

Revamping VTrans' Project Selection & Prioritization Processes



House Transportation Committee
02/14/18

VPSP2 – What is it?



Performance based, risk based, data driven project selection and prioritization system.

VPSP2 – What is it?



- Revamp / revise the current process to;
 - Identify and define how ideas for transportation improvements become transportation projects.
 - Harmonize transportation needs such that our transportation projects deliver increased value.
 - Remove projects or ideas that are no longer viable.

VPSP2 – Why?



Why? Time for a Revision

- Existing process is about 10 years old.
- Legislative mandate to include resiliency and health
- Feedback from RPCs that they don't feel their input is meaningful.
- Inconsistent implementation across the RPCs.

VPSP2 – Why?



Why? Time for a Revision

- Inconsistent parameters across assets / modes.
- Evaluation criteria needed to be reviewed / revised.
- VTrans moving towards holistic corridor management
- Process is heavy on transactions (e-mail, spreadsheets); opportunity to increase efficiency.

How is the effort unfolding?

2017 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan 2018

Document current practices
Develop change and engagement strategies

Stakeholder Workshops

Refine technical details
Develop policy language
Develop implementation roadmap

Workshop Participants

VTrans
RPCs
Sister Agencies: VDH, ANR, ACCD, VEM
Special Interests: VLCT, VCIL, AARP
Modal Interests: Rail, Bike, Transit

What have we been hearing?

- Need a process for RPCs and Municipalities to get a project onto the capital program.
- Not every transportation idea belongs on the capital program; but if validated it could be a *proposed* idea or need for future evaluation.
- Need clear, understandable definitions of Evaluation Criteria and Performance Measures.
- Need to do more with non-traditional transportation measures (such as Health Access).

What have we been doing?

- **Validating** the top-down Decision-Making Model
- **Refining** Evaluation Criteria and Corresponding Performance Measures
- **Developing and Researching** Process Checklists
- **Drafting** a Final Report & Implementation Roadmap

WiiFU



Performance



Risk
Identification



Credibility



Customer
Engagement



Customer
Satisfaction



Plan Alignment

Vision

Long Range Transportation Plan
25 yr Plan

Goals &
Objectives

VTrans' Strategic Plan
10 yr plan

Tactics

TAMP
5 yr plan

Freight
Plan

Rail
Plan

Strategic
Highway
Safety Plan

VPSP2



VTrans Strategic Plan Alignment

Mission

Provide for the safe and efficient movement of people and goods

Vision

A safe, reliable and multimodal transportation system that promotes Vermont's quality of life and economic wellbeing

VPSP2 - 8 Evaluation Criteria



Mobility / Connectivity

Resiliency

Environment

Health Access

Safety

Asset Condition

Community

Economic Access

Evaluation Criteria should....



- Identify primary benefits.
- Align with the Strategic Plan, LRTP,
- Support Governor's Priorities
- Aligned with benefits that come with transportation projects.
- Define and describe improvements which optimize investment decisions.

Evaluation of Transportation Priorities



Evaluation Criteria	Actual Weighting	Proposed Weighting
Safety	19.0%	20 %
Asset Condition	16.2%	15%
Mobility & Connectivity	13.6%	15%
Economic Access	12.3%	15%
Resiliency	11.9%	10%
Community	10.8%	10%
Environment	9.1%	10%
Health Access	7.2%	10%

Top-down, Driven by Analysis

Communicate multimodal investment...

Assign funding levels through 2-stage top-down trade-off analysis.

How much to each mode?

How much to each program?

