

**Accounting for Development:
Assessing Social and Triple Bottom Line Returns
of Public Development Investments**

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Abstract

As local and regional jurisdictions attempt to ensure that development achieves economic, environmental, and social returns, the need has emerged for tools that evaluate development investment with respect to this “triple bottom line.” Responding to a need for research regarding the use of such frameworks, we conducted twenty-six interviews with staff from fourteen jurisdictions representing four countries (Australia, Canada, the United Kingdom, and United States). The interviews addressed issues pertaining to content (what is reviewed), process (the mechanics of how the review system operates), functionality (how well the system is working), and impact (whether the reviews have made a difference). The project facilitates better accounting of social and triple bottom line returns of public development investment, while also contributing to understanding about adaptive governance and social innovation.

Table of Contents

Acknowledgments	P. 1
Overview	P. 2
Research Design	P. 3
How Jurisdictions Review the Triple Bottom Line of Development Investments	P. 6
Facilitating Uptake and Performance of TBL Reviews	P. 17
Impacts of TBL Review	P. 25
Conclusions and Implications	P. 27
Appendix A: Literature Review	P. 32
Appendix B: Organizations Contacted Regarding Identification of Potential Cases	P. 33
Appendix C: List of Jurisdictions Identified and Disposition	P. 34
Appendix D: Fourteen Case Jurisdiction Interviewees	P. 35
Appendix E: Web Accessible Documents Reviewed	P. 36
References	P. 41

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Overview

Across the globe, communities large and small have unwittingly entered a Race to the Bottom,¹ incentivizing development in ways that ultimately diminish community well-being. In contrast, communities engaged in the Race to the Top make development investments with a clear focus on sustainability and quality of life goals. These communities invest with the intention of achieving triple bottom line (TBL) performance – the accrual of positive environmental, social, and economic returns. Such an investment strategy necessitates the creation and application of tools that account for TBL impacts of development investments (cf Ball 2002; Deakin 2002; Hemphill, Berry and McGreal 2004; Newman 2005; Roberts and Cohen 2002). While progress has been made on this front, there is little research regarding the use of such frameworks (Devuyst 2000; Jensen and Elle 2007; Moobela, Price and Bristow 2007). Further, efforts to evaluate the social bottom line and its integration with economic and environmental bottom lines has particularly lagged (cf Dixon, Colantonio and Shiers 2007; Levett-Therivel 2004). Responding to this gap, our research examines where and how local and regional governments have used TBL frameworks² to inform their development investment decisions, what has facilitated or inhibited uptake and performance of these frameworks, what impact the frameworks have had, and how lessons learned may inform future practice and research.

The paper begins with a review of our research design, followed by a description of the TBL frameworks identified. Key themes regarding functionality and impact are taken up, respectively, followed by a consideration of implications and next steps.

¹ This research was commissioned by the Lincoln Institute of Land Policy as part of its Race to the Top Initiative. The Initiative is designed to inform understanding about alternatives to Race to the Bottom strategies that pit jurisdictions against each other and lead to a collective reduction in community quality of life and sustainability (e.g., through relaxed environmental standards or ill-specified and unmonitored tax giveaways). The race metaphor should not be construed to imply that only some participants win: all jurisdictions can get to the bottom or top. In these races, everyone can cross the finish line, though some may arrive earlier than others.

² The terms framework, process, tool and method are found in the literature and are not used consistently. They are used interchangeably in this paper, as are the terms account, assess, and evaluate.

Research Design

This research was designed to increase understanding about how communities evaluate development investment with respect to the triple bottom line of sustainability. More specifically, we were interested in learning when and how TBL review of development investment has been applied, what has worked well or not well, and what lessons learned there may be. In our examination of TBL review frameworks we considered content (what is reviewed), process (the mechanics of how the review system operates), functionality (how well the system is working), and impact (whether the reviews have made a difference).

The first step in our research was to identify local and regional jurisdictions that have attempted to account for social or triple bottom line impacts of development investments. This included programs that are currently in use as well as efforts that have been tried and abandoned. We focused our search on cases where a local or regional government jurisdiction had reviewed development decisions using a framework, tool or process explicitly designed to account for social or social, economic, and environmental impacts.³ We did not examine cases where jurisdictions conducted a TBL review of internal operations (e.g., GRI Public Agency⁴) or of traditional financial portfolio matters (e.g., socially responsible investing⁵). We also did not

³ Given the research interest in social dimensions of sustainability, we included cases where social impact or the social bottom line (SBL) was the focus of the assessment tool as well as cases that addressed the triple bottom line. The issue of whether and how such frameworks are similar to impact assessment is taken up in the issues and implications section.

⁴ The Global Reporting Initiative (GRI) is a global, network-based organization that has developed a widely used, voluntary sustainability reporting framework. Reporting guidelines inform both what to report and how to report. The Public Agencies Sector Supplement addresses issues unique to the public sector. <http://www.globalreporting.org/WhoAreYou/PublicAgency/>

⁵ Socially responsible investing (SRI) is an umbrella term used to describe investment practices that aim to “do well by doing good.” While returns on investment are earned, social dimensions may be addressed via screening or shareholder activism (e.g., not investing in companies that sell weapons, or using shareholder status to encourage environmental protection or human rights).

include Community Benefit Agreements (CBA), as these are a unique class of negotiated agreement distinct from review tools.⁶

Building on prior research (Hammer 2009), cases were identified through an extensive literature review. We systematically considered over 400 search term combinations in a review of academic and “gray” literature (Appendix A). In addition, representatives of twenty relevant organizations were contacted about this research and asked whether they were aware of any jurisdictions taking a social or triple bottom line approach to public development investment (Appendix B). Representatives of thirteen organizations responded and most did not have any suggested cases to contribute.

Fifty-one jurisdictions were identified as possibly conducting social bottom line (SBL) or triple bottom line (TBL) review of development investment. Each jurisdiction was contacted to confirm whether such reviews were conducted currently or in the past. A list of the identified jurisdictions and the disposition of our inquiry is provided in Appendix C. Fourteen jurisdictions were confirmed as currently or previously conducting SBL or TBL reviews and were selected as cases for in-depth interviews and document review: five in the United States, four in Canada, three in Australia, and two in the United Kingdom (Table One).⁷ Twenty of the jurisdictions identified as potentially conducting reviews were in fact not, thirteen jurisdictions contacted did not respond, the contact for one jurisdiction was unwilling to be interviewed, and three potential cases were not identified in time to be included in this research.

The total number of interviews conducted was twenty-six, with multiple interviews conducted in five of the jurisdictions (see Appendix D for a list of interviewees). Interviewees were selected

⁶ Community benefit agreements are negotiated, legally binding documents that define a set of project performance standards that address community-specific interests such as housing, wages, workforce development, amenities. See Kathleen Mulligan-Hansel’s Race to the Top working paper on community benefits agreement for further information.

⁷ Interviews were conducted with staff in three other jurisdictions, however, upon further exploration it was determined that the jurisdictions were not engaged in TBL review and those cases were not included in this analysis.

for their working knowledge of the tool (with a few exceptions due to staff turnover). Initial inquiries were made to the staff person identified as the contact person by the organization. The research goals were explained and a request to speak with current or former staff most familiar with the tool was made. Semi-structured interviews were conducted, with all interviews conducted by the principal investigator to ensure consistency. Interview duration was usually between forty-five minutes and one hour. Human Subject research approval was secured and offers of confidentiality were extended to participants in order to promote a sense of ease and candor.

Interview transcripts were coded using a combination of prefigured and emergent categories. Information was first grouped into organizational categories (topics) and then further analyzed for meaning. Archival evidence included documents publicly available on the web as well as materials made available by interviewees. Object knowledge (e.g., website information and reports) and memory both have limits; combining information from the two sources served to increase reliability and validity. All interviewees were offered the opportunity to review the draft report for accuracy.

This research provides a view of on the ground practice of TBL assessment by local and regional governments. Limitations of this research are as follows. First, the cases identified can be characterized as reasonably sized and resourced communities with some history of attention to sustainability principles. Findings may not be applicable to other contexts such as smaller, less resourced jurisdictions or communities with less of a background addressing sustainability. Second, in some cases, staff most familiar with the assessment tools had moved on. While the perspective of current staff contributed to the research, interviews with former employees engaged with these efforts would enhance the findings. Third, multiple interviews in all jurisdictions would be preferred in order to provide a more complete “360 degree” view as well as a check against archival data; however, resources did not permit such an extensive process.

