



CAMBRIDGE
SYSTEMATICS

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Major Expansion Project Prioritization

presented to

*Transit Service Delivery Advisory Committee
(TSDAC)*

presented by

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HB 1359 - Transit Capital Prioritization

- Project-specific prioritization for both state-of-good repair and expansion transit asset needs based on an objective and quantifiable analysis
- For new or expansion transit projects, the following factors should be considered relative to the cost of the project:
 - » congestion mitigation
 - » economic development
 - » accessibility
 - » safety
 - » environmental quality
 - » land use

Major Expansion Projects – Prioritization

- **Major Expansion:** New projects/programs that add, expand, or improve service (greater than \$2M)
 - » Expansion vehicles: greater than 5 vehicles and 5% of fleet
- *Recommended Approach* - Apply SMART SCALE evaluation measures to calculate prioritization score

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)

SMART SCALE Factor Areas



Safety



Congestion mitigation



Accessibility



Environmental quality



Economic development



**Land use and transportation coordination
(areas with over 200,000 people)**

SMART SCALE Evaluation Measures

Factor Areas	ID	Measures
Safety	S.1	Number of Fatal and Severe Injury Crashes (50%)
	S.2	Rate of Fatal and Severe Injury Crashes (50%)
Congestion Mitigation	C.1	Person Throughput (50%)
	C.2	Person Hours of Delay (50%)
Accessibility	A.1	Access to Jobs (60%)
	A.2	Access to Jobs for Disadvantaged Persons (20%)
	A.3	Access to Multimodal Choices (20%)
Environmental Quality	E.1	Air Quality and Environmental Effect (50%)
	E.2	Impact to Natural and Cultural Resources (50%)
Economic Development	ED.1	Project Support for Economic Development (60%)
	ED.2	Intermodal Access and Efficiency (20%)
	ED.3	Travel Time Reliability (20%)
Land Use	L.1	Future Transportation Efficient Land Use (70%)
	L.2	Increase in Transportation Efficient Land Use (30%)

SMART SCALE Transit Project Evaluation

➤ Safety:

- » Uses ridership/volume reduction to calculate reduction in VMT and proportional drop in expected crashes

➤ Congestion Mitigation:

- » Hours of delay reduction based on reduced traffic volumes from transit ridership diversion
- » Person throughput benefit includes transit ridership plus additional vehicle demand that can now be served

➤ Accessibility

- » Accessibility gains based on transit time reduction
- » Projects receive points based on multimodal features

SMART SCALE Transit Project Evaluation

➤ Environmental

- » Projects receive points based on multimodal features
- » Impact to natural, cultural and historic resources from the project (based on acres of land impacted)

