VTrans' Project Prioritization

REVAMPING VTRANS' PROJECT SELECTION AND PRIORITIZATION PROCESSES: DEVELOPMENT OF AN OPTIMIZED CAPITAL PROGRAM

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VTrans Working to Get You There
Vermont Agency of Transportation

Project Prioritization System Timeline 2005 to 2016

2005   VTrans directed by Legislature to develop a numerical grade in order to develop a priority system for various assets.

2006   VTrans worked with the various RPCs (and the CCMPO) to assign a numerical score to transportation projects based on defined criteria.

2008-2009   Increased local input in the selection of paving projects.

Developed an approach for the regions and MPO to substitute a candidate project with a new project.

Emphasized the importance of obtaining local input for project priorities.

Project Prioritization System Timeline 2005 to 2016

2009-2016   Implementation and use of the Project Prioritization System

2016   ACT 158 - Amended the law that requires the Agency to develop a rating system in order to prioritize various categories of transportation projects in order to broaden the scope of the factors (health & resilience) that the Agency must consider in establishing its rating system and to make other miscellaneous changes.

2018   Revamping VTrans' Project Selection & Prioritization System

Section 53 of Act 80   2005

Section 53 of Act 80 of 2005 required the Agency to develop a **numerical grading system** to assign a **priority rating** to paving, roadway, bridge, and bridge maintenance projects **within those programs**.

The rating system included asset management-based factors which are objective and quantifiable including:

- Safety

- Traffic volume (AADT)

- Availability of alternate routes

Section 53 of Act 80   2005

- Future maintenance and reconstruction costs

- Priorities assigned by the regional planning commission (RPC) or the CCMPO

The legislation also required that the Agency consider the functional importance of the highway or bridge to the economy as well as its importance to the social and cultural life of the surrounding communities. **This is where the RPCs have provided their expertise.**

Sec. 48 of Act 175   2006

Sec. 48 of Act 175 of the 2006 Legislative Session directed the Agency of Transportation to explain how projects are prioritized and selected for inclusion in the annual budget.

In 2006, VTrans collaborated with the state's various Regional Planning Commissions and the Chittenden County Metropolitan Planning Organization (CCMPO) to **assign a numerical score to transportation projects based on defined criteria.**

The scores drive the transportation program and are an **essential part of the budget process.**

Sec. 48 of Act 175   2006

The agency shall **annually solicit input from each of the regional planning commissions** and the Chittenden County Metropolitan Planning Organization on regional priorities within each schedule, and those **inputs shall be factored into the prioritizations for each program area** and shall afford the opportunity of adding new projects to the schedules.

Each year the agency shall provide in the front of the transportation program book a detailed explanation describing the factors in the prioritization system that creates each project list.

2008-2009

In 2008, VTrans and the Directors of the Vermont Association of Planning and Development Agencies (VAPDA) met several times to further improve the process. 2009 was the first year when the changes were in place.

Increased local input in the selection of paving projects.

Developed an approach for the regions and MPO to substitute a candidate project with a new project.

Emphasized the importance of obtaining local input for project priorities.

Although local input is not needed for Interstates and certain FHWA funded safety projects, it is an essential component of the VTrans project selection process for most other asset classes.

2008-2009

Although the RPCs and MPO have flexibility in how they prioritize projects, they use common criteria as specified by the Legislature.

VTrans' Program Managers provide more information on candidate projects in order that each region has an accurate "big picture".

A close working relationship between VTrans and the RPCs/MPO assures the success of project prioritization and selection. In 2009 it is anticipated that the changing transportation environment would necessitate further changes over time.

RPC Perspective

"The reality was people demanded a better understanding of how projects were prioritized, developed, and eventually constructed. Prior to this prioritization process, it was unclear as to why and how projects could advance at greater rates of speed than other projects.
The prioritization process works well and it has substantially improved the transparency in project selection and development."

Rita Seto, TRORC January 2014

2016 Current Process - VTrans

VTrans' ranking process is based on several engineering factors such as asset condition, remaining life, intersection capacity, accident rates, vehicle per mile impacts, cost-benefit ratios, and project development momentum.

These are the types of data specific criteria that you would expect VTrans to consider when developing project rankings. **These factors constitute 80% of the total ranking process.**

These factors vary by program.

2016 Current Process - RPCs

RPCs use planning factors that expand what VTrans' officials are not able to factor into their ranking process such as economic development and growth.

