



# A COMPARATIVE ANALYSIS OF SUSTAINABLE COMMUNITY FRAMEWORKS

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## Executive Summary

Sustainable community frameworks attempt to give form and direction to the environmental, social, and economic activities of a locality. Across the nation and around the world, communities are beginning to take on the task of both defining sustainability and identifying the requisite actions needed to get them there. In the absence of a national framework to reference, the landscape of sustainable community frameworks in use is hugely variable. This paper attempts to examine this landscape to glean themes and lessons that will be of use in creating a national framework.

By conducting an extensive literature review and a survey of sustainable community framework staff, this study yielded several themes. The following is a brief list of observations:

- The scale at which the framework intends to function informs the framework. Development of a national framework will benefit from examining sustainability frameworks at other scales.
- The vast diversity in framework structure and focus makes it very difficult to compare the progress of one locality to another, and misses the opportunity to leverage change and share lessons learned.
- While frameworks may contain commonalities in terms of verbiage used and apparent themes addressed, these terms and themes do not share common definitions, leading to additional potential confusion and lost opportunities for collaboration.
- Just as the frameworks themselves varied widely, framework development costs spanned an order of magnitude, hinting at the potential for public sector financial and human resources savings with the advent of a national framework.
- Interest in a national framework was expressed by many, with the caveat that the framework was created in a participatory, peer-reviewed fashion with flexibility to accommodate the priority issues of a particular locale.
- Community investment and political support of a framework seems to be a driver behind the individuated approach to framework development. A national framework should recognize the need and design to facilitate this local ownership.
- A framework is best served by robust linkages to those entities responsible for implementation, and by connections between indicators used to measure sustainability and government performance measures.

## About the Founding Partners

The **Center for American Progress** (CAP) is a think tank dedicated to improving the lives of Americans through ideas and action. CAP combines bold policy ideas with a modern communications platform to help shape the national debate, expose the hollowness of conservative governing philosophy, and challenge the media to cover the issues that truly matter. [www.americanprogress.org](http://www.americanprogress.org)

**ICLEI- Local Governments for Sustainability** (ICLEI) is a membership association of local governments committed to advancing climate protection and sustainable development. Since its inception in 1990, ICLEI has grown to include nearly 1,000 cities in the world, nearly 500 of which are in the United States. [www.iclei-usa.org](http://www.iclei-usa.org)

The **U.S. Green Building Council** (USGBC) is a non-profit organization committed to expanding sustainable building practices. USGBC is composed of more than 15,000 organizations from across the building industry that are working to advance structures that are environmentally responsible, profitable, and healthy places to live and work. [www.usgbc.org](http://www.usgbc.org)

## Introduction

As global issues such as climate change, resource depletion, and economic inequality are raised with ever more urgency and localized effects of these phenomena continue to emerge, municipalities are beginning to integrate their sustainability efforts internally and display that coordination to the public and stakeholders. Across the nation and around the world, jurisdictions are attempting to organize and connect their compartmentalized efforts to increase the environmental, social and economic health of their communities into cohesive programs.

This analysis aims to glean both commonalities and differences between existing sustainable community frameworks in order to establish an understanding of the present landscape of programs. From this initial research that programs are influenced by a series of drivers and are taking myriad forms. Many municipal and county programs are the result of a process and history extending much farther back than the inception date of the current official framework, often beginning in earlier conservation and environmental programs. Additionally, sustainable community frameworks take a series of forms, each with its own set of attributes. From this diversity, this analysis attempts to draw out themes and lessons learned to help inform the development of the STAR Community Index.

For the purposes of this analysis, the definition of “sustainable community framework” was left intentionally broad to include a large number and variety of local and regional efforts. This paper defines a sustainable community framework as:

*A program or approach by which an entity aims to evaluate the progress of itself or other entities with respect to performance in the arenas of environmental, human, and economic health. The framework must have defined boundaries (geographic or organizational) to allow for comparison, and indicators or other measures of evaluation.*

This broad definition brings under one roof a variety of different programs and tools that are more easily analyzed when grouped into functional categories. These functional categories will be explored in this paper, along with the strengths and weaknesses of each category. Additionally, in order to better analyze sustainable community frameworks, it is important to understand the larger context of sustainability frameworks within which community frameworks operate.

To identify similarities and differences between the many sustainable community frameworks that are in place or under development, the author conducted an extensive literature review, examining annual reports, existing meta-analyses, and the web presence of the various programs. **Appendix B** contains a comprehensive list of information sources for this analysis. Additionally, an online survey was distributed to contacts at 27 local jurisdictions and organizations identified as key developers of sustainable community frameworks to elicit program development information not available elsewhere. 11 responses were received, helping enhance the information gleaned from the literature review.

## Findings

Over the last 15 years, sustainability frameworks have been emerging in a wide variety of fields, from individual product category standards to overarching, universal frameworks including The Natural Step (TNS). These frameworks run the gamut in terms of both specificity and the basis on which evaluations are made, as well as inclusiveness, transparency and the use of consensus-based decision making processes. Basing these frameworks on commonly agreed upon principles, such as the TNS’s four “system conditions” (see call-out box on page 5) provide a basis on which stakeholders with differing interests and viewpoints can come together in pursuit of common ends<sup>1</sup>. However, high-level frameworks such as TNS have experienced difficulty becoming established in the vocabulary of government or

business sustainability—perhaps because the user is required to develop her own metrics by which to measure whether they are heading toward or away from compliance with system conditions.

It is worth mentioning a few universal frameworks that have been used by local governments to inform sustainability frameworks:

### Ecological Economics

**Ecological Economics** is a universal framework and measure of human well-being. Ecological Economics connects economic thinking and practice with physical reality by addressing the interdependence and co-evolution between human economies and natural ecosystems<sup>ii</sup>. Ecological Economics measures the positive contribution of four types of capital that contribute toward human well-being: Natural Capital, Built Capital, Social Capital, and Human Capital (see call-out box.)

