FY 18 Capital Project Applications Scoring and Prioritization

presented to

Transit Service Delivery Advisory Committee (TSDAC)

presented by
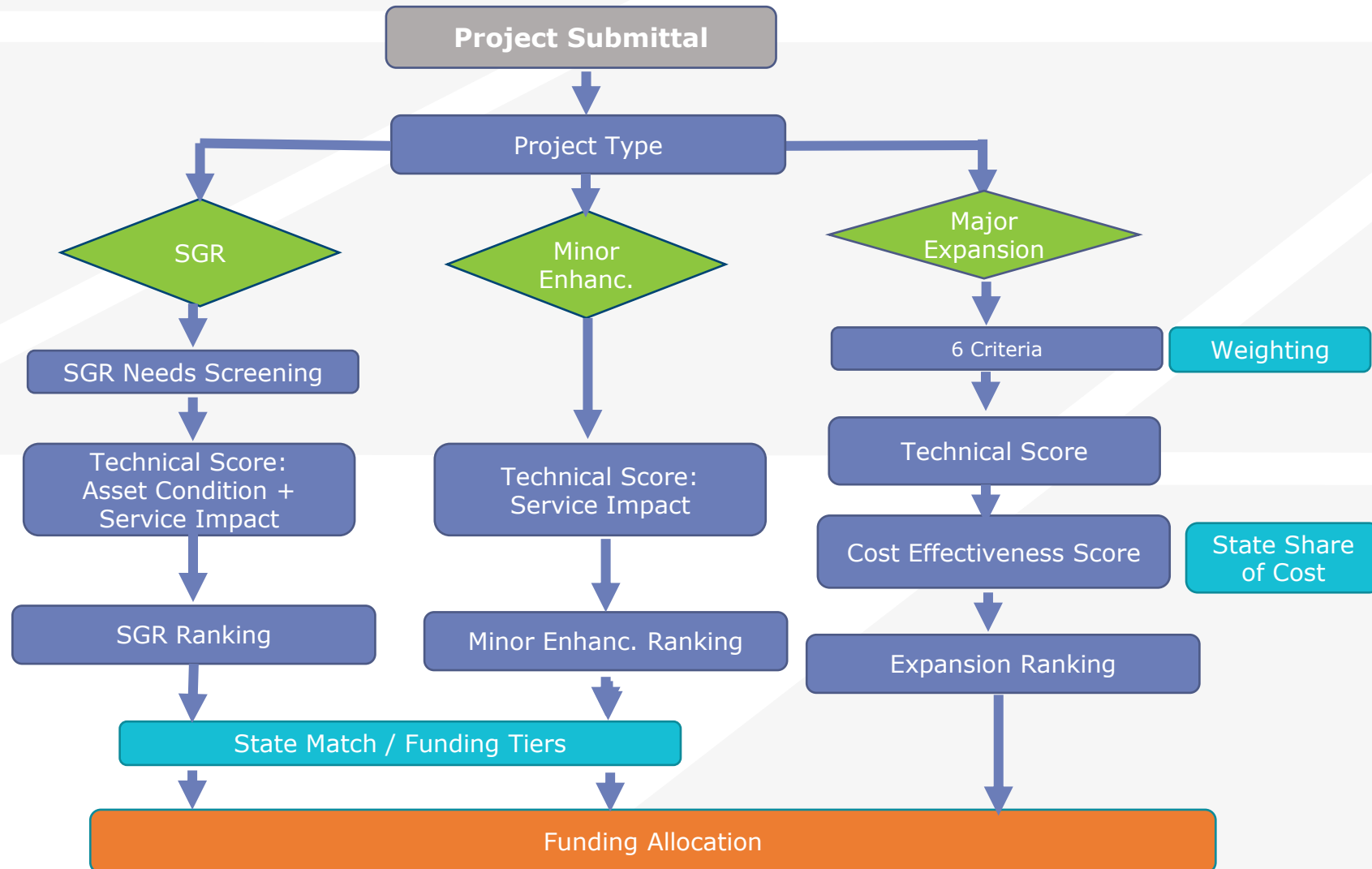
Cambridge Systematics, Inc.