The **regional planning commission's factors contribute 20% to the ranking process**. This "20%" recognizes that not all public policies and priorities can be captured by engineering factors and that there is a **greater community context** beyond that road, bridge, or park-and-ride.

Opportunity for Improvement

- Improvements can be made to direct limited transportation funds to support key strategic goal areas enhancing the Agency's integrity and credibility.

- There is an opportunity to include a **program-level** prioritization framework to help determine funding levels by program. How much should the Agency be investing in each of its Programs? Should the Paving Program's budget be higher than the Bridge Budget, if so by how much?

- The current **project** prioritization process can be strengthened by having a consistent and documented method for adding and deleting projects.

Opportunity for Improvement

- VTrans' programs with mature inventories and asset-based performance measures, such as bridges and pavement, will benefit from a well-defined process that
  - determines how a project is selected,
  - when a project is placed in the Capital Program, and
  - how **projects are prioritized against each other**.

- The Agency's prioritization system will be enhanced with the inclusion of well defined processes for **selecting, adding and removing projects** to the capital program based on non-asset related needs such as land use policy, economic development, quality of life, multi-modal access and resiliency.

Opportunity for Improvement

- These types of projects are often identified in a variety of planning processes that are outside of the asset management systems and do not have a defined path to the Capital Program.

- Which projects yield the highest rate of return...i.e, provide the most value?

- Prioritization processes need to be performance based, data driven and simplified. Process needs to be managed electronically.

Request For Proposal

Revamping VTrans' Project Selection and Prioritization Processes: Development of an Optimized Capital Program

Revamping VTrans' Project Selection and Prioritization Processes: Development of an Optimized Capital Program

Project Goal:

To develop an understanding of how value is added to the transportation system and how the transportation network supports broader statewide goals related to non-asset related factors such as economic development, quality of life, and the environment.

Revamping VTrans' Project Selection and Prioritization Processes: Development of an Optimized Capital Program

Project Goal:

Use established principles of asset, risk and performance management to **refine** VTrans' existing project prioritization system and couple it with a supporting policy plan to **ensure that the optimum mix of projects is delivered to the public each year.**

Revamping VTrans' Project Selection and Prioritization Processes: Development of an Optimized Capital Program

Project Goal:

Develop policy language for VTrans that will support the use of the proposed decision-making framework utilized to develop an optimized Capital Program.

The policy language should convey a **structured methodology** that clearly **communicates the Agency's commitment to managing its resources efficiently and effectively.**

Why?

- To **effectively manage multiple goals and objectives**, the Agency needs to determine what its priorities are and then effectively communicate them to its **customers**

- To ensure that its resources are focused on those activities that are of the **highest priority** and provide the **highest value in return** for the Vermont taxpayer's investment.

- Vermont's **infrastructure needs currently exceed available revenue**. Thus, the Agency must continue to be strategic and optimize every single penny of its revenue to limit the negative effects that stem from insufficient funding levels.

Why?

- In the face of funding and performance challenges the Agency must manage a transportation system that is sustainable while addressing the safety, mobility, resiliency, asset condition and economic development needs and expectations of Vermont's transportation users

- VTrans is committed to making risk-based, performance-based and data driven decisions with the goal of **maintaining transparency** and its **accountability** and **credibility** with its **customers**.

6 Key Project Steps

Task 1 - Review Existing Data and Developing the Work Plan

Change mgmt. strategies, stakeholder workshops, literature review, information & data gathering

Task 2 – Evaluate and Refine the Overall Project Identification, Prioritization and Selection process

Summarize project selection processes, host stakeholder workshops

6 Key Project Steps

Task 3 – Develop Weighted Decision Criteria

Develop an initial set of decision criteria to be used to evaluate and establish the relative importance of decision criteria consistent with FAST Act requirements and the goals and objectives of the TAMP, Strategic and Long Range Plans.

Develop the ratings scales. These are the qualitative and quantitative measurement scales that will enable the Agency to evaluate alternatives against established criteria.

What are the transportation values that VTrans wants to measure and how does one measure the amount of benefit provided by each project?

6 Key Project Steps

Task 3 – Develop Weighted Decision Criteria (meat & potatoes)

Establish Relative Importance of Decision Criteria, for instance, does VTrans and its stakeholders desire to prioritize safety over mobility? The environment over economic development? Mobility over asset condition?

What are the transportation values that VTrans wants to measure and how does one measure the amount of benefit provided by each project?

Task 4 - Laying the Foundation for an Optimized Capital Program

Develop recommendations on processes, procedures and the decision-making framework necessary to develop an optimized capital program.