How Jurisdictions Review the Triple Bottom Line of Development Investments

The Triple Bottom Line term was coined in 1994 by John Elkington, a sustainability business consultant, to describe non-financial impacts of business:

In the simplest terms, the TBL agenda focuses corporations not just on the economic value that they add, but also on the environmental and social value that they add – or destroy (Elkington 2004, 3).

The phrase has seen significant uptake in the business world, though uptake and quality of TBL review has been the subject of significant critique (cf Gray and Milne 2004). Triple Bottom Line⁸ analysis has been applied in the third sector as funders, nonprofits, and social entrepreneurs aim to account for the full impact of their investments (Clark, Rosenzweig, Long and Olson 2004; Emerson 2003). Adoption in the public sector appears to be much more limited. Our rather intensive search for examples yielded a limited number of cases.

The jurisdictions we identified as taking a TBL or SBL approach to the review of development investment⁹ represent communities with populations ranging between 55,000 to more than 1,000,000. We identified four distinct applications of social or triple bottom line review of development investment, with some jurisdictions using more than one type. Described below, the applications address overall policy reviews, capital improvements, land use decisions, and development incentives. The tools are used both to inform design and to make decisions – including selecting among competing alternatives or approving proposed projects. The list of approaches used by jurisdictions can be found in Table One.

⁸ The phrase “double bottom line” is sometime used and refers to non-financial returns of investment that may be social and/or environmental. The phrase “quadruple bottom line” is also found and in this context and usually refers to governance or management issues (e.g., public engagement), though sometimes to cultural issues.

⁹ As per Appendix A, we took an expansive view of development investment – for example, recognizing that review and approval of private development proposals requires an investment of resources both upfront with respect to staffing as well as over time with respect to impacts on the community.

Nine jurisdictions have adopted a *resolution or initiative* that calls for City policies, plans, and/or programs to be reviewed with respect to the social or triple bottom line.¹⁰ Two of these nine jurisdictions have discontinued their reviews, and two are in the process of developing their review framework. The jurisdiction-wide approach typically includes a checklist or worksheet comprised of a set of questions that are designed to elicit potential SBL or TBL implications of a proposed policy, plan, or program. The amount and quality of implementation has been uneven across organizations – even in the presence of extensive training and support. A number of interviewees suggested that such tools be applied early enough to inform and improve proposals rather than merely summarize impacts, though the degree to which this occurs also varies.

A TBL approach to review of *capital improvements* has been taken by seven jurisdictions – five as part of their overall TBL policy initiative. The types of capital improvement reviews identified include rating and ranking among a portfolio of potential projects (e.g., bridge, library, or flood control), deciding among alternatives (e.g., three options to address flood mitigation), or improving design of a designated project (e.g., identify potential TBL impacts and options to mitigate if negative and amplify if positive). Efforts to thoroughly quantify impacts, including full-cost and life-cycle costs, are seen in these review tools more than any others.

Five jurisdictions have applied a TBL approach to *land use decision-making*, with some using more than one tool. Two jurisdictions have reviewed development applications using a TBL checklist. In another, a detailed TBL review process was incorporated into a long-term planning process designed to identify preferred growth options. Three of the jurisdictions have applied a TBL approach to the design of new development or redevelopment projects. In one case, TBL criteria were incorporated into a land sale request for proposal (RFP) and review process in order to promote desired development objectives and provide a transparent process for prospective

¹⁰ We identified but did not interview four other jurisdictions with this approach on the books: Boulder, Colorado, USA; Coffs Harbour, New South Wales, Australia; Eugene, Oregon, USA; and Sutherland, New South Wales, Australia. Our follow-up with Richmond, British Columbia revealed that, contrary to the information on their website, TBL analysis is not being applied beyond their TBL Checklist for development review and land sales.

developers and community members.¹¹ In two cases, the TBL framework was used as an internal tool to inform project design. The tools were designed to operationalize broad sustainability goals in the agency’s development projects and help advance industry practice. The review tools inform how the agency will do development and signal developers as to what types of issues should be addressed and how. These checklists are not used by the agencies to rate or evaluate proposals.

Table One: Jurisdictions and Review Tools

Where	Council Reports/ Major Decisions	Land Use Decisions	Capital Improvements	Development Incentives
Austin			CIP Matrix	Smart Growth and Firm-Based
Brighton & Hove		Sustainability Checklist		
Calgary	TBL Policy and Framework		Corporate Infrastructure Investment Plan and Pilot SBL for Infrastructure	
Corvallis	In process, 2009		SAL tool	
Hamilton	Council Reports, Retired 2009	GRIDS – Planning for Long Term Growth		
Hornsby Shire	Council Reports			
King County	Voluntary EIR		TBL LCA Pilot Test	
Melbourne	Retired 2007		Retired	
Olympia	SAM tool		SAM tool	
Port Coquitlam		Sustainability Checklist and TBL Land Sale RFPs		Green Building and Social Housing Incentives Using Checklist
Richmond	In process, 2009			
Seattle	Racial Equity IA		TBL BCA and Environmental Justice & Service Equity Division @ Utility	
SEEDA		Sustainability Checklist		
VicUrban		Sustainable Community Rating		

¹¹ Port Coquitlam’s process was informed by the success of the Dockside Green project in the nearby City of Victoria, B.C. For a time, Port Coquitlam’s efforts were led by a staff person who had been integrally involved in the Victoria efforts.

Two jurisdictions have applied TBL review to their *development incentives*. In one, the process guides development toward certain areas and promotes specific social, economic, and environmental development goals. A multi-criteria decision matrix is used to review and score proposals for eligibility and level of incentive. In the other, incentives such as fast-tracking are determined using the checklist that is applied to development review.

Twelve of the frameworks are used primarily as a decision tool, four are used primarily to inform design, and four are used for both. A brief synopsis of each of the TBL approaches, based on the interviews and archival evidence, is provided below. A list of web accessible overview documents is provided in Appendix E.

The City of Austin, Texas, USA

The City of Austin, has utilized three distinct TBL approaches to review development investment. Austin's Capital Improvement (CIP) Matrix was used to select projects for inclusion in the City's 1998 bond package. This multi-attribute decision matrix¹² included thirteen criteria, with weights assigned to each. A guide sheet was provided to facilitate quality and consistency of scoring. The process was a rigorous one that included community input. The CIP process was viewed as successful, though it has not been applied since.

The City's Smart Growth Matrix was used from the late 1990s to 2003 to incent development toward certain areas and to promote specific development goals. The matrix had twenty-four elements grouped into three goals (how and where development occurs, quality of life, enhancement of tax base). The matrix was applied to residential, retail and office development. The process was voluntary and financial incentives included development fee waivers or refunds, and infrastructure investments. It was conceptualized as a tool to help shift practice and was expected to sunset.

¹² Also referred to as multi-criteria decision analysis and multi-attribute decision-making.

Firm-based economic development incentives are currently evaluated using a matrix that has five TBL criteria with weights and potential points attached. There are minimum requirements that must be met and maximum financial incentives. Compliance reviews are conducted prior to disbursement of payments and as of 2007 the City requires independent third-party verification of the reviews. The City's project-based incentive program designed to encourage large mixed-use development was retired in 2007. It had a similar matrix and rating scheme.

The City of Brighton and Hove, South East England, UK

In September, 2008, the City of Brighton & Hove began requiring that all residential build and conversion applications must complete the Sustainability Checklist. The Checklist is a web-based tool and was adapted from the SEEDA Sustainability Checklist (below). The Checklist includes eight categories, each with a series of questions. The developer self-scores the project and submits the application for review. There are recommended standards depending upon the size and type of development. The recommended standards are a baseline of what is expected and were developed with stakeholder input. Criteria are established for determining when and how to work with non-attainers in instances when recommended standards cannot be met.

The City of Calgary, Alberta, Canada

In 2005, the City of Calgary passed a TBL Policy stating that the City would use the Triple Bottom Line to incorporate sustainable development principles in its decisions and actions, "with regard to planning, policies, strategies, services, operations and approvals and all other City business" (City of Calgary 2005, 2). A TBL Framework based on an inventory and analysis of more than 350 extant policies was developed to inform the TBL review process. The Framework includes twenty-three themes organized under four headings and includes more than eighty guiding questions (City of Calgary 2006).