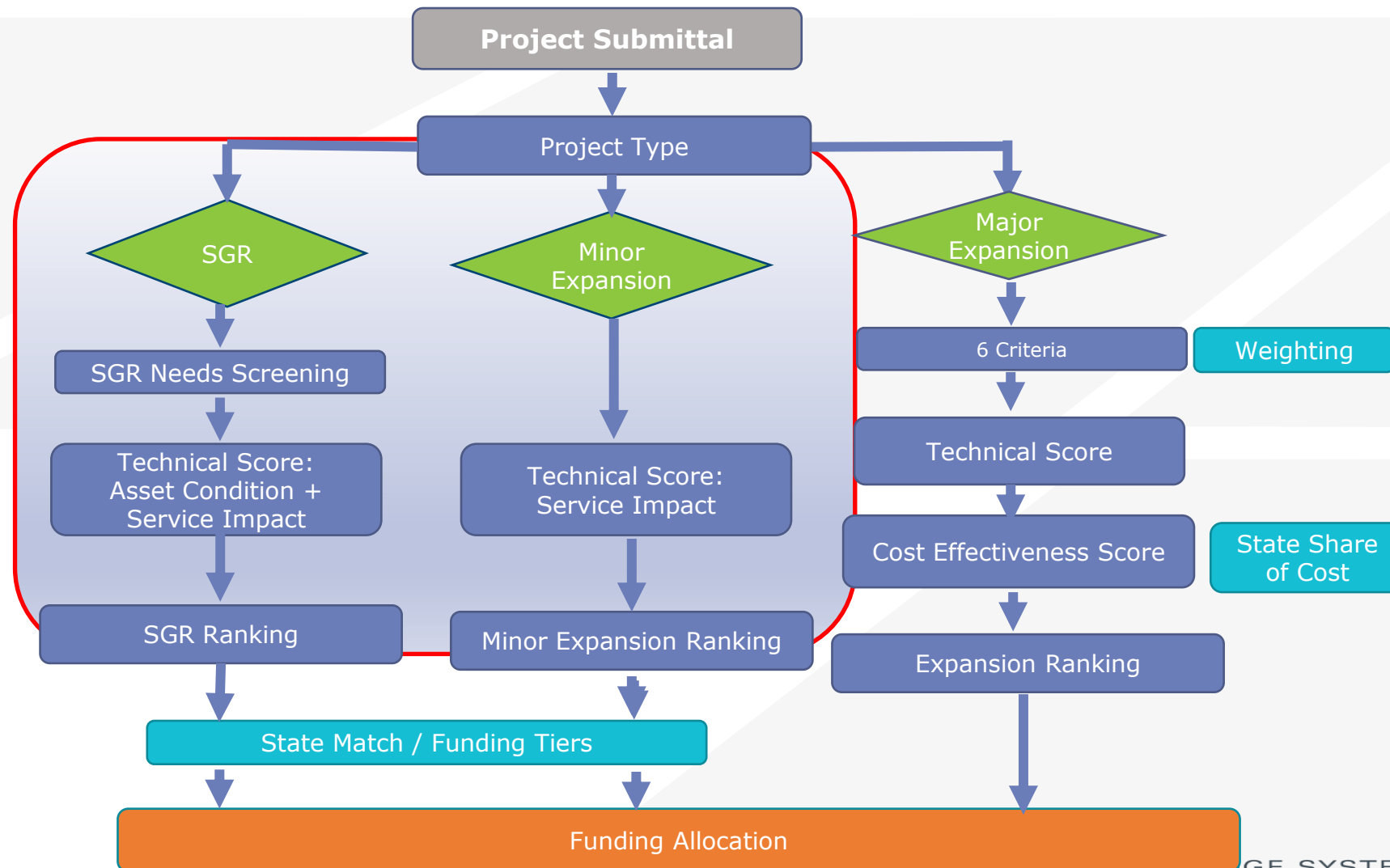*Thomas Harrington*

March 12, 2018

Presentation Outline

- Review of Prioritization Process Framework

- FY18 Capital Program Summary

- Scoring Methodology (SGR and Minor Expansion)

