Certifying Preservation: How Preservation Can Introduce Social Sustainability to Building Certification Programs

Andrea Kathryn Haley
University of Pennsylvania

Follow this and additional works at: http://repository.upenn.edu/hp_theses
Part of the Historic Preservation and Conservation Commons

http://repository.upenn.edu/hp_theses/615

Suggested Citation:

This paper is posted at ScholarlyCommons. http://repository.upenn.edu/hp_theses/615
For more information, please contact repository@pobox.upenn.edu.
Certifying Preservation: How Preservation Can Introduce Social Sustainability to Building Certification Programs

Abstract
When sustainability is discussed in the built environment it is often limited to environmental sustainability, however, there are many other values that should be considered. The field of historic preservation offers ways to incorporate social and cultural sustainability into the built fabric of cities and communities, but is often misrepresented or viewed as a niche field. This thesis explored how historic preservation can learn from the ‘green building’ movement which has risen to prominence to become a large part of the building culture in a relatively short period of time.

One of the most well-known tools is the USGBC’s LEED Certification, which, along with other certification programs, is examined to determine the possibilities and challenges of creating a voluntary third-party certification program as a method to raise awareness and promote preservation values in projects, and thereby incorporate social and cultural sustainability in the built environment. Such a program has the potential to be an additional tool to create holistically sustainable projects, but requires market demand to create major impact. Additionally, the creation of such a program requires more exploration into many challenges found here, including evaluating intangible and subjective values.

Keywords
sustainability, LEED, adaptive reuse, social capital, building culture

Disciplines
Historic Preservation and Conservation

Comments
Suggested Citation:
CERTIFYING PRESERVATION: HOW PRESERVATION CAN INTRODUCE SOCIAL SUSTAINABILITY TO BUILDING CERTIFICATION PROGRAMS

Andrea Kathryn Haley

A THESIS

in

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements of the Degree of

MASTER OF SCIENCE IN HISTORIC PRESERVATION

2016

______________________
Advisor
David Hollenberg
Lecturer in Historic Preservation

______________________
Program Chair
Randall F. Mason
Associate Professor
Dedication

For Bilasa
Acknowledgements

Thank you to everyone who helped and supported me during my time at Penn. A huge thanks to my advisor, David Hollenberg, who put up with me while I made it through the thesis process.

Also thanks to my family and friends. Your craziness helped keep me sane.
# Table of Contents

Dedication ........................................................................................................................................ ii

Acknowledgements ......................................................................................................................... iii

List of Figures ................................................................................................................................... v

Chapter 1: Introduction and background ........................................................................................ 6

Chapter 2: Literature Review ......................................................................................................... 21

Chapter 3: Existing Preservation Tools and their limitations ......................................................... 31

Chapter 4: Third-party Certification ............................................................................................... 47

Chapter 5: Potential Program Scope .............................................................................................. 58

Chapter 6: Organizing institution and management ..................................................................... 74

Chapter 7: Description of major challenges and conclusions ........................................................ 86

Bibliography ................................................................................................................................. 106

Index ............................................................................................................................................ 111
List of Figures

Figure 1 - Model of intersecting circles of sustainability .............................................................. 10
Figure 2 - Model of concentric circles of sustainability ................................................................. 11
Figure 3 - The Circles of Sustainability model .............................................................................. 12
Figure 4 - Compiled table of selected social sustainability metrics .............................................. 15
Chapter 1: Introduction and background

How we encourage private development to include public benefits can be challenging in a capitalist society where maximizing profits indicates success. Sustainability is becoming more integral in the design of much of the built environment today and will play a growing part in how our cities are designed and operated. There are a variety of incentives and arguments for creating environmentally sustainable buildings, reflected at all scales of construction. As the concept of sustainability evolves, other areas of sustainability should be consciously incorporated in the built environment. Social and cultural sustainability are playing an increasingly large role in the evolution of cities, and having direct impact on the quality of life for residents and workers. Historic preservation offers a way to incorporate the values of a place, even, if not especially as they evolve.

Preservation tools focus on identifying, protecting, and appropriately reusing historically significant structures. That is what registers were created for, and also the main aim for important legislation such as Section 106 review. Designated buildings that deserve protection are important to the continuation of significant cultural resources. While such tools will continue to play a critical role in saving cultural resources, these only address approximately 5% of the nation’s built fabric. Preservation methodology can still be beneficial to undesignated buildings, not necessarily as a protection measure, but as a philosophical framework for a stewardship mechanism to guide future development. Through evaluation, assessment, and subsequent integration of existing social and cultural dimensions in renovation and reuse projects, preservation can bring unaddressed dimensions of sustainability to projects. Preservation is a lens through which to look at the context, history, and demographics of an area, which can be critical for older neighborhoods as they face new development. Guiding
projects and incorporating the values of a place into new projects can coalesce to create more sustainable communities, neighborhoods, and cities.

Traditional tools of preservation are not addressing the majority of buildings or neighborhoods. By not including preservation in the majority of buildings, the field does not have a major impact on the greater building culture, even though the benefits it can confer are not only related to historically designated structures. With the current structure of historic designations and recognitions in the US, buildings with the highest national or local importance have tools to guide stewardship and change. However, not every place has the same level of importance. Many existing places provide aspects of sustainability, including environmental, economic, social, and cultural areas of sustainability, but they do not all convey the same level of historic significance. Treating all existing properties equally for historic significance does not make sense. Preservation needs new tools to impart benefits to a wider range of projects.

Flux is essential for a healthy and dynamic city, however, extant fabric does not need to be sacrificed for change. Healthy communities are built upon the past, and progression is a continual process that learns from what is existing. Non-historic resources, particularly structures that are ineligible for an historic register, can play an important role in continuing the feelings, connections, and other intangible aspects of a place. Sustainable development requires cultural and social dimensions, and preservation can act as a vehicle for identifying and including these aspects.

The U.S. Green Building Council (USGBC) has created a system in which private developers choose to neutrally evaluate the “green” components of the design of their projects, which in turn has affected change in the building and construction field. This is one of many emerging voluntary third-party certification programs that require participants to include
sustainability in their operations and products. There are multiple benefits to this system of voluntary certification, both to the developer as well as for the greater society. Despite the problems and criticisms of the Leadership in Energy and Environmental Design (LEED) program, there is no question that it has become a pervasive tool in the design of the built environment and that it has had major impacts on evaluation, new regulations, and standards. Since its creation, LEED has evolved as a tool, not only to respond better to environmental concerns, but also to apply to a larger stock of the built fabric. Considering the environmental impacts of a project is standard for most development now, and there is a greater understanding of mitigating steps and products.

A rating and certification program geared toward the social and cultural aspects inherent in preservation values has the potential increase the inclusion of such values in the development of the built environment. Intangible values, which the environmental field has difficulty addressing, can be tackled through a preservation methodology. The process of learning from existing conditions, community input, and continued assessments and maintenance are important parts to most preservation processes. Maintaining and reusing existing fabric provides particular community and social benefits that can be difficult to achieve through new construction. They contribute to the layering and evolution of a place, and enable the continuity of a place with character that fosters connections and appreciation. The best places contain a balance of new construction and reuse of existing place to synthesize the benefits of each. There should be systems in place to encourage the reuse of existing places, while also allowing for change and new construction, to capture the unique benefits each development type offers.
Definitions and evolution of sustainability

Definitions of “sustainability” have steadily evolved. The most commonly cited definition of sustainability comes from the Brundtland Report, *Our Common Future*, published in 1987: “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”¹ The Report connects environmental development with economic, political, and social forces,² recognizing that solutions to environmental degradation must be economically feasible.

*Our Common Future* quickly became a cornerstone of sustainability discussions and solutions. For example, the 2005 World Summit on Social Development based its three pillars of sustainability, also called the triple bottom line, on the Brundtland Report. Economic development, social development, and environmental protection form the basis for holistic sustainability.³ The World Summit diverged from the Brundtland Report by recognizing social and economic sustainability as important values in their own right. The Summit proposes that all three areas are critical in their own right to reach “sustainability.”

These three major themes are frequently graphically represented as intersecting each other (Fig. 1) and in concentric circles (Fig. 2). Both models have benefits and problems. In the intersecting model, each value is largely independent of each other, with sustainability falling only where the three come together. This leads to solutions that address each value separately, with less focus on integrating the others to find a balanced solution. The separation of the components of the model also leads to the major criticism of it. By removing the values from each other, there is an implication that economics is independent of social development.

---
² Ibid, 43.
³ 2005 World Summit on Social Development
The second model utilizes concentric circles to demonstrate the dependence of each area on the other. Economics is a part of society, which is subsumed by the environment. One interpretation of this model is that economic capital, in the center, drives development, but is constrained by the outer circles of society and the environment.\textsuperscript{4} This model can also lead to the belief that addressing the outer circle of environmental sustainability will affect change in the

two interior circles. Emphasis on environmental solutions that do not however contribute to social or economic sustainability can emerge from using this model.

Figure 2 - Model of concentric circles with the economy subsumed within society, both in turn within the environment. Source: Author.

Such criticisms eventually led to the development of a new model of sustainability. The Circles of Sustainability, developed by Metropolis and the United Nations Global Compact Cities Programme and written by Paul James, which identifies four areas for measuring sustainability: culture, economics, politics, and ecology. Each of these four has seven subcategories, for a total of 28 areas for sustainability evaluation. These 28 metrics are measured on a nine point scale and graphed to demonstrate the holistic sustainability of a region or city.

5 Paul James, Circles of Sustainability (New York: Routledge, 2015).
6 Ibid, XX.
is the midpoint, or a 5 point rating, with “critical,” at the bottom, one point, and “vibrant” at the top, nine points.

![Circles of Sustainability model](image)

*Figure 3 - The categories and point system of the Circles of Sustainability model. The circle represented has an example shown of an evaluation. Source: James, *Circles of Sustainability*, viii.*

The evolving definition of sustainability is dependent on the current interests and research focus. One of the problems with recent discourse is the variability of definitions. The evolving understanding of sustainability has been changing while research continues, and a comprehensive view of sustainability must be able to absorb and reflect these new values. Because this will continue to change in the future, tools for the assessment of sustainability require flexibility to adapt to new meanings, and must cover the expanding purview of intangible and qualitative factors that contribute to sustainability.
Why Preservation?

Even though the definition of sustainability is evolving to include wider and increasingly interconnected values, there is consensus that all aspects of sustainability are not yet given equal treatment and study. Environmental concerns are the primary focus of research and assessment due to the ability to quantify outputs. New technology makes it easier to map and track complex environmental effects, and software to design and then to analyze these has been developing rapidly. Environmental advocacy and the emerging technology that tracks it creates a symbiotic relationship that has put environmental concerns at the forefront of sustainability conversations.

Economic sustainability is not always included in discussions. Sustainability is addressed in free markets, where the private sector is driven by profits, and do not remain viable if they are not profitable. Therefore, at least in the private sector, there is inherent push for economic sustainability built within the core assumptions of market conditions. To label cities or communities as economically sustainable requires more research and analysis, but similar to environmentalism, technology is beginning to make these complex and dispersive indicators possible to measure. Additionally, as the criticism demonstrated by the “three pillar approach,” economic sustainability is inextricably linked to the social realm, and efforts to examine social sustainability include some measure of economic health.

---

8 Such emerging indicators of economic sustainability include housing prices, poverty levels, income disparity, and unemployment. More recent research can track or model complex economic results from area investments or regional competition. Sources: Judith E. Innes and David Booher, “Indicators for Sustainable Communities: A Strategy Building on Complexity Theory and Distributed Intelligence,” *Planning Theory and Practice* (Vol 1:2, 2000), 173-186. Partnership for Sustainable Communities, *Supporting Sustainable Rural Communities* (US Department of Agriculture, 2011).
The social and cultural realm remains the least considered and researched of the components needed for holistic sustainability. The difficulty of assessing the intangible and qualitative aspects of a culture and a place have prevented widespread integration of these values into practice. Historic preservation practice deals with these areas, and through a collaborative and inclusive process integrates them into the future of projects. The field has moved from a concern of the elite to a responsive and innovative field that places emphasis on socio-cultural values grounded in communities and demonstrated values. A preservation-based approach, that can inform the process, design, and management of a project, can help solve some of the difficult issues that texts on cultural and social sustainability address.

The table below is the author’s compilation of some of the recommended areas of assessment for holistic and cultural sustainability drawn from multiple texts. Seven key reports, including those mentioned above in this chapter, identify social and cultural measures. All of these metrics have subcategories and expanded definitions. Preservation directly addresses many of the categories (shown in bold in the chart), and can have positive impacts on even more. The creation of a sense of place and a continuity of identity is critical in projects that are focused on preservation. Successful adaptive reuse projects maintain the significant features of a building, while allowing a new use that contributes to the future of a project. Reusing a building and incorporating its important aspects in a new iteration provides continuity in the built environment. This leads to engagement with history, culture, and a sense of place. It also promotes interest and connection to the built environment from the public.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Rights</td>
<td>Identity and Engagement</td>
<td>Labor Practices and Decent Work</td>
<td>Housing and Environmental Health</td>
<td>Human Rights</td>
</tr>
<tr>
<td>Heritage, Diversity and Creativity</td>
<td>Creativity and Recreation</td>
<td>Human Rights</td>
<td>Education and Skills</td>
<td>Labor Practices</td>
</tr>
<tr>
<td>Culture and Education</td>
<td>Memory and Projection</td>
<td>Society</td>
<td>Employment</td>
<td>The Environment</td>
</tr>
<tr>
<td>Culture and the Environment</td>
<td>Beliefs and Ideas</td>
<td>Product Responsibility</td>
<td>Health and Safety</td>
<td>Fair Operating Practices</td>
</tr>
<tr>
<td>Culture and the Economy</td>
<td>Gender and Generations</td>
<td></td>
<td>Demographic Change</td>
<td>Consumer Issues</td>
</tr>
<tr>
<td>Culture, Equality and Social Inclusion</td>
<td>Enquiry and Learning</td>
<td></td>
<td>Social Mixing and Cohesion</td>
<td>Community Involvement and Development</td>
</tr>
<tr>
<td>Culture, Urban Planning and Public Space</td>
<td>Wellbeing and Health</td>
<td></td>
<td>Identity, sense of place and culture</td>
<td></td>
</tr>
<tr>
<td>Culture Information and Knowledge</td>
<td></td>
<td></td>
<td>Empowerment, participation and access</td>
<td></td>
</tr>
<tr>
<td>Governance of Culture</td>
<td></td>
<td></td>
<td>Social Capital</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Well-being</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 4 - Compiled table of various metrics used by identified research on social sustainability. Source: Author.*

In her seminal work, *The Death and Life of Great American Cities*, Jane Jacobs brought social life to the forefront of city planning by advocating for community diversity. Street activation and social networks are critical for safe and vibrant neighborhoods.\(^9\) Preservation ideals and learning from existing neighborhood structures form the basis of Jacob’s proposals. These recommendations have been accepted from a practical viewpoint since Jacobs’ book was published in 1961.

There have been recent efforts to quantify the social benefits of existing buildings and naturally developed communities that Jacobs postulated. For example, the National Trust for Historic Preservation created a research branch in 2009, the Preservation Green Lab.\textsuperscript{10} \textit{Older, Smaller, Better} tests the theories of Jacobs using data analysis.\textsuperscript{11} Measurable criteria are used to map the effects older buildings have on cities and communities.

Building age, diversity, and building size were combined to create a “diversity score.” This diversity score is assessed against 40 metrics that encompass economic, social, cultural, and environmental performance. Blocks with the highest diversity score performed better than blocks with lower scores.\textsuperscript{12} In all markets, having smaller buildings and a high percentage of older buildings equated with better performance. While this evaluation system is not comprehensive and was limited to desirable areas in San Francisco, Seattle, and Washington, DC, the study still empirically demonstrates the truth of Jacobs’ theories that older buildings contribute to urban vitality.