Jurisdiction-wide, TBL impact statements are incorporated into Council Reports¹³ and a TBL lens was used during the development of the 2009 - 2011 Business Plan and Budget. Our interviews and document analysis reveal that uptake and implementation of the TBL Policy

¹³ Administrative reports to Council.

varies across the organization. Noted one interviewee, “There are multiple applications of the philosophy of the TBL.” For example, a very formal and rigorous TBL process has been applied to capital improvements and asset management, while a considered approach to project specific targets is utilized for development of City land.

The City’s 2009-2011 Capital Budget was developed using a TBL-infused analytical hierarchical process.¹⁴ Directors ranked twenty-one criteria and then staff rated and ranked the five hundred proposed projects against the criteria. The City’s Infrastructure Services Unit has partnered with the University of Calgary Centre for Social Work Research and Professional Development to explore the social bottom line with respect to infrastructure (Urban Alliance 2008). The first phase of this work included developing a draft model for social impact assessment and pilot-testing it on a review of two capital improvement projects. The revised draft includes twenty-seven questions grouped into six social factors. For each question a matrix is scored for degree of impact (large, moderate, small) by number of people impacted (small, medium, large). A compilation matrix shows the overall placement of scores (check marks) providing a visual assessment of whether the project is likely to be more in the green or red zone (i.e, better or worse outcomes). In phase two of the research the team aims to increase public engagement, measure impact quantitatively, and continue pilot-testing.

The City of Corvallis, Oregon, Washington

A Sustainability Action List (SAL) based on Olympia’s Sustainability Action Map (SAM) tool is used to determine how to improve a new project that has been proposed, not for rating or ranking projects. SAL has been applied on some public works efforts over the past few years. The City’s sustainability coordinator is working with an internal Sustainability Steering Committee to consider TBL review across the jurisdiction.

¹⁴ A decision-making method that allows alternatives to be scored and ranked among a variety of criteria. A forced choice pairwise hierarchy system was used in this case.

The City of Hamilton, Ontario, Canada

The City of Hamilton has engaged in two types of TBL review. Catalyzed by the merging of seven jurisdictions into one, the Growth Related Integrated Development Strategy (GRIDS) was a multi-year initiative that took a TBL approach to evaluating development options that were being considered as part of a long-range planning process. The TBL tool, developed in conjunction with ICLEI¹⁵ Canada, included nine outcome statements – three each for social, environmental, and economic impacts. The web-based multi-criteria decision assistance tool was a scorecard that included quantitative assessment (e.g., - 2 to +2) and qualitative assessment for each outcome statement.

From 2005 to mid-2009, a TBL review was required for all Council Reports. According to Hamilton's Senior Project Manager for Sustainability, the TBL reviews for Council Reports were discontinued because Council wanted report comments structured to align with the Corporate Strategic Plan adopted in 2008 which, though consistent with TBL thinking, does not use that language.

Hornsby Shire Council, New South Wales, Australia

Hornsby Shire Council adopted a Triple Bottom Line Sustainability Policy in 2006, following an evaluation of their TBL reporting pilot phase (Potts 2005). Adapted from the Melbourne/ICLEI TBL Toolkit,¹⁶ Hornsby Shire's TBL Checklist is organized around the Council's seven strategic themes; criteria are given as to when a Checklist is required. The Council is moving to a quadruple bottom line approach that incorporates governance.

¹⁵ ICLEI – Local Governments for Sustainability, began as the International Council for Local Environmental Initiatives. An association of more than 1,100 local governments from 67 countries, ICLEI provides information and training to support local governments in their sustainability efforts.

¹⁶ Developed in partnership with ICLEI, the TBL Toolkit lives on the City of Melbourne website. The Toolkit includes the business case, capital works sustainability statement, corporate planning case study, summary of resources, sustainability assessment for council.

<http://www.melbourne.vic.gov.au/info.cfm?top=166&pg=1197>

King County, Washington, USA

Two relevant review frameworks were identified in King County. First, the County is in the early stages of implementing an Equity Impact Review (EIR) process. This framework was developed as part of the County's Equity and Social Justice Initiative launched in February 2008 with the goal of ensuring that all King County residents live in "communities of opportunity" (King County 2009, 1). Based on a health determinants model, the Initiative recognizes that well-being is impacted by social, economic, and environmental conditions: "Inequity refers to differences in well-being between and within communities that are systematic, patterned, unfair, and can be changed. They are not random, as they are caused by our past and current decisions and policies" (King County 2009, 4). The EIR is used to assess policy and program proposals for their potential impact on thirteen determinants of equity and health and identify ways to eliminate or mitigate negative impacts. The EIRs are voluntary and uptake has varied across the organization. The objective is to support the development of policies and programs that advance a shared agenda of fairness, spread the burdens fairly, and help address historic patterns of institutional bias and discrimination (King County 2009, 1).

The second identified framework is a three-goal model being pilot-tested by the County's Department of Natural Resources and Parks that reflects the triple bottom line (environment, people and communities, fiscal responsibility and economic vitality). The TBL assessment framework is designed to support decision-making that maximizes the benefits realized to the community from capital investments. GIS mapping has been conducted to assess equity of service delivery to identify disproportionate benefits and burdens that could be addressed by the Department.

The City of Melbourne, Victoria, Australia

Perhaps the most frequently cited example of municipal use of TBL decision-making is Melbourne, Australia. The City engaged in an extensive TBL process that included Sustainability Assessments for Council Reports beginning in 2002. Melbourne's TBL

Assessment tool was reviewed and retired in 2007.¹⁷ The Assessment Tool was intended to inform Council decisions as well as to forecast project outcomes and check policy alignment during the project scoping and development phase. The process included an initial screening to determine if an assessment was required. If so, a Sustainability Questionnaire was completed addressing impact, magnitude, likelihood of occurrence and, if appropriate, a more detailed description of impacts. Results were summarized for Council Reports (City of Melbourne and ICLEI 2002a). The retired tool might be replaced with a new review tool (questions for Council Reports); however, the timeframe and content were not been finalized at the time of this research. At the time of the interview, it appeared that the new tool will consider water, waste and energy as per Council request and, thus, will not operate as a triple bottom line tool. A review of archival evidence indicates that Project Sustainability Statements for Capital Works were approved in 2000 but were not used past 2002/2003 (City of Melbourne and ICLEI 2002b).

The City of Olympia, Washington, USA

Council members in the City of Olympia defined “putting sustainability into action” as one of their four priority Council goals in 2005. A team of Department Directors was assembled to develop a strategy to achieve this Council goal. Development of a successful tool to support sustainable decision-making was identified as a priority. The Team identified characteristics of a successful tool and worked with both an outside consultant and a group of students from Evergreen State College to develop the tool (SAM – Sustainability Action Map). Use of the tool is voluntary. It was designed to be simple, user friendly, replicable across departments, and helpful for identifying connections, trade-offs and opportunities. The SAM is not used to evaluate and rank a project but to facilitate a conversation. A primary champion of SAM is the Director of Public Works, whose programs and services include drinking water, engineering and construction, garbage and recycling, parking services, storm and surface water, wastewater, and transportation services. The Public Works Department has framed their Business Plan and key result measures around the four components of SAM.

¹⁷ The review was not made available nor were requests accommodated for additional interviews or information.

The City of Port Coquitlam, British Columbia, Canada

Port Coquitlam has engaged in two types of TBL review of development investment. Their Sustainability Checklist is required for all significant land development applications, such as rezoning and development permits. The Checklist provides a comprehensive assessment of a proposal's contribution to sustainability, distributing the balance of potential points evenly across environmental, economic and socio-cultural criteria (1/3 each). Developers self-review the project and then meet with staff to review the application and identify areas where improvement may be possible, particularly where the developer's self assessment score varies significantly from the staff assessment score. The City also applies a TBL framework to its land sale process, articulating goals and scoring criteria directly into the RFP. The goal is to promote desired development objectives and provide a transparent process for prospective developers and community members. At the time this research was conducted, the triple bottom line review of budget decisions listed on the website does not appear to be in operation.

The City of Richmond, British Columbia, Canada

Efforts to embed TBL analysis across the jurisdiction are nascent in the City of Richmond. Following up on a 2007 Council Resolution stating that the City would apply TBL decision-making to evaluation of major policies and programs, the City's Sustainability Leadership Team is working to articulate targets for the three dimensions and a strategic, integrated tool or framework for reviewing policy or project alignment with those targets.