- Prioritization Process Issues

- Next Steps

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Prioritization Process Framework

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Current Focus - SGR and Minor Expansion Scoring

Project Submittal

Project Type

SGR

Minor Expansion

Major Expansion

SGR Needs Screening

6 Criteria

Weighting

Technical Score: Asset Condition + Service Impact

Technical Score: Service Impact

Technical Score

Cost Effectiveness Score

State Share of Cost

SGR Ranking

Minor Expansion Ranking

Expansion Ranking

State Match / Funding Tiers

Funding Allocation

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Project Types

➤ **State-of-Good Repair (SGR):** Projects/programs to replace or rehabilitate an existing asset

  » Includes acquiring assets/technology to serve current functions

➤ **Minor Enhancement**: Projects/programs to add capacity, new technology, or a customer enhancement meeting the following:

  » Project costs less than $2 million, <u>OR</u>

  » Expansion vehicles: less than 5 vehicles or less than 5% of fleet

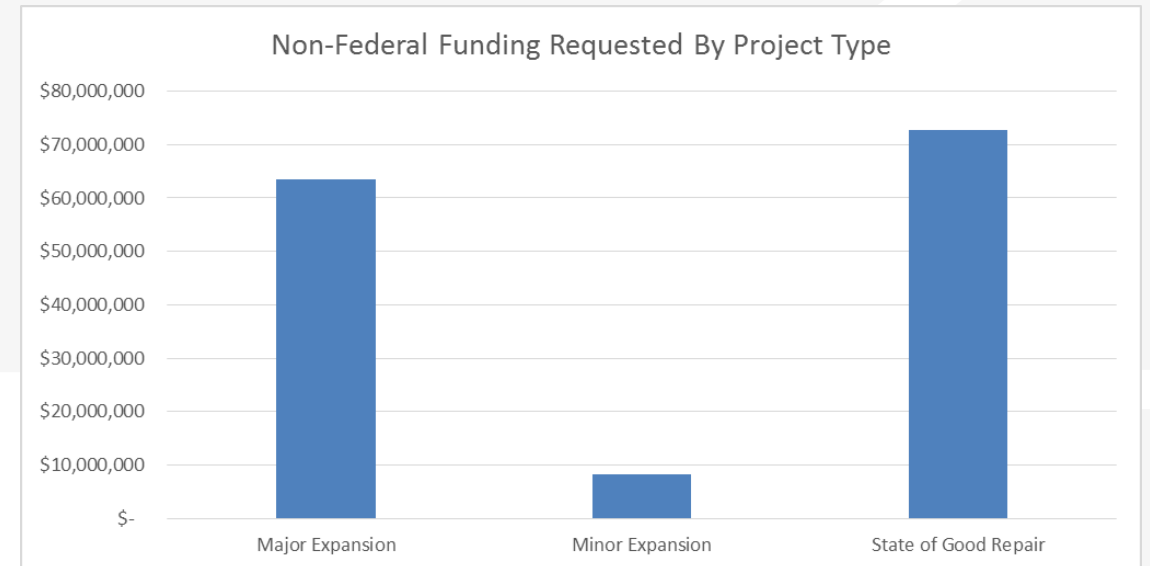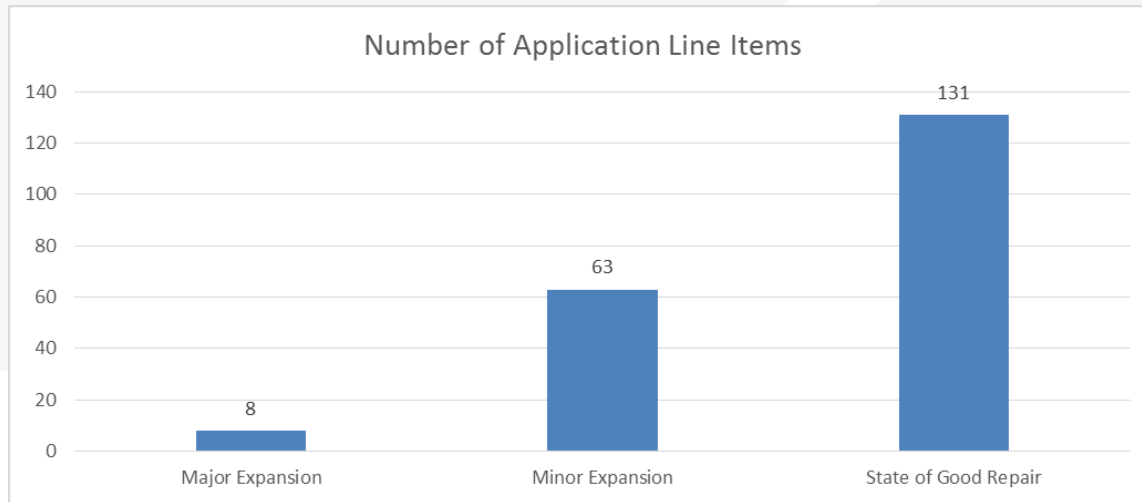➤ **Major Expansion:** New projects/programs that add, expand, or improve service (greater than $2M)