A less quantitative analysis of the contributions of existing buildings is listed by Tom Mayes in his blog series, \textit{Why Do Old Places Matter?}.\textsuperscript{13} Mayes uses personal experience, interviews, and scholarship to argue that older places have a major role in many aspects of everyday life; continuity, memory, individual identity, shared identity, beauty, history, architecture, sacredness, creativity, learning, sustainability, ancestors, community, and economics.


\textsuperscript{11} Preservation Green Lab, \textit{Older, Smaller, Better} (National Trust for Historic Preservation, 2014).

\textsuperscript{12} Ibid., 27.

The assessments from the Preservation Green Lab and Mayes use different qualitative and quantitative analysis. Both address places beyond designated resources, however, and conclude that the presence of existing buildings provide benefits to cities, social life, and culture. Adaptive reuse can maintain and enhance these values. Additionally, the process of preservation, based on stakeholder input, multiple values, and planning for future change, puts identified benefits at the center of projects.

Historic preservation provides an important approach to solutions examining complicated questions about social and cultural sustainability. The appropriate use of preservation tools and frameworks should be developed – and, if necessary, encouraged with new tools – as a way of achieving sustainability goals beyond LEED’s focus on environmental and energy performance. A voluntary third-party certification system through a non-governmental organization (NGO) can create self-regulation in the private sector using market forces to incentivize its use. Certification relies on an assessment framework that is broad enough to be applicable across a range of building types and geography, yet specific enough to allow analysis of individual project outputs. Although there are existing programs and research that can begin to inform the creation of these standards, there are still significant difficulties that need to be further explored, as laid out in the later chapters of this thesis.

Chapter 2 is a literature review that examines current sustainability literature, preservation tools, social capital research, and certification programs. There are many works that link historic preservation and environmental impacts, but very few that quantify the other benefits that reuse projects provide. Social capital is a relatively new area of research that is developing metrics. At the moment many of these are not focused on the built environment, and there is no consensus for evaluating social or cultural capital. Any analysis focused on built
fabric must go beyond the design of a project, and influence the project even after construction is completed, because social impacts are ongoing and continuous well beyond the design, construction, and initial operations of buildings.

Chapter 3 evaluates existing preservation tools in the United States. These tools are overwhelmingly fabric-centric, intended to protect the historically designated structures from demolition or inappropriate renovation. There are tools at the federal, regional, and local level. Primary tools are from the government, with supporting education and funding from NGOs or the private sector. International tools do a better job of addressing intangible values in early stages of identification, though there are still limited guides on including these in the treatment of properties. Relatively new tools, such as the Sustainable SITES Initiative (SITES), begin to address the ongoing future management of resources.

Chapter 4 examines third-party certification as an emerging tool. NGOs create a framework and evaluation system that participants use to guide their work. Certification systems are used across many fields, and have been gaining in popularity since the 1990s. In the US building and real estate sector LEED Certification is the most prevalent tool, and has transformed the building industry to include environmental sustainability. Certification programs have benefits and issues, but work in a different way from government tools, and are therefore a useful addition to an industry’s toolkit.

Chapter 5 relates how a preservation-based certification system might affect users in the built environment. The nature of such a program appeals to specific users at first, and its growth is dependent on consumers recognizing the value represented by certification labeling. Because outputs are difficult to measure, and the data available is limited, during early years of implementation, the program will be most relevant to community groups, developers, or
institutions with a strong commitment to Corporate Social Responsibility (CSR). It can grow to a larger program driven by consumer choices and private sector benefits as visibility, understanding, and research increase.

Chapter 6 discusses existing organizations that would be most likely to have potential interest in such a program. The National Trust for Historic Preservation and the U.S. Green Building Council are the two major organizations that deal with preservation issues and building sustainability respectively. To create a certification program that addresses social and cultural issues in the built environment, each organization likely needs to be involved. Standards and assessment creation can only emerge through discussions with stakeholders from different backgrounds and expertise, and the process must be transparent. The continuing management of the program after its creation must be done by an organization that has the ability to assess both quantitative and qualitative factors, and there should be ongoing engagement with relevant stakeholders as the program develops and adapts.

Chapter 7 attempts to lay out the problems of creating a third-party certification program based on preservation. There is acknowledgement from many fields that such a program or evaluation system would be beneficial, but the obstacles to creating an applicable framework are difficult to resolve. How complex and intangible features of a place are rated; how and when social benefits, which occur over time, are assessed; and the applicability of one framework to multiple project types are major among the many barriers to the creation of such a tool. These can be resolved through more studies, research, and discussions on current and potential strategies. The creation of a pilot program to define and evaluate the implementation of standards is critical, as is the ongoing reflection and adaptation of a program.
In summary, this thesis analyses the applicability and feasibility of creating a third-party certification program based in large part on preservation values and methodology to increase and encourage the incorporation of social and cultural sustainability in real estate and construction projects. This is done through research on existing tools and programs, and on emerging research on certification programs and holistic sustainability.

Such a program can offer an additional tool that promotes better development and communities. It has potential to work in conjunction with existing tools, and act as a source for future guidelines, regulations, and research. The many difficulties of creating such a program are outlined and analyzed in the concluding chapter of this thesis. The proposed program requires much more in depth thinking to overcome the numerous technical and philosophical challenges to be effectively implemented and enact beneficial social and cultural change in the built environment.
Chapter 2: Literature Review

Sustainability and Social Capital

Environmental sustainability in the built environment has recently been a large topic of analysis, debate, and scholarship. There are scores of articles, research papers, and studies on how to improve, measure, and expand “green” building. As summarized in Chapter 1, the most widely accepted definition of sustainable development is from the Brundtland Commission Report, *Our Common Future*, that defines it as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”\(^{14}\) This definition was developed by the United Nations World Commission on Environment and Development. This international body analyzed the many issues of development and searched for actions that would affect change, leading to this widely accepted definition of sustainability.

The report also calls for a synthesis of “environmental, population, and development assistance” to create holistic, long-term sustainability.\(^{15}\) The political forces of a place have major impacts on overall sustainable development, and any proposed actions must work within existing systems. Social problems including poverty, migration, and social justice have a direct impact on environmental sustainability. Environmental solutions must be linked to social solutions, and work within a healthy political and economic system.

*Our Common Future* had direct influence on the 2005 World Summit on Social Development that identified three pillars of sustainability: economic development, social development, and environmental protection.\(^{16}\) In the Brundtland report, which is focused on the

---


\(^{15}\) Ibid, 43.

\(^{16}\) 2005 World Summit on Social Development
environment, recommended strategies address these areas, but they serve as a method to advance environmental sustainability. Both the World Summit and the Brundtland Report recognize the interdependence of these values, but in the Report they serve as mechanisms to reach long-term environmental sustainability. These pillars have been depicted multiple models, illustrated in Chapter 1.

This view of sustainability has been criticized for separating economic development from social development. In his work, *Sustainable Circles*, Paul James identifies four metrics of measurement for urban areas.\(^\text{17}\) The United Nations has begun using this evaluation method. Culture, economics, politics, and ecology form the basis for the sustainable circles approach, which integrates the areas and allows for flexibility.\(^\text{18}\) Each of the four areas is subdivided into seven categories that are then rated on a nine-point scale. The approach was developed to be applied globally to cities and regions. Paul also examines social sustainability, and how communities form and relate to each other.

The Circles of Sustainability considers the four domains to be the basis of social life. Putting all categories within the social realm underscores that all four areas have an effect on the livability of a place. Qualitative factors are included alongside quantitative ones to create a flexible framework applicable to different scales and regions.\(^\text{19}\) The assessment uses the 28 indicators as a way of measuring sustainability grounded in complex interdependencies. It also follows other modern definitions of sustainability, many of which now recognize culture. The

\(^{17}\) Paul James, *Circles of Sustainability*, (New York: Routledge, 2015).

\(^{18}\) Ibid, xv.

Global Network of Cities, Local and Regional Governments lists reports, declarations, and commitments from many organizations that have included culture in their development goals. In addition to the broadened definition of sustainability that James proposes, he also investigates ways of analyzing social benefits. Recent anthropologists are studying the ways in which society can measure and recognize the intangible and seemingly non-quantifiable benefits of non-economic value. Robert Putnam has termed this “social capital” in his book *Bowling Alone: The Collapse and Revival of the American Community*, based on his essay from 1995, also titled “Bowling Alone.” He assembles many tables of data to prove that the historic social processes that bound a society together are declining, and concludes that we are therefore losing social capital. For example, he shows that participation in the government and civic organizations has been decreasing since 1950. The main reason he attributes to the decline in social capital is the emergence of “isolating technology.” Previous studies from the 1920s leveraged this argument against technology of that time, as Everett Carll Ladd points out in a critique of “Bowling Alone.”

Additionally, Putnam’s conclusions do not hold true for all demographics, as Barbara Arneil proves by systematically challenging his data and assumptions for women and ethnic minorities in *Diverse Communities*. Arneil chooses different social groups to argue that social capital is changing, rather than disappearing. Many of the targeted organizations showing declining membership in Putnam’s work are countered with new and different organizations that have been expanding. With changing connections, the methods of measuring social capital

---

also need to change. Arneil argues that it is not the quantity of social capital that should be measured, but the social justice available to all. Allowing access for people of all cultures, races, genders, and economic levels access to opportunities and representation is important. 24 Otherwise, social capital is dominated by higher income levels, and connections and resources are limited for others.

While social capital has been the subject of many recent studies, there are far fewer works that explicitly address social capital in the built environment, or the physical conditions that can contribute to healthy social environments. Jane Jacobs is the most famous writer on socially bound urban planning. She wrote *Death and Life of Great American Cities* 25 in 1961, which remains a cornerstone of planning and architecture literature. Arguing for diverse neighborhoods, Jacobs champions low rise, mixed use buildings. Jacobs proposes four major methods of encouraging active communities: mixed uses, small blocks, a mix of building ages and conditions, and density. 26 She claims that activating the street at all hours through a variety of programming and uses can make a place vibrant, safe, and viable, both socially and economically.

Even the economist Edward Glaeser, who vocally critiques historic preservation, admits that the history of cities has appeal and value to maintain. In *Triumph of the City* he states that part of the attraction of many cities is the “centuries’ worth of investment in buildings and museums and parks,” as well as the tendency of cities to bring creative and innovative people together to learn from each other, before he paradoxically argues that older and diverse

24 Ibid.
26 Ibid, 150-1.
buildings should be replaced with high rises.\textsuperscript{27} Both Jacobs and Glaeser argue for density, but Jacobs does so in search of greater diversity, whereas Glaeser argues that creating density will lead to the benefits that cities bring to residents, including more interaction and productivity.

A research branch of the National Trust for Historic Preservation, the Preservation Green Lab, began to quantify Jacob’s claims through new technology and data interpretation. Their report, \textit{Older, Smaller, Better}, evaluates three cities to track how the age of buildings relates to the diversity and activity in an urban setting.\textsuperscript{28} Blocks that have buildings built pre-1940 tend to have a higher diversity score, and higher diversity scores translate to more street activity at all hours, tracked by cell phone activity.

In \textit{Living over the Store}, Howard Davis examines more claims by Jacobs about diversity in the urban setting.\textsuperscript{29} He looks at the typology of the mixed use buildings around the globe, where residential is integrated with commercial space. Davis argues that combining commercial and residential functions optimizes both small businesses ventures and dwellings. Combining these functions in new ways may prove critical for future cities to create connections, flexibility, and resiliency. The shop/house model responds to and supports “social, economic, and energy/material sustainability.”\textsuperscript{30} The shop/house building represents a traditional form that conveys many important benefits to cities, but is often overlooking in modern building practices. Preservation methodology addresses and values these, finding ways of morphing the historic benefits with new uses required in modern cities.

\textsuperscript{28} Preservation Green Lab, \textit{Older, Smaller, Better} (National Trust for Historic Preservation, 2014).
\textsuperscript{29} Howard Davis, \textit{Living over the Store} (New York: Routledge, 2012).
\textsuperscript{30} Ibid, 205.
**Third Party Evaluation Programs**

Non-government organizations (NGOs) have begun to introduce additional tools for encouraging desirable behaviors in the market. Such third party certification systems have been gaining momentum in the market for a variety of fields for the past 20 years. Given the recent emergence of such certifications, there are as yet few evaluations and studies on their total impact on markets, and no consensus on their effectiveness as a tool for encouraging market transformation. As the number of certification programs and their visibility increases, there is a corresponding increase in the analysis of them. However, more work still needs to be done.

The National Research Council of the National Academies held a discussion workshop in 2010 on certification systems, defining them, the role they play, and evaluating their inherent strengths and weaknesses. Their collective discussion points were published in *Certifiably Sustainable?*[^31] and represents insights into the tool by professionals and practitioners, as well as a call for additional studies and data. The text relies on practical knowledge and anecdotes more than numbers and data, due to the nature of the roundtable based workshop, and the lack of availability of such data.

Third party certification programs are classified as one of many tools that can be used to influence or control behavior, from conscious decisions to government regulations. As such, certification as a tool provides unique benefits, and also has downsides that are better addressed through a different tool. They are typically based on voluntary participation, but assume a market incentive for the trade-offs that come with pursuing certification. Certification programs can adapt more quickly than government programs, but the competition between

their sponsors can lead competing or overlapping standards to fight for market penetration, which does not equate to market transformation.

In fact, there are standards for third party evaluations set out by the International Standard Organization (ISO). ISO standards are developed by subject matter experts to “develop voluntary, consensus-based, market relevant International Standards.” Thousands of standards for different markets have been developed, including ISO/IEC 17065:2012 that sets criteria for certification bodies. These are intended to guide the credibility of third party certification systems to ensure consistency and impartiality.

There is also the American National Standards Institute (ANSI), which facilitates the creation of standards for a variety of sectors in the United States. ANSI oversees discussions to include all stakeholders in the standard development process. It conducts reviews of programs that have been accredited through ANSI, primarily to ensure a consensus-based, transparent process.

Other voluntary programs can include partnerships with branches and agencies of government. Hsueh and Prakash evaluate the connection between different levels of government sponsorship and the different benefits offered. When programs are sponsored at the national level, they offer more intangible benefits such as reputation and branding, and at the state level there is a tendency to offer tangible benefits, such as technical assistance.

An example of a popular international certification program is Fair Trade Certification. The Fair Trade movement is focused on internationally imported products primarily to ensure a

fair wage for farmers and workers. The intent of the program is to demonstrate that social responsibility can be economically viable. In studying the effect of Fair Trade Certification for products, April Linton looks at the rise of certification programs for social justice.\(^{35}\) Linton draws from studies focusing on the premium consumers are willing to pay for socially responsibly branded products, how the certification affects producers, and the underlying reasons corporations buy into certification. The primary drivers for participation can be broken into three categories: mission driven, quality driven, and market driven businesses.\(^{36}\) These businesses take advantage of certification, but in so doing support the ideology of certification programs to varying extents.

**LEED and Preservation**

There has been a lot of focus within the preservation field on how older buildings fit into the discourse of sustainability. As the most well-known certification tool in the US building industry, Leadership in Energy and Environmental Design (LEED) Certification has come under scrutiny by the preservation field for how it addresses existing buildings. LEED was launched in the 1990’s to encourage and recognize environmental sustainability. Since its inception, it has become well-known and widely applied, introducing “green” building techniques into thousands of construction projects. With research, critiques, and a higher standard for energy efficiency, LEED has been revised many times since its launch.

