

VisionEval Strategic Tools for Performance-Based Planning

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



VisionEval is a recently established partnership merging the successful GreenSTEP family of strategic planning tools into an open-source project with a supporting community forum of partner agencies and others sharing in its use and enhancement. The goal is to support a broad array of potential tool uses and enable pooled enhancements expanding the types of outcomes measured or refine the specificity of transportation and land use solutions considered. The work to date by the founding FHWA-Oregon DOT partnership has focused on the technical components of putting the various tools on a common programming framework. Bolstered by interest at an RPAT Peer Exchange in October 2015, efforts are underway to build a supportive community around the tool, drawing from successful past and interested future users nationally, who will both define the policy needs and uses of these tools, and set their direction moving forward. VisionEval is built on the following models (RSPM and RPAT are on GitHub):

The **GreenSTEP** (Greenhouse gas Strategic Transportation Energy Planning) model was the first of these models to be developed. It was developed by the Oregon Department of Transportation (ODOT) to assist in the development of plans to reduce greenhouse gas (GHG) emissions from light-duty vehicles to meet statutory goals. GreenSTEP models the effects of many different factors (e.g. transportation supply, prices, land use, etc.) on household vehicle ownership and use, and the effects on emissions, traffic congestion, etc.

The **RSPM** (Regional Strategic Planning Model) was developed by ODOT as an offshoot of the GreenSTEP model to support the preparation of metropolitan area scenario plans. The name reflects a broadening of the policies, beyond GHG emissions.



The **EERPAT** (Energy and Emissions Reduction Policy Analysis Tool) was developed to "assist state transportation agencies with analyzing GHG reduction scenarios and alternatives for use in the transportation planning process, the development of state climate action plans, scenario planning exercises, and to measure the reduction potential of various transportation strategies to meet state GHG reduction goals and targets." The EERPAT was developed from the GreenSTEP model and was revised to have a graphical user interface and to serve all 50 states.

The **RPAT** (Rapid Policy Analysis Tool) was developed under the federal Strategic Highway Research Program (SHRP2). The model was developed to help planners evaluate the potential effect of smart growth policies on regional travel. Portions of the GreenSTEP model were used in RPAT, but substantial revisions were made to the code, including use of land use place type categories.

For more information...

VisionEval: <https://gregorbj.github.io/VisionEval/>

GreenSTEP: <https://www.oregon.gov/ODOT/TD/TP/pages/greenstep.aspx>

RSPM: http://www.oregon.gov/ODOT/TD/OSTI/Pages/scenario_planning.aspx#reg

EERPAT: https://www.planning.dot.gov/fhwa_tool/

RPAT: <https://planningtools.transportation.org/551/rapid-policy-analysis->