    - Utilize Washington State Contract
    - Fastest way to Procure Vehicles
  - Develop Specifications
    - Electric Vehicles are “Special”
    - New Technology

Don’t forget to write specs and purchase the additional infrastructure!



Electric Bus Purchase Plan

Specifications Write Up

- Pick everything you need and want on a bus
- Assess how all these items that you want MIGHT impact the energy “pull”
- Ensure adequate battery supply is provided

Manufacturing Oversight

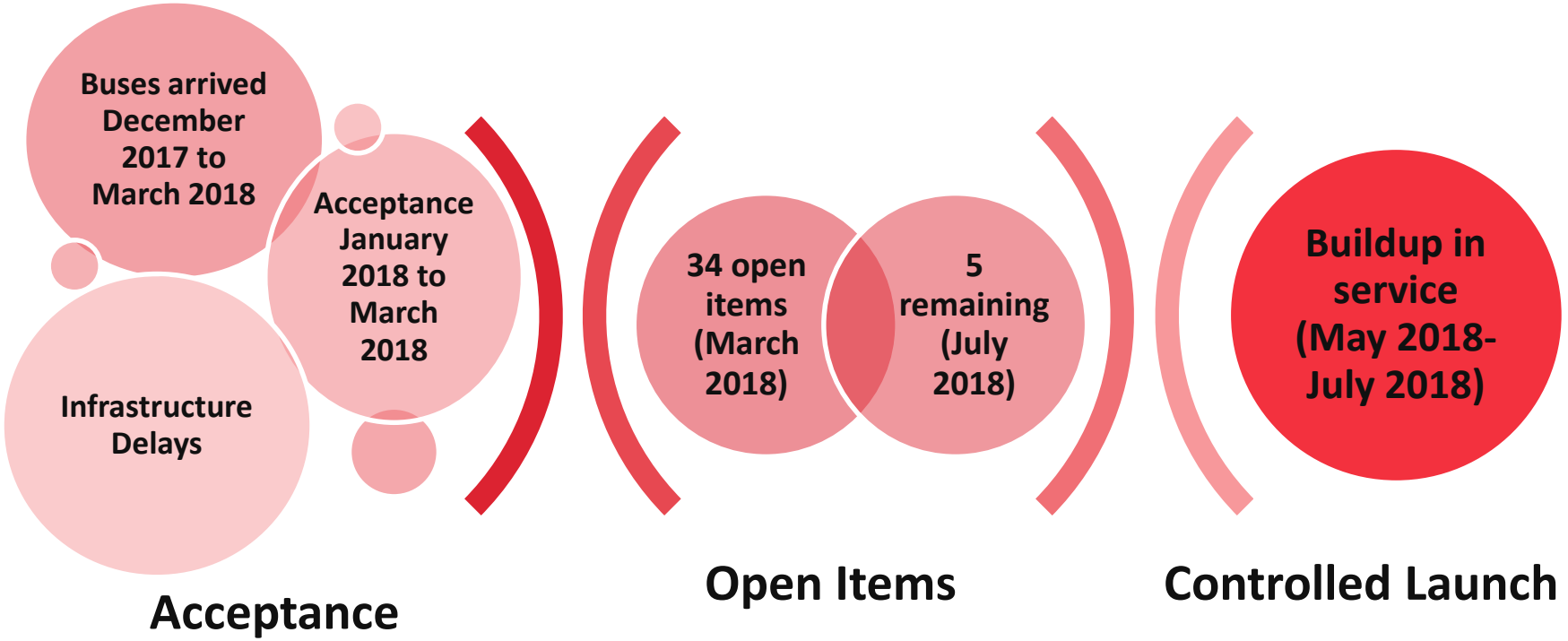
- Have someone who understands electric bus vehicles oversee
- You should begin the pilot vehicle with an expert and end full production with an expert in the acceptance process

Acceptance

- Need Acceptance Process to be performed by someone familiar with both bus production and bus functionality
- You will have open items given the technology is still developing

Infrastructure and Charging Stations

Challenges During Acceptance: Open Items



Lessons Learned

- Learn from others!
- Assemble a support team that understands the type of technology under consideration
- Ensure close coordination with the manufacturer
- Infrastructure installation is complex, ensure to work with your power company, environmental agency, and licensing division. Closely monitor charging infrastructure performance
- Carefully plan training for maintenance and operations staff
- Expect the unexpected

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