The City of Seattle, Washington, USA

Two relevant assessment frameworks were identified in Seattle. First, former Mayor Greg Nickels of Seattle, Washington launched the Race and Social Justice Initiative (RSJI) in 2003 in an effort to end institutionalized racism in City government. Initially, the effort focused inward, requiring all departments to create work plans for reducing disparity and fostering multiculturalism including addressing workforce equity, economic equity (purchasing and contracts), public engagement, immigrant and refugee inclusion and access to services, and capacity building. In 2008, a set of RSJI policy and budget filter questions were added to the Budget Issue Paper (BIP) process, thus requiring every BIP submitted to the Department of Finance and Mayor's office to complete a race and social justice analysis. A toolkit was

developed to inform the response to the Budget and Policy Filter questions. It includes the Race and Social Justice Best Practices Criteria (five themes) and a Racial Equity Impact Analysis Worksheet (being revised at the time of this research to align with the Best Practices Criteria). Application of the EIA is being encouraged for all programs and policies. Uptake varies across the organization, with strong gains noted in 2008 (City of Seattle 2008).

Second, Seattle Public Utilities, the City department responsible for water, sewer and solid waste, has adopted a triple bottom line asset management approach to project selection. A neoclassical economic efficiency approach is taken to the assessment of costs and benefits. Equity considerations are monitored and addressed by the Utility's Environmental Justice and Service Equity (EJSE) Division, whose mission is to ensure equitable services and access to decision-making.

South East England Development Authority, UK

The South East England Development Authority (SEEDA), a regional development agency, worked with BRE¹⁸ and a number of other partners to develop a sustainable development checklist in 2003/2004. The Checklist has been used by SEEDA to inform the standards that they incorporate into calls for prospective partners to develop land. The Checklist was developed to help advance thinking and practice within the industry. It can be adopted by local planning authorities, as it was by Brighton & Hove, or used by developers to inform their work. BRE Environmental Assessment Method (BREEAM) is a certification method used globally. There are BREEAM schemes for a variety of building types – from residential to healthcare. BREEAM Sustainable Communities is a recently launched program that provides certification regarding a project's achievement of the Checklist standards (similar to LEED ND).

VicUrban, Victoria, Australia

VicUrban, the Victorian State Government's urban development agency, developed the Sustainable Community Rating (SCR) to help advance thinking and practice within their organization and the building industry. It is an internal management tool to inform selection,

¹⁸ BRE – Building Research Establishment – is an international leader in sustainability research, consultancy, training, testing and certification

design, and development of parcels. There are three versions, tailored to urban redevelopment, master planned, and provincial communities. The SCR is applied at the beginning of a project to define what the expected performance will be. Internal assessors monitor delivery of the performance. The tool may be adopted for third party assessment such as BREEAM Sustainable Communities or LEED-ND.

Facilitating Uptake and Performance of TBL Reviews

Interviewees were asked a series of open-ended questions regarding what had facilitated or inhibited uptake and performance of the tool(s) used in their jurisdiction. Six influences of tool uptake and performance were identified. Discussed below, these include requirements, leadership, capacity, framing, usability, and integration.

Requirements

Not surprisingly, requirements for TBL review were found to be facilitative of uptake in both internally directed and externally directed programs. For example, with Austin's Capital Improvement Matrix for project selection, Hamilton's GRIDS tool for identifying preferred growth options, and Port Coquitlam's RFP process for land sales, projects simply would not proceed if one did not "play the game" and play it well. As one interviewee noted, "You needed to do it to move your project through...So everybody kind of kicked into gear."

At the same time, instituting a TBL review requirement did not guarantee that reviews were done or done well. For example, mandates for TBL review of all jurisdiction policies and plans have a spotty record of performance: Calgary has seen uneven application of its policy, and both Hamilton and Melbourne have discontinued their requirement for TBL reviews on Council Reports. This is not to say that the mandated reviews have not been useful; as we discuss below, they have had impact. For example, the review of Hornsby Shire's TBL pilot found that even when staff thought that the tool would not significantly influence decisions, use of the tool was thought to have improved the process for generating reports and decisions by providing significant opportunities to improve internal communication and break down silos (Potts 2005, 21).

Our research suggests that uptake of TBL reviews is less a function of whether reviews are required than of the extent to which incentives or disincentives are associated with quality completion of the TBL review. This includes the incentive of having a project approved or a bonus such as fast tracking or fee waivers. Where uptake has been more uneven we heard, “frankly there’s no big stick or carrot.” Toby Futrell, former City Manager of Austin noted, “If they know that their reward, recognition, or success depends on their ability to care about and embody those values, then that's what they'll do.” Commented another interviewee, “it really gives us some leverage, it gives us the ability to try to work with people to get better projects... People are willing to negotiate and work a little harder to ensure their project is going to make it.” The importance of structuring incentives appropriately was also identified. This includes withholding incentive payments until performance has been documented, and periodically reviewing the incentive program to ensure that the incentives advance community goals, are necessary, and are appropriately specified (e.g., creating incentives that are sufficient enough to stimulate participation but do not reward activities that would happen in their absence).

Leadership

Leadership, both from the “top” and the “trenches,” was noted as an important influence on adoption and implementation of TBL frameworks. As one interviewee noted, “you do need politicians who are accepting of this and are willing to promote it, because if you don’t have that, you might as well just forget it.” However, while a lack of support from the top can inhibit uptake and performance, the presence of a key leader alone is not sufficient to carry the day. Clearly, other factors such as incentives, capacity building and resources play a role. Further, questions of continuity surfaced during the interviews, with concerns expressed regarding leadership turnover. “The memory is so short ... You have this churning at the top in local government that seems to throttle back institutional memory... Also, the desire for leaders to put their stamp on things.”

Examples of leadership from the top include Mayor Nickels launching the Race and Social Justice Initiative in Seattle and Executive Sims catalyzing the Equity and Social Justice Initiative in King County. In other cases, it was senior and mid-level staff that championed efforts to

better account for the TBL. In the vein of Peter Block’s *Stewardship* (1996), Robert Greenleaf’s *Servant Leadership* (1977), or Peter Senge’s *Fifth Discipline* (1990), these leaders’ strategies included reaching out to non-traditional stakeholders, finding common ground, taking a systems approach, fostering initiative and capacity-building, and linking TBL review with organizational goals and performance measures.

Capacity

Uptake and performance of TBL review was influenced by both technical capacity (e.g., understanding) and resource capacity (e.g., real and perceived impacts on time or budget) of staff, applicants, decision makers and community members. For example, interviewees remarked that there was often a “huge gap” between concept and application: “intention and commitment alone doesn’t mean the technical understanding or capacity to do it.” As discussed below, jurisdictions have attempted to build capacity by conducting trainings, designating resource people, and/or taking a team approach to reviews.

Trainings have been provided on mechanics (e.g., how to use the tool), as well as underlying issues (e.g., what is sustainability, equity, or the triple bottom line, and why is it relevant). At least six¹⁹ of the case jurisdictions have provided trainings, ranging from “lunch and learns” to full-day or multi-session events. For example, in Olympia a three-day sustainability training is offered a few times a year, and in Seattle staff participate in a range of trainings depending upon their role (City of Seattle 2008).

Trainings were found to be facilitative of uptake and performance, but also might have limits. For example, in some cases, the trainings did not reach everyone they should, the content was too thin, or the trainings did not continue though should have been on-going. Noted one interviewee, “it’s certainly an ongoing process and I think one thing that we haven’t done very well is have continuous training for our staff, with new people coming on board, with new terminology coming on board, with new requirements and things like that.” Incorporating TBL

¹⁹ Possibly more as the question was not explicitly asked in the interviews and is not always included in web materials.

review material into new employee trainings might foster continuity but did not seem to be sufficient on its own (e.g., the timing and content not being as applicable as a training focused on TBL review). Trainings are likely a necessary but not sufficient condition for building TBL accounting capacity. For example, an evaluation of eighty staff who received training on how to use their jurisdiction's TBL tool found that while participants increased their understanding about the role and process of integrating the TBL into decision-making, gaps remained regarding comfort using the tool (Potts 2005).

