COMMONWEALTH of VIRGINIA

Office of the

SECRETARY of TRANSPORTATION

SMART SCALE Process Review Update

June 20, 2023

Overview

- **Process Bias Analysis**
  - **Project Size**
    - Small Project Preference
  - **Project Types**
    - Bike & Ped Preference
  - **Findings**
- **Scoring and Funding Analysis**
  - **One-factor Majority Impacts**
    - Land Use
  - **Funding Approach**
    - HPP Definition
    - Funding Scenario Step 2
  - **Findings**

Overview

- Potential Process Changes
- Revisit Previous Recommendations
- Schedule and Next Steps

Key Components of SMART SCALE Process Review

Statistical Analysis

Analysis of the performance and outcomes of the past funding rounds

Identification of potential biases and related causes

Survey Assessments

Review of process performance and perceptions

Administration, communications, and customer service

Procedural Review

Identify procedural improvements including application updates, communications, and process improvements

Code and Policy

Recommend procedural changes

Recommend CTB Policy changes

Recommend Code changes

Process Bias Analysis
Small Project Preference

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Project Size

- One area of perceived bias identified in the SMART SCALE Process Review Survey responses was “Small Project.”

“Do you think the current process is biased in any way (urban/rural, large/small projects, mode, etc.)?” (yes/no & free text response)

Yes

59% of external respondents think *the current process is biased in some way*

No

41% of external respondents think *the current process is not biased in some way*

Process Bias Analysis
Small Project Preference

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Project Size

- **When referring to "Small Projects", interpreted as low-request (<$10M)**
  - 60% of all applications are Small Projects
  - 95% of Small Projects have a total cost of less than $10M

- **Small Projects vs. Large Projects comparison**
  - 1,092 Small Projects submitted / 823 Large Projects submitted
  - $4.8B Small Projects requested / $33.1B Large Projects requested
  - 558 Small Projects funded* / 154 Large Projects funded
  - $2.1B Small Projects funded / $4.2B Large Projects funded

**The term "funded" represents projects recommended for funding in the staff scenario throughout the presentation*

Process Bias Analysis
Funded Small Projects

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Project Size

- Based on the number of projects, Small Projects were just over 2X more successful than larger projects.
- The average project funded amount is $8.9M.
- The average amount requested for all projects is $19.8M.

Success rate for Small Projects across all area types (558 projects) **51%**

Success rate for projects greater than $10M across all area types (154 projects) **19%**

Process Bias Analysis
Funded Small Projects

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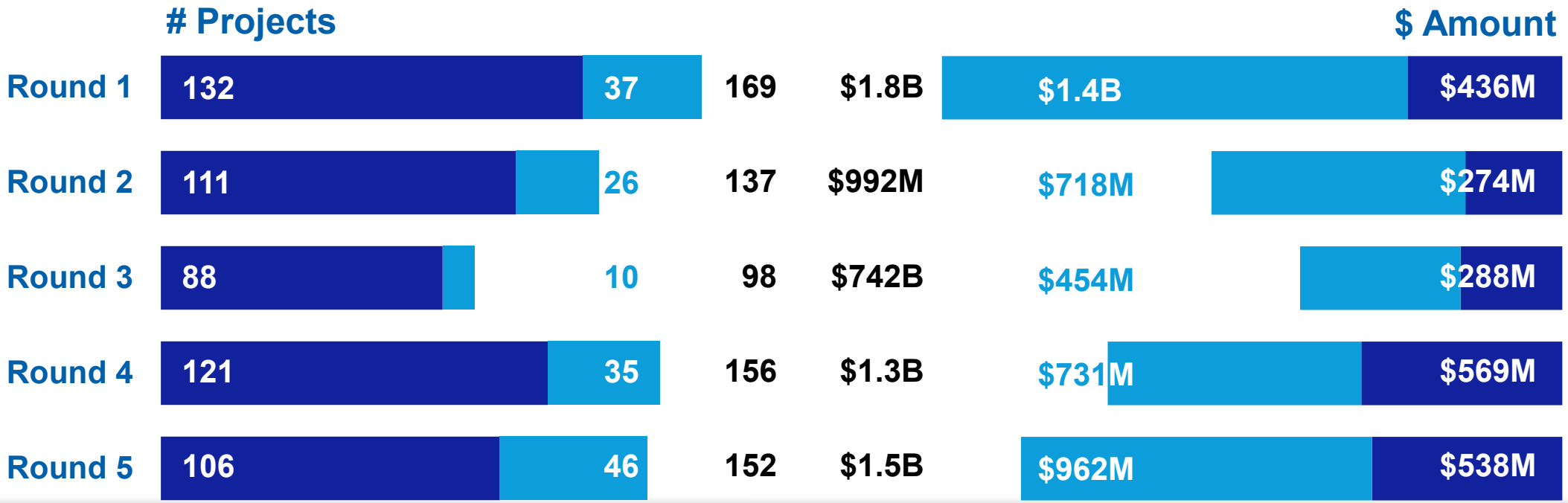
Project Size

