



Resilience Improvement Plan

How the Measures of RIP Goals Were Applied & Draft Results

Transportation Planning Initiative
June 15, 2023

Agenda

- Quick refresh on purpose
- Update on process
- Latest on System Measures
- Using Measures
- Draft analysis results
- Preliminary locations to explore – **This is the focus for discussion**
- Next steps



Promoting Resilient Operations for Transformative, Efficient, and Cost Saving Transportation (PROTECT)

Introduced as part of 2021 IIJA/BIL

Formula funds - \$37 million to VT over 5 years

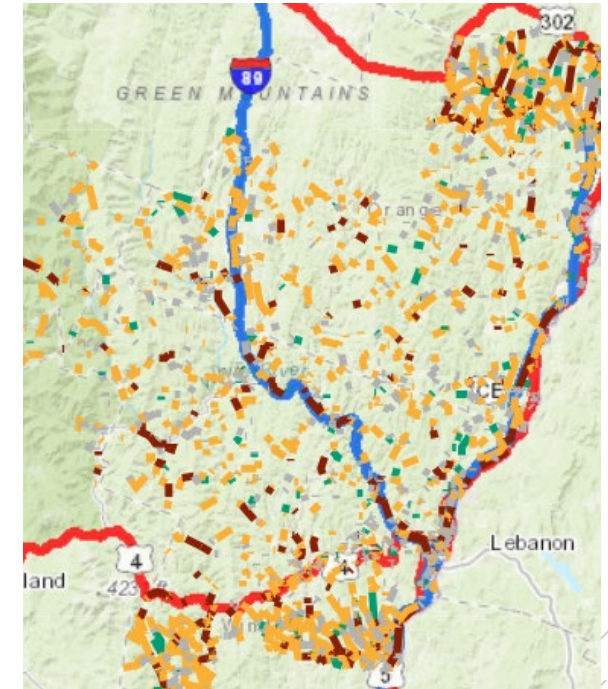
Discretionary grants

Purpose: [H]elp make surface transportation more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk costal infrastructure.

Making Vermont More Resilient...and Financially Stable

The PROTECT Formula Program does not require States and MPOs to develop a Resilience Improvement Plan before spending PROTECT Formula Program funds. However, a Resilience Improvement Plan **can reduce the non-Federal cost share for a project by up to 10 percent.**

*Lots of opportunities
as shown in this
TRPT analysis*



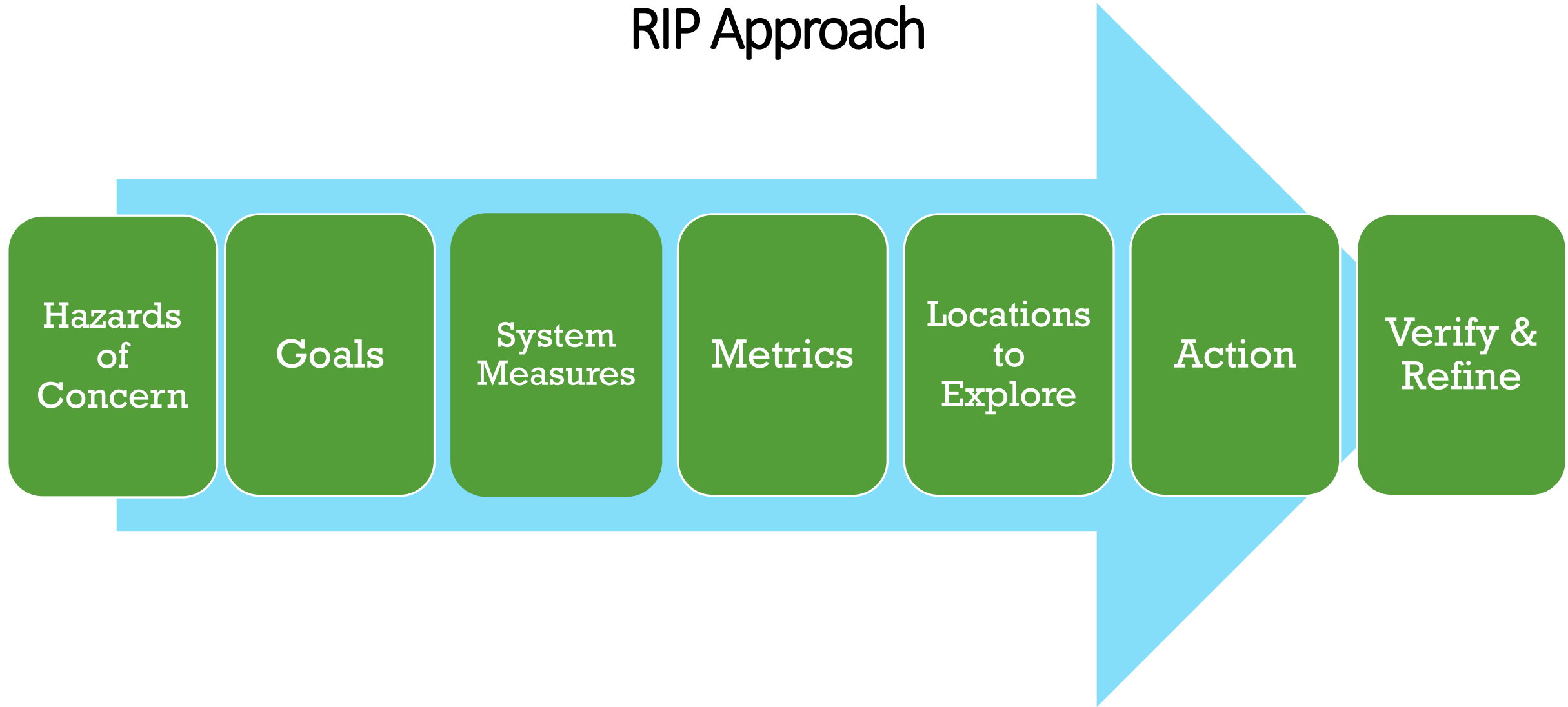
Vermont already has developed much of the required contents...