6 Key Project Steps

Task 5 – Develop Supporting Policy Language and Draft Legislation

Develop policy language that supports the use of the proposed decision-making framework to develop an optimized Capital Program. The policy language should reflect the role that keeping infrastructure in a state of good repair has on economic development.

Task 6 – Preparation, Review, Revision and Presentation of Interim and Final Reports

Optimized Capital Program

Conceptualized Optimized Capital Program
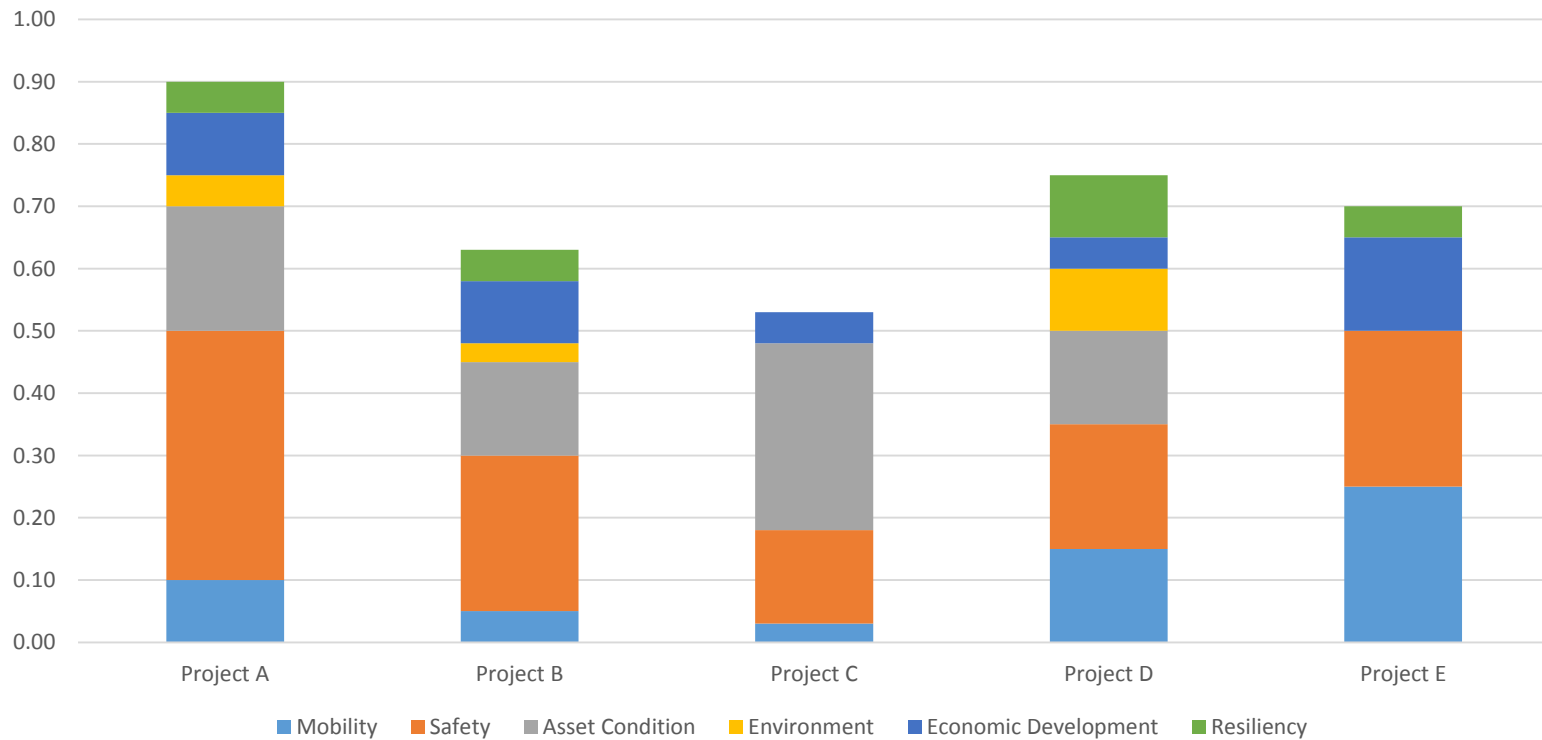
Proposed Schedule

- Project set to begin in mid to late February with Stakeholder Workshops.

- Duration is approximately 12 months; goal is to have legislative language developed for discussion purposes in 2018.

Questions