- Small Projects account for 78% of all funded projects.
- Small Projects account for 33% of the total funded amount.

Small Funded Projects vs. Large Funded Projects, with Total Funded Projects



Process Bias Analysis
Funded Small Projects by Program - Counts

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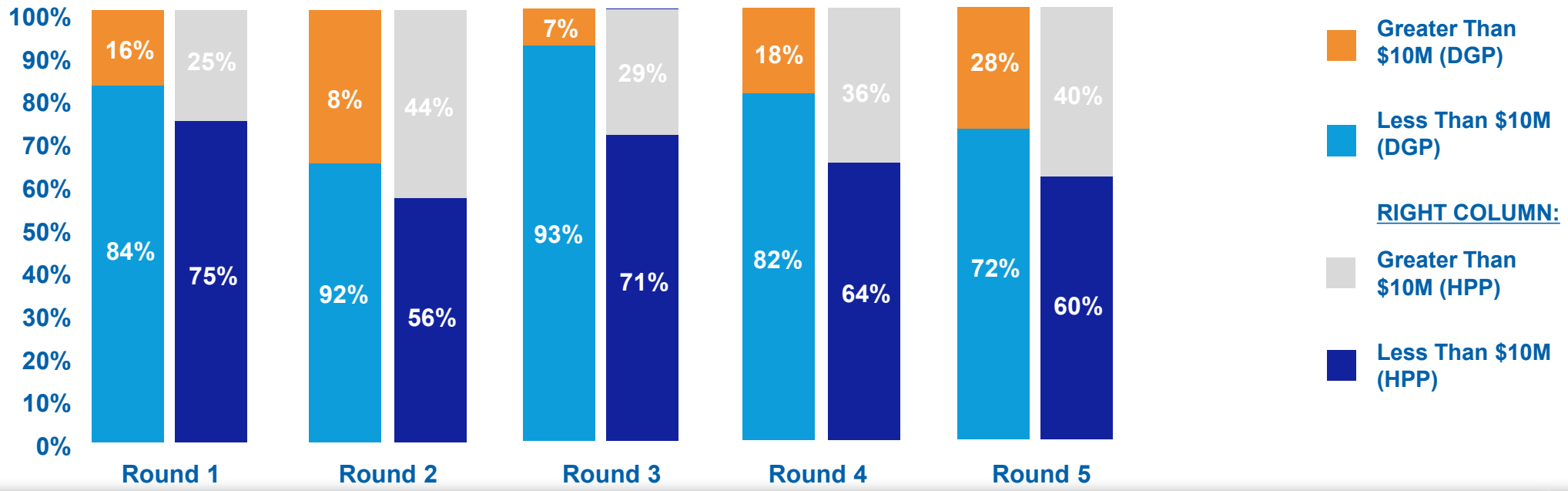
Project Size

- Overall, based on the number of projects, most funded projects in both DGP and HPP are small.
- In HPP, based on the number of projects, 60% are small.

of Funded Projects (DGP and HPP)