Recent revisions to LEED include greater recognition of embodied energy, one of the principle environmental arguments for saving existing buildings. The National Trust for Historic


\(^{36}\) Ibid, 154.
Preservation has evaluated the impacts that old buildings can contribute to the sustainable energy. Even energy efficient new buildings take decades to recapture the energy savings that existing buildings inherently have from embodied energy.\(^{37}\)

While most literature connecting LEED and historic preservation is focused on the environmental or economic benefits of older buildings, there are a few emerging arguments for expanding LEED to include social benefits as well. Barbara Campagna wrote that there are discussions between the Sustainable Preservation Coalition and USGBC to include credits for the intangible benefits of preservation.\(^{38}\) Campagna identifies major areas that preservationists want LEED to incorporate: cultural value, embodied energy and service life, and the value of traditional building practices. The Lifecycle Assessment Analysis\(^{39}\) is now emerging as the main method for measuring the energy of building impact, and provides more weight for embodied energy.

Patrice Frey writes that preservation is inextricably linked to the sustainability movement, because preservation provides important social benefits.\(^{40}\) The structure of existing neighborhoods, emphasizes walkability and transit, and encourages less energy use, but also promotes social and cultural values. Tom Liebel also recognizes that the reuse of buildings “provides opportunities for mixed use developments with a vibrant, urban street life.”\(^{41}\) While the social values are well established in the preservation world, these are infrequently paired with other sustainable measures, particularly environmental sustainability.

\(^{39}\) As defined by International Standards Organization (ISO), ISO: 14040.
Chapter 3: Existing Preservation Tools and their limitations

Within the field of historic preservation there is a consensus that the physical fabric of a place conveys benefits beyond a memorial to the past. This understanding of the field is often not translated in public discourse on preservation, and many misconceptions prevail. Public views of preservation may be limited to seeing the field as a tool for the elite, an aesthetic concern, or as a method to prevent all change and keep all existing places static.\(^\text{42}\) In reality, most preservation work is in small-scale, community based initiatives and projects, and relies on a values assessment and contextual understanding to most appropriately manage future change.

Current Tools

Since the modern preservation movement in the US began gaining force, many tools have emerged to regulate and incentivize preservation. These tools were created for different purposes and many of them take the form of government incentives or regulations. With the passing of the National Historic Preservation Act in 1966, a governmental review process known as Section 106 review was developed. Going through this process to assess the impacts of a project on historic resources is required for federal or federally funded projects. There are other tools created by other government agencies, such as local registers and state tax credits, as well as non-governmental organizations (NGOs) who provide resources and grants for preservation efforts.

The Secretary of the Interior’s Standards for Rehabilitation are the major guiding principles applied to historic rehabilitation and reuse projects in the United States. These, along with the Standards for Preservation, Restoration, and Reconstruction, were written in 1976 and have been revised since. The ten recommendations in the Standards for Rehabilitation have been developed to pertain to all types of historic buildings, both interior and exterior conditions. The Standards are worded to provide guidance for many different projects and recognize the variability in historic structures. “Historic significance” and “defining characteristics” are key aspects in the Standards that state these physical features must be maintained, repaired, and preserved. Historic changes to a property are respected, and future changes are not prohibited, but should not alter the historic form and integrity of a property. These Standards form the basis for analyzing the reuse of historic structures, and are the basis of much preservation regulation.

Section 106 of the National Historic Preservation Act requires that federal agencies consider the effects of any “undertaking” on historic resources that are listed in or eligible for the National Register of Historic Places. An “undertaking” is defined as a project, license, or permit. A review is required for all projects to ascertain the effects of a project on historic resources and provide a plan to mitigate any negative effects. This legally stipulated procedural process does not require specific protections for historic properties. It mandates a process, not an outcome. These historic properties are defined as districts, sites, buildings, structures, or objects listed or eligible for listing in the National Register of Historic Places.

45 Leslie E. Barras, Section 106 of the National Historic Preservation Act: Back to Basics, (National Trust for Historic Preservation, 2010), 1.
While Section 106 is a procedural process required of federal or federally funded projects, it has in fact had a substantial effect on saving historic properties. Incorporating preservation considerations in the planning process and accepting commentary from the Advisory Council on Historic Preservation has saved thousands of historic buildings from demolition and inappropriate alterations. The review establishes a clear requirement that federal agencies consider the nation’s historic resources in planning their projects. Federal agencies must also consider public concerns and input through the process. Public involvement is not regulated, but generally takes the form of public meetings or notices. The Section 106 process is the same for federal agencies and private developers utilizing federal funds, and some states also have analogous processes for projects using state money.

Tax credits are the major financial incentive for the reuse of income-producing historic buildings for private developers. There are two federal tax credits (FHTC) for reuse. A 20% tax credit for the certified rehabilitation of income-producing historic properties that are listed in the National Register, or locally designated by a Certified Local Government, and a 10% tax credit for non-historic, non-residential buildings constructed before 1936. Because the 20% FHTC is jointly managed by the National Park Service and the Internal Revenue Service (IRS), with assistance from the State Historic Preservation Offices (SHPOs), it has more available data for analysis. The 10% credit requires documentation submittal to the IRS, but there is no historic preservation review to receive the credit, since it is for non-historic buildings.

---

46 Ibid, 5
By definition, the 20% tax credit is only applicable to designated historic resources that are income-producing. These buildings have demonstrated historic value and deserve recognition and documentation. Structures whose sole designation is listing in the National Register of Historic Places do not have legal protections, but many have local protections that restrict actions for these. Local protections, combined with required compliance with the Secretary of the Interior’s Standards when using the 20% FHTC, regulate the development and design of projects and maintain historic fabric.

Utilization of the 10% FHTC is not a preservation tool, unlike the 20% credit. Because the process of claiming this credit does not rely on preservation review, use of this credit is not often discussed in the preservation field. The recipient of the 10% tax credit is required to maintain at least 50% of the external walls, 75% of internal or external walls, and 75% of the internal structural framework of the original building to maintain eligibility. Use of this credit guarantees that the building will not be demolished, but any further connection with its context may be eliminated or altered. The 10% credit is not a protective measure for significance or character. It only ensures the retention of most of the shell of a building.

There are a variety of local historic preservation tools as well, that can offer more protection and guideline specificity than national tools. Local registers and historic districts often provide protective measures against demolition and insensitive alterations. Historic districts are areas with a valuable feel and aesthetic whose communities have come together to create a local ordinance to protect these qualities. There are approximately 2,300 local historic districts. Design guidelines are a common tool of historic districts. Where they exist, new

49 Ibid.
development and rehabilitation projects must follow these guidelines to maintain the character of the neighborhood.

When a municipal historic preservation program satisfies certain requirements from the state and federal government, they may become a Certified Local Government.\(^5\) This means that they conform to regulatory standards that address, for example, their historic commission, their enforcement of legislation on property designation and protection, creation of historic surveys and inventories, and allow for public participation. After certification, these programs can receive formal recognition by the state and local government, compete for federal funding, participate in National Register nominations, receive technical assistance, and locally designated properties are eligible for the 20% FHTC.

Conservation districts are also specific to a neighborhood. There is as yet no unified definition or target for conservation districts. They can have many different functions, and only some are preservation-oriented. For example, these can be developed for places that are not eligible for historic designation, but still have a significant character to retain. Eligibility can be lost when there has been a significant loss of fabric or integrity. Conservation districts acknowledge the remaining character and value in maintaining this in the future. They rely heavily on community participation. In some cities, such as Raleigh and Dallas, the nomination of a district requires either a request from the city or a majority of property owners.\(^6\) Land use and zoning tools are the primary methods used by conservation districts to control development. These regulations primarily restrict height, massing, and compatibility with

\(^{51}\) Ibid.

existing architecture.\textsuperscript{53} Conservation districts can provide many of the same benefits of historic districts, but often have more flexibility than traditional historic districts.

Both district tools are created for specific neighborhoods. They can provide guidelines and specific regulations to safeguard an area’s character. Design review is essential for historic districts, and can be a major consideration in conservation districts where historic preservation is the major goal. The two tools are agreements between residents and the local government to guide the development of a neighborhood. These are powerful tools, but must be developed locally. They cannot act as a universal method across geographies to integrate preservation as a major component of sustainability.

Historic preservation development can be very complicated, and navigating the many regulations and incentives at local and national levels requires specialized knowledge. Support and education is a critical aspect for those interested in historic preservation development. Local groups can provide many resources to help, including NGOs, municipal Historical Commissions, and SHPOs. The major national advocacy group for historic preservation is the National Trust for Historic Preservation. The Trust provides reference materials, technical guides, and other supplemental educational tools that can help with preservation development. The Trust has a large outreach network and promotes the available tools for preservation. Funding for preservation research, planning, and projects are also available through the Trust, from private foundations or public grants.

\textsuperscript{53} Ibid, 14-15.
Gaps in Current Preservation Tools

While there are many existing tools for historic preservation development, there are still areas that are not considered. Major gaps in preservation tools include the lack of guidelines for intangible and social values, future maintenance and management, and properties not listed in historic registers. Section 106 review considers eligible properties that are not yet listed, the 20% FHTC can apply to locally designated buildings, and conservation districts may be created for ineligible neighborhoods, but otherwise there are no broad tools to apply a preservation framework to ineligible buildings. The current tools are extremely effective for the protection of historic physical fabric, but do not lend themselves to broad application across the greater building industry or feature prominently in sustainability efforts.

The Secretary of the Interior’s Standards for Rehabilitation are the field’s basis for project evaluation, especially the 20% FHTC process and much local municipality historic review. The Standards were created to ensure appropriate renovations. These standards act as guidelines for projects and result in the reuse of historic properties. Important fabric of the buildings is maintained, while continued or new uses can be supported. This fabric-centric renovation process works well for the design of historic buildings, however, it does not address the continuing life of a project. The process of development and the management of the property or business can have as significant effects on a community as the design.

The Standards address the use of a property only in Standard 1: “A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.”\(^5\)\(^4\) While this standard limits the uses of properties, it does so in relation to the fabric of the structure and

---

\(^{54}\) The Secretary of the Interior's Standards for Rehabilitation, Department of Interior regulations, 36 CFR 67.
neighborhood. There is no directive for allowing a new use that responds to the social conditions that the historic use created. This intangible value can be lost even if the introduced new use is physically compatible. Requiring a project team to study the context and social benefits that the building has previously conveyed during the development process may help direct a new use that serves a similar or comparable function in modern society. This can be difficult, however, because the vast majority of development has an intended use prior to purchase. The current timeline of the development world does not lend itself to these studies and explorations, and a change in approach would be necessary for the greatest benefits.

For example, in its guide to interpreting the Standards, the National Park Service explains the appropriateness of converting historic churches. While residential conversions that excessively subdivide the space, thus harming historic features, are deemed incompatible, there is an example of a compatible conversion of a small church to a single-family residence. While this may be physically compatible for the building, it does not address the loss of community benefits if the church was previously a significant community gathering place. The social benefits of a church are lost with the privatization of the building for residential use.

Instead of personal appropriation or demolition when faced with vacancy, religious buildings can support new functions that continue the community and reflective nature that religious buildings once served. Privatization is not always negative if the use brings people together, such as a community center, or even a café or bar that provides public seating and makes space for interactions, gathering, and creates a node in the neighborhood. A non-profit may support needs of the community and make use of a vacant religious building, while a meditation or relaxation studio can bring peace and mindfulness in a sacred setting. Some uses

are more sensitive than others, but all the above possibilities have bilateral benefits between
the new use and the community, in a similar strain that the spiritual use provided.

No other Standards address aspects of the property beyond the physical fabric. Nor do
the majority of preservation projects have guidelines for future management. Ongoing
management of projects can help with maintenance, a particularly important consideration for
historic properties. Management decisions also create connections to the community. For
example, commercial management can support small and local businesses that support
community economic and entrepreneurial development.

Though the economic benefits of historic preservation have been studied and proven
for reuse,\(^{56}\) the existing tools, with the exception of the 10% FHTC, do require extensive
planning and review. Opponents of preservation argue that the existing regulations limit
development and hurt the availability of supply, raising demand,\(^ {57}\) even though participation in
FHTC programs is voluntary, and local protection regulations apply to a small number of
properties. Arguing for an increase in density ignores what makes these places desirable in the
first place, however. In a study on resident satisfaction globally, none of the top five cities were
of a particularly high density.\(^ {58}\) The social and cultural life of a place impacts satisfaction and
livability as much as affordability, and demolishing existing fabric to achieve higher density can
remove these intangible aspects.

Non-historic existing structures can convey some of the social and cultural benefits that
historically designated resources do, with greater opportunities for change and adaptation to

Trust for Historic Preservation, 2005), 89.


\(^{58}\) Andrea Colantonio and Tim Dixon, *Urban Regeneration & Social Sustainability: Best Practice from European cities*,
demand. Many historic resources are physically protected, but there are no tools for applying preservation methodology to non-historic resources. These unprotected resources can become a living document of change, incorporating the important public benefits while having the flexibility to be incorporated in new projects that respond to demands. Both types of properties can benefit from tools to guide process, management, and continuing development of adaptive reuse projects, to varying degrees in each case.

Another concern with property redevelopment is raising prices and potential gentrification of neighborhoods if the demographics radically shift. Working with current residents is one way to mitigate dramatic changes to the neighborhood that change social characteristics. The Section 106 review requires a process for input and comments from stakeholders, which often includes the surrounding community. There are no process requirements or guidelines if a project is not receiving federal, or in some cases state, funds, even if the property is listed on the National Register.

The National Trust recommends utilizing the historic tax credits for low income housing development in combination with other federal tax incentives. The financial benefits from utilizing the tax credits have been quantified, and redeveloping historic properties has resulted in new jobs, services, and an increase in the tax base. While the Trust and others utilizing these incentives acknowledge the intangible social benefits to a community, there is no method for ensuring that these goals are incorporated in design and management of a low-income housing project, or other rehabilitation projects.

60 William F Devlac, Susan Escherich, and Bridget Hartman, Affordable Housing through Historic Preservation: A Case Study to Combining the Tax Credits (National Trust for Historic Preservation, 1999).
61 Ibid, vi.
The use of the 20% credit ensures that significant features of the building are kept, and has caused major historic property redevelopment. As of 2016, this tax incentive has resulted in over $78 billion in investments by the private sector to reuse and rehabilitate historic properties.\(^\text{62}\) Because the Standards do not direct management, however, these can inappropriately cause new social pressures or rifts. For example, to make smaller projects more feasible, some developers have used the tax credits for many row house properties at once, and converted them to subdivided apartments in neighborhoods predominately owner-occupied. This may introduce transitory residents that disrupt the social connections existing and have no stake in neighborhood development, or put economic pressure on long term renters of single-family homes. Tax credits make many rehabilitation projects feasible, but are only applicable to approximately 5% of the built environment.\(^\text{63}\) The 10% tax credit broadens the applicability but essentially only requires the shell of a building to be reused. Use of either tax credit may result in disturbing social change, and there is no mechanism built in the credits to mitigate this.

There is potential for the 10% FHTC to be linked to other tools or methods of maintaining character in non-designated historic properties, acting as a financial incentive for redeveloping existing properties that have community benefits. This credit is limited by the wording of the legislation, however, which stipulates a building must be placed in service before 1936 and not be residential. For widespread application of holistic preservation values, that incorporates social justice and cultural sustainability, there needs to be a tool that provides benefits to a much wider percentage of the built environment, and has flexibility to integrate in other areas of concern within the real estate and construction industry.


\(^\text{63}\) *Pastforward*, National Trust for Historic Preservation Conference: Washington, 3-6 November 2015.
Existing historic preservation tools do not have the flexibility to apply to the greater building stock. They have been developed for historic resources, and are in place to preserve physical fabric, and thereby convey the intangible benefits that preservationists recognize existing buildings impart. Tools that are local rather than national in scope can provide more guidance and flexibility, but do not have the capacity to be applied as a general framework across geographies. There is also more variation in the application and review of these. Each SHPO can interpret the Standards in a different way for proposed projects, because they are meant to be applied in a “reasonable manner taking into consideration economic and technical feasibility.”\textsuperscript{64} The variation of interpretation across the country makes it difficult to have assurance of the suitability of a project. This limits the innovation of projects, because experimentation can lead to more risk with wide variation.