### Genuine Progress Indicator

The **Genuine Progress Indicator (GPI)** measures human well-being and can be applied from the local to the national scale. The GPI is an alternative to Gross Domestic Product (GDP) as a measure of success. GPI is a broader measure of progress that includes the economic contributions of the family, community, and ecosystems, and also subtracts negative factors such as family breakdown, crime, and pollution. While the per capita GDP has more than doubled since 1950, GPI has declined by nearly 45%<sup>iii</sup>.

### Ecological Footprint

The **Ecological Footprint (EF)** measures the biological capacity that is used to sustain a community, or how much nature it takes to sustain a population based on lifestyles. The EF is expressed in the equivalent land area needed to sustain the consumption within a community and absorb its wastes. In the U.S., the per capita Ecological Footprint is 108.95 hectares, and biological capacity is 20.37 hectares. U.S. communities far exceed the biological capacity available to sustain them<sup>iv</sup>.

Different scales need different tools to evaluate sustainability performance. A brief examination of sustainability frameworks at other scales of inquiry will help reveal the impact of scale on a framework.

### *The Natural Step*

The Natural Step, begun in Sweden in 1989, attempts to define sustainability using scientific principles governing the healthy functioning of a biological system in perpetuity, while also accounting for social sustainability. TNS describes these concepts in terms of four “system conditions,” i.e., preconditions that must be met for a system to be described as sustainable. According to TNS framework, in order for a society to be sustainable, it must:

1. Not subject nature to systematically increasing concentrations of substances extracted from the earth’s crust,
2. Not subject nature to systematically increasing concentrations of substances produced by society
3. Not subject nature to systematically increasing degradation by physical means.
4. Not subject people to conditions that systematically undermine the capacity for them to meet their needs.

### *Ecological Economics*

1. Natural Capital refers to land, natural resources and ecosystems, and includes forests, water, air, climate, minerals, forest and aquatic ecosystems, fish, animals, and insects.
2. Built Capital refers to the manufactured assets that compose our economy and includes the built environment and infrastructure, cities, towns, buildings, agriculture, parks, water systems, utilities, transportation, communications, energy, industry, and waste.
3. Social Capital refers to cultural institutions, rules, and norms that facilitate interactions within our communities and include institutions, governance, neighborhoods, business, finance, organizations, regulations, social services, and social equity.
4. Human Capital refers the physical labor and knowledge of humans and includes abilities, well being, health, friends, education, employment, spiritual life, leisure, recreation, shelter, and liberty.

## Product Level

**Green Seal GS-11 Paint Standard:** Green Seal is a 501(c)3 organization founded in 1989. It issued its first environmental standards in 1992. Green Seal standards cover a variety of consumer products, such as windows and doors and paper/newsprint, and also include services, such as cleaning services and lodging properties<sup>v</sup>. Green Seal's paint standard (GS-11) is exemplary of the issues covered by the organization. Not only covering the issue of VOC (Volatile Organic Compound) levels found in the LEED credit for paints and finishes, the standard includes prohibitions on a long list of toxic compounds, specific performance standards (opacity, adhesion, scrub-ability, etc), and requirements for consumer education for end-of-life management. The standard is silent on social and workplace issues (such as those that are present in the FSC standards). Green Seal operates with a high level of transparency, disclosing their standards development process and conducting a public review and balloting process for its standards<sup>vi</sup>.

The Green Seal paint standard has achieved substantial, but far from universal, market penetration. Criticism has been leveled against the GS-11 standard for not keeping up with advances in paint formulation, making the VOC (volatile organic compound) levels in the standard irrelevant<sup>vii</sup>. However, this information itself appears to be outdated: Green Seal revised its standard in May of 2008. This criticism does point to the need for sustainability frameworks to keep abreast of developments to remain relevant and timely. The 2008 standard replaced the original standard developed fifteen years prior.

## Commodity Level

**Forest Stewardship Council Certification:** The Forest Stewardship Council, founded in 1993 after the Rio Earth Summit highlighted the need for a common currency when discussing issues of the sustainability of natural resource use has developed bioregional standards for forest management coupled with a third-party verification and a chain-of-custody system that ensures compliance with standards<sup>viii</sup>. The Forest Stewardship Council forestry certification system is governed by 10 principles and 57 criteria<sup>ix</sup>. The standards address the health of the forest ecosystem, sustainable yield rates, and social equity assurances for forest industry workers. The myriad products made from wood can all be certified via FSC, from pulp and paper to furniture and dimensional lumber. The Chain of Custody framework allows each step in the process from forest to retail shelf be accounted for (e.g., for a publication to bear the FSC logo, the paper manufacturer, distributor, and printer producing the publication must be FSC Chain of Custody certified). This allows for a clear trail along the entire length of the global supply chain.

## Building Level

**LEED Green Building Rating System™:** At this point, the US Green Building Council's rating system has become nearly a household name, with more than 50,000 LEED Accredited Professionals in the United States and scores of municipalities, counties, public agencies and states referencing LEED as the standard to which buildings within their purview must be designed and constructed. Beginning with the City of Seattle in 1998, the list of public agencies referencing LEED has become long indeed. According to the USGBC website, there are currently more than 8,000 registered LEED-NC projects, and over 1,700 have been certified as of September, 2008<sup>x</sup>.

LEED standards are developed using an intensive public balloting and technical advisory team process<sup>xi</sup>. Internal review by USGBC staff, Technical Advisory Groups, and the USGBC Board of Directors and Steering Committee is followed by a public comment period of at least 30 days and a second comment period restricted to changes made since the first comment period. The final draft resulting from this process is then presented to USGBC membership for balloting.

LEED has become the referenced standard for a large and growing number of municipalities, counties, and state governments when it comes to green building goals. It is likely that one of the reasons governments have been comfortable aligning with LEED is its consensus-based, non-partisan approach to standard development. Aligning with a national green building standard has saved public dollars related to creating a municipal standard from scratch. The City of Santa Monica, for example, invested substantially in a Santa Monica-specific green building standard in the 1990s, prior to the release of LEED, only to shortly thereafter realign efforts around the LEED tool<sup>xiii</sup>.