Process Bias Analysis
Funded Small Projects by Program - $ Amount

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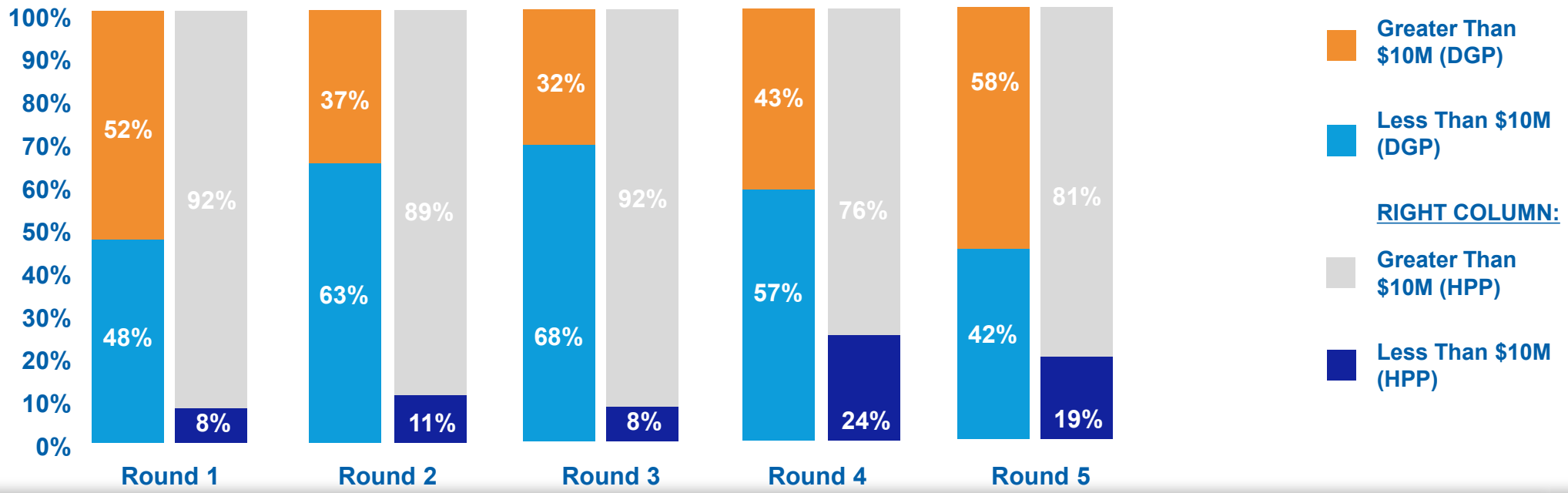
Project Size

- In DGP, Small Projects are getting roughly equal the amount of funding compared to larger projects.
- In HPP, the funded amount of Small Projects in Rounds 4 & 5 was 21% higher than in Rounds 1, 2, & 3 combined.

$ Amount (DGP and HPP)



Process Bias Analysis
Types of Small Projects

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Project Size

- **Typical Small Projects may include**
  - Highway Principal Improvement Type* – Intersection or turn lane improvements, innovative intersections, roadway widenings, access management
    - Typically, less than a half mile in length
  - Bike & Ped Principal Improvement Type – Sidewalk projects, shared-use paths, bike lanes, improve crossings
    - Typically, less than 1 mile in length
  - Bus Transit Principal Improvement Type – New Routes, Stop Improvements

**Principal Improvement Type means the largest component of the application. SMART SCALE applications are largely multi-modal with 50% of all Highway Principal Improvement Type projects having Bike & Ped components.*

Process Bias Analysis
Prevalence of Bike & Ped Projects

- **For all Small Projects (all principal improvement types):**
  - Highway projects comprise 74% of projects submitted (804 out of 1,092 projects)
  - Highway projects comprise 67% of funded projects (376 out of 558 projects)
  - Bike & Ped projects comprise 21% of projects submitted (228 out of 1,092 projects)
  - Bike & Ped projects comprise 24% of funded projects (135 out of 558 projects)