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Capital Program Items Classified as "Other" – Will Not Be Scored

- Projects with no state transit funding contribution – ex. 5310 Capital (with federal and local funding only)

- VRE track lease payments

- WMATA

Note: Projects described as debt service, vehicle lease payments, or project management will be rated based on the underlying asset or project type.

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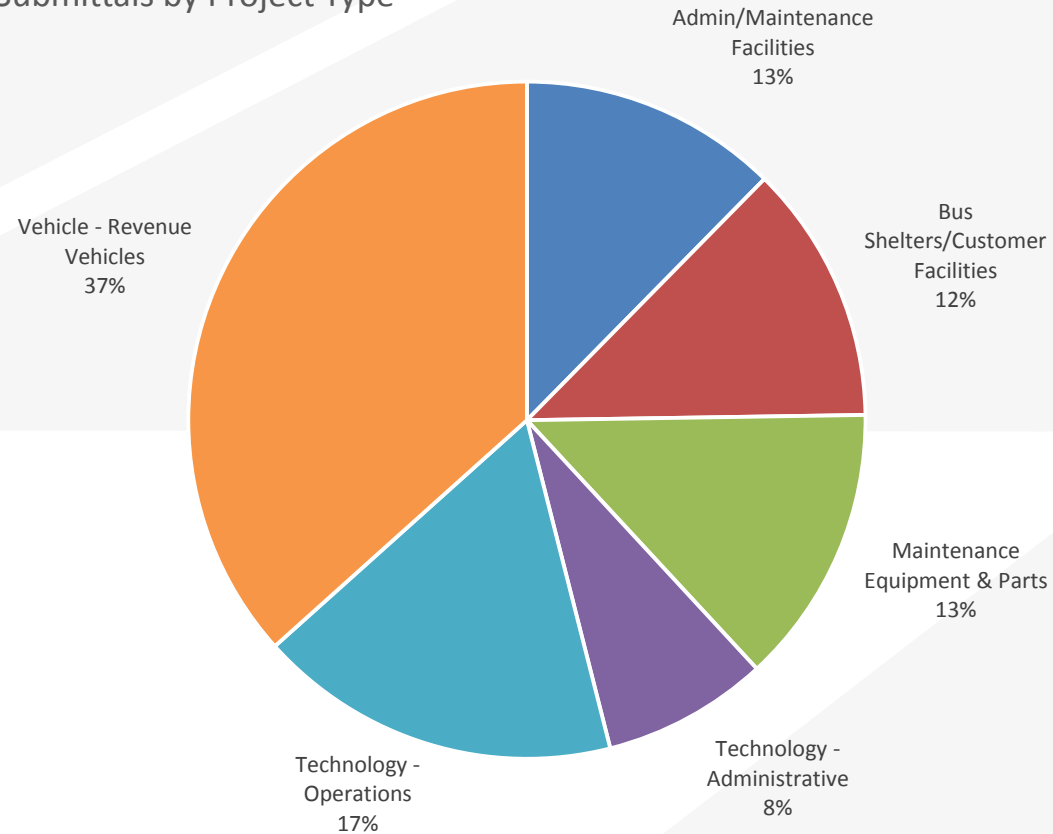# Summary of FY 18 Capital Application Requests

