Project Brief - June 2014

Sustainable Transportation Decision-Making: Using Triple Bottom Line as a Framework

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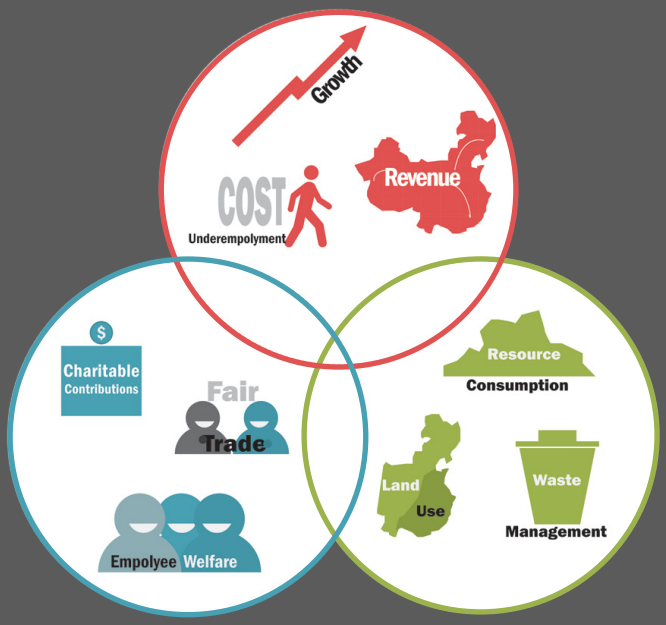

Triple Bottom Line Diagram by wikimedia.com

THE ISSUE

In a rapidly changing and uncertain world where public funds are becoming increasingly scarce, public entities must make sound, sustainable transportation decisions.

THE RESEARCH

This report reviews the concept of sustainability, highlights inherent uncertainty in making transportation decisions, provides a Triple Bottom Line framework, and surveys Triple Bottom Line methods.

THE IMPLICATIONS

Using Triple Bottom Line as a framework for evaluating transportation investments can increase both decision-maker and citizen buy-in.

The Issue

We live in an era of shrinking public resources—and shrinking trust in public institutions. Citizens want limited public funds to be used wisely. Citizens want their government to do more with less: promote economic vitality, support healthy communities, and protect our natural environment. Moreover, citizens want to understand what public agencies are doing with their money and why. In transportation decisions in particular, public entities face the difficulty to accurately predict transportation demand, transportation technology, transportation funding, or community values.

The triple bottom line (TBL) is an approach to making decisions better and to transparently explaining the costs and benefits of decisions to the general public to promote greater understanding, trust, and support.

Often transportation investment decisions are made without even any sort of “single bottom line” – some sort of measure of the “bang for the buck” the public receives for their tax dollars – let alone a triple bottom line of sustainability. Although the term “triple bottom line” was introduced a couple of decades ago, the general idea of striving to achieve multiple goals has a long history. The challenge has not been a lack of methods; the challenge has been the lack of political will to apply them.

The Research

This report reviews the concept of sustainability, highlights the uncertainty inherent in making transportation decisions, provides a general triple bottom line framework, and surveys a sample of triple bottom line methods that can be applied or adopted to making transportation decisions. By describing sustainability and the triple bottom line framework, the research suggests that surveyed triple bottom line methods support the conclusion that it can increase general buy-in to public transportation decision-making.

General-purpose triple bottom line frameworks do not include specific evaluation measures. These frameworks act as guides for officials, staff and other stakeholders to use to identify key benefits and costs of particular proposed actions or alternatives.

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More About the Research

The research surveys triple bottom line maps from Olympia, Washington and Fort Collins, Colorado, and TBL guides from Eugene, Oregon and the Eugene Water and Electric Board (EWEB).

In addition to general-purpose frameworks, there are many tools for infrastructure and economic development. This report surveys and analyzes a rating system from the Institute for Sustainable Infrastructure (Envision™); an economic development-oriented tool from Portland State University (The Triple Bottom Line Tool); a web-based collection of best practices from the Federal Highway Administration (Invest); a combination cost-benefit, TBL, return-on-investment tool from the Oregon Department of Transportation (Mosaic); and an integrated rating framework from the North American Sustainable Transportation Council (STARS).

In comparing the methods, the research suggests that no one model is better than another, but must be thoughtfully applied to appropriate problems. General-purpose frameworks are simple and adaptable. General-purpose tools (Envision™ or The Triple Bottom Line Tool) set standards but can potentially be too broad. Ultimately, using a hybrid approach of starting with a general-purpose framework followed by officials, staff, and stakeholders selecting an appropriate tool could yield the best result.

The Implications

Triple bottom line could help our public officials create more lasting and comprehensive transportation decisions. Using triple bottom line as a framework and tools for the decision-making process will increase decision-maker and community buy-in. In practice, triple bottom line should infuse and frame the entire eight-step transportation decision-making process, the eight steps are:

1. Articulate community values, goals and objectives
2. Quantify direct costs and benefits
3. Identify other major costs and benefits
4. Identify who benefits and who pays
5. Develop rough estimates but highlight uncertainties
6. Help decision-makers to balance priorities
7. Integrate TBL methods into final decision-making
8. Monitor outcomes

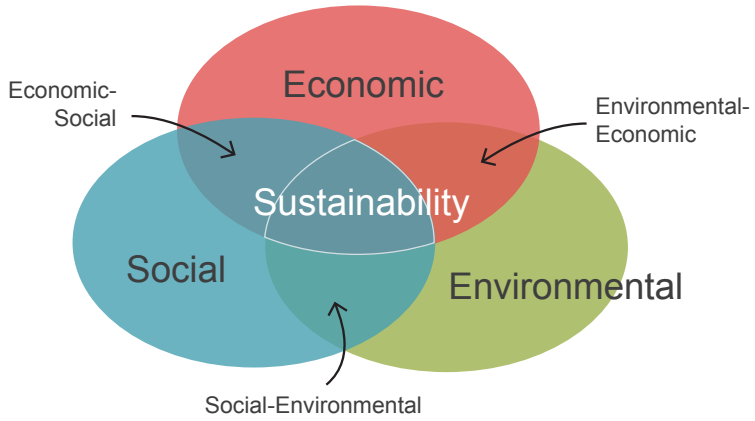

Diagram: The three spheres of sustainability. Image based on cft.vanderbilt.edu

PROJECT INFORMATION

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Online:	http://www.livabilitylane.org/files/2_SCI-Pragmatic%20TBL%202014_01_20.pdf