Interestingly, both LEED and FSC have faced competition from the Sustainable Forestry Initiative (SFI) in the form of standards meant to compete with LEED and FSC<sup>xiii</sup>. Most of the political battles fought by the USGBC and LEED are related to specific industry groups arguing for the inclusion of their product or certification in the LEED tool (e.g., the Vinyl Institute's effort to have PVC listed as a green product, or the forest industry interests arguing for an expansion of the systems acceptable for certification of forest products beyond FSC).

## Organization Level

**The Global Reporting Initiative (GRI):** Created in 1997 by CERES in partnership with the United Nations Environment Programme, the Global Reporting Initiative is charged with the mission of “developing globally applicable guidelines for reporting on the economic, environmental, and social performance of corporations, governments and non-governmental organizations (NGOs).<sup>xiv</sup>”

A revealing element of the GRI framework is its inclusion of Sector Supplements, or specific guidance and reporting requirements for industry sectors<sup>xv</sup>. Recognizing the unique impact of sectors such as the automotive industry, financial sector, and public agencies, the GRI sector supplements inform another layer of reporting, rather than a replacement of the general Sustainability Reporting Guidelines.

Similar to the USGBC process utilized for LEED development, GRI uses a consensus-based process of stakeholder engagement to develop standards. Like LEED, it includes the use of technical advisory committees, expert working groups, and public comment periods, followed by adoption of standards by GRI's Board of Directors. All standards are subject to a review and improvement cycle. According to GRI, more than 20,000 individuals have been involved in GRI's development since its inception<sup>xvi</sup>.

## Varied Successes

For every successful standard, framework, or certification, there are scores of examples of systems that have simply not achieved significant market penetration. Reasons for this are many and varied, but the level of stakeholder involvement in a framework's development appears to have lasting impacts on the public perception of the framework's objectiveness and, ultimately, its uptake in the marketplace. The development of LEED, for example, can be viewed as the development of a movement as much as the development of a standard. Transparency, stakeholder and public involvement, and a credible reputation all are hallmarks of successful frameworks.

Scale also plays a factor in informing a sustainability framework; the traits that make a product-level sustainability framework successful may not be the same as those that will make a sustainable community framework successful. Scale has an impact on a framework's level of generality, and whether it can rely on a smaller or larger suite of criteria to describe



sustainability. Green Seal’s paint standard, for example, can focus narrowly on product toxicity and performance, along with consumer education, and remain comprehensive. A standard such as GRI, given its breadth of inquiry, must by definition address a huge number of issues to be considered complete, including the issuance of Sector Supplements.

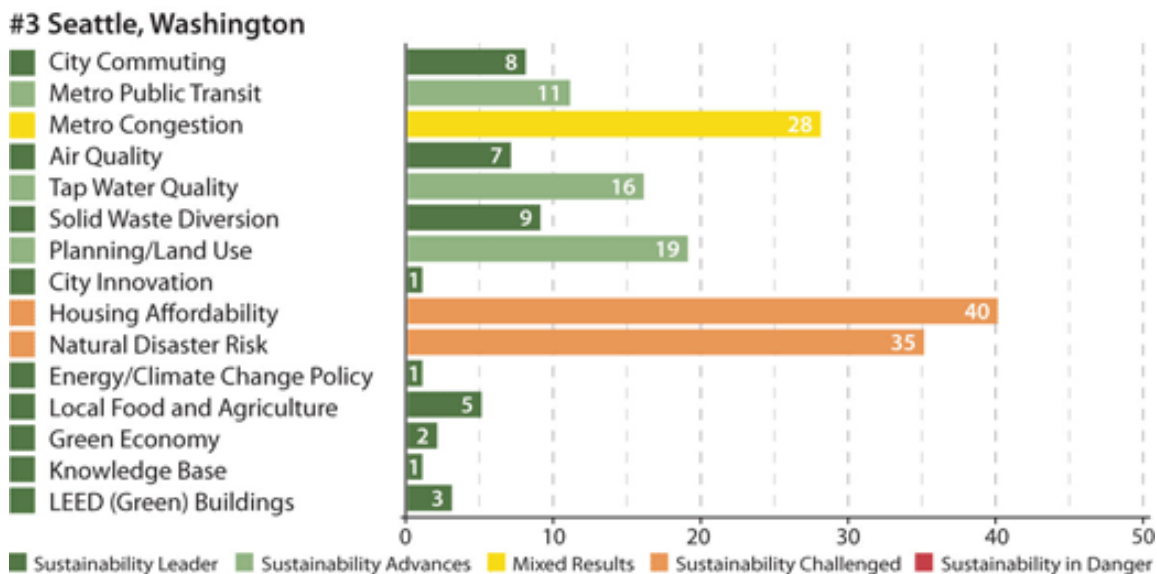
## Sustainable Community Frameworks

Researching sustainable community frameworks revealed a variety of themes related to their structure, development, and deployment, and allowed the author to identify four general categories of framework. The following categories of sustainable community frameworks will be discussed in this paper: ranking projects, designation systems, indicator initiatives, and sustainability programs.

### Ranking Projects

Ranking are high-level, national or international programs that intend to place a group of entities, such as schools, municipalities, companies or products in hierarchical order of performance. A set of metrics is devised, and the group is evaluated using those metrics, with each entity receiving a score that determines the hierarchy. A relevant ranking project for the purposes of this study is SustainLane’s US City Rankings<sup>xvii</sup>. SustainLane ranks the fifty largest US cities using a suite of sustainability factors, such as local food and agriculture, which are represented by indicators (e.g., number of farmers markets). To conduct the ranking, data were assembled from both public information and primary research. Another example is the College Sustainability Report Card<sup>xviii</sup>. The Report Card produces an annual ranking of colleges and universities based on their response to a survey inquiring about a variety of sustainability activities in several categories (e.g., food and recycling, green building, shareholder engagement and endowment transparency).