Process Bias Analysis
Success of Bike & Ped Projects

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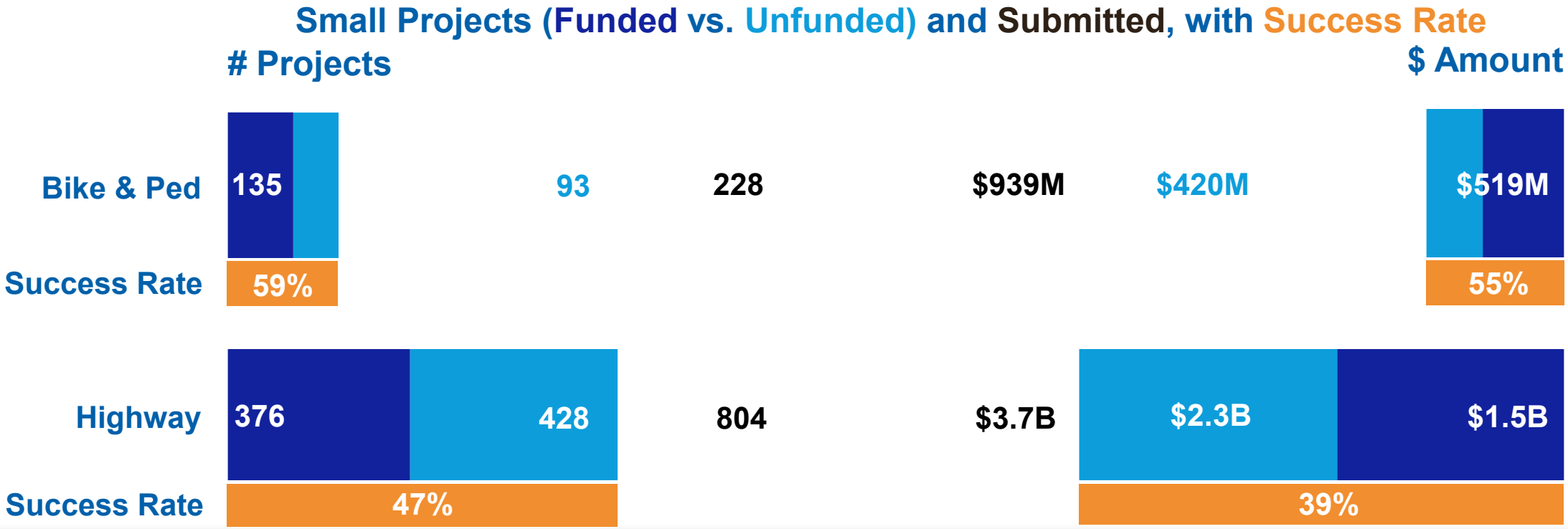
Project Size

- Overall, small Bike & Ped projects were more successful than small Highway projects.