So let's do a
Resilience
Improvement
Plan !

ELEMENTS OF PLAN (PER THE GUIDANCE)

- Define risks and vulnerabilities of concern
- Identify external and internal partners
- Summarize how resilience is addressed in existing plans
- Identify processes
- Develop a framework for project selection and implementation
- Establish methods to measure performance
- Define next steps and future actions
- May identify projects

RIP Approach



A green speech bubble graphic with a tail pointing towards the bottom left. The word "Collaboration" is written in white text inside the bubble.

Collaboration

- Thank you for your comments at the last four TPI meetings!
- Three cross-division AOT discussions
- Two external partners meetings with BGS, VEM, ANR – DEC/FW, Dept of Health, and ACCD, plus informal discussions
- Positive results working with VEM on how freight would get to Vermont and be distributed after a major event, referred to as Commodity Points of Distribution (CPODs) and aligning with other State Plans and resources.

Goals

1. **Less damage in the future.** 

Major natural events result in *less damage* to the transportation system in the future than in the past.

2. **Systems return to normal quickly.** 

The transportation system *returns to normal quickly* after major events.

3. **Vermont is resilient for all people.** 

All people have transportation options to safely evacuate before an incoming natural event or after if necessary.

4. **Essential freight moves.** 

Essential freight continues to arrive at key destinations for distribution and delivery to Vermonters.

5. **Resilience efforts are coordinated.** 

Resilience investments benefit transportation systems and Vermont's communities, environment, economy, and other critical infrastructure sectors.

System Measures Help Us Track Progress Toward Resilience Goals

They also identify locations to explore for strategies to increase resilience... or accept risk.

For more detail, visit
PROTECT Team:
[Measures spreadsheet](#)

Goal	System Measures – How we know if we're making progress
There is less damage in the future.	High risk locations are known and are being made more resilient through capital projects or other strategies
Systems return to normal quickly.	Start: Transportation travel time returns to reliable more quickly on average. Future: Reliability returns to normal more quickly after major storms.
	Roads necessary for fixed route transit have no segments or structures at very high risk that haven't been addressed.
Vermont is resilient for <u>all</u> people.	AOT knows the locations where high transportation risk and high social vulnerability coincide. Transportation improvements have been completed to increase ability of vulnerable populations to travel to safety and key services.
	Vermont's transit providers have regularly exercised plans to increase resilience for bus riders.
Essential freight moves.	Start: AOT understands transportation access risks for key freight receiving and distribution sites. Future: Access to key freight distribution sites is more resilient and redundant, including for multiple modes.
Resilience efforts are coordinated.	Increasing numbers of VTrans resilience efforts specifically also address recommendations of other State plans
	Increasing numbers VTrans resilience projects specifically also increase resilience of natural systems

