VisionEval
Strategic Tools for Performance-Based Planning

Using **strategic tools** for long range **performance-based planning** is becoming increasingly valuable 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 to evaluate many alternative futures and policies, rather than focusing on details. As a result, planners can reason more effectively about intended and unintended consequences of prospective policies, and assess the resilience of plans to uncertain external influences. Performance metrics set in a strategic phase may be incorporated into subsequent planning, programming and project prioritization processes. The metrics can also help agencies monitor plan performance to inform long range planning decisions. A network of regional agencies, coordinated through the Federal Highway Administration (FHWA), has come together to accelerate the adoption and deployment of strategic tools to aid in performance-based planning.

[VisionEval](https://visioneval.org) (https://visioneval.org) is a collaborative project to merge the successful GreenSTEP family of strategic planning tools into an open-source framework. A supporting community of partner agencies and others share in its use and enhancement. VisionEval supports strategic planning by allowing users to run, visualize and explore thousands of scenarios, testing a broad set of policies and actions. A Pooled Fund effort is building a supportive community around the tool, drawing from successful past and interested future users. The VisionEval framework is comprised of the following models:

MODEL	GEOGRAPHY	DESCRIPTION
VERSPM	Metropolitan Area	Detailed metropolitan area model. VERSPM (VisionEval Regional Strategic Planning Model) supports the preparation of metropolitan area scenario plans.
VERPAT	Metropolitan Area	VERPAT (VisionEval Rapid Policy Analysis Tool) was developed to help planners evaluate the potential effect of growth policies on regional travel in a metropolitan area. Focused on land use policies and smart growth to evaluate the potential effect of growth policies on regional travel. Simplified inputs relative to VERSPM.
VE-State	Statewide	Extension of VE-RSPM to encompass multiple metropolitan areas at a statewide level, providing the same outputs as the original GreenSTEP system. Input in larger geographic areas (county-sized) with outputs in synthesized smaller areas, comparable to VERSPM.

U.S. Department of Transportation

Federal Highway Administration

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** 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 GreenSTEP 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 long range policy and plan development.

VisionEval Open Source Project Development

The VisionEval project builds on an FHWA-AASHTO-Oregon DOT partnership to implement the GreenSTEP strategic planning models into the open-source VisionEval project. The Pooled Fund project has resulted in a downloadable installer, with extensive documentation for users and developers on the GitHub website. Selected model enhancements have been completed and others are in progress. Existing and new users are implementing VisionEval models, and informing ongoing efforts to make the tools more flexible and easier to understand, assemble, and extend in a plug-and-play fashion compared to traditional transportation planning tools.

VisionEval Capabilities and Planned Enhancements

- Vehicle and Fuel technology adoption
- Pricing policies
- Home and Work location and attributes
- Sensitivity to Bike network investments & connectivity
- Multimodal: Car service, short trip diversion, transit (implemented)
- Unified MultiModal Module (implemented) 5D Land use sensitivity & transit access
- Safety & Reliability metrics (implemented)
- Travel Time Reliability (under development)
- Driverless Vehicles (under development)

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. Transportation Pooled Fund (TPF) programs allow public agencies and other organizations to combine resources to support transportation tool development and research to meet shared needs.

Open Source Project Benefits
- Credible, maintained, 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

VisionEval User Experience
PolicyMaker | Planner | User | Developer

- Formal Trainings
- Conference Workshops: TRB Planning Applications, TRB Annual Meetings
- Online materials and tutorials explain the tool to different audiences
- Concepts Primer and instructional video

Pooled Fund Partners
Federal Highway Administration, California Department of Transportation, Maryland Department of Transportation, North Carolina Department of Transportation, Ohio Department of Transportation (past), Oregon Department of Transportation, Virginia Department of Transportation, Washington State Department of Transportation, Atlanta Regional Commission, Houston-Galveston Area Council, Regional Transportation Commission of Southern Nevada.

The Pooled Fund study is open to new partners!
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, 202-680-9573)