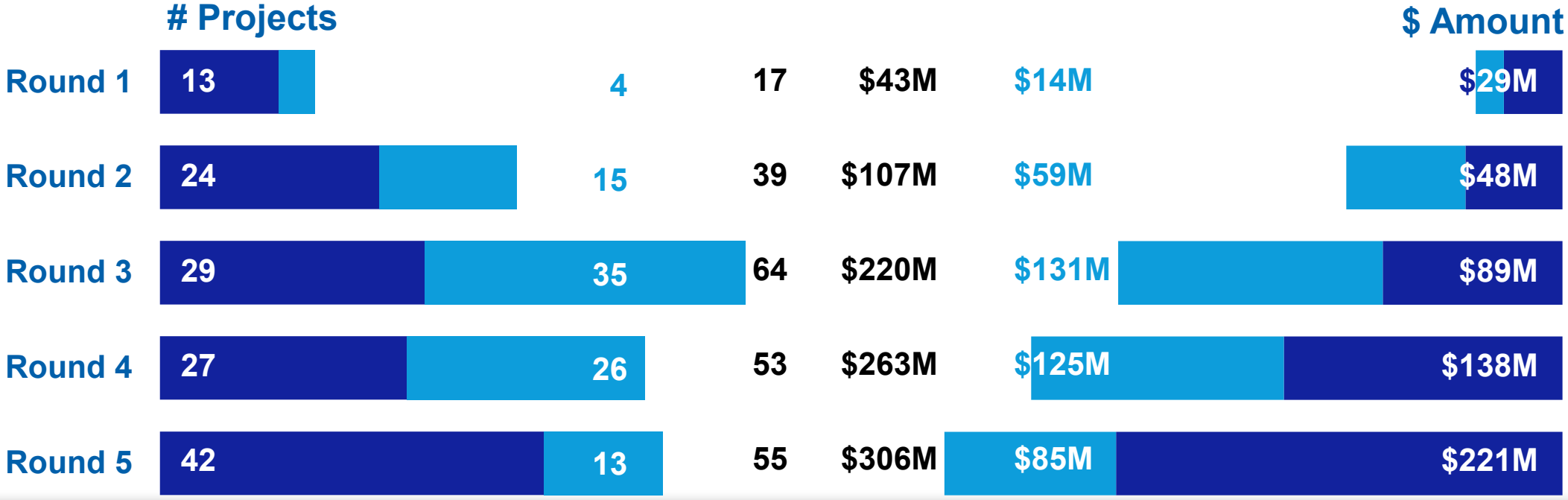


Process Bias Analysis
Number of and Funding for Small Bike & Ped Projects

Bike & Ped

- Small Bike & Ped projects have steadily increased in terms of number of projects and funding amounts both submitted and recommended.

Funded Small Bike & Ped vs. Unfunded Small Bike & Ped, with Total Submitted Small Bike & Ped



Findings
Small Project Size Perception

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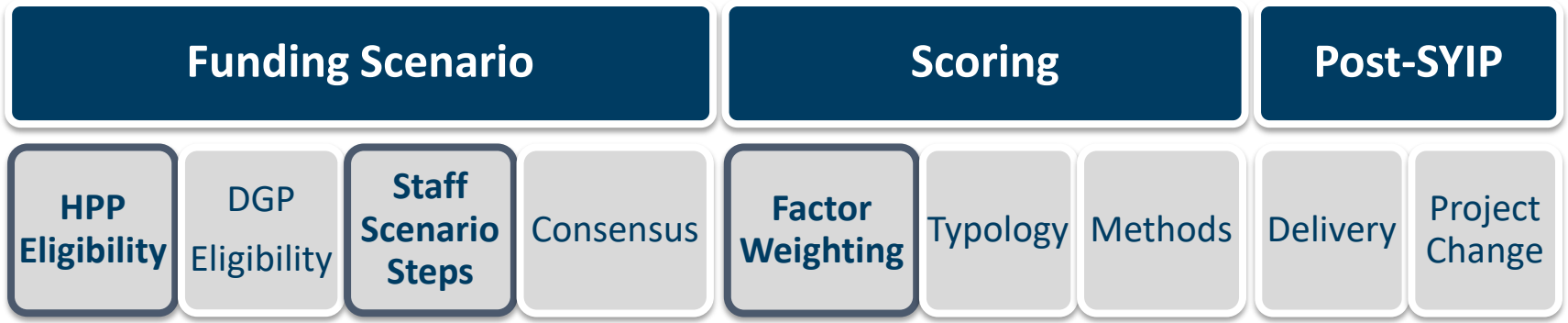
Project Size

- **Small Projects were funded just over 2X more often than larger projects**
- **Overall, small Bike & Ped projects were more successful than small Highway projects**
- **Small Projects account for 78% in project count and 33% of the total funded amount**
  - Bike & Ped projects received 25% of the total funding for Small Projects compared to 69% for Highway projects
- **Average SMART SCALE request has decreased between Rounds 1 and 4**
- **Bike & Ped projects have steadily increased in terms of the number of projects and funding amounts both submitted and recommended**
  - Funded amounts for Bike & Ped projects increased in HPP in Rounds 4 and 5

Scoring and Funding Analysis

1. **In the Scoring Process – Land use factor contributes significantly to funded projects scores**
2. **In the Funding Scenario Process - HPP dollars facilitate funding small project request projects**



- **Adjusting in one area can affect another**
- **A singular issue identified might be resolved by adjusting multiple components of the process**
- **A singular process adjustment might resolve multiple issues**

Scoring and Funding Analysis
One-factor Majority Impact

- **Land Use factor drives total benefits, at a rate of 2X from Round 1 to Round 5**
- **Land Use was expanded to Type C & D in Round 5**

Percent of Funded Project Benefit by Factor Area

Round	Safety	Congestion	Accessibility	Land Use	Economic Development	Environment
1	28%	9%	2%	23%	24%	14%
2	28%	15%	6%	24%	18%	10%
3	37%	5%	4%	24%	16%	15%
4	36%	8%	6%	31%	7%	12%
5	28%	5%	7%	49%	4%	7%

