

# NCHRP REPORT 750

Strategic Issues Facing Transportation

Volume 4



## Sustainability as an Organizing Principle for Transportation Agencies

TRANSPORTATION RESEARCH BOARD  
OF THE NATIONAL ACADEMIES

# APPENDIX F

## TBL Maturity Assessment Tool

This assessment tool was developed as part of NCHRP Project 20-83(7), “Sustainable Transportation Systems and Sustainability as an Organizing Principle for Transportation Agencies.” The tool is in the form of a self-administered survey to help transportation agencies assess their maturity and progress toward supporting a triple-bottom-line (TBL) sustainability policy system. It is based on a generalized sustainability maturity model developed as part of this project. This model is shown in Figure F-1.

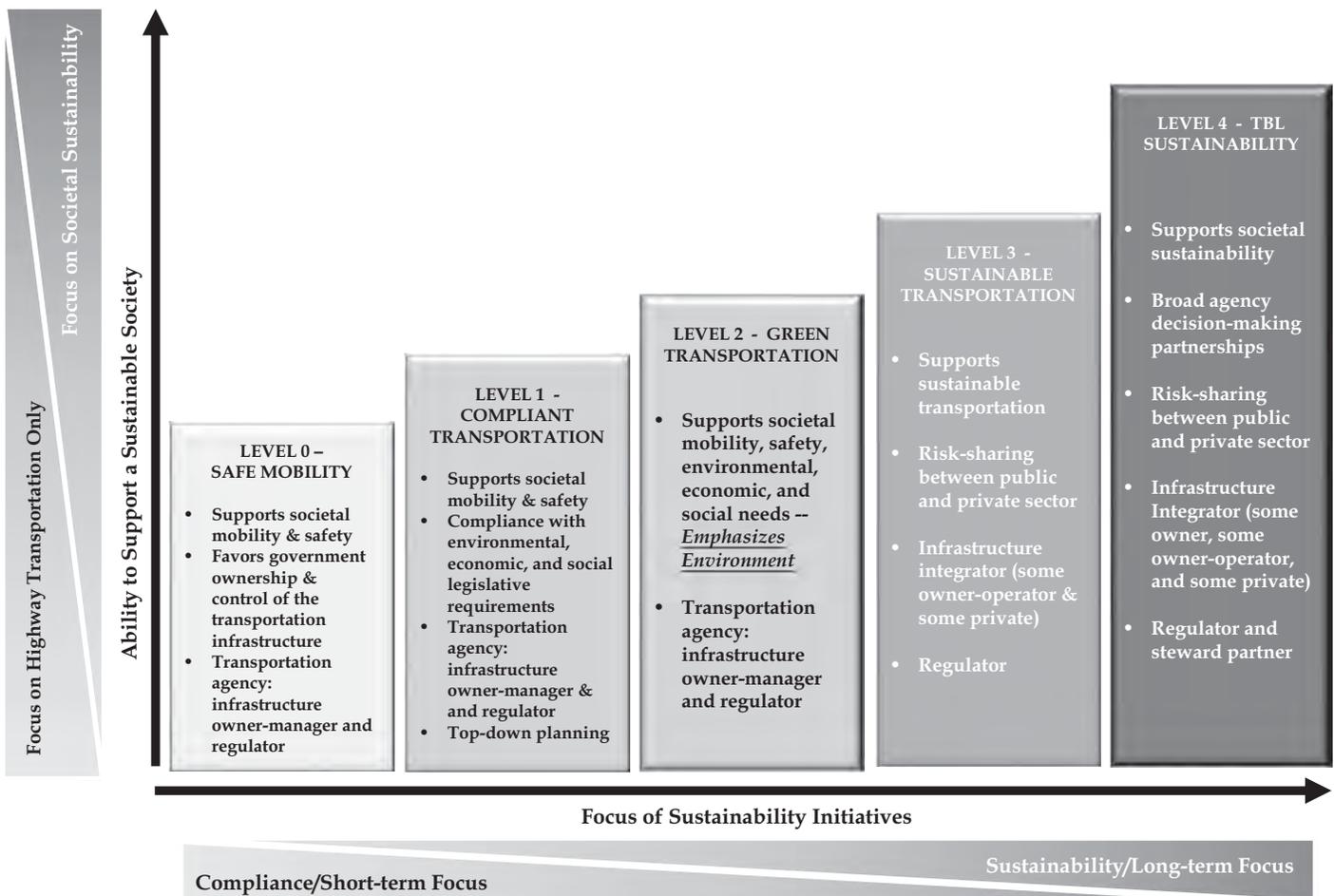


Figure F-1. Sustainability—maturity concept agency view.

