



Case Study:

Evaluating Regional Transportation Planning and Financial Sustainability Using INVEST Tennessee

Lead Agency: Chattanooga-Hamilton County/North Georgia Transportation Planning Organization (CHCNGA TPO)

INVEST Module: Systems Planning (SP)

Link: <https://chcrpa.org/index.php/project/2040-rtp/>

In May of 2015, the Chattanooga-Hamilton County/North Georgia Transportation Planning Organization (CHCNGA TPO) used INVEST Version 1.1 to evaluate its 2040 Regional Transportation Plan (RTP) and identify areas of improvement for the 2045 RTP Update. Through a workshop, TPO staff and other stakeholders scored the 2040 RTP and developed recommendations for improving areas where the plan did not score as well. The TPO is now developing the 2045 RTP Update, which incorporates several of the recommendations from the INVEST evaluation.

INVEST Scoring Process

After it published the 2040 RTP, the CHCNGA TPO decided to use the INVEST SP module to evaluate the plan's social, economic, and environmental sustainability and to inform the development of subsequent plans. To conduct the INVEST scoring, the TPO held a workshop with 18 participants, including representatives from the TPO and Regional Planning Agency, Federal Highway Administration (FHWA) Georgia Division, Tennessee Department of Transportation (DOT), Hamilton County, and other stakeholder groups.

Several weeks before the workshop, a TPO staff person assigned several INVEST criteria to everyone who was planning to attend. Approximately three to five people were assigned to each criterion. Each person prepared for the workshop by scoring the 2040 RTP through the INVEST website using their assigned criteria, and developing notes to support their scoring. Participants were also instructed to link their scoring to specific pages of the RTP. The TPO staff that organized the workshop scored the plan using all of the INVEST SP criteria.

At the workshop, participants discussed the scores and notes for each criterion they were assigned. The group then agreed on a score, and repeated the process for each criterion. The group was able to discuss and agree on a score for all of the criteria during the 6-hour workshop.

Areas for Improvement

Overall, the 2040 RTP scored 118 out of a possible 240 points, for a Silver rating. The plan scored highly on many of the criteria, including SP-06 Safety Planning, SP-09 Travel Demand Management, SP-10 Air Quality, and SP-14 Transportation Systems Management and Operations.

For criteria where the plan did not score well, workshop participants developed suggestions for improvements in the next RTP.

INVEST Criteria	Score/Points Available
SP-01 Integrated Planning: Economic Development and Land Use	9/15
SP-02 Integrated Planning: Natural Environment	2/15
SP-03 Integrated Planning: Social	10/15
SP-04 Integrated Planning: Bonus	0/10
SP-05 Access and Affordability	9/15
SP-06 Safety Planning	12/15
SP-07 Multimodal Transportation and Public Health	9/15
SP-08 Freight and Goods Movement	9/15
SP-09 Travel Demand Management	11/15
SP-10 Air Quality	11/15
SP-11 Energy and Fuels	0/15
SP-12 Financial Sustainability	0/15
SP-13 Analysis Methods	10/15
SP-14 Transportation Systems Management and Operations	11/15
SP-15 Linking Asset Management and Planning	4/10
SP-16 Infrastructure Resiliency	10/15
SP-17 Linking Planning and NEPA	1/10
TOTAL	118/240

These recommendations included:

- *SP-02 Integrated Planning: Natural Environment (2 out of 15 points).* Workshop attendees discussed how the next plan should identify more ecological considerations like surface water quality, maintaining or enhancing groundwater recharge (e.g., through innovative stormwater design features), or improving habitat connectivity (e.g., by increasing wildlife crossings). Participants recommended that the next plan use applied system or landscape-scale evaluation techniques using natural resource data and include more of an ecological component.
- *SP-11 Energy and Fuels (0 out of 15 points).* Participants discussed how the agency has the ability to develop energy and/or fossil fuel reduction goals and objectives and a baseline inventory for the transportation system within its jurisdiction, and that it should work towards that goal for the next plan.
- *SP-12 Financial Sustainability (0 out of 15 points).* Workshop participants recommended that the TPO adopt an interagency, cooperative approach for advanced revenue forecasting and project estimating practices. They also proposed that the agency look into developing a financial subcommittee that meets regularly.

- *SP-15 Linking Asset Management and Planning (4 out of 10 points)*. Participants found that the agency should incorporate asset management data and economic analysis to prioritize investments, leverage life-cycle cost analyses to evaluate project alternatives, and prioritize investment and leverage benefit-cost analyses to compare projects and prioritize investments in the long range transportation planning process.
- *SP-17 Linking Planning and NEPA (1 out of 10 points)*. Participants suggested that the TPO have documented procedures that link system-level planning analyses to project-level NEPA analysis, fully integrate NEPA practitioners in the planning process, and incorporate information from the planning process into project-level NEPA documents.

Incorporating Recommendations into 2045 RTP Update

When CHCNGA TPO began to develop its 2045 RTP Update, the agency used some of the recommendations from the INVEST workshop to make the plan more sustainable. One of the areas in which the INVEST recommendations led to a change was on the topic of financial sustainability. The 2040 plan did not receive any points for SP-12 Financial Sustainability, and to improve in this area workshop participants recommended that the TPO adopt an interagency, cooperative approach for advanced revenue forecasting and project estimating practices. Based on this recommendation, as part of the 2045 RTP Update, the TPO formed an interagency financial planning team to evaluate the current and future financial state of the region. The TPO engaged representatives from the Tennessee and Georgia DOTs, the Chattanooga Area Regional Transportation Authority, FHWA, Federal Transit Administration, and local stakeholders to reach consensus regarding the forecasting methodology and on assumptions to predict future transportation revenues for the plan.

The financial revenue planning team held an initial workshop in October 2016 to discuss the 2045 RTP Update process, the proposed revenue projection methodology, key revenue projection assumptions, and draft revenue estimates. The team met again in August 2017 to review final revenue projections, discuss financial assumptions regarding capital and operating expenses and revenues, and demonstrate the Financial Revenue Forecasting Tool developed as part of the 2045 RTP Update to ensure a more transparent revenue projections process. The financial revenue planning team also reviewed and commented on detailed technical documentation of the revenue projections process applied for the 2045 RTP Update.

Key Outcomes of Using INVEST

- Engaged stakeholders in evaluating the sustainability of the regional transportation plan.
- Developed recommendations for improvements based on the INVEST scoring and stakeholder workshop discussion.
- Incorporated recommendations into the 2045 RTP update, including changes related to financial sustainability.