**International Tools**

Tools in the United States do not directly require the integration of intangible and social benefits of a project, but there are international precedents for incorporating these values. The United Kingdom and Australia both provide guidelines that extend beyond physical fabric. *Building in Context* from Heritage England and the *Burra Charter* from Australia ICOMOS include intangible heritage, community involvement, and heritage management.

English Heritage, along with the Kent Architecture Centre and the Commission for Architecture and the Built Environment (CABE), began *Building in Context* in 2001. While not regulatory, the tool guides new design in historic settings through a collaborative process and

defined principles, and promotes long-term thinking in development. It consists of eight principles for designing in an historic context, along with case studies demonstrating these principles, and policies that give detailed information on process and development. The principles are basic guidelines that are applied to projects through a collaborative process. Case studies guide the application of these principles. The policies come from other government publications as technical guides.

Principle 4 states that development in a historic context should “sit happily” in the existing pattern of development.65 This can be interpreted physically in the sense of not interrupting the rhythm and streetscape of a neighborhood, but the word “happily” also implies a spiritual or intangible aspect to a building. This is reinforced through the case studies that are intended to “go beyond ‘how it looks’” and address other development concerns.66 This relates to the context and spirit of a neighborhood. Supporting the feeling of a neighborhood can be seen again in the Halifax Event Report in which a poem about experiencing the place under discussion is published.67

Case studies are focused on workshops that allow for explanations, discussions, proposals, and commentary. Organizations and community members have a voice and opportunity to learn about the principles Building in Context proposes. Principle 3 of the toolkit says that a “project should be informed by its own significance so that its character and identity will be appropriate to its use and context.”68 Along with the management policies for

governments and communities, this guideline begins to address use and the future life of the structure, always in relation to the existing context and identity of a place.

Australia also addresses similar values for cultural resources. The Burra Charter was first created in 1979 by Australia ICOMOS and most recently updated in 2013. It provides the guidelines for all cultural management in Australia, and set a precedence for other international documents. The Charter states that the cultural significance of a place needs to be conserved for future generations. Cultural significance is defined as “aesthetic, historic, scientific, social or spiritual value for past, present or future generations.” Building fabric is only one vehicle for demonstrating cultural significance, along with setting, use, associations, meanings, records, related places, and related objects.

Article 12 of the Charter requires participation of people with association and responsibility of the place in the conservation, interpretation, and management of a place. This also relates to Article 16 that addresses maintenance. Ongoing efforts must include communities and other stakeholders, and a management plan is important to the preservation and continued use of historic resources.

Building in Context relates to new construction in historic areas, while the Burra Charter addresses the management and stewardship of cultural resources, but they both include measures and principles that are not centered solely on the fabric of a place. They address process, use, stakeholders, intangible values, context, and management.

---

Conclusions

Historic preservation tools are intended to protect cultural resources. In the United States, these tools are very effective for the recognition of properties through historic registers. Development tools are primarily through the government. The federal government provides tax incentives for the reuse of historic buildings and regulatory guidelines for rehabilitation, which has often led to sensitive redevelopment and private investment in historic resources.

The guidelines and incentives from the government are based around the fabric of the buildings. While there are precedents for explicitly considering intangible values in a reuse project, these are international. Without consideration for incorporation of social connectivity, contextual use, and sustaining management, holistic sustainability of a project is less likely to be achieved. Historic preservation as a field can provide these values to many projects, not limited to designated historic resources. In addition to the intangible values inherent in many existing communities, the process of development should be closely integrated with the context and community members. Only Section 106 review stipulates interaction between stakeholders and project developers embarking on a federal “undertaking.”

A voluntary-participation tool developed by an NGO has the potential to make historic preservation a major aspect of the sustainability trend. NGOs have the ability to create a national program that does not rely on the SHPOs or local government variations, and can provide unbiased third-party review. Government tools are also restricted by property rights, but a voluntary participation program has less legal restriction. NGOs have the ability to respond more quickly to changing conditions and needs. This will be essential for any new tool that would address problematic and subjective values such as social justice and cultural sustainability.
A tool that directs, encourages, and rewards the inclusion of these values, a collaborative process, and continuing management and maintenance to a large range of built projects would go a long way to creating sustainable communities with significant social and cultural capital. To make this tool applicable to many projects across the country, a flexible framework must be in place, and consistently applied to every project using the tool. This can act as additional tool guiding reuse development, and supplement current tools. This can lead the built environment to a more sustainable future.
Chapter 4: Third-party Certification

Voluntary third-party certification programs have been a tool to utilize market incentives to guide corporate actions or establish consumer confidence for decades. These programs work in a variety of fields, many with the intent to encourage a market change toward responsibility and social consciousness. Non-governmental organizations (NGOs) rely on connections and conscious consumption to create “changing norms for producers, businesses, and consumers.” Certified products are encountered most frequently by the general public through grocery store labeling. These various labels communicate different values to the consumer. Labeling is the final step in attaining certification, after standards are created, and certification applied for. While labeled products are the most frequent use for certification, processes or management methods can also be subject to certification.

The scholarship on certification programs is minimal. They currently are experiencing a vogue encouraging more discussions, but the assortment of programs in diverse fields adds to the complexity of analyzing certification as a general tool. The Franchise Law Journal defined certification programs within a legal framework and established two distinct characteristics of recognized certification programs: first, in which the owner of the certification label may not use the label themselves, but authorizes others to utilize the label, and second, in which the certification label must be applied to anyone who meets the set criteria, without discrimination. The broad definition of certification programs allows nearly every field to create its own specific standards.

72 Ibid, 5.
73 Rochelle B. Spandorf, “Certification programs: franchises or not?” *Franchise Law Journal*, (33:4) 22 May 2014, 505.
The variety of fields that utilize certification systems demonstrates the flexibility these systems allow. A certification label represents how something was created or what it contains. Fair Trade Certification is a global program that requires producers to provide a decent wage and good working conditions. Fair Trade goes beyond products to scrutinize production and the conditions of the people involved. The goal is to combine social justice and environmental sustainability with quality goods.

A similar program is the Sustainable Forestry Initiate (SFI). Participation in SFI requires sourcing from certified sources to promote responsible forest management. SFI further promotes sustainable forestry by requiring participants to invest in or engage with research in the field. This has resulted in a $1.4 billion investment in conservation research, science, and technology since the program was launched in 1995.

NGOs have the opportunity to create standards that address areas federal government regulations cannot. Because it is in the private sector and participation is voluntary, such organizations are willing to address aspects that legally or politically cannot be regulated, such as private spaces. Additionally, these programs have the flexibility to respond to market conditions more quickly than regulations do. NGOs have the reach to create international programs that incorporate all levels of an industry, creating holistic change. Having a third-party certification system allows a level of branding and recognition in the private world that has become increasingly important to consumers. There is a demonstrated interest in certified sustainable products, but the willingness across multiple market sectors to pay premiums for

76 Ibid.
environmental responsibility is difficult to determine. Participation in certification relies on users realizing benefits from labeling.

While certification programs allow consumers to be more socially discerning with their spending power, the number of certifications available can lead to confusion and difficulty in ascertaining the legitimacy of the label. An increasing amount of labels on products can be interpreted to represent low standards or unclear assessment methods. In the environmental field, this is often known as “greenwashing.”\(^{77}\) Critics point to many programs with weak requirements whose goal is to attain a higher market share rather than creating standards that support and demonstrate significant achievement in social or environmental goals. Respected certification programs have consensus-created requirements that aim to raise standards and incorporate public benefits.\(^{78}\) Transparency in the creation of standards and applicant assessment ensures that consumers understand what labels represent with the implication of above-average achievement.

The increasing number of certification programs is creating overlapping standards and competing programs in many areas. There can be competitive benefit within fields to ensure that there are choices between programs and that the represented values are what the industry requires. Too many repetitive programs, however, shifting focus from developing in depth or integrated metrics to competing for precedence in a limited market.\(^{79}\) New programs should represent different needs that current programs do not address. As they are developed, the

\(^{77}\) Dan Wagner, “Existing and Emerging Third-party Certification Programs,” *The State Education Standard*, February 2012.

\(^{78}\) National Research Council, *Certifiably Sustainable?*, 59.

\(^{79}\) Ibid, 21.
existing metrics in place should be understood, so that when there are multiple programs they relate and can be utilized in conjunction with each other to create a wholly sustainable product.

LEED

The building industry has multiple certification programs aimed at improving design, construction, and building management performance. The most widely recognized certification in the United States is Leadership in Energy and Environmental Design (LEED). This rating system was first introduced in 1998 by the United States Green Building Council (USGBC). Public and private projects use the certification, which was created “with the intention of promoting healthy, durable, and environmentally sound practices.” These practices have been widely accepted in standard building practice, and the number of certified LEED buildings has been increasing rapidly since its inception.

The USGBC was formed in 1993 as a non-profit to effect building performance and create a more environmentally sustainable future. However, there was interest in “green building” prior to the formation of the USGBC. The energy crisis in the 1970s spurred interest in energy efficient design. After multiple international conferences on energy efficiency, domestic efforts were made to enact real change in building design and management. With the formation of the USGBC, multiple stakeholders came together to determine how to promote sustainability. Professional firms and non-profits participated in discussions to create the system now in place, which uses metrics understandable by the public. A two year pilot

---

81 Ibid, 24.
83 Ibid.
The program was launched nationally to test the rating system.\footnote{Ibid.} Ratings rely on a point system, awarding a set number of points for achieving identified sustainable measures in the design and construction of a project. The easily understood point system has helped LEED gain popularity and guide designs to a more sustainable approach.

Various levels of government acknowledge the importance of LEED, either requiring projects financed through public funds to utilize certification, or creating incentives for developers who seek high levels of LEED.\footnote{Stephen T. Del Percio, “The Skyscraper, Green Design, & the LEED Green Building Rating System: The Creation of Uniform Sustainable Standards for the 21st Century or the Perpetuation of an Architectural Fiction?” \textit{Environs} (Vol 28:1, 2004), 131.} Of course, with the abundance of LEED certifications and power that USGBC now has over directing construction a backlash against LEED is emerging. Political backlash can come from industries that LEED does not recognize, such as various forestry organizations that are not included in LEED credits for certified wood,\footnote{Stuart Kaplow, “Georgia’s Legislation Banning LEED for State Buildings is Much Ado About Nothing,” \textit{Green Building Law}, https://www.greenbuildinglawupdate.com/2015/03/articles/leed/georgias-legislation-banning-leed-for-state-buildings-is-much-ado-about-nothing/, 2 March 2015.} or from state governments in which those industries are located. There are also many criticisms from within the building and design industry for being reductionist, focused on profits, or too conservative in its requirements. Overall though, LEED has still introduced environmentally conscious design into many projects that would not have included it without the program.

This system has worked very well in generating interest in environmental sustainable buildings, and has created a new and broader market for products and expertise in this field. As the market for sustainability has increased there are more studies, research, relevant products and skills, and a better understanding of environmental sustainability. This creates a higher
standard for exemplary environmental attainment. USGBC has addressed this moving standard by engaging in periodic revisions to LEED.

LEED is currently on Version 4, having expanded the original system to many different classifications under which a project may be certified.88 This has allowed the categories to become more specified and targeted. There are five broad categories89 with sub-categories to target specific typology or use.90 Updating the rating system allows the USGBC to revise the standards to coincide with the wider understanding of “green building.” Reaching certification now, with a more sophisticated market, requires higher standards than when the market was new. USGBC is “continually gathering constituent feedback, analyzing data and generating alternatives, and revising its policies and programs,” and LEED can direct change more accurately in a wider number and broader range of projects.91 One result of this specialization is that projects now require specialized knowledge with a greater degree of sophistication to reach certification. This can prevent smaller projects or inexperienced clients from participating in the program, just as the certification fees may decrease accessibility.

Changing standards have also addressed some of the criticisms that were raised against early iterations of LEED. Some problems have been solved or mitigated by these changes, while others are intrinsic to the program was developed. One frequently cited concern with LEED is the point system. Originally, points were not weighted according to their actual environmental impact. Some complex design features were awarded the same points as adding a “green gadget.” This led to the simplification of sustainability measures. The revision to include

88 Ibid, 204.
89 Building Design and Construction; Interior Design and Construction; Building Operations and Maintenance; Neighborhood Design; Homes.
91 Chance, “Planning for Environmental Sustainability,” 195.
weighted credits helped resolve this issue, and some now work together to provide even more points. USGBC has also increasingly recognized the environmental benefits of reusing existing buildings, and revisions to LEED reflect this.

Feran Kleon’s evaluation of the current green movement bases it on the ideology of technological advances saving the environment. This analysis of the environmental sustainable ideology does not consider the many aspects of traditional and natural strategies, demonstrated in LEED credits through passive design strategies, to which the USGBC has been giving increasing weight. There are some users of LEED who individually pick strategies and technologies from the listed criteria as a grab-bag of individual elements, rather than beginning projects with an integrated and comprehensive approach to sustainability, as Chance argues the system was designed to encourage. The point system of LEED is intended to act as a quantifiable metric to understand a building’s total sustainability, and how the environment has been considered throughout the process.

The tiered rating system of LEED can capture a wider range of users than a simple threshold model. Multiple certification levels allows many projects to participate in certification, even though they may not all be able to reach the highest level of certification, LEED Platinum. Through the tiered point system, LEED can affect change by high level users, as well as the lower end of the market. Many certification programs do not impact the low end of the market because participation in third party certification is voluntary. Until the market changes sufficiently to penalize those who do not participate, certification remains a high-end concern,

---

93 Chance, “Planning for Environmental Sustainability,” 197.
94 Feran Kleon, *Towards a Culture of Sustainable Preservation*. 
53
raising the effects of projects on one end, but not concerned with production on the opposite end. The hierarchical system of credits that LEED utilizes allows for high performers to be recognized, while in principle affecting change at the lower end as well. The continual revisions ensure that the industry is constantly improving at all levels.

A sliding scale allows for greater market penetration. Market penetration is one possible measure of success, but it does not evaluate how transformative the program is for fully integrating sustainability into every step of a project. A higher rating in LEED does not require a fundamentally deeper commitment to sustainability.\(^95\) There are basic requirements for every certified project. By attaining a higher level of certification, a project fulfills more identified metrics, but does not necessarily contribute to environmental sustainability more holistically than a lower tier of certification. LEED has an integrated design point that encourages early adoption and integration of sustainability.\(^96\) This is an optional credit and only represents one point. Perhaps most importantly LEED Certification also does not address how buildings are maintained and operated. Its most used credits are focused on the design and construction of projects. LEED Building Operations and Maintenance (LEED O+M), discussed more fully in Chapter 6, is beginning to address this shortcoming, however the metrics it uses are not present in other LEED systems.

The success of LEED and other programs is difficult to measure. Whether success is in market penetration, recognition, or market transformation, certification can only reflect how acceptable the designated criteria has become. Market penetration and recognition can be indicated through the popularity of certification. Programs do not dictate whether a product

---

\(^95\) *Ibid*,

should be made, only that the making of it follows accepted criteria. There is an acceptance that LEED buildings reduce environmental impacts, but if buildings are being unnecessarily constructed, even reduced impacts degrade the environment. Certification is not enough in a field and should also be paired with traditional regulations and incentives.

Other Programs

Other certification or acknowledgement programs are also gaining interest in the building field. There are multiple environmentally focused programs. Passive House, Net-Zero Energy, Energy Star, and many others measure outputs and create a rating system to assess eligibility.97 The Sustainable Sites Initiative (SITES) was started through non-profit interest in encouraging more thought in landscape design and maintenance.98 SITES was created as a collaborative effort between many different organizations99 to establish criteria for evaluating sustainable landscapes.100 It was developed to be in alignment with LEED.