The SustainLane 2006 US City Rankings, [www.sustainlane.com/us-city-rankings/seattle.jsp](http://www.sustainlane.com/us-city-rankings/seattle.jsp)



### Designation Systems

Designation systems are regional or national systems that offer a menu of specific “credits” that the entity intending to earn a designation must pursue. There may be a combination of voluntary



and compulsory credits comprising the system. A designation system is created by an entity that often also acts as the certifying body. Applicant organizations pursue particular levels of achievement within the system. Some designation systems, such as the Florida Green Building Coalition's Green Local Government Standard<sup>xx</sup> utilize a binary structure: a local government either attains the standard, or it doesn't. Other designation systems, such as the Sustainability Tracking, Rating, and Assessment System from the Association for the Advancement of Sustainability in Higher Education<sup>xx</sup> offer series of designation levels, based on the total number of points earned.

## Indicator Initiatives

Indicator initiatives attempt to gather quantitative and qualitative information on factors considered to be indicative of a municipality, county or region's performance in subset areas of sustainability. Usually consisting of categories of factors, indicator initiatives are usually longitudinal in nature, highlighting movement toward (or away from) desired conditions. They often attempt to remain descriptive, simply reporting the facts as related to each indicator, and the direction the indicator is trending. Statistical in nature, indicators allow for analysis of multiple variables at once. Indicator initiatives often collect information on dozens, and sometimes hundreds of trends. However, some, such as the Sightline Institute's Cascadia Report Card<sup>xxi</sup> are much more parsimonious, focusing on seven key trends represented by a single indicator each. The Central Texas Sustainability Indicators<sup>xxii</sup> project and King County, Washington's Communities Count program<sup>xxiii</sup> are two other examples of indicator initiatives that rely on a larger stable of indicators.

*“What gets measured gets fixed.”*

*– Alan Durning, Executive Director, Sightline Institute in talk “Measure What Matters”, September 12, 2007, Seattle, WA*

## Sustainability Programs

Sustainability programs are internal, government-directed initiatives that attempt to package, and sometimes brand, a jurisdiction's sustainability efforts. PlaNYC<sup>xxiv</sup>, New York City's sustainability initiative is a case in point. An initiative of Mayor Michael Bloomberg, PlaNYC utilized extensive public outreach to create an image for the city's diverse sustainability efforts. As with most sustainability programs, it features thematic categories and vision statements, assembles existing efforts based on these conceptual categories, while identifying responsible departments, benchmarks and output targets. Marin Community Development Agency's Countywide Plan<sup>xxv</sup> is an example of a sustainability program emerging from a mandated county planning effort—leveraging the existing efforts to include broader sustainability goals. Sustainability programs can include indicator initiatives within their structure, or they may ally with indicator initiatives within their jurisdiction. Sustainability programs can also align with or utilize a designation system to help organize, benchmark, and provide credibility to the program.

It is important to distinguish between these four categories of sustainable community frameworks, in that each achieves a different purpose and involves a different set of actors.

## Framework Commonalities

While highly variable overall, an analysis of the various frameworks did elicit a few common themes. However, even these commonalities existed primarily at the top level of the program, and tended to diverge upon closer examination. The following themes were gathered from both literature review and survey results.

## Community Involvement

Nearly all frameworks were developed in the context of general public and local advocacy group involvement. Often, this process was extensive and lengthy, involving several iterations lasting roughly a year and in some cases several years. Presumably, public involvement and vetting are considered key to the integrity and authority of a framework. Sustainability programs and designation systems showed the most evidence of thorough community involvement, as did indicator initiatives. Community involvement appears less important to ranking projects.

## Benchmarks and Indicators

While the presence of benchmarks and indicators were not as universal as the theme of community involvement, there appeared to be a general awareness that progress cannot be measured without knowing a starting point and having a methodology for measuring progress toward (or away from) the goals that make up the framework. For example, the Jacksonville Quality of Life Progress Report, begun in 1985 and refined through successive iterations, contains several compelling elements. On the philosophical level, the categories are given names that are objectives themselves, and describe the purpose behind the report. (“Achieving Educational Excellence; Growing a Vibrant Economy; Preserving the Natural Environment” etc.) Similar to Burlington’s program, each section has a vision statement that describes where the region wishes to head. For each indicator, the questions: “What does this measure?” and “How are we doing?” are answered, and given within the context of performance of Florida overall, and the four counties adjoining Duval County (Jacksonville).

The Burlington Legacy Project (Burlington, VT) represents a prototypical sustainability program (the municipal sustainable community framework described in the introduction). Initiated in 1999, the project began with extensive community meetings to develop indicators by which the city would be evaluated. A Progress Report is created annually, which outlines the priority actions in each area of focus, and begins each subsection with a vision for Burlington in 2030. However, the report often falls victim to the common practice of reporting on inputs (e.g., number of FTE staff designated to work on a particular issue—3.5 FTE Street Outreach Workers, for example) rather than outcomes. In other areas, inputs are given in conjunction with outcomes, such as 438 instances of information and referrals given by the economic development office being juxtaposed with the statistics for economic development, e.g., that 25 new businesses emerged during the study period. (However, whether these 25 businesses were in the pool of contacts is not stated.) The vision statements also tend to be vague and not tied to specific performance levels over time. For example, the Economic Self-Reliance vision statement is: “In 2030, Burlington has become more self-reliant through local ownership, control, and maximum use and reinvestment of local resources.” However, “self reliance” is not defined, nor are terms such as “maximum use and reinvestment of local resources.” Other vision statements are clear and ambitious: “All community members are free from sexual and domestic violence.” In general, sustainability frameworks tend to focus on high-level goals, rather than identifying performance metrics.

## Conceptual Categories

Frameworks tend to have commonly themed categories, such as environment, civic engagement, community health, etc., but even if the themes are given the same name, they are not commonly defined. Some indicator programs, e.g., the Central Texas Sustainability Indicators program, provide trends for the overall area, as well as for individual counties within the area, and then by race/ethnicity in order to reveal disparities not only between geographic regions, but between groups. In general, indicator programs are most likely to provide this level of analysis, when compared to ranking systems or sustainability programs. Designation systems are generally not

designed to provide this type of analysis, although a designation system could require or provide incentive for accumulating this sort of information in its prerequisite or credit structure.