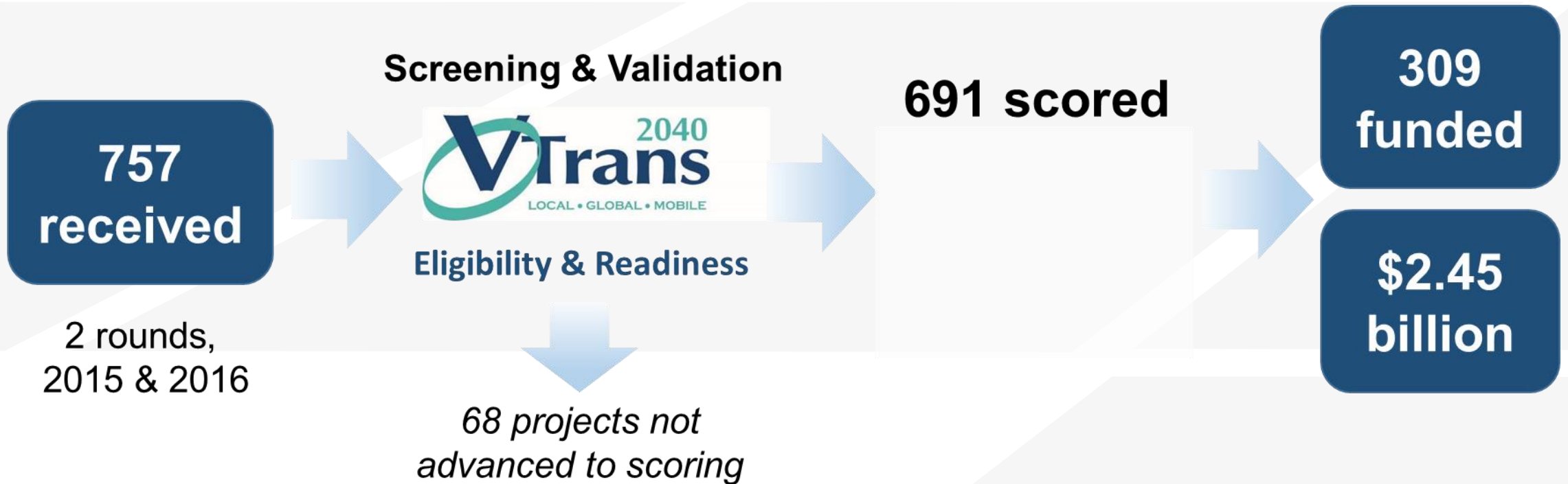
➤ Economic Development

- » Consistency with local/regional economic development strategy
- » Development sites that the project supports

➤ Land Use

- » Amount of population and employment located in areas with high non-work accessibility