➤ FY 18 Applications (Not including WMATA/Other projects)

Number of Application Line Items

Project Type	Count
Major Expansion	8
Minor Expansion	63
State of Good Repair	131

Non-Federal Funding Requested By Project Type

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Summary of FY 18 Capital Application Requests

Submittals by Project Type

Note: Does not include WMATA/Other projects

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FY18 SYIP - State-of-Good Repair Projects

- **Vehicle Replacement**
  - » Replacement buses (< 30-ft, 35-ft, 40-ft)
  - » Support Vehicle Replacement

- **Admin/Maintenance Facilities**
  - » Rehab/renovation/engineering and design of admin/bus maintenance facility
  - » Construction and rehabilitation of rail-related facilities, rail cars, or locomotives

- **Bus Shelters/Customer Facilities**
  - » Bus shelters and components
  - » Bus stop accessibility (ADA)
  - » Bus route signage

- **Maintenance Equipment & Parts**
  - » Mid-life and end-of-life overhaul/rebuilding
  - » Spare Parts, Hybrid Bus Batteries
  - » Shop Equipment

- **Technology/Systems/ Communications**
  - » Fare payments systems and hardware
  - » Safety/surveillance/security equipment and systems
  - » Software and hardware to support AVL, payroll and administration, planning and scheduling, real-time passenger information and reporting

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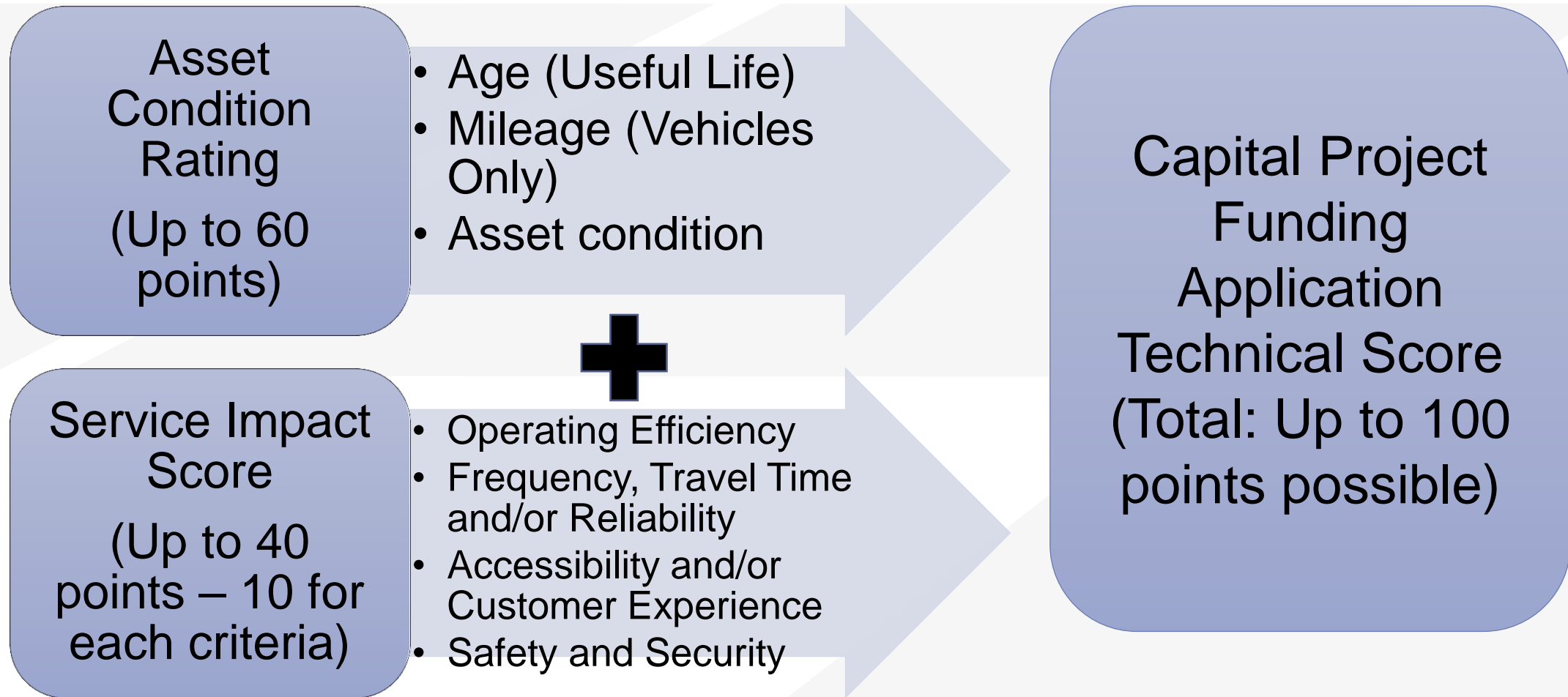
FY18 SYIP - Minor Enhancement Projects