**This tool is an advisory, heuristic device only.**

- *It is intended to encourage discussion and help agencies understand their current position and potential actions that they could take to achieve a high level of maturity vis-à-vis sustainability.*
- *It does not assess the degree to which policies support sustainability. Rather it assesses the maturity of agency structure and business culture related to their ability to support evolving sustainability policy systems.*

The assessment follows a number of basic functional dimensions to characterize an agency along a sustainability maturity scale—based on a vision of how an agency is likely to function under a TBL sustainability policy system. The basic functional dimensions are:

- Developing Consensus on Needs
- Planning and Programming
- Budgeting and Resource Allocation
- Rulemaking and Regulation
- Service and Project Delivery
- Compliance and Dispute Resolution
- Education and Cultural Development
- Outreach and Communications (to Public and Stakeholders)

**F.1 Instructions**

Users should review each of the following tables and select a single set of characteristics that best describe the agency. Users can:

- Combine scores to find an overall maturity rating,
- Compare scores for each dimension to focus on “trailing” functions,
- Judge what is most likely to change under a TBL policy system, and
- Evaluate potential initiatives the agency might take to advance in any functional area.

<p><b>A. CONSENSUS ON NEEDS AND GOALS:</b> Processes by which transportation policy systems identify needs, gaps, and requirements; build consensus around a prioritized ranking of potential needs; and develop acceptable goals and priorities for transportation.</p>		
<p><b>QUESTION:</b> Are the needs and goals assessment functions in this agency best characterized by:</p>		
SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>Needs driven by political decisionmakers and major stakeholders</li> <li>Strategic goals determined by high-level decisionmakers and constrained by funding and regulations (including environmental)</li> <li>Public participation limited to formal regulated processes</li> </ul>	
2	<ul style="list-style-type: none"> <li>Needs driven by political decisionmakers and major stakeholders</li> <li>Strategic goals determined by high-level decisionmakers and constrained by funding and greater focus on regulatory compliance (including environmental)</li> <li>Some outreach and public consensus building</li> </ul>	
3	<ul style="list-style-type: none"> <li>Needs driven by political decisionmakers, major stakeholders, and assessment of public sentiment</li> <li>Greater focus on environmental improvement, stewardship, and social context</li> <li>Significant formal outreach and consensus-building efforts</li> </ul>	
4	<ul style="list-style-type: none"> <li>Needs more driven by public sentiment, performance, and sustainability considerations</li> <li>Goals focus on sustainable transportation services and programs</li> <li>More transparency and active outreach and two-way public dialogue</li> </ul>	
5	<ul style="list-style-type: none"> <li>Cross-agency decisionmakers, stakeholders, and the public participate actively in needs determination and goal-setting</li> <li>Goals and policies focused on TBL sustainability</li> <li>Active two-way public engagement and consensus in strategic decisions</li> </ul>	