SMART SCALE Application Results

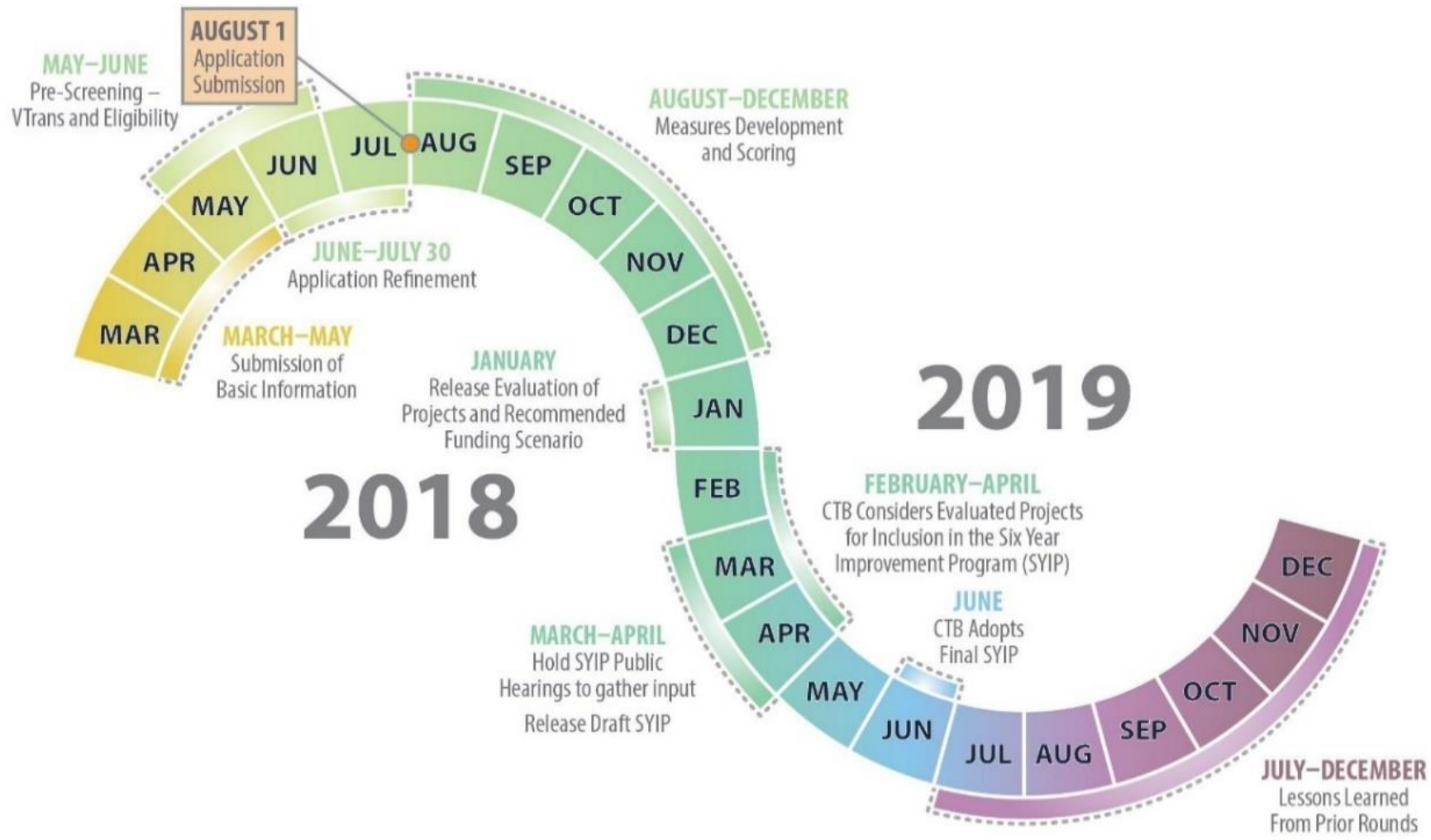


SMART SCALE Application Results

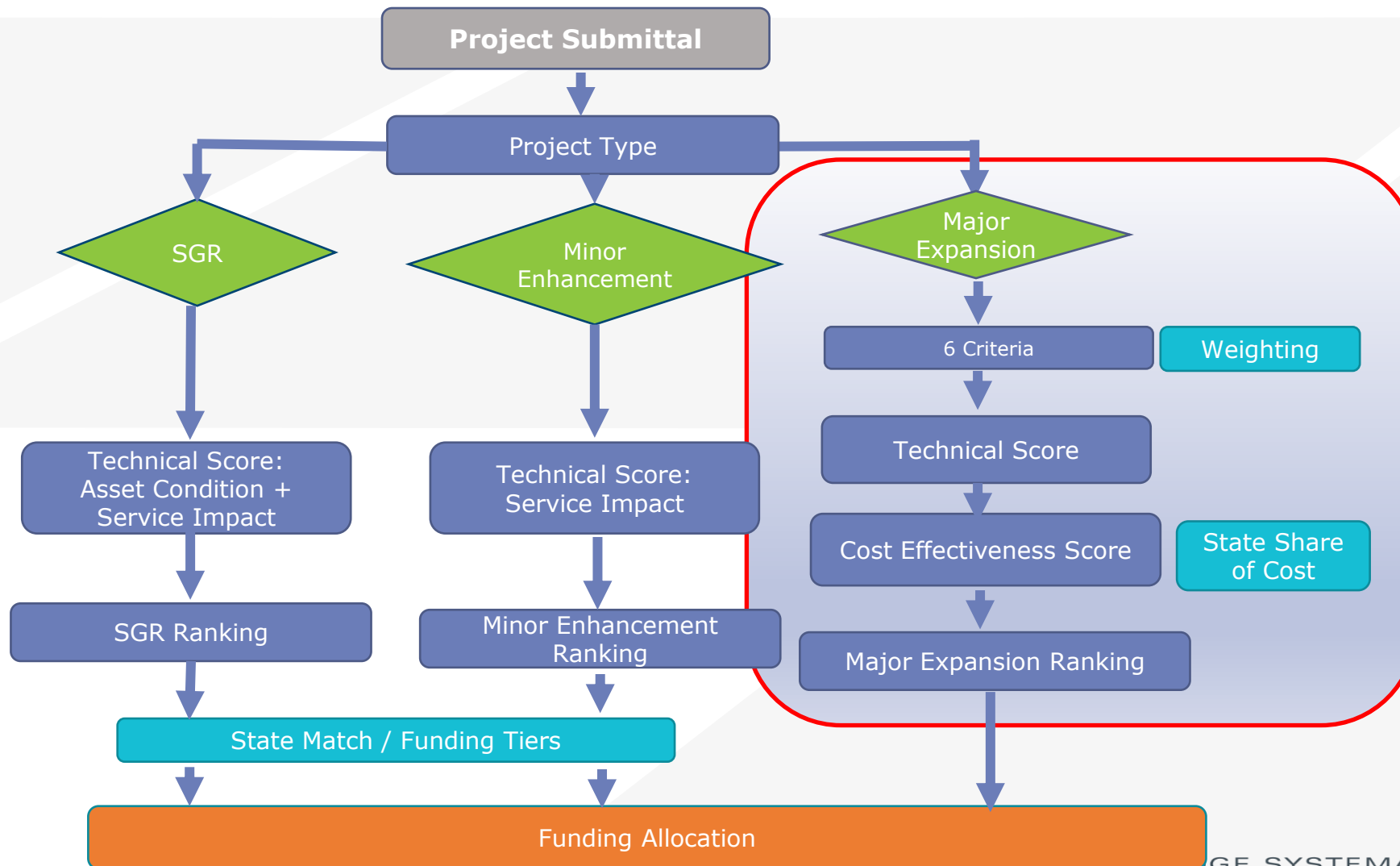
APPLICATIONS	Round 1 (FY 17)	Round 2 (FY 18)		Round 1 (FY 17)	Round 2 (FY 18)
Total # Submitted	321	436	Share of funding	3.3%	4.6%
Total # Scored	287	404		1.9%	4.1%
Total # Funded	162	147		92.0%	81.3%
Total \$ Funded	\$1.42B	\$1.03B		0.7%	9.0%
				2.1%	1.0%