In some jurisdictions, capacity building is fostered via designated champions or resource people that support the TBL process. For example, as reports are being prepared, questions may be directed to a resource person(s) or a resource person may check in with staff. In Seattle, "within every single department we have what's called a Race and Social Justice Change Team, and those Change Team members have received additional training on the use of the toolkit and so if there's someone who's struggling, we can designate a Change Team member to help out with it." In Calgary, there are resource people that serve the entire organization's TBL effort as well as "Super Users" in each department. While the presence of a designated office or staff position was identified as helpful for capacity building, as well as demonstrating organizational priority and commitment, it was also expressed that care must be given to ensure that the resource person or office helps build capacity and integration across the organization. As Austin's former City Manager said, "We wanted a check and balance, but at the end of the day, what we wanted is every department and every function to always think about all three things... In everything they did... We want it integrated."

A cross-disciplinary or team approach to capacity building has also been used to good effect in a number of communities. For example, when the City of Calgary was gearing up for their three year business planning cycle they held a day long event with the organization's business planners (approximately one hundred) where people moved from table to table, working in groups of five or six, to review and comment on the TBL dimensions of their draft business plans. In Richmond, people with different TBL strengths have been positioned on some key projects, and cross-departmental teams with an integrated focus have been assembled. For example, they have placed a social planner on their climate change team and an environmental person on the safe

communities team. At VicUrban, decision-making about performance measures for a project's TBL is designed to foster a trans-disciplinary approach: "The way we set up the meeting is that we are no longer our own experts. You might have the environmental background but you have to own all the other objectives as well, so it's your mandate to understand their potential for this site as much as they have to own your potential for the site."

A number of interviewees commented on the time and investment required for capacity building. In Seattle, the initiative was approached from a developmental perspective with a purposeful effort to start with capacity building:

"We have spent the first couple of years really focusing internally and so trying to do some educational work around what institutional racism is...to be really clear, that the way that government has historically operated, actually is to the benefit of white people and to the detriment of people of color... there has been a fair amount of emphasis on sort of training, education, capacity building sorts of things, with the goal eventually of preparing people to make institutional change... If we would have just started by saying 'we need to change things' and people didn't have that common understanding of what institutional racism is, then we would not have been able to be successful."

Framing

The need to "meet people where they are at" when implementing a social or triple bottom line framework was identified by a number of interviewees. Recognizing that individuals operate with existing mindsets and work plans, one interviewee observed, "...it's almost like weaving a thread into a quilt that exists...there's all this fiber, there's this thread, that then you have to weave into this existing quilt." Said another, "I think every stakeholder has a different entry point in to the TBL and that's what you leverage." Based on his experience, this interviewee advocates connecting to employees' daily work, identifying what their needs are and working from there. For example, addressing a priority such as quick response time or safety with fire fighters or policy began the conversation about sustainability at a meaningful, basic operational level. He noted, "Things grow from there. Lightbulbs go on...and it helps people become change agents on their own terms."

The importance of finding language, as well as issues, that resonate for people was also identified. For example, one interviewee found that speaking about “balance” rather than “tradeoffs” or “sustainability” was less polarizing in some contexts. Further, talking about “opportunities” rather than “strengths and weaknesses” helped people contemplate versus advocate. Another interviewee discussed the importance of inspiring people rather than dampening enthusiasm. He found the language of TBL review to be constraining and observed: “I find the best feedback is when you don’t approach them with a TBL discussion, you approach them with a, ‘you want to do something really cool? You want this to be a very interesting project? Well, what would that be? Something that you’d be really proud of when you’re finished...Just inspire people and get them excited about the possibilities and options and not as a negative thing.’”

Usability

Usability was identified as a significant issue influencing uptake and performance of TBL frameworks, with a tension frequently existing between rigor and relevance. As one interviewee noted, “the crux of the challenge that we’re facing right now...we want it to be manageable but not to the point that it’s just a checklist that people sort of go through but it means nothing.” Where a framework was too simple, one community found “it lost its credibility...I guess they wanted it to be easy to include in the reports, but making it easy...made it less rigorous.” At the same time, problems emerged when frameworks were too complex or burdensome. For example, in Melbourne, the tool was retired because of an identified need to find something “more user friendly and straightforward and less time consuming.” As noted earlier, capacity is a key issue affecting uptake and performance and a number of jurisdictions struggled with the level of complexity of the tool because staff or applicants did not have adequate skill and/or resources to implement it well.

The quest for standardized measures also raised usability issues. For example, checklists can provide “clear rules of the game” that offer consistency and predictability but they can also be overly prescriptive, diminishing creativity and responsiveness to context. Staff in Port Coquitlam and VicUrban found that a “one size fits all” approach to their checklists was not

working well, resulting in some high performing projects receiving a low score because of the way the review tool was designed.

The search for commensurate and quantifiable measures of impact was similarly problematic, with the quest for quantitative full and life cycle measures referred to as a “holy grail.” In some cases, traditional benefit-cost²⁰ analysis is being used, though problems with this approach have been identified. For example, willingness to pay does not map with ability to pay, surfacing social sustainability and equity concerns (e.g., housing price increases calculated as a benefit may cause displacement for some). While these figures could be addressed as part of a full life cycle cost analysis, such accounting does not appear to be the norm. Further, there is a strong imperative to quantify all impacts, though some things cannot or should not be quantified (Vanclay 2004).

Concerns about rigor and subjectivity were more tempered in some jurisdictions. Said one interviewee, “the reality for a lot of us is that a qualitative assessment adds value as well.” Observed another, “the bottom line is that there's a judgment call at a certain level. You can only quantify to a certain point and then you're using some type of logic and common sense to tell you what's better than what after you get to a certain level. The point is to be transparent about that. So it is clear where assumptions are falling.” This points to a communicative turn in TBL review – a point taken up below.

Finally, we also heard that the utility of TBL review is very much a function of timing (i.e., when the review occurs). In general, TBL analysis is more useful for informing projects at the design stage or for considering options than for reporting impacts of recommended decisions. Further, as discussed below, capacity in the form of skill and resources is an important contributor to the quality, and therefore usefulness and use, of TBL reviews.

²⁰ Also referred to as cost-benefit analysis.

Integration

The sixth theme we identified pertaining to uptake and performance was that of integration – integration of the three dimensions of sustainability within the review process and integration of the review process into governance structures.

First, it was noted that the language of TBL might reinforce “silo” thinking. Said one interviewee, “it’s hard to separate them...to write it up as individual sections on the Council Report actually defeats the purpose. It should just be a section that says TBL, and you actually have to describe how everything relates.” Said another, “this broader view about trying to do all three together, optimizing it and not causing externalities and really knowing the suite of benefits and costs that your action is taking. That’s still kind of missing.”

Second, the social dimension of sustainability proved to be the least understood with respect to the triple bottom line. For example, we heard “out of all three, that’s the one that I’m least aware of and I think ...various people, they just don’t get it or aren’t as knowledgeable about it.” Said another, “honestly that part has always been the most difficult for the community to come around, and our focus has probably been more on the environment than the other two legs of the stool, because that’s been easier to do.” Attention to social sustainability themes varies widely across the tools. In some cases, these themes are expressed broadly. For example, Olympia’s Sustainability Action Map (SAM) takes an open-ended SWOT (strengths, weaknesses, opportunities, threats) approach to four questions regarding natural, individual, community, economy (NICE). In other cases, themes are operationalized with specific criteria. For example, VicUrban’s²¹ Sustainable Community Rating for Master Planned Communities has five objectives (commercial success, housing affordability, urban design excellence, community well-being, and environment), with priorities and measures defined for each. Common social sustainability themes include health, safety, mobility, housing, jobs, culture, participation and engagement, and social justice and inclusion. Attention to equity and opportunity, including causes and consequences, is very explicit in some instances (e.g., Seattle’s and King County’s equity impact review tools) while receiving little, if any, treatment in others.

²¹ VicUrban, the urban development agency for the state of Victoria, Australia.

Third, addressing the need to integrate sustainability dimensions, one interviewee noted, “You can hire people to make napalm or you can hire people to make bicycles. Some communities don't make the distinction.” Interviewees suggested that TBL reviews should be anchored in “a really strong and discreet community vision,” “to be clear what you want your community to be thirty years from now and back cast.” However, when these distinctions have been made and communities articulate sustainability visions, plans, or indicators, there often has not been a strong link between those policies or documents and implementation of the TBL review. Thus, integration of TBL accounting with strategic and adaptive management was also identified as an issue. As one interviewee noted, “I don't see the tool as the problem, I see the problem is the way that we set up our institutions to go about making these decisions... The way the institution is set up is not really to support this type of thinking.”