## Evolution of Frameworks

Many municipal programs are agglomerations of existing environmental, health and social initiatives, brought together after the fact, as sustainability as a concept gained currency. Just as many green building programs grew out of energy conservation or construction waste reduction programs, municipal and county scale programs have been catalyzed by such issues as global climate disruption. It is unclear from the research whether the commonalities represent areas of critical importance or other drivers. For example, commonalities related to issues such as water or air quality may be reflective of regulatory requirements associated with these areas.

## Development Costs

Estimates of the cost of program development from survey respondents varied dramatically, for several reasons. Partly an artifact of the survey question, which did not define clearly the boundaries of the program but also because those very boundaries are individually defined, and because the programs represent cities that range in size from approximately 40,000 to nearly 8.3 million people, the development costs ranged from a reported “It is part of the job and encompasses all of our work everyday. So the cost I would say is 0,” to between \$40,000 and \$300,000, with three respondents unable to provide estimates. While the vague nature of the question and small number of respondents makes data-driven analysis difficult, the survey results comports with the literature search findings, which reveal a very organic development pattern for sustainability initiatives. The City of Seattle’s timeline of “Green Building Milestones,” for example<sup>xvi</sup>, lists thirty years of accomplishments related to the development of the municipal green building program. Determining the point at which efforts become a “sustainability framework” is often subjective and extremely difficult. Indeed, the goal of many sustainability initiatives is to imbibe all government functions with a sense of ownership and responsibility for environmental, social and economic stewardship. It is safe to assume that many estimates are actually low, especially in the area of staff time expended on the development and coordination of activities, as well as on ongoing data collection and reporting. This is especially the case with sustainability programs, where reporting requirements are often parceled out to the relevant departments without accompanying funding for the increased task load.

Analysis of the true cost of framework development is additionally confounded by the fact that framework boundaries are often quite fluid. Many sustainability frameworks operate as a multi-department initiative, with the genesis of the program also somewhat unclear, and only late in their development were they brought under a single umbrella. In fact, even with the creation of an office of sustainability or other analogous structure, much of the work product of the office is often accomplished outside the organizational and budgetary boundaries of that office. Several municipalities are notable examples of robust sustainability offices, such as Portland, OR and Santa Monica, CA.

## Framework Differences

The sustainable community frameworks studied varied in a number of ways, including the scope of inquiry, connectivity between indicators and performance reporting, and frequency of reporting.

### Breadth and Depth of Inquiry

Variation exists in levels of integration of social, environmental and economic factors. Depending on the origins and driver of the program, the focus varies widely. Differences also existed in granularity of inquiry or level of detail. Frameworks contained vast differences in the narrowness

of evaluation, especially with respect to indicators. Some plans were highly complex (such as the European Union's Urban Audit, with its US Census-like dataset), offering hundreds of data points to evaluate. Others narrowly focused themselves on a few key trending data, such as Sightline's Cascadia Scorecard, utilizing seven key trends represented by one indicator each<sup>xxvii</sup>.

## Connectivity to Government Performance Reporting

Again, depending on the origin and custodianship of the program, the linkages between the goals and indicators and government performance measures were more or less direct. The link (or lack thereof) between community indicators and government performance measurement has been studied and commented upon in some detail.

## Frequency of Reporting

Many programs offered annual updates, but this was far from universal. Government-sponsored programs appear more likely to maintain regularity with their programs in general and updates in particular. Nonprofit-driven initiatives appear more prone to fall victim to funding shortfalls, derailing regular reporting schedules. For example, Sustainable Seattle's program, hailed when it first emerged in the 1990s as a model example of community sustainability indicators, and receiving a United Nations award for its efforts<sup>xxviii</sup>, issued reports in 1993, 1995 and 1998. Sustainable Racine, initiated in 1996, started strong, with an intense community involvement process yielding sustainability measures and an overall game plan—only to close its doors ten years later<sup>xxix</sup>. However, this phenomenon is not limited to nonprofit frameworks. The City of Burlington, for example, reported that tracking on their "Quality of Life Indicators" has "fallen through the cracks lately." Changes in leadership, priorities, and budgets can impact public sector programs as well.

## Interest in a National Framework

Municipalities responding to the online survey expressed nearly universal interest in a national framework on which to base their sustainable communities work. However, the level of interest varied, with some respondents being very positive to the idea and others giving a more qualified response. The City of Santa Monica's response to the question of whether they would use a national framework was echoed by many other respondents: "yes, for the same reason we build LEED buildings. It creates a national standard and third party evaluation." The City of New York's response was more circumspect:

*"Obviously, the answer to this question depends on several things. We would:  
1) If the applications for the standard were reviewed by respected and knowledgeable people  
2) If the standard was thoroughly vetted by stakeholders  
3) If the standard was aligned with other related national standards, i.e. building and energy codes, etc  
4) If the standard was not set as the lowest common denominator, i.e. if it was not easy just to check things off a list."*

Outside of the municipal sphere, the impression of a national standard was more skeptical. The Jackson Community Council's response, for example, clearly challenged the value of a national standard:

*"Benchmarking against a national standard encourages gamesmanship to improve rankings instead of real progress towards improving the community. National standards/indicator sets are useful in contextual understanding and can be important to frame issues and evaluate effectiveness of different approaches, but they lack the power of evaluating a community against its own vision of where it wants to be."*

Analyses of sustainability frameworks at other scales, such as the US Green Building Council's LEED program, counter this perspective. A New Buildings Institute post-occupancy energy use study of LEED certified buildings showed them performing at 25-30% better than the national average or modeled baselines for buildings<sup>xxx</sup>. However, the perception is real and should be addressed if a framework is to be viewed with authority by the community.