SMART SCALE Round 3 Milestones

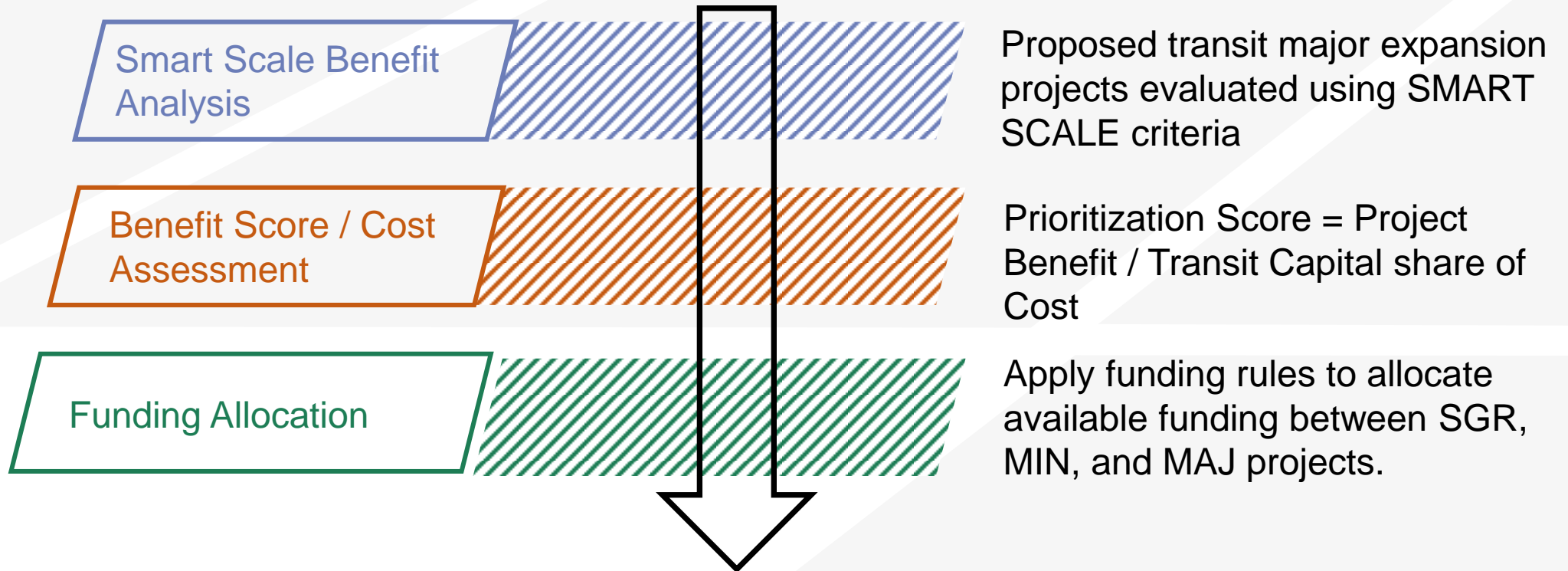


Major Expansion – Prioritization Approach



Major Expansion – Prioritization Approach

Transit Major Expansion Projects



Transit Capital – Major Expansion

Proposed Applicant Inputs

- Project Location and Features
 - » Project map and buffer used in calculation of benefits
 - » Multimodal elements used in accessibility and environmental scores
- Project Delivery – Cost / Schedule
- Ridership
 - » Project-related ridership
- Development Square Footage
 - » General estimate of development sites within project buffer
- References to project in comprehensive plans and economic development strategy

Major Expansion Prioritization Process Issues

- Weighting of factor areas – same as SMART SCALE
- Project readiness
- Selection of projects for transit capital funding
 - » Projects with low scores may not be funded
 - » Funding based on allocation rules (SGR still highest priority)