The SITES rating system was modelled on the credit system used for LEED; it has requisite components and a flexible credit system to award points. One major required criterion for all SITES certified projects is an environmental management plan.101 All participants must have a long term maintenance plan that extends sustainability through the life of a project. Some LEED projects have been criticized for achieving environmentally sustainable goals during

99 The American Society of Landscape Architects, The Lady Bird Johnson Wildflower Center at The University of Texas at Austin, and the United States Botanic Garden were involved in the creation of SITES.
100 Marisa Long, “GBCI Launches SITES, its Newly Acquired Rating System for Sustainable Landscapes,” USGBC, 10 June 2015.
construction, then using average or higher than average energy during operations, eliminating the intended energy savings from construction.\textsuperscript{102} Requiring the integrated design team to address maintenance for site management, and also including “Adaptive Management” in the prerequisite, to ensure that the management plan is reviewed and updated yearly,\textsuperscript{103} attempts to create lasting benefits from SITES certification.

SITES is now owned and managed by the Green Business Certification Inc. (GBCI), which also assesses LEED and five other green programs.\textsuperscript{104} While the certification systems remain separate, USGBC encourages projects to seek both for an individual project, and the two programs share certain credits.\textsuperscript{105} SITES applies to landscapes of all scales, with or without structures on them. Just as LEED went through a two-year pilot program, SITES followed the same process. Test projects were chosen, a large variety of technical consultants were contacted, and public comments were accepted.\textsuperscript{106} From the 150 projects that participated in the pilot program, over half planned to pursue certification after the program officially launched.\textsuperscript{107} Feedback from the pilot program, as well as subsequent commentary, have influenced the program to refine the credits. Certification measures outputs and the credits provide guidance on practices.

\textsuperscript{102} Cathy Turner and Mark Frankel, \textit{Green Building Performance Evaluation: Measured Results from LEED-New Construction Buildings} (New Buildings Institute, 7 July 2011).
\textsuperscript{103} Sustainable SITES Initiative, \textit{SITES v2 Rating System}, 101.
\textsuperscript{104} Performance Excellence in Energy Renewal (PEER); WELL Building Standard; Excellence in Design for Greater Efficiencies (EDGE); GRESB; Parksmart.
\textsuperscript{105} Sustainable Sites Initiative, “About SITES.”
Conclusion

Over the past two decades, certification programs have developed and grown more sophisticated. They are growing in popularity because they can influence markets in ways that other tools cannot. The flexibility and scope that such programs provide make them a valuable tool in affecting change in fields. Sustainability is a growing concern in many fields, particularly the construction industry. There are many benefits to a system such as LEED, which has raised the standard for green development. Using easily understandable metrics can allow users to participate in the program, but can also oversimplify complex sustainability problems. SITES was developed in 2005 to go beyond building sustainability. Providing a management and maintenance plan is important to ensuring projects remain sustainable through their lives.

Certification systems require stakeholder participation and consensus based standards. Successful programs continually develop based on feedback, studies, and experimentation. While a large number of participants in a certification program is needed to enact change in a field, the goal of market transformation must remain the overriding principle for socially-based certification programs to provide public benefits. Market penetration or proliferation should be a means to this end. As such, most certification programs cannot act alone, but must work with existing tools, government regulations, and be designed so as to allow for periodic revisions.
Chapter 5: Potential Program Scope

Voluntary certification programs operate on the basis of market incentives for participation. Because of the voluntary nature of the programs, interest in the program comes from benefits, perceived or real, in having third-party recognition. To determine the best structure for creating a viable certification program based on preservation methodology and values, a market needs to be identified, and benefits revealed. Benefits can occur at many points in the development process. Mapping where these benefits occur can reveal who the ideal target users are, as well as the general market conditions that have the potential to confer these benefits.

A preservation-based certification system can have wide applicability and bring social and cultural values into sustainability efforts in the built environment. The layering of history and extant conditions occurs in all settings and geographies. With an estimated one billion square feet demolished and replaced yearly in the United States, buildings have a large market to increase reuse and integration of the built fabric in projects.\(^{108}\) By encouraging projects to integrate the existing fabric, this number can be reduced, creating a building culture that views existing structures as resources.

This demolition and replacement estimate does not include retrofit projects, which made up approximately 61% of all construction activity in 2009.\(^{109}\) Including preservation in the renovations and work already happening with existing fabric can increase the likelihood that they will include social and cultural values. A building culture with a broader array of project


evaluation criteria may in turn lead to a more nuanced approach to decisions leading to demolition.

Because of the wide potential applicability across the built environment, specific users of any potential tool must be identified and targeted. Not all actors in the built environment will be interested or capable of participation. A certification tool seems to be most immediately applicable to commercial corporations, institutions, medium- to large-scale affordable housing developers, small businesses, and community actors. These potential users can have a close connection to their community or a desire to demonstrate social responsibility and can access market benefits created through certification. These market benefits occur through creation of the project, long-term benefits, and consumer choices.

**What Drives Certification Participation?**

In a free market economy all private companies seek to make a profit. The additional benefits that certification can convey, financial and otherwise, can drive proliferation of certification in a market. There are a variety of reasons for a private company to decide to pursue certification. Linton lays out three major driving forces for interest in certification: mission, quality, and market.\(^{110}\) While companies may have an interest in multiple areas, one force acts as the primary motivation for pursuing certification. These three drivers have different implications for a successful certification program. Users’ driving interest for pursuing certification can direct the focus in the creation of the program.

Companies with an ideological commitment to social and cultural sustainability incorporate these goals because they find the principles important. They may already be practicing some desired functions, and certification can codify this, or commit to the goals of the process after exposure to certification. Participation may become an integral aspect of a firm’s Corporate Social Responsibility (CSR). CSR is a rising consideration for large scale companies that want to be regarded as sustainable and ethical. For example, commitment to the environment from corporations is often done through LEED. The Best Buy Corporation states that because the corporation has a “commitment to sustainability […] certification is just part of how we’re doing business.” Larger corporations that use certification as part of their mission are more likely to seek out projects that can successfully use the program, and integrate the goals from the beginning of the process.

Quality-driven users see certification as a method to reduce variability between products. As a market, the building industry has a variety of building codes to ensure safety and stability. Planned service life, maintenance, design aesthetics, and efficiency can present a wide range of quality. Older buildings had access to materials and techniques that are not available or are prohibitively expensive now. Reusing these structures capitalizes on these often durable and valuable components. Adaptive reuse can integrate these elements, while introducing contemporary materials and systems not previously available. These projects can make the most of the past and present.

Encouraging diversity and fostering social connections through a proven development process that addresses design, construction, and management can allow certification to promote the consistent value of participation. According to Moretti, cities that encourage

111 USGBC, LEED in Motion: Retail, 2014.
innovation and information exchange through social connections will continue to outperform other cities, and this divide is going to increase.\footnote{Enrico Moretti, \textit{New Geography of Jobs} (New York: Houghton Mifflin Harcourt Publishing, 2013).} The findings from the Preservation Green Lab indicate that older buildings play an important role in fostering innovation and entrepreneurialism. In Seattle, WA and Washington D.C., areas with “a smaller-scaled mix of old and new buildings host[ed] a significantly higher proportion of new businesses, as well as more women and minority-owned businesses than areas with predominantly larger, newer buildings,” and a greater number of creative jobs per commercial square foot.\footnote{Preservation Green Lab, \textit{Older, Smaller, Better} (National Trust for Historic Preservation, 2014), 4.} This means that reusing buildings can contribute to a competitive market that attracts additional jobs and demand for space. While this is only one aspect of a competitive marketplace, it can still translate to significant returns for investors, and economic benefits to neighborhoods.

Consistency in standardization in assessment also provides an incentive to use the program. The global restaurant corporation Yum! has been certifying buildings with LEED in order to measure impacts globally using a common metric.\footnote{USGBC, \textit{LEED in Motion: Retail}, 2014.} Regional variations are critical to account for in the design and construction process, but for analysis purposes, a widely applicable certification program can be useful. For large corporations, this can be a major benefit.

Certifications from market driven users are the result of tangible and intangible returns based on consumer demand or economic savings for certified products. These can come on the production side, including savings on materials, operating costs, or maintenance, as well as on the consumer side, such as price premiums, increased occupancy, or faster leasing. Companies
with long-term planning can also see the benefits of including preservation in their operations. The Conceptual Framework of the Sustainability Accounting Standards Board states that

“[n]egative environmental and social externalities, by definition, generally do not currently affect the financial returns of companies that generate them. However, over time, large externalities are likely to become internalized, either through social and political pressure or through market mechanisms, making these companies and industries less profitable and competitive.”¹¹⁵

As consumers become savvier, the market driven benefits of certification are likely to increase. Trends in LEED demonstrate that with every project completed, the expertise of a team seeking certification increases, and there is a subsequent decrease in costs.¹¹⁶ Therefore, as more producers seek certification, the cost of compliance is likely to decrease.

**Potential Target Participants in Certification**

Voluntary certification has multiple user levels. Immediate users are the clients or owners who actively seek certification and participate in the program. Secondary users can include architects, contractors, engineers, and more. These users have a direct relationship with the program, and must understand the standards and process, but the choice to pursue certification comes from the primary users. There are also indirect users of the program. These actors create the market conditions in which certification becomes beneficial. Examples of secondary users are residents, consumers, neighborhood groups, government agencies, and

tenants. All users affect the success of the program. Potential users need to be targeted during program development.

**Large-scale participants: Corporations and institutions**

McGraw Hill states that social values can be a significant contribution to selling “green” retrofits, particularly for educational and health care facilities.\(^{117}\) Selling points of building “green” tend toward environmental and economic benefits, but the interest in social benefits is increasing in the market. Other markets have corresponding reports on the importance of social values. For example, “73% of hotel owners report that protecting or enhancing their brand will prompt them to engage in new green building projects,” and 61% of retail owners cite the same reason.\(^{118}\) Owners interested in social sustainability as part of their mission are the most likely initial users of a preservation-based certification program. Sectors that value social gains highly (education, health care, and commercial) also have the highest rate of LEED Certified projects.\(^{119}\) This demonstrates the willingness to pursue a third-party certification, as well as the areas in which a socially sustainably focused certification has the most appeal.

Urban institutions are interested in fostering these values. As institutions expand, integrating development with existing community values and fabric provides benefits to residents and users. For example, an urban university has limited expansion real estate, and must work with existing buildings. Redeveloping these in adherence with preservation methodology, even if they are not historically significant, can ground the projects in a sense of place, instead of creating a disconnect between institutional buildings and their contexts.

Institutions have a strong sense of social ethics, just as many corporations are beginning to publicly demonstrate commitment to CSR.

The social and cultural goals of the certification program naturally lend themselves most immediately to mission driven interests. In this case, larger corporations or institutions are often able to absorb any initial costs and tradeoffs in return for benefiting the local and exemplifying holistic sustainability values. CSR can become a significant driver for national brands interested in providing or appearing to support local diversity and culture. In planning for a retail store, hotel, or office space located on the site of an existing building, clients and designers can work together to ensure that the individuality of a place is expressed and social capital is fostered.

*Small-scale participants: Local actors and community initiatives*

Potential users of the program are not limited to large scale companies. While there can be some difficulties small businesses face with voluntary certification, there are also advantages for them inherent in preservation centered criteria. Many small businesses have a close connection to their community. Close community interactions can benefit these users, and they can utilize their first-hand knowledge to create nuanced spaces that respond to community conditions. Local actors can utilize the certification as a way of advancing the values that drew or kept them in the area.

Local Community Development Corporations (CDCs) can become major participants in the certification program. These groups already play a role in guiding change in neighborhoods. Acting as developers, CDCs produce an average of 7.41 million square feet of commercial space and 96,000 housing units annually.¹²⁰ Specific functions of individual CDCs vary, however, they are all based to varying degrees on community building. Therefore, social and cultural values are

---

already embedded in the organization. Certification can provide guidelines and a process for incorporating these into the built fabric, ensuring that as economic development grows, social and cultural values are enhanced.

**Potential Consumers of Certified Products**

The direct users of the certification program are those with real estate and construction interests who have a stake in the community they are acting in. However, programs are not successful without indirect users that create market conditions that reward certification labeling. Socially based certification programs in other fields were not originally created in response to market demand. Advocates wanting to induce market transformation created initial social justice certification and then sought to educate the market. This advocacy brought about Fair Trade Certification and other socially-based systems. While there is more consumer awareness to social issues because of these advocates, a consumer market still needs to be developed. Education and advocacy for consumers forms a critical part of certification success.

Some secondary users have an express interest in fostering the social and cultural sustainability of a neighborhood. These groups can act as consultants through the process to reveal pertinent information, particularly through community meetings. Many community members have a vested interest in promoting good development. When outside forces act in a neighborhood, current residents often react with distrust. A team that has previously constructed holistically sustainable projects, and is continuing this trend may gain more credibility with residents. There will always be some residents who distrust change, but the majority of urban residents reject change because there is no benefit or connection to them.

---

121 Linton, *Fair Trade*, 74.
Project teams who have a demonstrated commitment to working within the context of a neighborhood, responding to existing conditions, and respecting distinct character will be able to have productive conversations with community groups about future change. This can open a more balanced conversation about the project, and provide legitimacy to the team’s stated goals and methods. A history of socially sustainable certification will not lead to a stamp of approval from all parties, since local actors will judge the current project based on its own merits. Having an outside party declare something socially beneficial may not produce confidence in all communities, especially as the program begins. It can, however, allow the project team to approach the community discussion with higher level of believability and trust, if they begin with a demonstrated willingness to design for existing residents and incorporate community ideas and needs into projects.

Individual actors can also provide market benefits. Knowledgeable consumers choose to shop, eat, and play at commercial establishments that fits their personal needs and lifestyle. While studies have no consensus about the premiums consumers are willing to pay for socially responsible products, clear certification labeling can still influence market decisions. In a competitive market, consumer’s choice between multiple options can be powerful. Many consumers have brand loyalty. Certification acts as a type of branding, representing collective social health. Consumers who connect with that message are more likely to patronize certified places and brands. This consumer power can influence commercial properties, or extend to residency decisions, based on surrounding amenities and social connections. There are many consumers who prefer to patronize locally owned and operated business, or those that give

123 Ibid, 168.
back to communities, for example. Social certification can act as an additional layer for these conscious consumer decisions.

Many commercial tenants, particularly the creative class, can also act as consumers of certified properties. When looking for space, artists or entrepreneurs are more likely to choose smaller, older buildings, or places that convey character. These places foster innovation and creativity. Products that retain their tangible and intangible values as they are developed may see lower vacancy rates, and in the long-term may command higher returns from increasing demand by consumers.

The awareness of social benefits will lead to increased market demand for certification. Based on data from the “green” building movement, this can lead to greater returns from consumers. As viable returns are demonstrated, a greater number of products will seek certification, for competitive advantage and market incentives. This will broaden the program to a greater number of producers whose decisions are primarily market-driven. These users may have social interests, but are unable or unwilling to construct projects with social benefits certified without market returns.

All that said, major developmental pressures require significant returns to counter. Even if all detrimental developmental pressures are not explicitly defeated, certification can still raise awareness and knowledge about strategies to incorporate social benefits, such as active sidewalks, to projects that function within the free-market, and add greater social consideration to projects.

In addition to market forces from consumer preference providing benefits for certification, the government can provide benefits to encourage certification. Certification has

the flexibility to respond to market demands and encourage more innovation than regulations from the government. While voluntary certification programs are created by NGOs and not intended to act as regulations, a partnership between these and government entities provides benefits to both.

Current strategies to encourage voluntary certification can include expedited processing for permits or reviews, or financial incentives in the form of tax credits or abatements. Municipalities vary in strategies used, if any. Benefits are targeted to specific areas within a municipality, concentrating benefits where they will produce effective results. This partnership between NGOs and governments allows tangible and immediate benefits produced from the government to act as incentives for private developers to participate in certification, and for certification programs to guide development to provide communal benefits for the city. This can create geographically specific benefits to encourage participation that a generalized certification framework cannot.