## Discussion

The lack of a common thread by which to tie together sustainable community frameworks has a suite of potential impacts on the development and implementation of sustainability initiatives. These include:

### Difficulty in Comparing Efforts across Jurisdictions

Differences between frameworks are a hindrance to comparison, common vision, and concerted action. The vast variability in framework structure, indicator and benchmark selection, reporting frequency and other factors make it virtually impossible to compare performance across jurisdictions. In the rare places where substantially similar definitions of issues exist, it may be possible to execute a limited comparative analysis of two municipalities, but for the most part, this is impossible.

### Implementation Delay

It takes time to develop a sustainability framework. Estimates on the time devoted to creating a program are difficult to come by, as are cost estimates (see below). From survey results, even fast-track programs assembling existing programmatic elements, such as PlaNYC, invested over a year in development.

### Market Confusion

Analysis conducted for the United Nations Global City Indicators revealed the eight cities studied were collectively tracking over one thousand indicators with only three of those thousand common to all eight<sup>xxxi</sup>. The result of this landscape of creative chaos is an inability to compare one jurisdiction to another or message consistently across jurisdictions.

### Missed Opportunity to Advance Best Practices

The decentralized and fragmented current structure has no infrastructure to allow Buffalo to learn from Portland's experience, thus increasing the likelihood of repeated mistakes. Compounding the fragmented nature of the current landscape is the lack of a common language, vision, and definitions, creating a world of apples-to-oranges comparisons. A referenced framework, especially one with a robust supporting structure such as an online commons, will help create a unified vernacular and facilitate the dissemination of knowledge.

### Uncertain Verification of Claims

The lack of common definitions, coupled with absence of a standard process by which to verify claims results in uncertainty as to their validity. Validation of claims varies between frameworks. With sustainability programs, reporting is usually performed by the constituent municipal departments, compiled, and presented in an annual report. Indicator initiatives rely on a variety of sources for information, but many indicators focus on outcomes for which local jurisdictions are only partly responsible. Designation systems are the most likely form of sustainability framework to result in verifiable claims, when combined with a third-party certification protocol.



## Lack of Structure to Harness Competition

With frameworks currently individuated, with the exception of the Florida Green Building Coalition program, and therefore no comparative framework in which to operate, the existing milieu misses the opportunity to engage local governments in a competitive bid for “greenest” jurisdiction. This competitive spirit has served other sustainability frameworks, and specifically designation systems, such as LEED, quite well, and is in part responsible for LEED’s rapid market adoption. Competition can also be promoted using ranking systems.

## High Program Development Cost

Although many programs surveyed for this study were hard pressed to provide specific cost estimates for the development of their sustainability frameworks (or declined to provide the information), it seems a safe assumption that in general, the cost is substantial. Many programs have long, tortuous histories that eventually wended their way to becoming more holistic community frameworks, with origins in conservation or sometimes community health programs. While by no means erasing the development costs completely, the use of a standardized framework as a basis for a government program will drastically reduce up-front costs, and open up opportunities for interdepartmental collaboration and facilitate a quicker “getting to yes” situation, by helping departments see where their ostensibly disparate missions are actually interrelated and complementary.

## Considerations for a National Framework

There are a variety of issues to consider in the development of a national sustainable communities framework. Analysis of existing frameworks brought the following issues to light.

### Design to Facilitate Local Investment In and Political Support

The most successful programs possessed strong local ownership of the initiative. The community involvement theme points to a difference that the scale of a sustainable community framework makes in comparison to the individual building level (or even the neighborhood level) addressed with LEED. Even at the building scale, climate, microclimate, and community mores play a role in design, as evidenced by the USGBC’s move in LEED 2009 to more regionally specific credits within their system. However, community involvement is a priority in the development of a sustainable community framework. The hesitancy evident in several responses to the survey question, “Would you use a national standard as a framework to benchmark and evaluate your sustainability efforts if it existed? ....Why, or why not?” showed the importance of community involvement. More directly, the question “Briefly describe the process used to gather political and community support for the framework/program development and deployment process,” revealed the importance of community support and involvement.

Interestingly, while the recognition of the need for community and stakeholder involvement was apparent to most programs/frameworks, the level and type of involvement varied significantly. A national framework could aid in normalizing this process as well, and increasing the likelihood that it is truly inclusive. Survey results show the range of inclusion possible under the current scenario of one-off programs. As one end, the City of Tucson’s process was essentially internal: their process consisted of “One-on-one discussions with all elected officials; community support was already apparent so emphasis was on electeds.” Alternatively, the Jackson Community Council’s approach was public oriented and philosophically hinged on public support and ownership. A representative described it this way: “Two key aspects of the process of community engagement were framing the issue and ownership. The issue of sustainability was embedded within a quality-of-life framework to allow greater openness to the ideas discussed. Open community engagement and consensus-led discussions to determine visions and indicators

created a sense of ownership in the larger community, not that the issue was owned by our organization.”

Building into the national framework a process requirement for community outreach and stakeholder involvement could help address this issue. The current variability in application of stakeholder involvement hints at yet another value that could be created by developing a process for local governments to follow.

## Create Flexibility

One of the reasons existing sustainable community frameworks are so varied is that priorities vary regionally due to differing geography, population size and composition, culture, climate etc. A national framework must have sufficient flexibility to accommodate regional issues and priorities. While the majority of survey respondents voiced unqualified support for a national sustainable community framework, several listed concerns, including ensuring the system was “consistent with our sustainability framework and priorities.” Another respondent voiced reservations this way: “National standards/indicator sets are useful in contextual understanding and can be important to frame issues and evaluate effectiveness of different approaches, but they lack the power of evaluating a community against its own vision of where it wants to be.” Conversely, however, a national framework has the potential to create a shared vision of sustainability that can unite jurisdictions in their common goals, while providing the flexibility to address priority regional issues. Flexibility can be built into a sustainability framework: LEED’s use of Innovation Credits, for example, allows a project to address its unique issues in a way that potentially garners extra points within the system. The Florida Green Building Coalition’s Green Local Government program also offers flexibility, by evaluating the applying jurisdiction only on those credits that are applicable to their jurisdiction.