A% Highway

B% Walkways, Paths, Trails

C% Transportation Facilities

D% Transit

E% Rail

F% Aviation

Administrative

W%

State of Good Repair – Asset Condition

X%

Safety

Y%

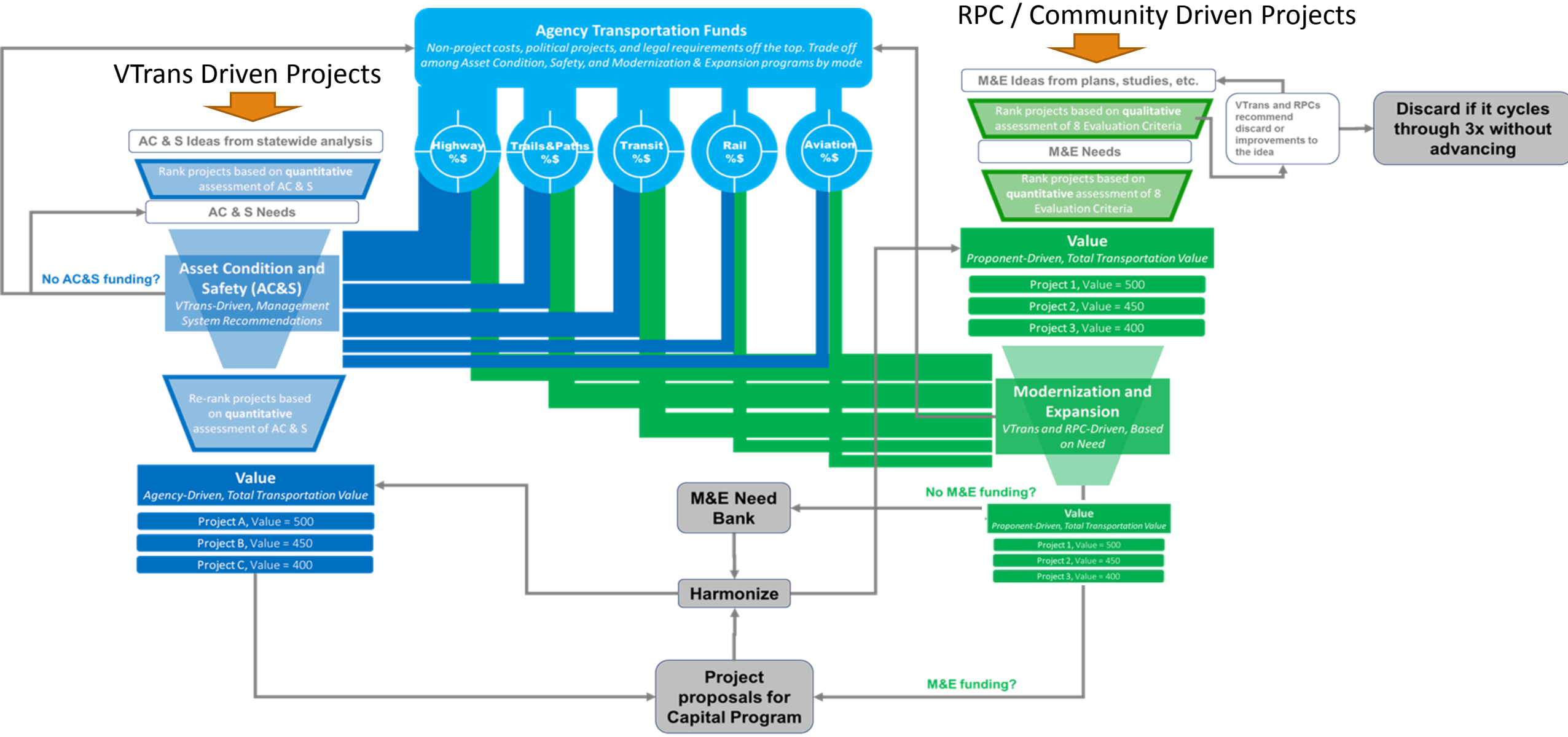
Modernization and Expansion

Z%

VTrans Programs: State Highway Paving, Interstate Paving, etc.

Geographic equity as a check.

Model Overview – How will it Work?



Validation Results

FY18 Capital Program		
ADMIN	\$ 43,442,220	10.1%
ASSET	\$ 264,680,930	61.6%
SAFETY	\$ 31,031,121	7.2%
M&E	\$ 90,411,238	21.0%
		100.0%
TOTAL	\$ 429,565,509	

Validation Results

FY18 CAPITAL PROGRAM		Admin	Asset Condition	Safety	Modernization & Expansion
AVIATION	8%	51%	35%	7%	7%
HIGHWAYS	67%	9%	73%	7%	11%
RAIL	10%	4%	51%	19%	26%
TRANSIT	8%	2%	51%	0.0%	47%
TRANS. FACILITIES	2%	0%	23%	0%	77%
WALKWAYS, PATHS, TRAILS	5%	1%	5%	5%	89%
TOTAL	100.0%				



Work Left To Do



- Develop check lists to qualify ideas.
- Develop performance measures for each mode, and for each evaluation criteria (48 Total)
- Develop legislative language to revise prioritization language in State statutes.
- Develop new processes and communicate processes to stakeholders.

