VisionEval Pooled Fund Partnership
Strategic Tools for Performance-Based Planning

Electric vehicles, declining revenues, congestion pricing, automated vehicles, micro-mobility….The need for strategic planning tools to support evaluation of alternative futures under immense uncertainty has never been greater for the transportation sector…

Using **strategic tools** for long range **performance-based planning** is an increasingly valuable means to help state and metropolitan area governments select policies and actions to address pressing issues that are fraught with uncertainty. Strategic tools are designed to address a wide range of trends and policies to evaluate many alternative futures and policies, rather than focusing on cumbersome details. As a result, planners can reason more effectively about intended and unintended consequences of prospective policies, and assess the resilience of plans relative to uncertain external influences. Rigorous strategic models complement traditional tools with robust estimates of scenario metrics. Performance metrics identified in a strategic phase may be incorporated into subsequent planning, programming and project prioritization, where they help monitor and understand plan performance. Several state and regional agencies, with the support of the Federal Highway Administration (FHWA), have joined in the VisionEval Pooled Fund to build a supportive community and accelerate the adoption and deployment of strategic planning tools to support performance-based planning.

VisionEval (https://visioneval.org) is a collaborative project to merge the successful GreenSTEP family of strategic planning tools into an open-source framework. Partner agencies and others are sharing in its use and enhancement. VisionEval supports strategic planning by allowing planners to visualize and explore thousands of scenarios, testing a broad range of policies and actions, and resiliency to outside factors. The VisionEval framework is comprised of the following models:

MODEL	GEOGRAPHY	DESCRIPTION
VE-RPAT	Metropolitan Area	Tests land use policies and smart growth in a metropolitan area to evaluate the potential effect of growth policies on regional travel. RPAT (Rapid Policy Analysis Tool) was developed to help planners evaluate the potential effect of growth policies on regional travel. Requires less detailed inputs than VE-RSPM.
VE-RSPM	Metropolitan Area	The Rapid Strategic Planning Model (RSPM) supports the preparation of metropolitan area scenario plans through systematic exploration of possible future conditions and policy and planning responses.
VE-State	Statewide	The Statewide VisonEval Model examines scenarios across multiple metropolitan areas at a state-wide level. VE-State is an updated version of the original GreenSTEP model.

The pooled fund was recently extended through FY2022, and new partners are welcome!

To learn more about this partnership or to join the Pooled Fund, visit: https://pooledfund.org/Details/Study/621
Or contact Jeremy Raw (jeremy.raw@dot.gov, 202-366-0986)

For more information:

Website: https://visioneval.org/
GitHub Repository: https://github.com/visioneval/visioneval
Wiki: https://github.com/visioneval/visioneval/wiki

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VisionEval Pooled Fund Partnership

The VisonEval **pooled fund project ("Collaborative Development of Strategic Planning Models")** is hosted by **FHWA** and supports tool development, upgrades, and outreach. The pooled fund is maintained and governed by a **community** of agency sponsors, active users and developers. The pooled fund partners define the policy needs and uses of the VisionEval family of strategic planning tools, and set the direction for **future tool development**. VisionEval also provides forums for agencies to share **best practices** in applying strategic planning tools to support of long range policy conversations.

VisionEval Open Source Project Development

The VisionEval project builds on an FHWA-Oregon DOT partnership to implement strategic planning models using the open-source VisionEval framework. The project is committed to creating a flexible tool that is easier than traditional transportation planning models for users and contributors to understand, assemble, and extend in a plug-and-play fashion. The Pooled Fund project goals are to maintain VE Releases with improved documentation for various audiences, expand consultant capacity, and add model enhancements. To date a downloadable installer for VisionEval has been published, with extensive documentation for users and developers on the GitHub website. Several trainings and workshops have been held. Selected model enhancements have begun with support from multiple consultants. Implementation and testing of tool enhancements are also underway.

Current Capabilities and Planned Enhancements

Existing:

- Synthetic Households with Home and Work location, attributes, and policy actions
- Vehicle and Fuel technology adoption
- Multimodal: Car Service, short trip diversion, transit
- Pricing policies: gas tax, VMT fee, congestion and carbon pricing
- Resilience testing: fuel price, household size

Planned:

- Unified Multi-Modal Module (2020) with 5D Land use sensitivity & transit access
- Safety & Reliability metrics (2020)
- Driverless Vehicles (2020, long term 2022)

The pooled fund was recently extended for 2 years to continue developing VisionEval and building capacity for agency partners through additional documentation and in-person knowledge sharing opportunities. Partners have expressed interest in a structured program to better support own-agency tool implementation, followed by in-person meeting to share application work and set priorities for future model enhancements.

Open Source Projects and the FHWA Transportation Pooled Funds Program

Open source projects provide for robust collaboration, investment efficiency, and quality control benefits while ensuring transparency and access to data. FHWA Transportation Pooled Funds (TPF) programs allow federal, state, and local agencies and other organizations to combine resources to support transportation tool development and research to meet shared needs.

Open Source Project Benefits

- Credible, maintained, well-documented tools
- Clear standards and development guidelines
- Collaborative code maintenance and updates
- Active user and developer communities
- Knowledge sharing among partner agencies

Financial Contributor Benefits

- Cost-effective tool upgrades and investment efficiency
- Voting privileges to prioritize enhancements
- Early review and use of the implemented models
- Technical support for model implementation

Pooled Fund Partners (through FY2020)

Federal Highway Administration, **California** Department of Transportation, **Maryland** Department of Transportation, **North Carolina** Department of Transportation, **Ohio** Department of Transportation, **Oregon** Department of Transportation, **Virginia** Department of Transportation, **Washington** State Department of Transportation, **Atlanta** Regional Commission, Delaware Valley Regional Planning Commission (**Philadelphia), Houston-Galveston** Area Council, Regional Transportation Commission of **Southern Nevada**