Just as LEED is currently retooling its program to create a suite of tools depending on the scope and type of building in question, a sustainability framework for local government must be flexible and adaptable to local concerns and trends. That said, there are specific actions that all local governments will have to take to move toward sustainability. These could take the form of “prerequisites” in the system, much like LEED.

## Establish Linkages to Entities Responsible for Implementation

Local governments are but one element in the network of actors needed to move a sustainability initiative forward. Several of the sustainable community frameworks studied made it explicit that their programs were reliant on the collaboration and cooperation of myriad actors. For example, Marin County’s *Countywide Plan* is a State of California required planning document, but the details of the plan go far beyond what is mandated by planning legislation, making it a *de facto* sustainable community framework. The Plan includes indicators, benchmarks and targets, to facilitate understanding of whether the county is moving ahead as planned. Using the concept of the ecological footprint as an underpinning framework, the plan aims to chart a path for the county over the long term. However, the Plan offers the following disclaimer:

Because the indicators, benchmarks, and targets are intended only as an aid in implementation of the General Plan and are not policies or programs of the General Plan, they are included in the plan only for convenience and updates will not be considered amendments to the General Plan. Furthermore, progress towards reaching these targets is not the sole responsibility of Marin County government and will, in many circumstances, require federal or State participation as well as a countywide collaboration among local governments, residents, businesses and other affected parties<sup>xxxii</sup>.



Such disclaimer language is understandable in a mandated planning document; it also points to the challenge of locating a sustainability initiative within a bureaucracy and the responsibility for its implementation. Similarly, the Central Texas Indicators Project states: “The Indicators Project’s role is not to advocate specific solutions or strategies... (r)ather, the Report is a diagnostic tool that can help Central Texans as they engage in public discourse and debate, focus their energies on issues of critical concern, and arrive at policies and solutions that best meet the needs and aspirations of the diverse communities of Central Texas.”<sup>xxxiii</sup>

Logical next steps to making such a disclaimer is to create a mechanism for implementation by assembling the lead agencies and organizations whose participation will be required to meet goals. A national sustainable community framework could require such a process as part of certification.

## Learn from Others outside the Standard Channels

Looking to other successful sustainability framework models outside of the local government frameworks “box” can help identify promising structures and deployment modalities. Cues can be taken from the green building movement, given the fact it has one of the longest track records when it comes to the application of sustainability standards. For example, both the LEED Rating System and the ENERGY STAR program posit that a building must meet certain threshold standards to earn a designation. This threshold standard approach aligns with one respondent’s hope that “(a national) standard was not set as the lowest common denominator; i.e., if it was not easy just to check things off a list.” Green building standards have faced this a similar challenge: making sure the designation is meaningful in the marketplace requires it to be a stretch to achieve—this is what makes the designation a market differentiator.

Examining green building designation systems can yield additional insights. For example, the Living Building Challenge also offers a clear vision of the ideal that all projects should be striving for within each area of inquiry (Energy, Water, Indoor Environment etc.). For example, the Ideal set forth in the Water section states: “The Living Building Challenge envisions a future where all materials in the built environment are safe and replenishable and have no negative impact on human and ecosystem health. The precautionary principle guides all materials decisions.”<sup>xxxiv</sup> These become a vision statement for the building. Similar vision statements in a national sustainable community framework could provide a starting point for local communities to envision their preferred future.

Other frameworks, such as the Sustainable Business Achievement Ratings (S-BAR) system, also hold valuable insight. Given the similarities between local government and business in terms of structure and function, the approach S-BAR is proposing may prove useful to the creation of a national sustainable community framework. Its five categories of business activity (Government and Management; Workplace; Community; Marketplace; and Environment) are rated on four “key measures<sup>xxxv</sup>.”

1. Policy (what commitments they have made)
2. Practices (how they have implemented the policy)
3. Performance (the measurable outcome of the practice)
4. Progress (how performance has improved over time)

Although the S-BAR program has yet to be deployed, it has undergone extensive stakeholder development, and the key measures listed above appear highly applicable to a sustainable community framework.

## Choose a Structure that Best Encourages Market Adoption

This paper distinguishes between the four types of frameworks listed in the introduction for organizational and practical reasons. The different framework structures (ranking projects, designation systems, indicator initiatives, and sustainability programs) provide different advantages and limitations. Ranking projects and designation systems have the potential of introducing friendly competition into the marketplace, by rewarding higher performance. Designation systems can also provide such incentive, and provide the additional benefit of acting as a tool for continuous improvement. More specifically, designation systems with multiple levels of achievement (such as LEED) provide more incentive for improvement than one-level designation systems (such as Green Seal and FSC). Multilevel designation also addresses the issue of creating a system that is meaningful to early adopter and high performing jurisdictions by rewarding them with advanced levels of achievement, while being inclusive of jurisdictions just beginning to develop sustainability initiatives by providing a low barrier to entry. Currently, sustainability programs occasionally also engender competition between municipalities, but often this is a function of mayoral competitiveness in general rather than the program itself.

From a cursory survey of sustainability frameworks in the commodity, product, and built environment arena, it appears that several factors assist in the successful market penetration of a framework. These include status as early entrant into the arena, the initiating and primary partner organizations being perceived by the public as credible and unbiased, and the use of transparent and open processes of standard development.

## Design to Connects Indicators with Government Performance Measures

It behooves any initiative aiming to create a sustainable community framework to attend to the observations of the Community Indicators Consortium<sup>xxxvi</sup>: there is often a lack of connectivity between the indicators that are developed by a community involvement process (which tend to be higher-level and outcome-based) and government performance measures (which tend to be much more specific, often tied to specific government programs, and output- or even input-based). Ted Greenwood claims that connections can be enhanced if:

1. Community indicator projects include indicators that capture things governments can affect
2. Government measurement and reporting becomes more participatory in the development of performance measures and ways of reporting
3. Community indicators and government performance measures are linked together in logic chains<sup>xxxvii</sup>.