Timeline



- Continued process development and customer engagement through CY2018.
- Continued change management communications with stakeholders in CY2018 and CY2019.
- Pilot the FY20 Capital Program.
- Fully operational in 2020 for FY21 capital program.

Questions?



Additional Reference Slides Beyond This Point



Asset Condition

A transportation project enhances the condition of **multimodal** infrastructure by maintaining it to preserve its current condition, by rehabilitating it to improve condition and extend service life, and/or replacing it to improve its condition and service

Mode

Project-Level Assessment

Highway

Trails & Paths

Transit

Rail

Aviation

Improvement in the condition of primary assets for each mode;

- Bridges,
- Pavements,
- Roadway,
- Transit rolling stock,
- Modal facilities,
- RR bridges.
- RR track,
- RR grade crossings,
- Runway pavements, etc.

Safety

A transportation project enhances mobility by increasing the reliable connectivity to jobs and other destinations **and/or** increasing the number of mode choices available for people and goods.

Mode	Project-Level Assessment
Highway	Reductions in the number and rate (per 100M VMT) of motorized vehicle fatal and serious injury crashes.
Trails & Paths	Reductions in the number and rate (per 100M VMT) of bicycle and pedestrian fatal and serious injury crashes.
Transit	Reductions in the number and rate (per 100M VMT) of transit fatal and serious injury crashes.
Rail	Reductions in the number and rate (per 100M VMT) of rail grade crossing fatal and serious injury crashes.
Aviation	To be developed.

Mobility & Connectivity

A transportation project enhances mobility by increasing the reliable connectivity to jobs and other destinations **and/or** increasing the number of mode choices available for people and goods.

Mode	Project-Level Assessment
Highway	Improvement in congestion and reliability for trucks and autos.
Trails & Paths	Checklist scaled by activity levels, that considers the potential of the project to: <ul style="list-style-type: none">■ Increase number of multi-modal connections■ Land use density measurement ?■ Connects into a larger network of bike/ped facilities
Transit	
Rail	
Aviation	Increase in night time flying – under development

Economic Access

A transportation project enhances economic access by increasing the ability of a region to attract and retain businesses and the workforce by providing better access to jobs.

Mode	Project-Level Assessment
Highway	Increase in cumulative jobs accessible with 60 minutes by auto
Trails & Paths	Increase in cumulative jobs accessible with 5 miles by bike or 0.5 miles by foot.
Transit	Increase in cumulative jobs accessible with 60 minutes by bus.
Rail	Increase in cumulative jobs accessible with 60 minutes by rail.
Aviation	Increase in non-stop access to major labor markets (e.g., Boston, Montreal).

Environment

A transportation project enhances the **natural** environment by reducing the **negative impacts of travel** (e.g., reducing GHG emissions, improving air quality, enhancing safe wildlife passage, and/or improving water quality)

Mode

Project-Level Assessment

Highway

Trails & Paths

Transit

Rail

Aviation

Checklist scaled by activity levels, that considers the potential of the project to:

- Improve air quality?
- Improve water quality?
- Improve wildlife passage?
- Reduce greenhouse gas emissions?
- Minimize impact on cultural resources?

Community

A transportation project enhances the community by conforming to the goals and objectives defined in local and regional plans, and by supporting the outcomes of a robust public process

Mode

Project-Level Assessment

Highway

Trails & Paths

Transit

Rail

Aviation

Checklist for any project (could include multiple modes) score to be scaled by activity levels, for example:

- Number of Vermont Comprehensive Economic Development Strategy (CEDS) goals addressed?
- Number of regional CEDS goals addressed (if one exists)?
- Number of Regional Transportation Plan goals addressed?
- Number of plans in which project called out?
- Harmonized with other infrastructure work (e.g., water, sewer, broadband)?