- Vehicles - minor fleet expansion

- New bus shelters

- Route signage (Bus Stop Signs)

- New fare collection equipment (fareboxes)

- New software, hardware, systems

- Minor facilities (fueling station, parking)

- Capital project development (engineering and design, construction management)

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FY18 SYIP - Major Expansion Projects

➤ Transit Center Facilities Construction (Blacksburg MMTF)

➤ Purchase Expansion Bus 40-ft (ART)

➤ Facility Construction – Infrastructure (CCPY)

➤ Bus Bays / Shelter Installation (East Falls Church Station)

➤ Facility Construction – Parking (Silver Line - Innovation Station)

➤ Facility Construction – Parking (Silver Line - Herndon Station)

➤ Project Management Support (Route 1 BRT)

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Scoring Methodology
State of Good Repair Projects

Asset Condition Rating

(Up to 60 points)

- Age (Useful Life)
- Mileage (Vehicles Only)
- Asset condition

+

Service Impact Score

(Up to 40 points – 10 for each criteria)

- Operating Efficiency
- Frequency, Travel Time and/or Reliability
- Accessibility and/or Customer Experience
- Safety and Security

Capital Project Funding Application Technical Score

(Total: Up to 100 points possible)

Scoring Methodology Minor Expansion Projects

Service Impact Score

(Up to 40 points – 10 for each criteria)

- Operating Efficiency
- Frequency, Travel Time and/or Reliability
- Accessibility and/or Customer Experience
- Safety and Security

Capital Project Funding Application Technical Score (Total: Up to 40 points possible)

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SGR – Asset Condition Methodology

- Data Source for Vehicle and Non-Vehicle Assets - TransAM

- Vehicle SGR applications submitted together for multiple vehicles disaggregated into individual vehicle line items

- Purpose of disaggregation was to assign age & condition

- 38 percent of vehicle assets seeking replacement are 4 years beyond ULB or 40,000 miles beyond useful life mileage

State of Good Repair - Vehicle Assets by Estimated Service Life

Pie chart values:
- 107 / 38%
- 15 / 5%
- 2 / 1%
- 24 / 9%
- 67 / 24%
- 57 / 20%
- 7 / 3%

Legend:
- < ULB or < Max Mileage
- =0 years beyond ULB or =0 miles beyond max
- <=1 years beyond ULB or <=10,000 miles beyond max
- <=2 years beyond ULB or <=20,000 miles beyond max
- <=3 years beyond ULB or <=30,000 miles beyond max
- <=4 years beyond ULB or <=40,000 miles beyond max
- >4 years beyond ULB or >40,000 miles beyond max