One report from the Community Indicators consortium suggested that collaboration could be increased by “creat(ing) a “shared vision” and a sense that government and non-government organizations can help achieve each other’s goals by working together.<sup>xxxviii</sup>” A successful sustainable community framework will endeavor to make these connections through both its structure and the process it employs.

# Appendix A: Sustainable Community Frameworks

## Matrix of CATEGORY Names Used as Organizing Structure

Category	Albuquerque, NM	Austin, TX	Boston, MA	Burlington, VT	Cape Cod, MA	Chicago, IL	Denver, CO	Jacksonville, FL	Marin County, CA	Milwaukee, WI	Minneapolis, MN	New York, NY	Northampton, MA	Olympia, WA	Pittsburgh, PA	Plano, TX	Portland, OR	Racine, WI	Salt Lake City, UT	San Francisco, CA	Santa Barbara, CA	Santa Monica, CA	Seattle, WA	Seattle, WA	Seattle, WA	Sierra Nevada	Tucson, AZ	SustainLane	STATE LEVEL	Florida	Minnesota	Virginia		
Environment (& Nature)																																		
Water (& Stormwater)																																		
Air Quality																																		
Urban Forests (& Biodiversity)																																		
Resource Management																																		
Infrastructure & Utilities																																		
Waste Management (& Resource Conservation)																																		
Hazardous Materials (& Risk Management)																																		
Green Building																																		
Energy (& Renewable Energy)																																		
Climate Protection (& Ozone Depletion)																																		
Transportation (& Mobility)																																		
Ports & Marinas																																		
Green Fleets																																		
Land Use																																		
Brownfield Redevelopment																																		
Parks, Open Space & Recreation																																		
Leadership & Innovation																																		
Government Operations & Administration																																		
Education & Outreach																																		
Tax Collection & Property Appraisal																																		
Economy (& Economic Development)																																		
Tourism & Hospitality																																		
Retirement Economy																																		
Clean Technologies																																		
Local Food (& Agriculture)																																		
Health (& Access to Health Care)																																		
Healthy Community (Neighborhoods)																																		
Public Safety																																		
Emergency Management																																		
Arts & Culture																																		
Society (Civic Vitality & Engagement)																																		
Social Equity																																		
Environmental Justice																																		
Human Services																																		
Affordable (& Workforce Housing)																																		
Employment & Workforce Wages																																		
Poverty & Homelessness																																		
Educational Excellence (& Children)																																		
Human Capital (& Social Well-Being)																																		
Youth (Wellness & Life Skills)																																		

## Appendix B: Resources

### General Resources

1. “Bridging the Divide Between Community Indicators and Government Performance Measurement” by Ted Greenwood *National Civic Review*, Spring 2008
2. Creating Stronger Linkages between Community Indicator Projects and Government Performance Measurement Efforts by the Community Indicators Consortium, April 2007
3. Indicators and Information Systems for Sustainable Development by Donella Meadows The Sustainability Institute, 1998
4. “[Regional Environmental Performance and Sustainability: A Review and Assessment of Indicator Projects](#)” by Richard Florida and Tracy Gordon (Pittsburgh: Environmental City Network and Sustainable Pittsburgh, 1999)
5. “[Sustainability Initiatives Benchmarking Report](#),” by the Seattle Office of Sustainability and Environment, 2002

### Program Resources

#### Local Government Level Programs

<a href="#">Albuquerque</a> , NM: AlbuquerqueGreen	<a href="#">Plano</a> , TX: City of Plano Sustainability Initiative
<a href="#">Austin</a> , TX: Central Texas Sustainability Indicators	<a href="#">Portland</a> , OR: Portland Office of Sustainable Development Strategic Plan
<a href="#">Burlington</a> , VT: Burlington Legacy Project	Racine, WI: (Sustainable Racine shuttered operations in 2006—no online presence.)
<a href="#">Cape Cod</a> , MA: Sustain Cape Cod	<a href="#">Salt Lake City</a> , UT: Salt Lake City Green
<a href="#">Chicago</a> , IL: Environmental Action Agenda	<a href="#">San Francisco</a> , CA: San Francisco Sustainable City Plan
<a href="#">Denver</a> , CO: Greenprint Denver	<a href="#">Santa Barbara</a> , CA: Sustainable Santa Barbara Annual Report
<a href="#">Jacksonville</a> , FL: Quality of Life Progress Report	<a href="#">Santa Monica</a> , CA: Sustainable Santa Monica—Sustainable City Report Card
<a href="#">Marin County</a> , CA: Ecological Footprint + Countywide Plan	<a href="#">Seattle</a> , WA: City of Seattle Environmental Action Agenda
<a href="#">Milwaukee</a> , WI: Milwaukee Green Team Report	<a href="#">Seattle</a> , WA: King County—Communities Count
<a href="#">Minneapolis</a> , MN: Living Well Report	<a href="#">Seattle</a> , WA: Sightline—Cascadia Scorecard
<a href="#">New York</a> , NY: PlaNYC	<a href="#">Sierra Nevada</a> : Sierra Nevada Wealth Index
<a href="#">Northampton</a> , MA: Sustainable Northampton Plan	<a href="#">Tucson</a> , AZ: Livable Tucson
<a href="#">Olympia</a> , WA: Olympia Sustainable Roundtable	<a href="#">SustainLane</a> : US City Rankings
<a href="#">Pittsburgh</a> , PA: Southwestern Pennsylvania Regional Sustainability Indicators Project	

#### State Level Programs

<a href="#">Florida</a> : Florida Green Building Coalition—Green Local Government Standard
<a href="#">Minnesota</a> : Minnesota Green Star Cities
<a href="#">Virginia</a> : GoGreen Virginia—Green Government Challenge

#### Other Programs

<a href="#">AASHE</a> : STARS 0.5
<a href="#">Sustainable Endowments Institute</a> : Campus Sustainability Report Card
<a href="#">European Union</a> : Urban Audit
<a href="#">UN</a> : Global Cities Indicators
<a href="#">One Planet Living</a>

## End Notes

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