Resiliency

A transportation project enhances the resiliency of the system by minimizing the impacts of **planned and unplanned events** (e.g., floods and extreme weather)

Mode

Project-Level Assessment

Highway

Trails & Paths

Transit

Rail

Aviation

Checklist that assess the following for each mode;

- Increase in modal system robustness (i.e., by increasing the robustness index)
- Decrease in each mode's overall asset vulnerability and risk.

Health Access

A transportation project enhances public health by increasing the opportunity for physical activity and increases access to destinations that improve health (i.e., healthcare, education, and healthy food)

Mode

Project-Level Assessment

Highway

Trails & Paths

Transit

Rail

Aviation








Checklist scaled by activity levels, for example

- Potential to increase access to healthy food?
- Potential to increase access to education?
- Potential to increase access to recreation destinations (parks, gyms, etc.)?







Note: Pedestrian and bicycle access is addressed in the Trails & Paths

Harmonizing Process - Legend





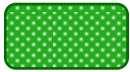




Asset Driven

-  Pvmt: Resurfacing
-  Pvmt: Level & Overlay
-  New Bridge
-  Bridge Rehab
-  Culvert Replacement
-  Culvert Lining
-  Resurface RR crossing

Safety Driven

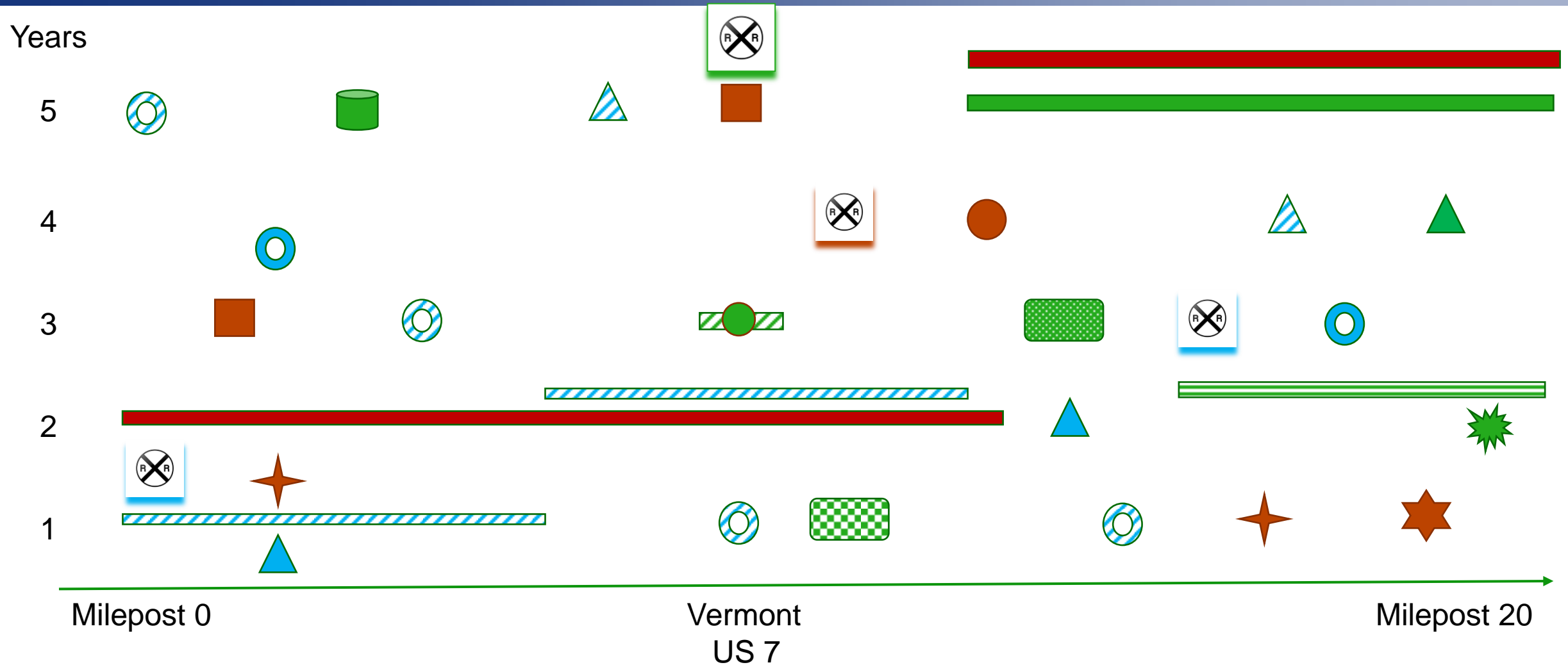
-  Guard Rail, Line Striping, Signs
-  Signal Upgrades
-  Intersection Improvements
-  Improve School Crossings
-  Pedestrian Improvements
-  Upgrade RR crossings