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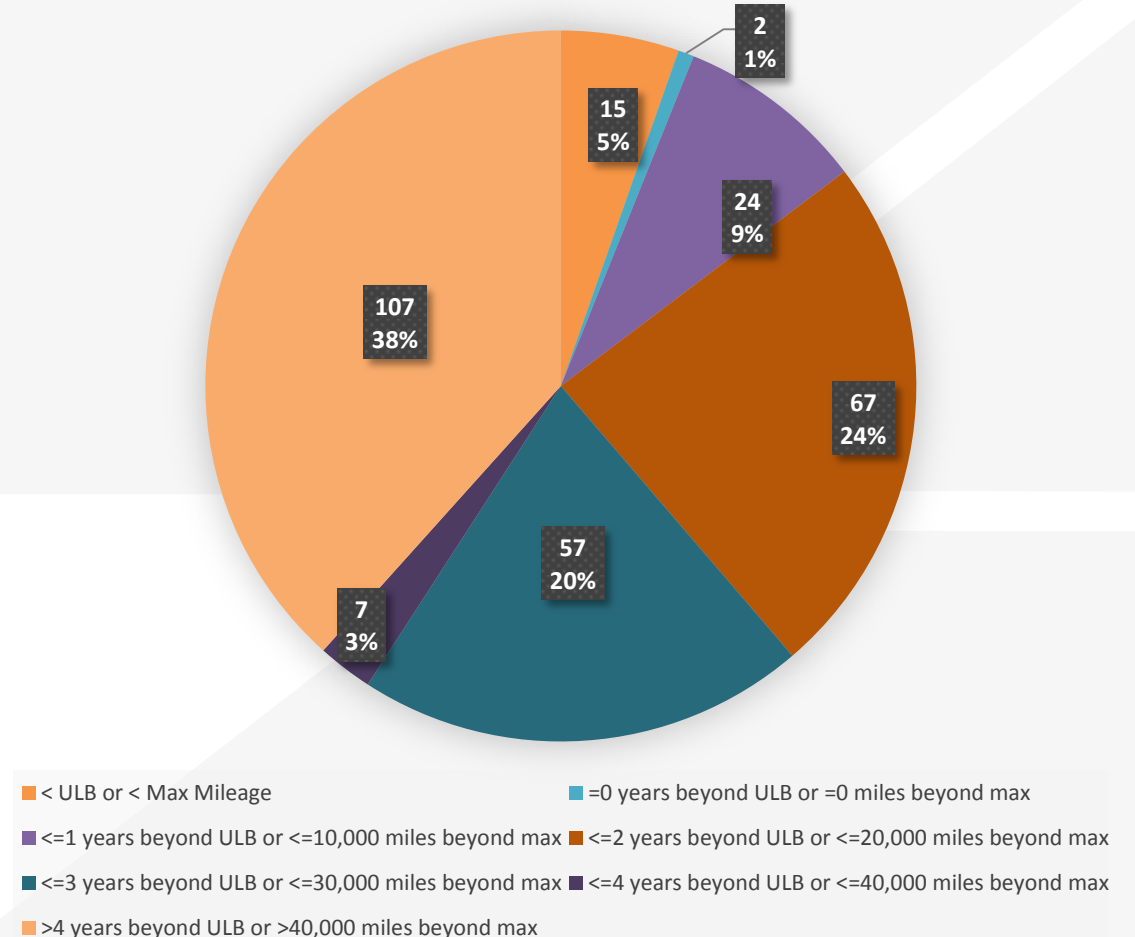
Asset Condition Rating – Age and Mileage

➤ Asset condition score is the maximum score between the age and mileage-based scoring systems

➤ Age and mileage beyond useful life considered

➤ Assets well past ESL have higher scores than those which have either just exceeded their useful life. Intended to score very old or obsolete vehicles higher.

➤ Project justification statements used to confirm scores for non-vehicle assets

Age Score System	
< ULB	0
=0 years beyond ULB	30
<=1	36
<=2	42
<=3	48
<=4	54
>4	60

Mileage Score System	
< Max Mileage	0
=0 miles beyond max	30
<=10,000	36
<=20,000	42
<=30,000	48
<=40,000	54
>40,000	60

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Service Impact Rating

Criteria	Definition
Service Frequency, Travel Time and/or Reliability	Speeds up transit routes or allows for increased frequency. Significant impact on reliability either through preventing breakdowns or removing vehicles from mixed traffic
Service Operating Efficiency	Provides for significantly more cost-effective provision of service
Service Accessibility and/or Customer Experience	Significant improvement in a customer's ability to access the system or a significant improvement in the ease of use of the system.
Safety and Security	Provides a significant improvement in safety or security

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Service Impact - Proposed Ratings by Project Type