<b>B. PLANNING AND PROGRAMMING:</b> Planning and programming refers to the processes by which transportation plans are created to carry out the goals developed in the consensus-building, needs assessment, and goals-setting processes.		
<b>QUESTION:</b> Are the planning and programming functions in this agency best characterized by:		
SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>Emphasizes mobility, safety, and quantity (more, faster) within mode</li> <li>Expands in response to travel demand (“accept and accommodate”)</li> <li>Transportation planning is siloed</li> <li>Transportation planning is not connected to land use decisionmaking</li> <li>Limited by political jurisdiction</li> <li>Limited data and related performance measures</li> </ul>	
2	<ul style="list-style-type: none"> <li>Emphasizes mobility, safety, and quantity (more, faster), alternate modes</li> <li>Plans, builds based on forecasts of likely demand (“predict and provide”)</li> <li>Transportation planning is siloed</li> <li>Transportation planning more influenced by land use decisionmaking</li> <li>Limited by political jurisdiction</li> <li>Compliance-based reporting</li> </ul>	
3	<ul style="list-style-type: none"> <li>Emphasizes mobility etc. but considers flexibility, accessibility, connectivity, system efficiency, and environmental context</li> <li>Emphasizes improved intermodal operations and environment</li> <li>Manages transportation demand and capacity</li> <li>Formal and informal links exist between other planning entities</li> <li>Plans, builds based on forecasts of likely demand and land use plans</li> <li>Limited by political jurisdiction</li> <li>Performance-based reporting, including environment</li> </ul>	
4	<ul style="list-style-type: none"> <li>Emphasizes flexibility, accessibility, connectivity, system efficiency, safety, security, and context</li> <li>Emphasizes multimodalism and connections between modes</li> <li>Proactive demand and capacity management</li> <li>Stronger planning links with other planning entities</li> <li>Works from preferred vision to planning and provision (“deliberate and decide”)—build scenarios, backcast, deliberate, and decide</li> <li>Planning and investment decisions are driven by reliable and up-to-date data that reflect the full range of effects of transportation investment</li> </ul>	
5	<ul style="list-style-type: none"> <li>Emphasizes flexibility, accessibility, connectivity, system efficiency, safety, security, and full TBL context</li> <li>Emphasizes multimodalism and connections between modes</li> <li>Proactive demand and capacity management</li> <li>Emphasizes integrated planning engaging multiple agencies</li> <li>Works from preferred vision to planning and provision (“deliberate and decide”)—build TBL scenarios, analyze, deliberate, coordinate</li> <li>Flexible regional focus that engages multiple jurisdictions</li> </ul>	

C. BUDGETING AND RESOURCE ALLOCATION: Budgeting and resource allocation includes the processes by which transportation policy systems determine how to collect and distribute resources among different projects and programs (includes budgeting and allocation).		
QUESTION: Are the budgeting and resource allocation functions in this agency best characterized by:		
SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>Budget process is competitive (e.g., agencies compete for funds), siloed, and driven by previous allocation decisions (e.g., starts with last year's budget)</li> <li>Ignores larger social, regional, and economic costs and benefits of transportation—focuses on transportation-centric cost-benefit analysis</li> <li>Inflexible—funds are bucketed and segregated by rules and policy</li> <li>Politicized—transportation funding is driven by taxes and formulae</li> </ul>	
2	<ul style="list-style-type: none"> <li>Budget process is competitive (e.g., agencies compete for funds), siloed, and driven by previous allocation decisions (e.g., starts with last year's budget)</li> <li>Focuses primarily on immediate direct costs, but does include consideration of social, regional, and economic benefits of transportation</li> <li>Inflexible—funds are bucketed and segregated by rules and policy</li> <li>Politicized—transportation funding is driven by taxes and formulae</li> </ul>	
3	<ul style="list-style-type: none"> <li>Budget process is competitive (e.g., agencies compete for funds), siloed, and driven by previous allocation decisions (e.g., starts with last year's budget)</li> <li>Incorporate full social, environmental, fiscal, economic, and other costs into planning and provision—uses FCA</li> </ul>	
4	<ul style="list-style-type: none"> <li>Budget process is more integrated and cooperative</li> <li>Incorporates social, environmental, fiscal, economic, and other costs into planning and provision—uses FCA</li> <li>More independent funding—funds for transportation are derived more sustainably from users and other benefiting entities</li> </ul>	
5	<ul style="list-style-type: none"> <li>Budget process is integrated and cooperative across agency boundaries</li> <li>Incorporates full social, environmental, fiscal, economic, and other costs into planning and provision—uses FCA</li> <li>Flexible—funds flow to program areas, regions, and modes where they meet greatest TBL societal sustainability needs</li> <li>Independent funding—funds for transportation are derived sustainably from users and other benefiting entities</li> </ul>	