Modernization & Expansion

-  Pvmt: Reclaim
-  New Pedestrian Bridge
-  New Sidewalk
-  New Turn Lanes & Signals
-  Construct Gravel Wetland
-  New Stormwater Det. Pond
-  Park/Ride Facility Upgrades
-  New Multimodal Facility
-  Lower RR tracks, ↑ Freight

Harmonizing Process

Before Harmony



Harmonizing Process

After Harmony

Years

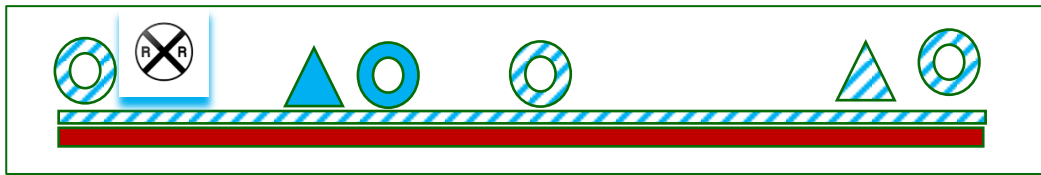
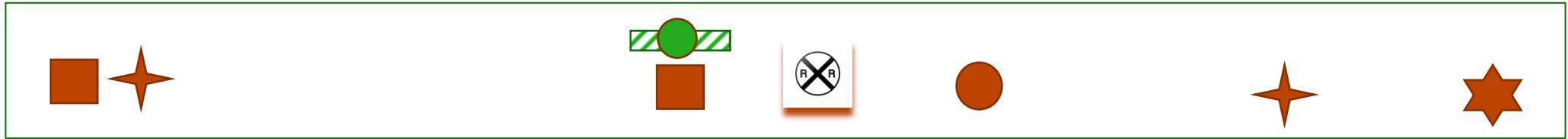
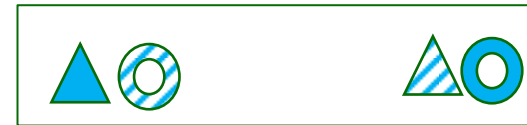
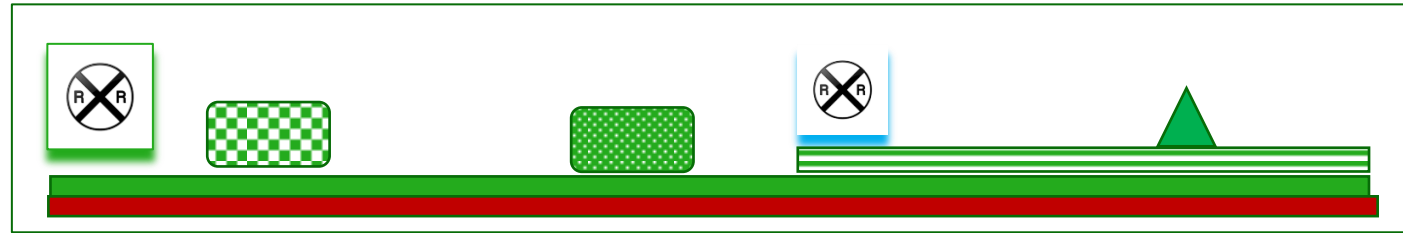
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Milepost 0

Vermont
US 7

Milepost 20