Products Suitable for Certification

Potential users for the certification program reveal the areas in which certification can produce the most results. With corporations, institutions, local development groups, and local property owners as the projected initial users of the certification, the scope of buildings available for certification can be defined. As Chapter 3 discussed, the majority of preservation tools are focused on designated or eligible historic buildings. This limits the influence of preservation benefits to a small share of the market, when many of the major goals of preservation are universal. The mission statement of the National Trust states that they “build
vibrant, sustainable communities,” and “create a cultural legacy.” These communities do not exist solely in designated historic districts. Because cities are always changing, having preservation protections as a goal for the majority of buildings is unsustainable. However, including preservation processes as the framework for a tool for guiding this change will result in better projects.

The goal of the program is to incorporate social and cultural values into construction projects; private projects will have a public benefit. To achieve this the construction process, management, and design can be evaluated, however, physical space under review is limited to public areas. Based on the nature of certification programs, the market incentives, and the users, single family residential buildings do not easily fall under the qualifications for certification. While these represent a large portion of the built environment, they are comprised of entirely private space on the interior. Additionally, more than half of single-family houses are owner-occupied, and the benefits of labelling shows that certification is most applicable to actors responding to market forces. These market forces capture the benefits of preservation, whereas many homeowners are responding to family needs in rehabilitations or purchases.

City and neighborhood plans that recommend community development act as guidelines for identifying areas that can benefit greatly from this preservation-centered development. Areas with high development pressures may be identified as losing their sense of community, and be prime targets for socially sustainable development through the certification program. Many development pressures come from underlying zoning, which creates a greater impact than guidelines or master plans. These alternate directives still have an impact in

---

126 American Community Survey Data, 2014.
directing future development, however, and are more easily and quickly changed than comprehensive neighborhood zoning. Neighborhood change is inevitable, but too often it is linked with losing character, social connections, and diversity. Having new development utilize the assets of a neighborhood, closely connect to the context, and understand the social fabric and cultural importance of a place can mitigate this undesirable development. Local groups and actors creating a master plan, or guidelines can encourage participation in certification as a method to work with new development projects. Preservation methods allow a project to act as a continuum in the timeline of a place, managing change to utilize the best of the past and the present to create a new future. By identifying the essential aspects of an existing building, whether physical or not, these can be incorporated into a new iteration that responds to contemporary needs and opportunities.

Certification is not effective without market incentives for participation. The majority of benefits, particularly with a new certification label, come from consumer preference and potential branding via certification. A design criteria of certification usually covers the public or commercial space in a project, for example the selling areas of commercial property, or publically accessible spaces, especially as the intent is to provide communal benefit. Mixed use buildings or large-multifamily residential buildings with common spaces can also be designed with these benefits in the public areas. Integrating retail, housing, office, or other functions brings various users together, fostering diversity and vitality at multiple times during the day.

For example, there is a logic to the traditional corner store in dense urban neighborhoods, whether part of a commercial corridor or standing alone. Local amenities are provided within walking distance. Though the services provided may change, the act of walking to a local store brings community members together in random ways, creating urban
interactions specifically rooted in the community. The design of a corner store can encourage these social connections even further, by interacting with the street and creating spaces to congregate. Corner stores are an example of small scale reuses that can have a large impact on daily life in a neighborhood.

Changing building use provides opportunities to layer different narratives and uses with each other. In the post-industrial cities there are still many large industrial buildings that can be reused in unique ways. Similarly, many religious buildings are losing their original functions with diminishing congregations across the nation. Not having a religious function does not mean that communities should lose what these structures represented, or the connections between people they created and enriched. Showing the foundations of the neighborhood and community through existing buildings is important for grounding areas that are developing quickly. Renovations to support community centers, non-profit organizations, or even private commercial use with a social dimension, like a meditation studio or a bar, can all bring new life to a religious building that is moving to a new use. These renovations can bring new life to the building, while the history of the area is told through the fabric. Certified development would ensure the cultural value is enhanced while social needs are met in instances where use changes.

Both institutions and corporations as users of the program show the potential for certifying a variety of uses. Institutional architecture can provide areas for public use, and many older established institutions are stewards of built heritage. In addition to institutions, corporations are another powerful potential user, because while in many cases small businesses are more diverse and support the local economy, global corporations are present in nearly every neighborhood. These places should not be ignored, but encouraged to rethink how they interact.
with the areas they are located. With strong branding and marketing, certification can utilize CSR as a method for incentivizing and driving more contextually and socially grounded corporate retail. This is most easily developed for small retail, such as coffee or beauty services, rather than box stores, however, as these places directly market to the communities in which they are located. Many do not currently provide nuanced design decisions when inhabiting existing buildings and insert pre-planned corporate designs inside a stripped shell. Participation in a preservation-based certification program would require a more thoughtful approach to integrating existing elements into the interior of retail buildings.

**Conclusions**

The potential for certification is not bound to a specific typology or time period. The layering of fabric, turning the built environment into a palimpsest that maintains and creates a social and cultural identity, can be applied to a variety of public spaces. Though there are national guidelines for preservation, notably the Secretary of the Interior’s Standards, there is not always a single clear preservation methodology that is universally applicable. This reinforces the need for flexibility, to incorporate the many ways of working in preservation. While the main intent of the program is to encourage private use of preservation methodology in projects that are not historically designated but still contribute in important ways to the social and cultural vibrancy of a community or place, there is also potential to utilize a program outlining this development for designated buildings as well. Nationally designated buildings are not protected through regulations, but are deemed significant. New development of these places should integrate the historic values, and certification can guide this. This begins to create a public-private partnership between the certification program and the government, which the National
Research Council identifies as important for creating incentives, and allowing the government additional paths to directing development that provides public benefit.

Potential users of the program have different reasons for participation, indicating a range of potential projects that can seek certification. Initial users identified above can raise the visibility of the program, and it can then extend to other participants in the future. Critical to the program development is the outreach and education of both primary and secondary users. Without education about the benefits there will be no market demand. Development responds to demand, and with low demand, the program will have a limited scope, rather than enacting market transformation.

Federal Historic Tax Credits (FHTC) are a powerful, federally directed tool. These have created market transformation in how historically designated income-producing buildings are developed. The creation of other powerful federal tools that achieve similar effects for non-designated building, or projects not using federal funds, is dependent on political forces and major advocacy from the preservation field. The advocates for preservation already struggle to maintain and refine existing tools, and further calls for federal tools could undermine the important existing tools. Even if such a tool is created, it still cannot produce the same results as a third-party certification tool. As such, the preservation field should consider other methods to expand the methodology, values, and benefits of historic preservation to a wider range of projects. Certification cannot act alone, but can be a tool to influence certain actors in the built environment, and allow consumers to create informed decisions based on how a project is developed, designed, and managed. The built environment needs much more recognition of social and cultural sustainability, and preservation can influence and direct these aspects in the future.
Chapter 6: Organizing institution and management

Certification programs must be recognized as impartial. Their management and formation cannot be regarded as a closed or elite process. There are multiple ways of beginning a new program: a new and independent non-profit, integration within an existing organization structure, such as the National Trust for Historic Preservation, or attached to an existing program, such as a subcategory of Leadership in Energy and Environmental Design (LEED) Accreditation. While the creation of certification programs is relatively recent, their popularity has been growing over the past twenty years. The proliferation of programs created in the past decade presents an opportunity for new initiatives to learn from the successes and failures of existing programs.

Recent interest in certification programs means that many programs have emerged with similar or overlapping goals. Whether there is market saturation of certification programs remains undetermined. However, based on the findings of the National Research Institute, there seems to be potential for integrating current and new programs. While there are a variety of programs, with some being well-known among consumers, participation in programs has room to increase. There is low market penetration in many fields, even as awareness is growing, indicating that the potential for certification programs has not been met. In the building environment, surveys indicate, for example, that the majority of retail owners know what LEED Certification is, and many consider using it. A new program dealing with the built environment and sustainability could capitalize on the recognition and market penetration of the LEED system. To accomplish this, there are two major stakeholders already established as non-

---

governmental organizations (NGOs) with the potential to collaborate, create, and manage a new certification system focused on social and cultural capital: the US Green Building Council (USGBC) and the National Trust. These two organizations are recognized as leaders in their respective fields, with a high degree of professional knowledge and engagement. Creating a new program within one or both of these organizations is more likely to mitigate concerns about certification programs having overlapping goals. Integrating goals within existing programs will ensure that a holistic approach is possible for users.

Additionally, one of the pitfalls that certification programs can fall into is the goal of market penetration overtaking the goal of market transformation. This is especially if there are multiple programs fighting for limited users. This makes certification the end goal, rather than a means of market transformation. With this in mind, it seems that integration or collaboration with LEED would be imperative for a new certification with similar goals, but independent metrics. Nevertheless, there would be multiple issues with incorporating a preservation-based certification program within the established LEED program. In her evaluation of the two organizations, Feran Kleon looked at the mission statements and working methodology of both the USGBC and the National Trust. With respect to the USGBC, one of the largest conflicts between a socially and culturally focused program and the organization is the system of credits and points that is based on quantitatively measurable interventions to solve environmental problems. LEED credits were created on the basis of easily understood and quantifiable metrics that reduce the damage that the building industry causes to the environment. These are intended to act as indicators for the total environmental sustainability of a project.

The ideological underpinnings of using a preservation approach is to maintain existing values and manage future change to allow for social and cultural benefits and new juxtapositions to occur that improve livability. Quantifiable and qualitative metrics are necessary to encourage a holistic approach for designing and managing projects to encourage and maximize their social-cultural public benefit. Although working within an existing framework provides benefits, the extant program must ideologically match the new. This is not the case with LEED and a new socially targeted program. They have complementary goals of reaching sustainability in the built environment, but begin with somewhat different priorities to reach a solution. LEED was created with an environmental focus, and therefore prioritizes energy use and ecology. Adding social and cultural values would likely take a lower priority if grafted on to LEED, when they are deserving of equal consideration.

On the other hand, the National Trust does not have an inherent ideological divergence from a certification program based in preservation. As the major advocacy organization in the United States for historic preservation, the Trust has the knowledge and connections to create a certification program grounded in preservation methodology to achieve its goals. It also has the national reach that can provide a united metric across geographies to allow for consistent implementation. This is critical in certification development, because consistency and transparency is one of the identified requirements for a trustworthy certification. While the Trust has the established reach, there is ample reason to believe that they may lack capacity or organizational desire to create an expansive program.

The focus of the National Trust has been clearly defined recently by its President to provide information and resources to community leaders and preservationists, advocate for existing programs and funding, and reaching a wider audience. This renewed and broadening
focus of the organization was created to mitigate lower operating revenues and an excess of programs in relation to its capacity.\textsuperscript{130} Even with a focus on existing programs, the Trust is continuing to foster conversations about the future of preservation and additional tools used, demonstrated in the two talks “Beyond the 5 Percent” focused on undesignated buildings, and “New Tools for Preservation,” both held at the 2015 annual conference.\textsuperscript{131} They have also started a research branch, the Preservation Green Lab, to study the “values that older buildings bring to their communities” with a focus on environmental benefits and preserving character.\textsuperscript{132} With limited capacity, an extension of the National Trust to create an additional tool that they would be committed to reviewing as an independent and unbiased third-party is impractical. A new certification tool to expand the purview of preservation to a wider number of projects cannot ignore the powerful existing tools that address other preservation issues. Trust resources for advocacy and education about these existing tools should not be diminished to make way for a new experimental tool. It continues to produce research, technical help, and pilots programs to act as a forum for discussions, and a new tool can become a part of these efforts, but the creation and management of such a tool extends beyond the current reach and purview of the National Trust.

In creating and managing a neutral third-party certification program that encourages, recognizes, and certifies social and cultural sustainability practices, a symbiotic relationship between the two applicable organizations should be sought for maximum effectiveness. The USGBC understands certification systems and encouraging the popularization of public benefits

\textsuperscript{131} \textit{Pastforward}, National Trust for Historic Preservation Conference, 3-6 November 2015.  
in the private development field. It also has a significant role in the sustainability movement, and the capacity to expand further, as interest continues to grow. The Trust has the connections to bring the many different stakeholders together needed to create meaningful, consensus-driven credits that measure project achievement. The two organizations can complement each other and can mitigate any weaknesses.

Communication between these two organizations already exists, having been established from previous efforts to integrate the values that the National Trust brings to the sustainability goals of the LEED program. During revisions leading to LEED Version 3,\textsuperscript{133} the stakeholders of both organizations met and exchanged ideas.\textsuperscript{134} The Sustainable Preservation Coalition was created in 2006 by the National Trust to act as an advisory council to the USGBC.\textsuperscript{135} The final version of the revised standards included some of its suggestions, in particular, the recognition of material sustainability of reuse through Lifecycle Analysis.\textsuperscript{136} However, the qualitative suggestions and incorporation of social and cultural goals that were suggested in the discussion were not included, and only mentioned in preservation literature as future development. As LEED was revised again in 2011, creating LEED Version 4, reuse of existing buildings was again recognized and encouraged, but social and cultural goals were not included.\textsuperscript{137} This disconnect demonstrates the difficulty in quantifying the suggested goals of incorporating intangible aspects into projects with any specificity. This initial collaboration

\textsuperscript{133} Also known as LEED 2009.
\textsuperscript{135} Ibid.
\textsuperscript{136} Ibid.
\textsuperscript{137} Mark Huppert, “Greenbuild 2013: LEED v4 Takes the Stage,” preservationleadershipforum.com (11 December 2013.)
between the two organizations indicates a shared desire for a program, however, which could potentially incorporate these metrics of social benefit.

There is an increasing awareness in the USGBC that reuse of existing buildings leads to more sustainable development and is an effective tool for green construction. The creation of the LEED Neighborhood Development category explicitly includes “Existing Building Reuse & Historic Building Preservation & Reuse” as a point category.\(^{138}\) This only represents one credit, but the USGBC is beginning to pay more attention to historic preservation and reuse of existing buildings, as a tool.

The knowledge that the National Trust brings regarding social and cultural metrics in the world of sustainability is critical in the criteria development process, as is the recognition and expertise of the USGBC in certification and analysis of the construction and building process. Due to the measurements of LEED, there are unlikely to be major steps forward in incorporation of social and cultural sustainability within the program, but the two organizations, the Trust and USGBC, can work together to create a corresponding or supplementary program that addresses these additional goals for holistic sustainability.

The Green Business Certification Inc. (GBCI) acts as the independent evaluation organization that reviews LEED and Sustainable SITES Initiative (SITES) applications. The GBCI has a variety of certification programs create the inventory of popular construction certifications.\(^{139}\) LEED has created a category that rates building management in “Buildings Operations and Maintenance” (O+M). Many prerequisites and credits in O+M require ongoing

---

\(^{139}\) Ibid.
annual reports. SITES also demonstrates the possibilities of certifying ongoing management plans. All projects are required to create an environmental management plan, and rather than continually reporting purchasing and managing, as LEED O+M requires, projects have provisions to review the management plan annually and revise it.

While there is a high degree of recognition in the building culture about environmental sustainability, management plans are more difficult to certify. LEED and SITES explore methods for incorporating this. However, there are still limited guides to building socially and culturally sustainable projects. A program for projects working toward social and cultural sustainability can engage with professional stakeholders in the field, and partner with an organization with the capacity to administer the program.

One notable such attempt is the Sustainable Preservation Coalition, which gathers input from the American Institute of Architects, Association for Preservation Technology International, National Park Service, General Services Administration, and National Conference of State Historic Preservation Officers. These organizations all have some interest in the built environment, reuse projects, preservation systems, or preservation products. While none of them are likely to be wholly interested in creating and managing a third-party tool applicable to the greater building stock, their expertise and knowledge should be sought during the creation of standards.