Greater than 40% of total benefit score

Scoring and Funding Analysis
One-factor Majority Impact
In Small Projects

- **In round 5, the smaller the project, the greater the Land Use benefit**

Percent of Land Use Benefit by Funded Project Cost

Round	Applicable Area Type	ALL	<$10M	$10M-$20M	$20M-$30M	$30M-$40M	$40M-$50M	>$50M
1	AB	23%	21%	35%	35%	10%	2%	7%
2	AB	24%	25%	22%	21%	0%	-	8%
3	AB	24%	24%	19%	-	0%	-	30%
4	AB	31%	32%	24%	67%	18%	9%	8%
5	ABCD	49%	55%	43%	32%	7%	-	0%

Greater than 40% of total benefit score

Scoring and Funding Analysis
One-factor Majority Impact
In Bike & Ped Projects

- Compared to all types, Bike & Ped projects have the most Land Use benefit
- Twice the amount in Bike & Ped when compared to Highway projects

Percent of Land Use Benefit by Funded Project Type

Round	ALL	Bike/Ped	Highway	Bus Transit	Rail Transit	TDM
1	23%	49%	19%	35%	95%	17%
2	24%	40%	18%	35%	13%	46%
3	24%	28%	17%	41%	69%	54%
4	31%	60%	20%	60%	8%	38%
5	49%	74%	37%	64%	-	-

Greater than 40% of total benefit score

Scoring and Funding Analysis
One-factor Majority Impact
Current Land Use Scoring Methods

- **Current Land Use method is more related to project location than to expected project outcomes**
  - Scores existing walk access to key non-work destinations such as grocery, healthcare, education, etc. in the vicinity of the proposed transportation improvement
  - Weighted based on population and employment density
- **Land Use was expanded to Type C & D in Round 5**
- **In Round 5 - funded projects a significant portion of overall benefit points from Land Use**
  - 77 projects funded (out of 152) had over 50% of the benefit score from Land Use
  - Of those 40 projects funded had over 80% of the benefit score from Land Use

Potential Process Changes
Modifications to Land Use Factor

Scoring

Factor Weighting | Typology | Methods

- **Modify the Factor Weighting for the Land Use factor**
- **Adjustments to other factor areas (will be discussed in July)**

- **Continue to use Land Use Factor to encourage land-use and transportation coordination**
- **No change to the way Land Use is calculated today**
- **Modify how Land Use weighting is applied**
  - Enhances the benefits of the project based on where it is located
  - Land Use Factor would be used to increase benefit points in other factor areas
  - Prevents Land Use from being the sole driver of success

Potential Process Changes
Modifications to Land Use Factor - Scenario

- **Funded Small Projects were reduced from 106 to 41.**
- **Funded Bike & Ped Principal Improvement Types were reduced from 51 to 20.**

The average total cost of funded projects raised from $15.1M to $18.3M

The average total request of funded projects raised from $10.1M to $11.8M (removes 28 projects)

For Principal Improvement Type

- **Bike & Ped -** 51 to 20
- **Highway -** 98 to 102
- **Bus Transit -** 3 to 2

For Area Type

- **A -** 39 to 29
- **B -** 34 to 24
- **C -** 23 to 19
- **D -** 56 to 52

Potential Process Changes
Refine HPP Definition

Funding Scenario

HPP Eligibility | DGP Eligibility | Steps | Consensus

- **Refine the HPP definition, which is largely implemented through CTB Policy.**
- **Current CTB Policy defines the *where* through VTrans, but not the *what.***

- **Code of Virginia § 33.2-370**
  - *"High-priority projects" means those **projects of regional or statewide significance**, such as projects that reduce congestion or increase safety, accessibility, environmental quality, or economic development"*
- **Policy defines *where* - Corridors of Statewide Significance and Regional Networks**
- **Define *what***
  - Consider projects that **include** feature types - New Capacity Highway, Managed Lanes, New or Improved Interchanges, New or Improved Passenger Rail Stations or Service, Freight Rail improvements, Fixed Guideway Transit