Impacts of TBL Review

Interviewees identified a number of positive impacts associated with the TBL reviews. These include better decisions, greater transparency, improved coordination between departments or units, and increased understanding about what sustainability means and how to operationalize the concept. In some cases, TBL reviews have helped to structure the process so that decisions are not made solely on the basis of “who is loudest” or “what the short term financials look like.” Interviewees observed, “it's changed the whole dynamics of the conversation,” “the public liked the transparency,” and “it helped a lot in understanding what sustainability meant for our community and helped them to make better recommendations and it helped in understanding the concept of sustainability... even when it was sometimes a bit of a ‘tick and flick’ and ‘rationalization.’” Noted one, “I think it is impacting decisions, because it's certainly providing our councilors with more information... They're now able to actually question a number of areas and that makes it a lot more open and transparent. So I think from a decision-making and councilor point of view it's been a good process to identify and flag issues.”

When contemplating tool impact, one of the strongest themes was that of capacity building and culture change. Consider, for example, these statements by interviewees:

- With a straight face, I can say these are making a difference. Five years ago, if I were to have looked at best practices, they would not have been at the same caliber.
- It's raising capacity within the sector about what sustainable development meant in the built environment. I think that's what it's job was and that's what it did...I think a lot of people have used it in those early years as guidance to just ask themselves the right questions and to actually help them understand what sustainable development meant for themselves in the built environment.
- I think staff are now starting to change their work plans. So where they did the report they've identified things and then thought, 'oh I didn't think about that, but hey, for the next project I will actually put that in place.' I think it's been a very slow process, but they are starting.
- It has been very helpful in getting folks to think about who is impacted and whether that impact has been felt disproportionately among populations who have historically been neglected or disadvantaged, and then...what can be done, what actions can be taken, to sort of enhance or mitigate the positives or negatives ... sort of a new way of thinking for a lot of folks ... the feedback I get is that they take that and it changes the way they think about a lot of other things as well. And so even though they may not be using the tool, they are adopting the lens and really that's the goal I think of our tool is to get folks to adopt this sort of lens of equity... as folks go through it and start to learn a little bit about it, it does change the way they think about their other work as well.

Thus, we find that TBL review tools are not simply a mechanism for evaluating investment decisions; the tools are a means for stimulating the learning and culture change required to achieve sustainability. Achieving strong triple bottom line yields requires the cultivation of new habits of thinking and doing: the tool becomes a vehicle to help get there. As one interviewee noted, "the organization has been described as a million ton ocean-liner and its heading in one direction and you're trying to go in another direction. You can't just do a 90 degree. You have to gradually steer it around. This process helps that."

Conclusions and Implications

Communities engaged in a Race to the Top must ensure that development investment fosters ecological, social, and financial health. This research informs understanding about how to account for this triple bottom line and provides valuable insight regarding what facilitates or inhibits uptake and performance of TBL reviews, and what impact reviews may have.

The question of how to account for the triple bottom line of development investment is answered with “it depends.” Our research shows that tools are applied in a variety of settings (policy review, land use decisions, capital improvement, and development incentives) and are used both to design (e.g., what should be done in this place) and to decide (e.g., which of these options is best or should this project or program be approved). The “best” way to account for integrated sustainability yields depends upon contextual factors such as purpose (what are you trying to assess and how will you use the information), audience (who will use the information), and capacity (what skills and resources do the producers and users of the information possess). Meaningful assessment is fostered when tailored to scope, needs, resources, or potential impact. However, while flexibility regarding TBL assessment implementation can foster innovation, buy-in, and relevance, care must be given to ensure that flexibility does not impede effectiveness via inconsistency or poor quality.

In some instances, the quest for “rigor” may sabotage assessment efforts as tools deemed “too complex” are cast aside. If a tool is perceived as too complex it is helpful to clarify what that means. For example, is more or better training needed, does the tool or process need to be modified, is it the wrong tool for the job, or would the application benefit from a more collaborative approach? Perhaps there are equity issues germane to the complexity of the tool – for example, smaller developers being disadvantaged because they do not have the staff or expertise required. Further, it is important to note that “rigorous” and quantitative processes are not necessarily accurate or useful. As one interviewee observed, “we have a computer model, we have criteria, we spit out the model, so it has some rigor to it, but now we recognize that it’s not quite there yet.” Notes Levett-Therivel (2004), “tools that require full sets of detailed data so as to reduce uncertainty do not necessarily lead to more certain results than those that assume a

certain amount of uncertainty: the former often merely disguise, rather than reduce, uncertainty” (P. 3).

Although attempts to quantify and monetize all impacts contradict basic tenets underlying TBL assessment, the pressure to do so is great. Noted one interviewee, “the challenge is we want to put dollar values to it so we can better defend our projects in front of the council.” Benefit cost analysis and other quantitative approaches are appropriate components of TBL analysis; however, one must be cognizant of and attentive to the limitations of these methods. For example, important costs and benefits are often excluded from these analyses (e.g., costs associated with displacement), boundaries of space and time remain problematic (e.g., costs to other communities that absorb “economic refugees” displaced by gentrification), and willingness-to-pay is both difficult to ascertain and ignores equity issues and attenuated costs that are associated with ability-to-pay. If it is true that what gets measured gets managed (or at least captures a good deal of our energy and attention) then it is imperative that we measure or account for an integrated, full cost triple bottom line. At the same time, in the quest to account for impact we must give care to “focus on the things that count, not the things that can be counted” (Vanclay 2004, 266).

Ironically, while integration of social, environmental, and economic dimensions is at the core of sustainability, the language of TBL accounting may undermine that intention. “Bottom line” language often conjures images of financial results, contradicting the imperative to address standard accounting procedures’ neglect of external costs and non-monetized costs. In addition, the phrase “bottom line” suggests summing up, which is clearly problematic when addressing incommensurable attributes. Further, triple bottom line language can reinforce tendencies to think in terms of three separate areas, perpetuating the reductionist thinking that undergirds many of the problems that TBL accounting aims to redress. The language of TBL has been useful for engaging certain populations in conversations about sustainability, though the limits of the metaphor must be acknowledged and addressed (Brown, Dillard and Marshall 2004).

Accounting dilemmas associated with the triple bottom line are reflective of a world that is complex, plural, and uncertain (i.e., issues are interrelated, information is distributed, predictions

are impossible, and there may be perceived differences of interest to reconcile). The presence of these qualities suggests the important role of discursive processes for generating, interpreting, and using assessment information (Owens, Rayner and Bina 2004; Brown 2009). Such endeavors contribute to the learning and transparency that is particularly important given the inherent subjectivities and inevitable inaccuracies associated with a given assessment method (Frame and Brown 2008; Hurley, Ashley and Mounce 2008). The traditions of democratic deliberation, participatory planning, and social learning can productively contribute to this arena. As one interviewee noted, “It’s the quality of the conversation that matters.” Social learning is a key function of the assessment process and must be viewed as such, with explicit attention given to the design of environments that “achieve engagement, mediation, and learning among stakeholders” (Thomson 2009, 36). This means attending both to the characteristics of the dialogic space (e.g., tone, form, pace), as well as the content: “The seeds of change – that is, the things people think and talk about, the things people discover and learn, and the things that inform dialogue and inspire action – are implicit in the very first questions we ask” (Ludema, Cooperrider, and Barrett 2001, 198).

Consistent with the literatures on policy implementation and evaluation, a number of factors were found to shape uptake and performance (cf Alexander 2006; Cavalluzzo, K. and Ittner, C. 2004; Lester, Bowman, Goggin and O’Toole 1987; O’Toole 2000, 2004; Peters and Pierre 2007; Spillane, J., B. Reiser and T. Reimer 2002). These research findings are also consistent with literature suggesting that the process of sustainability assessment can enhance understanding of sustainability concepts, build capacity, and improve collaboration (cf Bell and Morse 2003; Mitchell 2008; Pope, Annandale and Morrison-Saunders 2004; Taylor, Fletcher and Peljo 2006). Thus, TBL assessment can be a vehicle for the learning and change required to achieve sustainability goals. One implication is that training should address not just the mechanics of filling out forms but “how x might affect y” and why that might matter. It also suggests that learning strategies should shift over time in order to reach people new to the process as well as provide appropriate refreshers or enhancements.