There are studies and recommendations on incorporating historic preservation in metrics for environmental sustainability, but focusing solely on the environmental aspect of

141 Campagna, “Changes to LEED.”
142 Examples of such include research from Patrice Frey; Mike Jackson; Esther Hiu Kwan Yung, Edwin Hon Wan Chan and Ying Xu; Stephen Farneth; JulieAnn Patricia Murphy; Robert A. Young; and many publications from the National Trust for Historic Preservation.
historic preservation as it relates to other fields has major problems. Using historic preservation as a method for creating better projects and designs must extend its arguments beyond environmental sustainability because there are many other important benefits that it conveys. Because LEED is a tool based around the environmental impacts of a project, a tool for the social and cultural aspects of a project should be developed, in accordance with LEED, if necessary separately, to allow for different goals and measurements. Full integration with LEED does not seem to allow for the necessary differences that a new program would require, notably the focus on intangible areas, the need for qualitative evaluation, and the collaborative process inherent to many preservation projects.

The National Trust is already positioned to foster discussion on the creation of a rating system for social and cultural sustainability based on preservation values. The Sustainable Preservation Coalition engages with the many professional stakeholders in the field, and further collaboration between the USGBC and GBCI can provide the expertise in applying specialized measures to a large array of projects and unbiased assessment throughout the certification process.

**Certification Process**

The certification development process mainly relies on creating a rating system that can be broadly applied to products and their application. In many fields, this defines the process of creation, the source of materials, or the impact of the final product. Rating systems need to balance achieving a meaningful market share with creating goals that encourage above-average outputs.\(^{143}\) Voluntary programs have the potential to direct the development of top-performers,

\(^{143}\) National Research Council, *Certifiably Sustainable?*, (National Academies: 2010).
but because of the voluntary aspect, they do not initially change the actions of the lowest level
of clients. Any voluntary tool will not initially guide real estate developers exclusively interested
in the most economic and expedient process, but it must initially be aimed at users interested in
investing additional time and money for achieving certification, which gives the right to brand.

Addressing a large field with a single certified product increases the chance of diluting
the rating system to the point of meaninglessness. LEED is one example of a tiered process that
can help raise high- and low- performing participants both.144 With different levels of
certification - certified, silver, gold, and platinum - the program provides high goals for LEED
Platinum, but also allows less advanced or less aspirational users to participate by providing
levels of potential achievements. This gives clients the potential to engage in certification on a
spectrum, while maintaining integrity in the rating system. Since the development, other
building certification programs including SITES have utilized a tiered approach, creating
relevancy across a wider range of projects.

This tiered process remains effective due to the constant revisions by the USGBC. As the
field absorbs changes from environmental advocates, benchmarks and techniques for excellence
are continuously raised and re-established. Refinements based on experience and research are
also incorporated, making each program iteration more focused and comprehensive. Changes
that add complexity make the process more difficult to navigate, requiring more specialization
to achieve certification. The sophistication required for certification can be mitigated by a
transparent process and freely accessible education. The National Trust has established guides
and webinars for navigating complex tools of preservation, and similar clear guidance for a
created program could also be provided. This would require development and work, but much

144 Ibid.
less commitment than taking on the entire program. Experts in the process can write technical guides that can be posted electronically, reaching the highest number of users with the least amount of organizational dedication.

The end target for certification needs to be clearly defined to ensure consistency during the application process. The rating system should have sufficient flexibility to create opportunities for large corporations and institutions to participate, as well as small scale neighborhood groups and real estate developers, as outlined in Chapter 5. This can be done by creating clear guidelines, accessible education programs, and a universal and transparent process. If additional users, such as homeowners, are targeted in the future, partnerships and a specific single family home-focused system will likely be required. Without consistency in application, the meaning of the certification diminishes. Respect and trust in the certification program process drives the market conditions that create demand for the certification.

Conclusion

With the current interest in certification programs, it is critical to ensure that new programs do not overlap with existing programs, but create complementary rating systems to add depth to development. The National Trust has an established mission and connections with stakeholders that can provide the necessary expertise in creating metrics to encourage social and cultural sustainability practices in the built environment. The USGBC understands how to create a successful certification program applicable to a wide range of projects and clients. These two organizations should drive the creation, while a much wider range of expertise and input is needed to receive all relevant input on the process. LEED included input from private entities during its creation. For example, the real estate firm JLL has multiple publications on
holistic sustainability, and is an example of a private firm that should be consulted in the creation of such a program.

After the establishment of the program, education and resources will need to be provided to guide users through the process. The National Trust has experience in creating educational tools, and their pamphlets can act as a guide for new resources. The Trust can create and distribute these as they do their other educational information, without a major increase in capacity. As the program grows and requires more dedicated resources, the Trust may have the funding and desire to increase its capacity, or separate organizations will take on the role of education and support, due to demand, just as there are many private systems in place to guide LEED Certification.

A third party organization such as the GBCI, which already assesses existing construction certification programs, could take over management of the certification process once established. Creating a consistent and unbiased review process is necessary. The GBCI operates various certification programs, the two most well-known being LEED and SITES. Through the expertise of professionals in GBCI or a similar organization, the newly created certification program will gain credibility and the capacity to assess many projects. While the GBCI has the technical expertise relating to green building, it may not be right for a preservation-based program that requires qualitative and quantitative measures for success. Whichever organization is able to manage the applications, it should be involved in the creation so interpretation is consistent. The creation of a valuation framework, even after the launch of the program, will be subject to review, and the metrics assigned should be flexible to allow for experimentation and adjustment as the program is used.

Chapter 7: Description of major challenges and conclusions

Despite the increased awareness of social justice in the built environment and holistic sustainability, there is no consensus on how to measure success. To create an accepted set of standards for reuse projects, a group of criteria must be developed through input from different viewpoints, stakeholders, and expertise. The difficulties of identifying and evaluating social sustainability include defining the assessment, including both qualitative and quantitative metrics, measuring ongoing change, analyzing delayed social benefits, and applicability to different construction types and scales. Some of these areas have initial solutions that are currently being explored to mitigate them and come to a potential resolution, but others are not. All require more discussion and research.

Defining the assessment

Many organizations have produced documents on indicators of social sustainability, but there is no agreed criteria or method of evaluating intangible areas of social and cultural values. These are complicated issues that extend well beyond the building and construction realm, but just as environmental sustainability is heavily impacted by the built environment, so are social connections and neighborhood development. The potential certification program addressed here is focused around the built environment. It cannot follow but rather only be influenced by any existing published criteria, which currently and generally consist of holistic sustainability evaluation of a city or region, social sustainability in other fields such as the coffee industry, or environmental sustainability in the built environment. Some programs, such as Fair

146 For example, the Fair Trade Certification, Circles of Sustainability, Culture 21, the Sustainable Accounting Standards Board, and the International Standards Organization. See Fig. 4.
Trade Certification, measures and rates social impacts within a field. Within the construction and building industry there are no such standards, however. The extant material can provide a starting point for the criteria, however, that should then be supplemented and guided through collaboration of different experts and project testing.

*Culture 21* lists multiple methods for local governments to use in promoting culture in policies and development. Some of these are not strictly governmental policies, and can be applied to the built environment from a hypothetical third-party. They lay out venues that should be encouraged for the production of culture, and the close participation of citizens in initiatives and developments, education and training, and guidance of renovation projects\(^{147}\). The actions recommended are still vague, however, and offer little guidance for specificity on how guidelines recommend the integration of culture.

One recommendation does include the use of “traditional construction techniques that add personality and distinctiveness to the city, rather than using models from elsewhere.”\(^{148}\) Continued use and development of construction techniques and materials that identify the place and continue the traditions can bring expertise to workers, as well as create a building that is a continuation of the history and culture of a place. New ground-up construction and also interventions in or additions to existing buildings should consider local and traditional ways of working. Additionally, reuse projects work with existing materials, which is environmentally sustainable, maintains the lived history expressed through these, and utilizes more labor, creating more jobs.

---


Many locally historically designated buildings are already subject to reviews and protections, as are buildings listed on the National Register of Historic Places, when projects involving them make use of government funding, triggering compliance with the Secretary of the Interior’s Standards. Because of this, a new tool should focus on applicability to non-designated buildings and buildings listed, but not required to comply with the Standards. Requiring stakeholder participation, a conditions assessment, incorporation of existing design aspects, and a management plan can make these projects contribute to the holistic sustainability of their community.

Colantonio and Dixon emphasize demographics and participation,149 as does ISO 26000 on Social Responsibility.150 These can help an area that is facing developmental pressures and potential displacement of long-term residents. Participation is important to ensure that negative affects to existing residents are mitigated, while an area can still undergo change and evolve. Housing reuse that caters to a mix of income levels, or maintaining a single-family house in a predominantly owner-occupied neighborhood are strategies to ensure that neighborhood changes happen gradually, and do not force displacement or create social tensions.

A primary aspect of a preservation-based certification program should include a thorough conditions assessment, not only of the physical characteristics of the building under consideration, but also of its tangible and intangible context. Appropriate use, design, and future management can emerge after understanding how the site functions, or its potential to contribute to the larger context. The metrics created can be flexible and rely on an initial

assessment. This can allow each project to go through the general certification process, using site-specific metrics derived from its own significance.

After the existing conditions are defined, the development process and design decisions should involve a multidisciplinary team, include the community, and incorporate the knowledge gained through the pre-design assessment. Reusing the physical material of a structure provides a sense of continuity and connection. This still allows for change and synthesis between new interventions and existing fabric, but criteria should be developed to measure success.

Understanding what works and does not can lead to better metrics and decisions in the future. Influencing design decisions is a major part of building certification programs, and aspects that have a direct impact on community interactions or livability should be included in a certification program that is focused on the social and cultural dimensions of a project.

Maintenance and operations after project completion shape many ongoing effects of the resultant building after it is put in use. Places are only as sustainable as the management methods are. Even if a commercial building design includes multiple ways of activating the street, if the storefront stands vacant for years, this can still have a negative impact on the community. Vacancy is not solely determined through management practices - the broader context plays a major role - but there are strategies in the operation of a building that can attract tenants, including competitive pricing, high levels of building maintenance and services, or temporary uses to activate the space. Measuring ongoing change is addressed more fully below, but creating a certification program with the intention of encouraging social responsibility must include some guidance for future management of a property.
**Qualitative versus quantitative standards**

One reason that the US Green Building Council (USGBC) has not synthesized suggestions from preservation stakeholders that encourage adding social and cultural values to their assessment is the tension between quantitative analysis and qualitative analysis. LEED evaluation is based on quantifiable metrics that add up to a point total. It mostly works as an unbiased and objective process, with almost no interaction between participants and assessors. On the other hand, the National Trust for Historic Preservation is focused on advocacy for preservation initiatives, and works directly with participants. These two opposing methods are difficult to reconcile. To create a consistent process required for a certification program, a checklist provides the understandable and predictable process that participants require. On the other hand, the intangible aspects of social and cultural sustainability can be impossible to identify and quantify.

There have been attempts to create metrics that capture the byproducts of socially and culturally beneficial projects. For example, the Preservation Green Lab has created a set of forty metrics to quantify the effects of a diverse urban environment. The Preservation Green Lab utilizes emerging Geographic Information Systems (GIS) technology to visualize these metrics. *Older, Smaller, Better* analyzes the secondary effects produced by diverse city blocks. It assesses the practical knowledge that professionals in historic preservation use, and creates quantifiable results.\(^{151}\) The impact of these places in the urban landscape is important and makes for a vibrant city. Street activation at different hours, as Jane Jacobs champions, has been measured through cell phone activity, giving new methods to understand how users interact on a street. Some attempts to understand or quantify cultural or aesthetic connections have taken forms of

---

tracking social media mentions, or picture sharing platforms. These are some examples of new metrics that emerging technology may provide, in addition to the ability to track complex relationships and outputs through databases. These metrics of course rely on the assumption that every place and user has the same access and desire to use the same technology and platforms, which at the moment is a major and problematic assumption, but may lessen as technological sophistication increases.

These metrics measure the resultant behavior that socially conscious places create, rather than addressing the components that create these behaviors. The Preservation Green Lab was created as a research branch to demonstrate ways in which older buildings and communities do contribute to the built environment. Additional characteristics that can be included in future design iterations are not established in the report. It was intended to measure the effects of character and age, rather than define the aspects that create such character.

Other organizations are investigating possible ways to quantify the social effects of the built environment. As assessments develop, the quantitative metrics may be expected to become more sophisticated as new technology and information supports a more advanced measurement of outcomes. But these are not likely to be able to capture the entirety of the feeling of a place, the associations, and history imbued in the fabric. A program focused on the intangible benefits of the existing environment cannot discount the explanations and holistic understanding that can come from discussions on the qualitative integration of intangible benefits.

152 In JLL’s *Putting the Pieces Together*, four standards organizations with social interests are listed: Global Reporting Initiative, Integrated Reporting, EU Directive, and Sustainable Accounting Standards Board.
A new program developed and set for implementation in 2016 combines quantitative assessment and qualitative analysis. The Sustainability Accounting Standards Board (SASB) is aimed at enabling financial stakeholders to measure the environmental impacts of a company.\(^{153}\) Despite the inclusion of social and human capital in the conceptual framework of the program, the assessment program continues the focus on environmental sustainability over other areas. Nonetheless, each topic in the framework includes a “discussion and analysis” accounting metric, in addition to the quantitative metrics required.\(^{154}\) These non-quantitative metrics are within a framework of broad topics and have a specific focus, such as providing a “description of approach to measuring, incentivizing, and improving sustainability impacts of tenants” under the Management of Tenant Sustainability Impacts Topic.\(^{155}\) This is similar to the Leadership in Energy and Environmental Design (LEED) Certification credit for innovation, which allows for participants to include impacts, strategies, or opportunities that fixed categories cannot address. The innovation credit only translates to one point on the LEED rating scale, however, and there have been no published materials on innovative techniques used to allow other users to experiment or test the techniques. The interactive quality that the National Trust emphasizes for holistic development can be included in a standardized assessment system in this way.


\(^{155}\) Ibid.
Ongoing change

Nothing in the built environment remains static. Conditions, uses, and knowledge will continually change. Achieving certification at a single point in time for a project does not ensure that the project will remain sustainable in all areas through its life. The future of projects must be considered in a program. There is no direct analogy to this particular challenge. The closest may be the LEED Operations and Management (O+M), which, in its limited usage by the market, demonstrates the difficulty of measuring ongoing management and maintenance.

There are 3,480 projects, or less than 5% of total LEED projects, certified under LEED O+M: Existing Buildings (EB) according to the US Green Building Council website. Every project under LEED O+M requires that projects recertify after they have been placed in operation for at least a year, but no more than five years. Many credits in LEED EB: O+M require ongoing disclosure of buying practices and maintenance. The operation of a building exists longer than the design and construction process. LEED O+M acknowledges this disconnect, and attempts to ensure sustainable management.

The relatively small numbers of certified projects in this criteria do not reflect operations trends, as many built projects are including sustainable operations in their daily management. Maintaining certification for LEED O+M: EB requires continuous reporting and review with the USGBC. While existing buildings comprise the majority of the built environment, this is not reflected in the share of LEED EB projects. In the first quarter of 2016 only 75 projects, or 7%, of the total number of LEED Certifications, were LEED EB: O+M.

The Sustainable SITES Initiative (SITES) does not require recertification in the way that LEED O+M does, but it does include required prerequisites for a management plan. A system must be put in place to ensure that operations are reviewed and revised every year. There are optional credits for the ability to monitor sustainable design practices. This accomplishes the updated management plan to reflect adherence with sustainability goals of the project, without requiring official recertification. Ensuring continuation of the benefits of certification programs after design and construction is difficult, and LEED and SITES are exploring ways to direct the actual operations.