D. RULEMAKING AND REGULATION: Rulemaking and regulations refers to the processes by which rules, regulations, standards, and guidelines are established for compliance with legislated mandates and laws.		
QUESTION: Are the rulemaking and regulation functions in this agency best characterized by:		
SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>Expert led</li> <li>Heavily influenced by organized interests and economic stakeholders</li> <li>Minimal public involvement</li> </ul>	
2	<ul style="list-style-type: none"> <li>Expert led</li> <li>Heavily influenced by organized interests and economic stakeholders</li> <li>Increased public involvement</li> <li>Highly politicized and conflict based</li> </ul>	
3	<ul style="list-style-type: none"> <li>Expert led</li> <li>Open to a plurality of interests, stakeholders, and activists</li> <li>Substantial public involvement during post-decisionmaking phase (i.e., "do you approve?")</li> <li>Highly politicized and conflict based</li> </ul>	
4	<ul style="list-style-type: none"> <li>Public-expert partnership in developing regulation and rules—experts invite and encourage public participation</li> <li>Open to a plurality of interests, stakeholders, and activists</li> <li>Substantial public involvement during the entire rulemaking process</li> <li>Less politicized and more cooperative</li> </ul>	
5	<ul style="list-style-type: none"> <li>Public-expert partnership in developing regulation and rules—experts invite and encourage public participation</li> <li>Bias for flexible, voluntary self-regulation</li> <li>Open to a broad TBL-related plurality of interests, stakeholders, and activists</li> <li>Substantial public involvement during the entire rulemaking process</li> <li>Cooperative and consultative</li> </ul>	

<b>E. SERVICE AND PRODUCT DELIVERY:</b> Service and product delivery includes processes by which transportation policy systems deliver transportation goods and services to the public and ensure that the level and quality of services meet goals and established standards.		
<b>QUESTION:</b> Are the service and project delivery functions in this agency best characterized by:		
SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>• Efficient and best-value business processes</li> <li>• Transportation and mobility performance measured and reported</li> </ul>	
2	<ul style="list-style-type: none"> <li>• Ad hoc sustainability initiatives</li> <li>• Efficient and best-value business processes—some environmental and social issues considered</li> <li>• Transportation and mobility performance measured and reported</li> <li>• Some environmental performance management reports</li> </ul>	
3	<ul style="list-style-type: none"> <li>• General sustainability objectives established</li> <li>• Sustainability performance (centered on environment) reporting and management common among delivery functions</li> </ul>	
4	<ul style="list-style-type: none"> <li>• Sustainability embedded in all business processes (e.g., project delivery, procurement, O&amp;M)</li> <li>• Sustainability performance (centered on environment) measured and reported across most functions</li> </ul>	
5	<ul style="list-style-type: none"> <li>• Sustainability embedded in all business processes (e.g., project delivery, procurement, O&amp;M)</li> <li>• Sustainability performance measured and reported with TBL-related improvement targets</li> <li>• Commitment to societal sustainability in all service and project delivery functions</li> <li>• Periodic reevaluation of performance measures and regular evaluation of sustainability achievements</li> </ul>	

<b>F. COMPLIANCE AND DISPUTE RESOLUTION:</b> Compliance and dispute resolution include processes by which the transportation community sees that the intent of legislation, standards, and regulations are complied with and the processes by which disagreements over interpretations or tradeoffs can be resolved.		
<b>QUESTION:</b> Are the compliance and dispute resolution functions in this agency best characterized by:		
SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>• Highly politicized</li> <li>• Informal brokering between powerful stakeholders</li> </ul>	
2	<ul style="list-style-type: none"> <li>• Highly politicized</li> <li>• Informal brokering between powerful stakeholders</li> <li>• Dependence on law and judicial system</li> <li>• Adversarial relationship between key stakeholder groups</li> </ul>	
3	<ul style="list-style-type: none"> <li>• Highly politicized</li> <li>• Less influenced by powerful stakeholders in the decisionmaking process</li> <li>• Dependence on law and judicial system</li> <li>• Less adversarial relationship between key stakeholder groups and more constructive dialogue</li> </ul>	
4	<ul style="list-style-type: none"> <li>• Emphasizes “deliberate and decide” and constructive engagement</li> <li>• Avoids dependence on law and judicial system</li> </ul>	
5	<ul style="list-style-type: none"> <li>• Politics minimized—public involvement and transparency in compliance issues</li> <li>• Emphasizes “deliberate and decide” and emphasis on constructive engagement to solve problems</li> <li>• Avoids dependence on law and judicial system</li> </ul>	

**G. EDUCATION AND TRAINING:** Education and training includes processes by which the transportation community is educated to understand and embrace evolving organizing principles and to adopt (and invest in) behavioral norms associated with those principles.