High (significant improvement) – 10 points
Medium (moderate improvement – 5 points
Low (marginal improvement) – 1 point
No Impact – 0 points

Primary	Secondary	Operating Efficiency	Frequency, Travel Time and/or Reliability	Accessibility and/or Customer Experience	Safety and Security
Admin/Maintenance Facilities	Admin/Main Facilities -Construction	Medium Impact	Medium Impact	Low Impact	Medium Impact
Admin/Maintenance Facilities	Admin/Main Facilities -Maintenance	High Impact	Medium Impact	Low Impact	Medium Impact
Admin/Maintenance Facilities	Maintenance Materials	Medium Impact	Low Impact	Low Impact	Medium Impact
Bus Shelters/Customer Facilities	Bus Shelter - New Installation	No Impact	No Impact	High Impact	Medium Impact
Bus Shelters/Customer Facilities	Bus Shelter Installation - Maintenance/Parts	No Impact	No Impact	Medium Impact	Medium Impact
Bus Shelters/Customer Facilities	Transit Centers/Stations	Medium Impact	Medium Impact	High Impact	Medium Impact
Bus Shelters/Customer Facilities	Wayfinding Aids - Signage	No Impact	No Impact	High Impact	Medium Impact
Maintenance equipment & parts	Fueling Station	High Impact	Medium Impact	No Impact	Low Impact
Maintenance equipment & parts	Maintenance Inspection	No Impact	No Impact	No Impact	High Impact
Maintenance equipment & parts	Purchase Bus Replacement Batteries	Medium Impact	Medium Impact	Low Impact	High Impact
Maintenance equipment & parts	Vehicle Maintenance - Overhaul	High Impact	High Impact	Medium Impact	Medium Impact
Rail Infrastructure	Facility Maintenance - Infrastructure - Rail	High Impact	High Impact	Medium Impact	High Impact
Technology - Administrative	Admin Computer Hardware Purchase (Computers/Laptops/Tablets, etc)	Medium Impact	Low Impact	Low Impact	Low Impact
Technology - Administrative	Software Purchase - Administrative	Medium Impact	Low Impact	Low Impact	Low Impact
Technology - Operations	Admin and Operations Software Renewal	Medium Impact	Medium Impact	Low Impact	No Impact
Technology - Operations	Operations Software - Complaint Tracking	Medium Impact	Low Impact	High Impact	Medium Impact
Technology - Operations	Operations Software - Ridership Information	Medium Impact	Medium Impact	No Impact	No Impact
Technology - Operations	Rider Support Hardware - Fare Collection	High Impact	Low Impact	Medium Impact	Low Impact
Technology - Operations	Rider Support Hardware - ITS	Medium Impact	Medium Impact	Medium Impact	Medium Impact
Technology - Operations	Rider Support Hardware - Safety	No Impact	No Impact	Medium Impact	High Impact
Technology - Operations	Software Purchase - Scheduling	High Impact	High Impact	Medium Impact	Low Impact
Technology - Operations	Software Purchase - Vehicle Maintenance	High Impact	Medium Impact	Low Impact	High Impact
Technology - Operations	Graphics Package for Vehicles	No Impact	No Impact	Medium Impact	High Impact
Vehicle - Revenue vehicles	Engine Replacement	High Impact	High Impact	Medium Impact	High Impact
Vehicle - Revenue vehicles	Paratransit Vehicle Purchase	High Impact	High Impact	High Impact	Low Impact
Vehicle - Revenue vehicles	Purchase Expansion Bus	Medium Impact	High Impact	High Impact	Low Impact
Vehicle - Revenue vehicles	Purchase Replacement Bus	High Impact	High Impact	High Impact	Medium Impact
Vehicle - Revenue vehicles	Purchase Support Vehicles	Medium Impact	Medium Impact	Low Impact	Low Impact

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Prioritization Process Issues

- Data availability and consistency in applications
- Updating and validating asset data from TransAM
- Grant application changes to support prioritization

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Next Steps

- Confirm methodology and identify areas for further development and refinement during implementation

- Apply prioritization process to FY18 SYIP (SGR and ME) projects to score and rank projects, and show what would have been funded in FY18 with prioritization

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