As with every assessment of sustainability, operations and management can reach beyond environmental impacts. Participation in community events, sponsorship, and local hiring can all indicate that a business or management is invested in the community in which it is located. Directives and encouragement for community participation and development should be included in a certification, and these activities should be included throughout the life of a project, not limited to the design process.

Both SITES and LEED programs include optional credits for education and training. Promoting education of users and managers can direct future change, or the reaction to change, to be more sustainable. Education helps with resilience. Change is a given during the life of a building, but the ability to respond to change sustainably comes from knowledge on the inputs and outputs of a system. As new conditions or problems appear, educated decision-makers can act with more knowledge and a greater awareness of the complex systems, both physical and intangible, that they are influencing. Awareness of the issues promotes greater understanding.

---

and research, and if a program or tool could increase the visibility of social and cultural conditions, better responses could be found in the future.

Outside of the construction culture, the Sustainable Forest Initiative requires contributions to research on sustainable forestry from its participants. This increases the education of individual actors, and promotes advancement in the entire field. Advances and research within fields has effects on certification programs. Successful certification programs are all tracked and undergo period reviews and revisions.

Ongoing change happens at the building level, neighborhood, and within the field of the built environment. Certification programs must understand that change happens, and be equipped to handle this. Requiring a management plan that can respond to change, incorporating education, and subjecting the entire certification framework to revision will allow a created program to adequately manage and account for change, with additional strategies such as recertification and research implemented if necessary.

**Delayed and mutating benefits**

Analyzing the existing conditions allows a certification program to synthesize existing benefits with beneficial changes. The resulting project can support a sustainable community, however, it is impossible to fully identify the social impacts of a project during design and construction, or even immediately after occupancy. This challenge derives not only from the tension between quantitative and qualitative metrics and the ongoing change in the built environment as discussed above, but also because social patterns require time to shift.

Energy outputs require a buffer period to effectively measure, leading to metrics such as the lifecycle analysis that predicts energy output, rather than measuring real energy
consumption over the life of a building. Social and cultural outputs can take an even greater amount of time to appear, and most likely will never be able to be predictably modeled. The creation of community, social connections, and cultural vibrancy does not occur within weeks of a project’s opening. A study on the social connections within two London neighborhoods by Kuchler and Lo Conte relied on surveys and examined the evolution of each neighborhood’s built fabric, and how it related to the businesses and lifestyles present. The questions revealed that many social aspects are long-term behaviors, such as shopping habits or entrepreneurial encouragement. These are established over months and years.

While the built environment has a major impact on these behaviors, sometimes the benefits are so delayed that attempting to measure them during the design, or just after construction is completed, can lead to a skewed conclusion. Both over- and under-estimations on the benefits of a project can occur. Delayed benefits in the social and cultural realm can mean that an assessment program has to rely on assumed benefits, have a buffer period to oversee the actual created impacts, or a combination of other strategies. More studies and discussions are critical to resolve the issues surrounding the appearance of delayed and inevitably changing benefits. How and when to adequately account for these in an assessment framework relies on specialized knowledge and experimentation.

Applicability to different construction types and scales

Certification programs can create a broad framework that can span geographies and typologies. The evolution of LEED Certification demonstrates that there are inherently different

---

metrics required for different construction types and uses. The pilot program of LEED addressed commercial and office construction. The program now includes 21 different rating systems under four primary sections.160 The expansion of LEED indicates that the generalization of a program has limits before it loses either wide scale applicability or meaningful requirements.

When projects deal with existing buildings, there are many different situations that may arise. Rehabilitation and reuse faces different types and degrees of variation than ground-up construction because of the unknowns that an extant building can contain. Metrics that direct the reuse of an office building may not adequately manage the reuse of a neighborhood corner store. Different construction types and uses determine the capabilities to support a continuing or new use. Projects can undergo similar design processes, but require different criteria for physical design decisions. After the building is put in service, the management of a project differs depending on many variables, not only the type of construction.

Due to the variation in process, fabric, and management, existing certification programs sometimes define specific criteria for different project types, as LEED does. SITES focuses on landscape development for projects over 2,000 square feet. There is one set of credits used within SITES, and participants have the flexibility to choose credits that apply to their projects.161 This flexibility is also seen in LEED, though the program is increasingly specialized. One of the major benefits of a credit based program is the potential to simultaneously provide broad and specific criteria. These can be combined in a multitude of ways to allow individual projects to adapt the standards that are most relevant to them.

160 The four primary rating systems are Building Design and Construction, Interior Design and Construction, Building Operations and Maintenance, and Neighborhood Development, with subcategories for each.
While SITES demonstrates the broad flexibility that a standards framework can create, the different categories of LEED are necessary to address cases with fundamentally different relationships between their fabric, context, and uses. As noted in previous chapters, LEED credits have given increasing weight to existing buildings through its revisions. Another major change emerged when LEED launched LEED for Homes in 2008. Single-family or low- to mid-rise residential buildings are differentiated from commercial or industrial buildings, and a new set of standards was developed to apply to these buildings.

Residential buildings contribute to neighborhood vitality in a different manner than other buildings. Street relationship and activation can be equally important to all building types, but a residential building approaches this through the creation of front stoops, porches, or small patios instead of garage doors in dense urban settings, for example. A commercial building can maximize the glazing, place street furniture, or create public-private open space. Strategies for many aspects of sustainability are unique to residential buildings. These differences indicate that if both building types are incorporated in a program, they must have different standards guiding the physical decisions made.

It is not only the design choices that separate residential buildings, however. The scale of a project has an impact on the criteria used as well. Established metrics are geared for application to neighborhood or city sustainability. The majority of existing social valuation methods are an attempt to create a holistic picture of large-scale sustainability. They are social metrics to demonstrate the total livability of a place. Older Smaller Better utilizes the smallest scale, evaluating blocks of a city that measure 200 meters by 200 meters. The age and size of

---

buildings are converted to a “diversity score.” Individual blocks are individually evaluated, however, but comprehensively mapped to give an overview of urban vitality. This allows comparison across different neighborhoods and cities. *Circles of Sustainability* was created to measure sustainability at the regional or national scale. Both of these methods demonstrate that it is important to think of the overall sustainability of a place, rather than seeing a project without context.

While large-scale sustainability can provide an overview of current conditions, there are no methods currently that apply to individual projects. The development patterns of the United States are not comprehensive, but occur piecemeal from many different actors. In urban areas, individual projects do not often have the ability to redevelop major swaths of the city. According to a survey by the Bureau of Labor Statistics, the average size of a commercial project is 42,358 square feet. Comprehensive sustainability of a place is dependent on the total built environment, but individual projects make up this landscape. Creating a program directed to individual projects follows development patterns and creates a path for influencing the actions that coalesce to define the sustainability of a place.

Without encouragement for individual projects to include social and cultural aspects, it is impossible for the greater neighborhood or place to achieve these goals. Private and public development each have an influence on the community, and these cumulative effects produce a place’s overall sustainability. While there are emerging measurements of larger scale sustainability, and officially categorizing or acknowledging these may be beneficial, smaller scale assessments could direct all projects toward a sustainable future. If the hypothetical

---

164 Paul James, *Circles of Sustainability* (New York: Routledge, 2015).
certification system is developed, determining a minimum size, or requiring multiple actors to reach a critical mass to influence patterns of a block, or requiring a general master plan to direct future development could all be methods to begin to resolve the issue of scale the provision of social benefits. Total sustainability comes from the sum of its parts, so hoping for regional or community sustainability without directing individual projects to include aspects that encourage sustainability may not have desirable results.

**Increasing attractiveness to all potential users**

The nature of certification programs, outlined in Chapters 4 and 5, dictate some limitations on what they can achieve and who they appeal to. Examples of potential users who would be most interested in a socially-grounded certification program are institutions, community development groups, small business owners, and corporations dedicated to social responsibility. These users have a real estate interest and a public image or connection to community building. Residents and homeowners also have a major interest in the future of their community. Targeting one set of standards for all of these potential users can be difficult, but focusing on the process and an analysis of the existing conditions can make it possible for a variety of users to participate.

The expertise required to seek certification would be one of the largest obstacles to reaching all potential participants. The complexity of a certification program could discourage smaller projects or participants with fewer resources from navigating the process. If a community or grassroots organization recognizes the social importance of a building, such as a church or fire hall, and reuses it, they should be able to access the same certification benefits as a developer reusing the same space. But these smaller organizations that act from within a
community may not have the funding, expertise, or resources to dedicate to a burdensome application process, with overly complicated requirements. The sense and pride of place, creation of character, fostering of innovation and entrepreneurialism, and representation of multiple histories and social uses can benefit all scales of users. They can also translate into financial and tangible benefits, such as encouraging stewardship and surrounding improvements, attracting businesses and tenants looking for character and diversity, and greater street activity. Programs that are easily understandable are easier to launch, can foster greater interest, and are more accessible to participants from all levels.

To allow users of all levels access to the program, the requirements should be clear and direct within a simple model. Education and technical help should include reasons and justifications for each section, so that the benefits of using the system are understandable. For example, a required contextual study on existing conditions provides the necessary information on what tangible and intangible aspects in its design and management the building has previously provided the community, and what benefits are currently needed. This informs the future use, design, and management of the current project, ensuring that all aspects include or enhance social and cultural benefits.

A simplified model does not mean that the connections and implications are not complex, however. The assessment in the Circles of Sustainability lays out 28 areas that can variously combine to provide a holistic view of sustainability, while still representing a complex underpinning of theories.\textsuperscript{166} With technical assistance, a simple model based on complex relationships behind the chosen metrics makes the certification open to users of all sophistication and economic levels.

\textsuperscript{166} James, \textit{Circles of Sustainability}.
As the program grows, increasing the applicability to a greater share of the built environment can extend the benefits further. The nature of certification programs is based in the market, meaning that, at least initially, it would have few benefits to residential owners or tenants. Developers or owners of large multifamily buildings can be attracted to the program through the branding and reputational benefits, but the same does not hold true for all homeowners. They may consider the market, particularly their home value and surrounding amenities, but often act on personal pressures and influences. Tenant participation in the program is more likely to be as a consumer, not a primary participant. They may see and buy into higher achieving projects through their spending power and conscious consumer choices, but do not have the resources or impetus to participate in choosing when to seek certification.

If a residential certification were to be created, a different framework would need to be developed. Not only that, but it would not be desirable without secondary partnership, since the market benefits of certification does not translate to residential development. These could create connections between the amenities of a neighborhood and provide continuity and assurance that the aspects they value in a neighborhood will remain through new development. For example, that the small-scale and mixed use of a commercial corridor will remain, and provide a variety of local and entrepreneurial services, or ensuring that there will be minimal or no conversion of housing types, such as the subdivision of current single-family homes. A homeowner’s tax credit, technical help, inclusion in a master plan, or creating a community coalition to seek out certification could be methods of partnering with certification standards to incentivize its use. The primary nature of a certification, at least acting alone, however, does not immediately lend itself to most small scale residential use, however. There are many regulations
and codes that direct these efforts, and certification can only work with these efforts, it would not have the ability to fight against them.

Conclusions

Sustainability is a major topic in the built environment today, and will continue to impact building practices in the decades to come. As the design, construction, and real estate industry grapples with environmental sustainability, using third-party certification programs has become a powerful motivation tool, it is critical to explore and understand how best to incorporate considerations of social and cultural sustainability. Constructing energy efficient buildings with negative impacts on the lives of people using them is not a productive path forward. The success of environmentally focused third-party certification programs seems to indicate a strategy for encouraging socially and culturally sustainable development, but, as the challenges explored above demonstrate, there is no apparent way to move forward with this.

A certification program can influence the decisions and development of individual projects, and provide benchmarks for the greater industry. As described in this thesis, many researchers and organizations have attempted to broaden the definition of sustainability beyond environmentalism. However, the broader building culture has not. Historic preservation creates many of the social and cultural values that contribute to a sustainable community, and should be a primary method for including these dimensions in the built fabric. The values and methodology of preservation can be incorporated into a certification program to widen the influence and enact greater change in the building culture. Beginning with valuing the existing material of a place, preservation influences the process, design, and future management of a project. Incorporating these areas creates a balance between continuity and change.
Interest in a socially and culturally grounded program exists in many organizations and publications. The social and cultural dimensions of sustainability are difficult to discuss and there are numerous obstacles in measuring them. To create a relevant and influential program, the major obstacles outlined above must be addressed. Many fields of expertise and different stakeholders are required to develop consensus on metrics for a new certification framework. These metrics should include requirements for documentation and pre-design research, development process, design aspects, and future management.

A voluntary third-party certification program can influence change in ways that government mandated regulations cannot, just as regulations are required in cases where encouragement and guidance does not produce needed results. Putting historic preservation as the foundation of such a program can go a long way to ensure that projects include the community and its existing social and cultural dimensions, foster stewardship, and create diversity. Instead of one-dimensional or bland construction that does not have a connection, reuse projects can result in the continuing evolution of a place. New construction and reuse of existing fabric both have the potential to contribute to a place’s evolution, and there should be sufficient and effective tools that encourage a balance of each, and a high standard for each.

Certification using multiple criteria to award points allows for flexibility, so that many projects can participate, while the voluntary aspect ensures that new construction still has a place in the building culture. Reuse cannot satisfy all demands, and new construction may be more beneficial in some cases. Requiring a project to be adaptive reuse would hinder progress, but creating a voluntary program that encourages reuse can ensure that projects first analyze what is existing, and determine how it can be incorporated in a new project. This can change the
Holistic sustainability requires consideration of ecology, economy, politics, culture, and society. As research and interest between social and cultural sustainability and the built environment continues, creating methods to encourage incorporation of these dimensions in reuse projects is critical to ensuring that development and construction projects positively affect people and places. A preservation-based certification program can create benefits and awareness to projects that include social and cultural dimensions. This can be a useful tool for creating holistic sustainability that works in conjunction with existing and future tools, but developing it will require initiative from organizations, discussions, research, and experimentation to overcome the barriers that it faces. As the myriad obstacles outlined in this thesis are explored, the hypothetical certification may transform into a new tool that more effectively directs the social and cultural dimensions. Whatever the end product becomes, the issues laid out here deserve more attention in the building industry, and historic preservation as a field should expand beyond its existing tools to influence the sustainability movement and add depth to the areas considered.
Bibliography


National Trust for Historic Preservation. “About the National Trust for Historic Preservation.”


Pastforward, National Trust for Historic Preservation Conference: Washington, 3-6 November 2015.


Secretary of the Interior’s Standards for Rehabilitation, Department of Interior regulations, 36 CFR 67.


Index

Building in Context, 37, 38, 39, 101, 102
Burra Charter, 37, 39, 104

*Fair Trade Certification*, 22, 23, 42, 43, 54, 60, 81, 82, 101, 102

Federal Historic Tax Credit, 28, 29, 30, 32, 34, 36, 68

*ISO*, 10, 22, 83, 102

Leadership in Energy and Environmental Design (LEED), 3, 12, 13, 23, 24, 45, 46, 47, 48, 49, 50, 51, 52, 55, 56, 57, 58, 69, 70, 71, 73, 74, 75, 76, 77, 78, 79, 85, 87, 88, 89, 91, 92, 93, 101, 102, 104, 105

National Trust For Historic Preservation, 11, 14, 20, 23, 24, 27, 31, 34, 35, 36, 53, 56, 63, 64, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 85, 87, 101, 102, 103, 104

Secretary of the Interior’s Standards, 27, 29, 32, 37, 83, 103, 104

*Sustainable Forest Initiative*, 43, 90, 101

Sustainable Preservation Coalition, 24, 73, 75, 76

Sustainable SITES Initiative (SITES), 13, 50, 51, 52, 74, 75, 77, 79, 89, 92, 93, 103, 104

US Green Building Council (USGBC), 2, 24, 45, 46, 47, 48, 49, 50, 51, 55, 56, 70, 72, 73, 74, 75, 76, 77, 78, 85, 88, 89, 101, 103, 104