While clearly situating TBL assessment as a social learning technology, the findings suggest that its potential to contribute to adaptive governance could be more fully developed. This research

supports claims that the integration of sustainability assessment into planning and decision-making has been lacking and that a change in institutional architecture is required (Devuyst 2000; Hughey and Coleman 2007; Hunt et al. 2008; Ness 2007; Potts 2005; Roberts and Cohen 2002, 127; Thomson 2009). Potts (2005) offers that the triple bottom line:

is not a new bottom-line ‘metric’ but an approach to performance assessment and management that stresses the interdependence of economic, environmental and social criteria. TBL is therefore best seen as a process that includes managing, measuring and reporting sustainability performance and integrating with management process throughout an organisation. It is a platform for the discussion of these issues within the council and the community. The key with TBL is that it is as much about the process as it is about the final product (5-6).

An important implication regarding integration of TBL assessment, strategic management, and adaptive governance is captured in the words of one interviewee: “You can’t start evaluating or measuring before you know what it is you are trying to get to.” TBL accounting is most productively applied when a clear vision and associated goals, objectives, strategies, and performance indicators have been articulated. With those elements in place, information from a TBL assessment can more effectively be used as a decision aid. Further, assessment results and associated learning need to be fed back into the system to inform conversations about the community’s direction and to appropriately modify assessment processes, incentives, and capacity building efforts.

A lingering question is whether TBL review is different than other methods of sustainability assessment (cf Hacking and Guthrie 2008; Vanclay 2004). Examining a number of sustainability or social sustainability assessment rubrics, we see them as a suite of tools, applied at different times (e.g., ex ante prediction, ex post measurement), to different stages of development (e.g., planning, design, construction, operation), for different purposes (e.g., design, decide, monitor, evaluate), and with varying epistemological stances and degrees of participation, complexity, comprehensiveness, and integration (cf Clark et al. 2004; Deakin et al. 2002; de Ridder et al. 2007; Eales et al. 2005; Levett-Therival 2004; NeighborWorks 2006; Ness 2007). In some

instances different terms are used for essentially the same activity; in other instances they reference different things.

Many tools have been created to account for triple bottom line impacts, however, little research has been published regarding their uptake and performance. This research helps to fill that gap by shedding light on the practice of TBL review by local and regional jurisdictions. Specifically, this inquiry improves understanding about review framework content (what systems consider), process (how the systems are structured), functionality (whether the systems work well), and impact. Further, this research demonstrates how the accounting for and achievement of TBL yields are intertwined, with TBL reviews supporting the information needs and cultural and institutional changes necessary for communities to win the Race to the Top.

Appendix A:
Literature Review

Databases Searched

Searches were conducted in the following fourteen academic databases:

Academic Search Complete	Academic Search Premier
Avery Index to Architectural Periodicals	Business Source Premier
E Journals	EconLit
MasterFILE Premier	MLA Directory of Periodicals
MLA International Bibliography	Political Science Complete
Public Affairs Index	Regional Business News
Soc INDEX	Urban Studies Abstracts

For “gray literature,” the search was conducted in Google with the search restricted to government domains in English speaking countries that seemed to be leaders in the topic as per the literature review (i.e., .gov, .ca, .uk, .nz).

Search Terms

Our search terms were both targeted and expansive in order to increase the likelihood of identifying cases. The following search term sets were used (A*B*C) in the academic and gray literature searches. For example, [“social bottom line” and city and accounting] or [“triple bottom line” and public and investment].

Five ‘A’ Terms:	Twelve ‘B’ Terms:	Seven ‘C’ Terms:
Triple Bottom Line	City	Accounting
Social Bottom Line	Development	Evaluate
Integrated Assessment	Development Agency	Indicators
Sustainability Accounting	Development Commission	Investment
Social & Environmental Assessment	Development Department	Performance measures
	Development Division	Public finance
	District	Review
	Government	
	Jurisdiction	
	Municipality	
	Public	
	Region	

Appendix B:

Organizations Contacted Regarding Assistance Identifying Potential Cases

American Planning Association

American Society for Public Administration

BREEAM Communities

Clarion Associates, LLC

Green for All

ICLEI

ICLEI – Triple Bottom Line Capacity Building Program

International Economic Development Council

Monash University

National League of Cities

Public Performance Measurement and Reporting Network

The Partnership for Working Families

Western Washington University, MBA Program, Department of Accounting

Gund Institute

International City/County Management Association

National Association of Counties

National Conference of Mayors

Policy Link

University of Texas Dallas

University of Wisconsin – Madison

Appendix C:

Potential Cases of Jurisdictional SBL/TBL Review and Inquiry Resolution²²

Interviewed

Austin, TX, US
Brighton & Hove, ENG, UK
Calgary, AB, CA
Corvallis, OR, US
Hamilton, ON, CA
Hornsby Shire, NSW, AU
King County, WA, US
Melbourne, VIC, AU
Olympia, WA, US
Port Coquitlam, BC, CA
Richmond, BC, CA
Seattle, WA, US
SEEDA, ENG, UK
VicUrban, VIC, AU

Not Identified in Time for Interview

Boulder, CO, US
Coffs Harbour, NSW, AU
Sutherland Shire, NSW, AU

Not Available for Interview

Victoria, BC, CA

Interviewed –Not Conducting TBL Review

Gold Coast, QLD, AU
Grand Rapids, MI, US
Port of Seattle, WA, US

Contacted – No Current TBL Review

Albuquerque, NM
Eugene, OR
Fort Collins, CO, US
Taupo District, NZ

Reviewed – Not Contacted, Determined Not Relevant to Research

Beaverton, OR, US
Chicago, IL, US
Christ Church, NZ
Edmonton, AB, CA
Eurobodalla Shire, NSW, AU
Gosnells, WA, AU
Hillsboro, OR, US
Minneapolis, MN, US
New York City, NY, US
Newark, NJ, US
Oakland, CA, US
Porirua, NZ
San Francisco, CA, US

Contacted – No Response

Diamantina Shire, NZ
East of England Check List
Hutt City, NZ
London Check List
Maroochy Shire, Australia
Northwest Check List
Southwest Check List
UK Regional Sustainability Check Lists
Waikata, NZ
Waitakere, NZ
Wellington, NZ
West Midlands Check List
Wollongong, NSW, AU

²² While the effort to identify cases was quite inclusive, we acknowledge that there may be additional cases that were not captured by this search. We welcome contact information for previously unidentified cases. Suggestions can be sent to the author at hammerj@pdx.edu.

Appendix D:

Fourteen Case Jurisdiction Interviewees

Where	Who	Title
Austin, Texas, US	Laurence Doxsey	Former Director of Planning, Environmental & Conservation Services Department and Former Sustainability Officer
Austin, Texas, US	Toby Futrell	Former City Manager
Austin, Texas, US	Austan Librach	Former Planning Director
Brighton & Hove, England, UK	Paula Gonclaves	Senior Planning Officer
Calgary, British Columbia, CA	Steve Wyton and Nabil Dahbi	Manager, Corporate Asset Management Infrastructure Analyst
Calgary, British Columbia, CA	Scott Pickles	Development Strategist, Office of Land Servicing & Housing
Calgary, British Columbia, CA	Heather Reed Fenske	Manager, Information Technology
Calgary, British Columbia, CA	Derek Cook	Research Social Planner, Community and Neighbourhood Services
Corvallis, Oregon, US	Greg Gescher	Engineering Supervisor, Public Works Department
Hamilton, British Columbia, CA	Heather Donison	Senior Project Manager, Sustainability Strategic Services
Hornsby Shire, New South Wales, AU	Julie Nelson	Manager, Environmental Sustainability & Health
King County, Washington, US	Josh Fogt	Former Trainer/Developer
King County, Washington, US	Richard Gelb	Performance Measures Manager, DNRP Finance and Admin Unit
King County, Washington, US	Michael Jacobson	Manager, Performance Management
Melbourne, Victoria, AU	Adam Zaborszczyk	Greenhouse Policy Coordinator, Sustainability Team
Olympia, Washington, US	Michael Mucha	Director of Public Works
Port Coquitlam, British Columbia, CA	Jennifer Little	Acting Manager of Planning
Port Coquitlam, British Columbia, CA	Bryan Sherrell	Planner, Development Services
Richmond, British Columbia, CA	Margot Daykin	Sustainability Manager
Seattle, Washington, US	Tim Skeel	Principal Economist, Strategic Asset Management SPU
Seattle, Washington, US	Julie Nelson	Director, Seattle Office for Civil Rights
SEEDA, England, UK	Martin Bolton	Head of Environmental Development
VicUrban, Victoria, AU	Karen Deegan and George Tieman	Acting Environment Director and Director Government Liaison and Policy

Additional Interviews

Where	Who	Title
Port of Seattle, Washington, US	Burr Stewart	Former Strategic Planning Manager
Gold Coast, Queensland, AU	Stephen Varady	Acting Executive Coordinator, Corporate Performance Management
Grand Rapids, Michigan, US	Corky Overmeyer	Former Sustainability Manager

Appendix E:

Web Accessible Overview Documents Reviewed

This is a partial list of documents reviewed. The list does not include council reports, examples of matrices applied to specific cases, etc. Some of those additional documents can be accessed on-line, some were secured via communication with interviewees and are not available on-line.