**QUESTION:** Are the education and training functions in this agency best characterized by:

SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>• Focus on technical specialties and standards</li> <li>• Performance standards and incentives associated with traditional performance measures</li> </ul>	
2	<ul style="list-style-type: none"> <li>• Focus on technical specialties and standards</li> <li>• Performance standards and incentives associated with traditional performance measures</li> <li>• Informal sustainability training and recruitment and integration of environmental specialists into transportation agencies</li> </ul>	
3	<ul style="list-style-type: none"> <li>• Focus on multidisciplinary workforce—development of more flexible performance standards</li> <li>• Developing sustainability education, training, and internal incentives to support sustainable programs</li> <li>• Culture of environmental stewardship</li> </ul>	
4	<ul style="list-style-type: none"> <li>• Focus on multidisciplinary workforce—organization commitment to flexible performance standards</li> <li>• Commitment to sustainability education, training, and internal incentives to support sustainable programs</li> <li>• Culture of transportation sustainability and stewardship</li> </ul>	
5	<ul style="list-style-type: none"> <li>• Focus on multidisciplinary workforce—established and flexible standards associated with sustainability</li> <li>• Commitment to sustainability education, training, and internal incentives to support TBL sustainability</li> <li>• Culture of TBL sustainability and stewardship of societal well-being</li> </ul>	

**H. OUTREACH AND COMMUNICATIONS:** Outreach and communications include processes by which information on needs, strategies, expectations, and results are shared broadly by stakeholders in the public and private-sector transportation community—critical processes to support consensus-building, policymaking, planning, and decisionmaking.

**QUESTION:** Are the outreach and communication functions in this agency best characterized by:

SCORE	STATEMENT	YES/NO
1	<ul style="list-style-type: none"> <li>• One-way communication to explain transportation priorities and plans</li> </ul>	
2	<ul style="list-style-type: none"> <li>• One-way communication to explain transportation priorities and plans with formal requirements to present plans but limited feedback</li> </ul>	
3	<ul style="list-style-type: none"> <li>• One-way communication to explain transportation priorities and plans with highly structured presentation and feedback</li> </ul>	
4	<ul style="list-style-type: none"> <li>• Two-way active engagement and communication between transportation agencies, public, stakeholders, and decisionmakers</li> </ul>	
5	<ul style="list-style-type: none"> <li>• Regular two-way active engagement and communication between transportation agencies, public, stakeholders, and decisionmakers</li> <li>• Involvement of stakeholders at all stages of the decisionmaking and planning process</li> <li>• Active outreach to identify and include previously underrepresented groups</li> </ul>	

## F.2 Overall Rating—Sustainability Maturity Level

For an overall TBL sustainability maturity rating, review the answers for each of the functional dimensions. For the row that best describes your agency, circle the score in the first column of that row (i.e., 1 through 5). When tables for functional dimensions A through H are completed, enter the scores in the table below and sum for the overall rating.

Functional Dimension	Score
A. Consensus on Needs and Goals	
B. Planning and Programming	
C. Budgeting and Resource Allocation	
D. Regulation and Rulemaking	
E. Service and Product Delivery	
F. Compliance and Dispute Resolution	
G. Education, Training, and Culture Change	
H. Outreach and Communications	
<b>Total (sum A through H)</b>	

Compare the score to the following scale for overall maturity level:

Maturity level	Characteristics	Score
<b>Safe Mobility</b>	<ul style="list-style-type: none"> <li>Support societal mobility</li> <li>Favors government ownership &amp; control of the transportation infrastructure</li> <li>Transportation agency as infrastructure owner–manager &amp; regulator</li> </ul>	8 to 11
<b>Compliant Transportation</b>	<ul style="list-style-type: none"> <li>Support societal mobility</li> <li>Compliance with environmental, economic, and social legislative requirements</li> <li>Transportation agency as infrastructure owner–manager &amp; regulator</li> <li>Top-down, planning</li> </ul>	12 to 19
<b>Green Transportation</b>	<ul style="list-style-type: none"> <li>Support societal mobility &amp; environmental, economic, and social needs—<i>emphasizes environment</i></li> <li>Transportation agency as infrastructure owner–manager &amp; regulator</li> </ul>	20 to 27
<b>Sustainable Transportation</b>	<ul style="list-style-type: none"> <li>Support sustainable transportation</li> <li>Favors partnerships between public and private sector</li> <li>Transportation agency as infrastructure coordinator &amp; regulator</li> </ul>	28 to 36
<b>Support TBL Sustainability</b>	<ul style="list-style-type: none"> <li>Support societal sustainability</li> <li>Agnostic on issues of ownership or control of transportation infrastructure—whatever is most sustainable</li> <li>Transportation agency as transportation system steward</li> </ul>	37 to 40