Potential Process Changes
Current Funding Steps

- **Funding Small Projects with HPP dollars.**

- **Allocation steps are used to develop staff recommended funding scenario**
  - Step 1 allocates DGP on a district-wide basis
  - Step 2 allocates HPP on a district-wide basis
  - Step 3 allocates HPP on a statewide basis
- **HPP has not grown since Round 2, however, the DGP is now enhanced by the Supplemental District Grant (SDG) revenues**

Potential Process Changes
Eliminate Step 2

Funding Scenario

HPP Eligibility | DGP Eligibility | **Steps** | Consensus

- **Eliminate Step 2, Prioritize all HPP statewide by SMART SCALE Score.**
- **Smaller projects are being submitted as Step 2 eligible (MPO/PDC/Transit Only).**
- **Small Bike & Ped submitted in Step 2 has increased from 1 (RD 1&2) to 32 RD 5.**

Step 2 Eligible by Round

Round	Step 2 Eligible Number Submitted	Step 2 Eligible Average Request	Step 2 Eligbile Number Funded	Step 2 Eligible Average Funded
1	48	$57M	23	$4 M
2	45	$37 M	10	$2 M
3	72	$38 M	11	$7 M
4	82	$16 M	33	$8 M
5	81	$ 19 M	28	$10 M

Potential Process Changes
Refine HPP Definition - Scenario

Funding Scenario

HPP Eligibility | DGP Eligibility | Steps | Consensus

- **Steps 2 and 3 average project size rose from $15.6M (30 projects) to $76.2M (6 projects).**
- **All Bike & Ped Principal Improvement Types were removed from HPP.**

The average total cost of funded projects rose from $15.1M to $18.0M

The average total request of funded projects rose from $10.1M to $11.8M (removes 24 projects)

For Principal Improvement Type

- **Bike & Ped -** 51 to 38
- **Highway -** 98 to 88
- **Bus Transit -** 3 to 1

For Area Type

- **A -** unchanged at 39
- **B -** 34 to 24
- **C -** 23 to 17
- **D -** 56 to 48

Potential Process Changes
Eliminate Step 2 - Scenario

- **SMART SCALE review highlighted favor of Small Projects.**
- **Smaller projects get funded in both DGP and HPP.**
- **Importance of refining the definition of HPP-eligible project.**

The average total cost of funded projects fell from $15.1M to $11.1M

The average total request of funded projects fell from $10.1 M to $9.8 M (adds 14 projects)

For Principal Improvement Type

- **Bike & Ped -** 51 to 56
- **Highway -** 98 to 107
- **Bus Transit -** unchanged at 3

For Area Type

- **A -** 39 to 42
- **B -** 34 to 40
- **C -** 23 to 28
- **D -** unchanged at 56

Potential Process Changes
Potential Solutions Combined

- **Combining the scenarios balances the two HPP solutions.**
- **HPP average funded went from $15.6M (30 projects) to $31.8M (17 projects).**
- **Bike & Ped Principal Improvement types reduced from 51 to 15.**

The average total cost of funded projects rose from $15.1M to $20.5M

The average total request of funded projects rose from $10.1M to $13.2M (removes 34 projects)

For Principal Improvement Type

- **Bike & Ped -** 51 to 15
- **Highway -** 98 to 103
- **Bus Transit -** 3 to 0

For Area Type

- **A -** 39 to 30
- **B -** 34 to 26
- **C -** 23 to 18
- **D -** 56 to 44

Revisit Previous Recommendations
Application Cap Limit

Addresses Small Project Bias

- Forces applicants to prioritize submissions focused on priorities.
- In the testing scenario, the overall project cost/size was increased in funded projects.
- Anticipate reduction in Small Projects as a result of cap limit reduction.

Schedule and Next Steps

JUNE	Process Biases (Part 1), One Factor Majority, Funding Steps
JULY	Process Biases (Part 2), Low Scoring Projects, Emphasis on Safety Priority, Forward-Looking Process
JULY Retreat	Summarize findings to date and gather feedback, Identify any additional focus areas of analysis, Discuss preliminary recommendations
AUG	No Meeting
SEPT	Retreat Summary, Disconnect Between Need and Benefit, Flexibility in Project Change Process, Project Performance
OCT	Final Recommendations
NOV	TBD
DEC	Policy Adoption

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