Austin

Austin Capital Improvements Program Sustainability Matrix

http://web.archive.org/web/19991106003422/http://www.ci.austin.tx.us/sustainable/matrix_paper.htm

<http://web.archive.org/web/19991105232005/www.ci.austin.tx.us/sustainable/matrix.htm>

<http://web.archive.org/web/19991108204744/www.ci.austin.tx.us/sustainable/matrixexample.htm>

<http://web.archive.org/web/19991014022534/www.ci.austin.tx.us/sustainable/matrixconsider.htm>

Austin Smart Growth Criteria Matrix

www.epa.gov/dced/scorecards/austin_matrix.pdf

<http://design.asu.edu/apa/proceedings03/FORREST/forrest.htm>

Austin Economic Development Matrix:

<http://www.ci.austin.tx.us/redevelopment/edagreements.htm>

<http://www.ci.austin.tx.us/redevelopment/etincentives.htm>

www.liveablecity.org/docs/LC_Incentive-Study.pdf

City of Austin Growth and Development Initiatives, Policies, and Ordinances 1979-2008

<ftp://ftp.ci.austin.tx.us/GIS->

<Data/planning/CPC/City%20of%20Austin%20Growth%20and%20Development%20Policies%201979-2007%20draft.pdf>

Brighton & Hove

Sustainability Checklist

<http://brighton-hove.sustainabilitychecklist.co.uk/>

<http://www.brighton-hove.gov.uk/index.cfm?request=c1174453>

Calgary

TBL Policy and Framework

www.calgary.ca/docgallery/bu/cityclerks/council_policies/lup003.pdf

http://www.calgary.ca/docgallery/bu/environmental_management/tbl_policy_framework.pdf

http://www.calgary.ca/docgallery/bu/environmental_management/triple_bottom_line_outlook.pdf

http://www.calgary.ca/portal/server.pt/gateway/PTARGS_0_0_104_0_0_35/http%3B/content.calgary.ca/CCA/City+Living/The+Environment/Initiatives+and+Events/Strategic+Environmental+Initiatives/Triple+Bottom+Line/Policy+Framework/Policy+Framework.htm

http://www.calgary.ca/portal/server.pt/gateway/PTARGS_0_0_104_0_0_35/http%3B/content.calgary.ca/CCA/City+Living/The+Environment/Initiatives+and+Events/Strategic+Environmental+Initiatives/Triple+Bottom+Line/How+to+apply+TBL.htm

www.calgary.ca/planit

Corvallis

<http://www.ci.corvallis.or.us/index.php?option=content&task=view&id=1825&Itemid=2099>

Sustainability Action List not online: same format as Olympia SAM

Hamilton

http://www.hamilton.ca/NR/ronlyres/9B693276-734D-46C9-9586-62435B13799B/0/6Table_Outcomes_Issues_Feb16.pdf

<http://www.hamilton.ca/NR/ronlyres/61CD434A-73C8-4F27-88BD-9A9C96616A19/0/5ProcedureforCompleteingaTBLAssessment.pdf>

<http://www.hamilton.ca/ProjectsInitiatives/V2020/ResourceLibrary/Timeline+and+History.htm>

<http://www.hamilton.ca/ProjectsInitiatives/V2020/TBL/Information+Provided+to+Mayors+Advisory+Group.htm>

<http://www.hamilton.ca/ProjectsInitiatives/V2020/TBL/Triple+Bottom+Line+Projects.htm>

<http://www.hamilton.ca/CityDepartments/PlanningEcDev/StrategicServicesSpecialProjects/GrowthRelatedIntegratedDevelopmentStrategy/>

<http://www.hamilton.ca/NR/rdonlyres/A6062B08-8FBD-4091-ADB2-723C4E696033/0/1TBLinHamilton.pdf>

<http://www.hamilton.ca/NR/rdonlyres/51D276C4-A830-4085-9944-9C6E978B458E/0/TBLTrainingHamilton.pdf>

<http://www.hamilton.ca/NR/rdonlyres/D0546528-F468-478D-8685-9D27A7225097/0/TrainingTrainersPresentation.pdf>

Hornsby Shire Council

<http://www.hornsby.nsw.gov.au/environment/index.cfm?NavigationID=1715>

King County

<http://healthequity.wa.gov/Meetings/2009/12-10/docs/Tab11d-KingCntyEquityImpactBudgetDev.pdf>

<http://www.urbanparks08.org/tuesdayrichardgelbppt.ppt>

<http://www.kingcounty.gov/exec/equity.aspx>

http://www.kingcounty.gov/exec/~/_media/exec/equity/documents/EquityReport2009.ashx

<http://your.kingcounty.gov/dnrp/measures/>

Melbourne

<http://web.archive.org/web/20071013162051/http://www.melbourne.vic.gov.au/info.cfm?top=166&pg=1197>

<http://web.archive.org/web/20071020095917/www.melbourne.vic.gov.au/info.cfm?top=166&pa=1197&pg=1204>

<http://web.archive.org/web/20071020100411/www.melbourne.vic.gov.au/info.cfm?top=166&pa=1197&pg=1201>

<http://web.archive.org/web/20071020100838/www.melbourne.vic.gov.au/info.cfm?top=166&pa=1197&pg=1205>

Olympia

<http://www.ci.olympia.wa.us/community/sustainability/sustainable-action-map-sam.aspx>

<http://www.ci.olympia.wa.us/en/community/sustainability/sustainable-action-map-sam/sustainability-and-sam-methodology-behind-sam.aspx>

http://www.ci.olympia.wa.us/community/sustainability/~media/Files/PublicWorks/pw_resources/external_SAM.ashx

<http://www.ci.olympia.wa.us/~media/Files/PublicWorks/PDFs/Utilities/Sustainability-Strategy.ashx>

http://www.apwa.net/Publications/Reporter/ReporterOnline/?MODE=VIEW&id=ReporterOnline_052009 [Article page 32]

Port Coquitlam

http://www.city.portcoquitlam.bc.ca/City_Hall/City_Departments/Development_Services/Sustainability_Initiative.htm#Sustainability%20Checklist [See links]

http://www.portcoquitlam.ca/_shared/assets/Sustainability_Initiative_Jun_073145.pdf

<http://www.toolkit.bc.ca/resource/city-port-coquitlam-sustainability-checklist>

Seattle

<http://www.seattle.gov/rsji/>

<http://www.racialequitytools.org/resourcefiles/nelson.pdf>

SEEDA

<http://southeast.sustainabilitychecklist.co.uk/>

VicUrban

[http://www.vicurban.com/cs/Satellite?c=VPage&cid=1168844489258&pagename=VicUrban%2FLayout
&site=VicUrban](http://www.vicurban.com/cs/Satellite?c=VPage&cid=1168844489258&pagename=VicUrban%2FLayout&site=VicUrban)

<http://www.sustainablecommunityrating.com/cs/Satellite?pagename=SCR> [See links]

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<http://www.melbourne.vic.gov.au/rsrc/PDFs/TBL/TBL%20Resources/SustAssessProc.pdf>

City of Melbourne and ICLEI. 2002b. Melbourne capital works sustainability statement. <http://www.melbourne.vic.gov.au/rsrc/PDFs/TBL/CAPWORKSSUSTAINTEXT.doc>

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