How the RIP Combines Goals, Measures, Metrics

FLAGS

- Each measure has a metric—a definition of what counts as “high”
- Locations where the measure is high get a point (or "flag")
- Flags can then be viewed or summarized by road segment or structure

Explore on the webtool! Draft Resilience Improvement Plan

ROAD SEGMENTS - Sample of Preliminary Locations To Explore

State Road Segments
TOTAL Flags 3 or More

RT	NHS	FUNCL	risk50	crit	town	county	M1_Hrisk_T	...	M20_Coord_	TOTAL_FLAG
VT-125	0	5	8.5	7.0	Ripton	ADDISON	1		0	6
VT-125	0	5	8.5	7.0	Ripton	ADDISON	1		0	6
VT-15	0	4	5.5	7.0	Hyde Park	LAMOILLE	1		1	5
VT-15	0	4	6.0	7.0	Hyde Park	LAMOILLE	1		1	5
VT-15	0	4	7.0	7.0	Morristown	LAMOILLE	1		0	5
VT-15	0	4	7.0	7.0	Wolcott	LAMOILLE	1		0	5

Explore on the webtool! [Draft Resilience Improvement Plan](#)

What's Next?

Steps to Completing Initial RIP

- Overlay locations with Capital Program to see where there are projects programmed, or planned
- Complete narrative of RIP
- Circulate draft for review
- Informal meeting with FHWA-Vermont Division
- Complete, submit to FHWA, and share Initial RIP

What About After this RIP?

Implement and Refine RIP

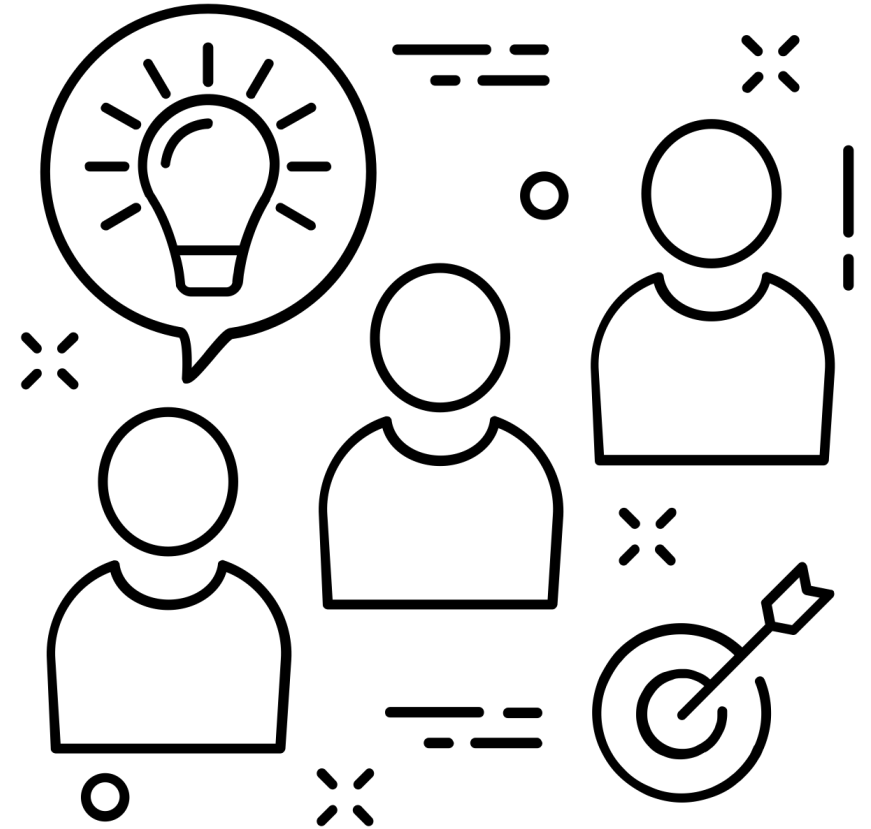
- Complete first actions in RIP, potentially including grant applications
- Continue to communicate with internal and external partners
 - Define how RIP will be incorporated in other AOT processes
- Stay engaged as this field develops—prepare to update RIP

Discussion!

Now that you see how this works do you have suggestions?

How do you want to participate?

How does this relate to Discretionary Grant efforts?





Thank You!

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