

INSTITUTE of
Museum and Library
SERVICES



UNDERSTANDING THE SOCIAL WELLBEING IMPACTS OF THE NATION'S LIBRARIES AND MUSEUMS

2021 Report



REINVESTMENT
FUND



Penn
UNIVERSITY of PENNSYLVANIA
Social Impact of the Arts Project

HR&A



START

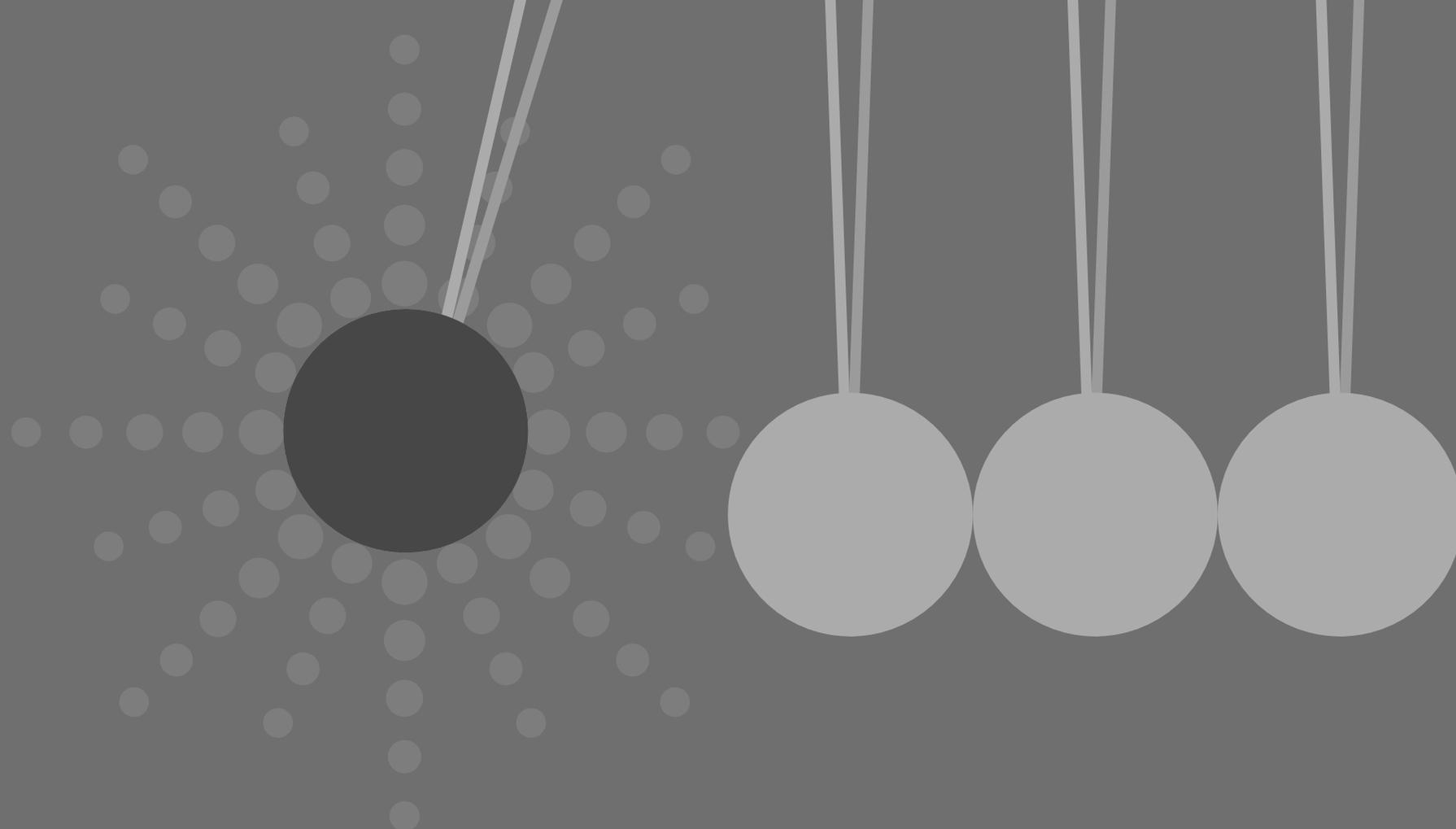


“Local libraries and museums are actively involved in animating social and institutional connections that catalyze the creativity, ingenuity, and empathy within their communities in ways that promote personal and social wellbeing. These unique features of libraries and museums make them critical institutions to advance ongoing efforts to promote inclusion and equity for historically underrepresented populations, particularly residents of color.”



UNDERSTANDING THE SOCIAL WELLBEING IMPACTS OF THE NATION'S LIBRARIES AND MUSEUMS

2021 Report



FOREWARD



FOREWARD

ACKNOWLEDGMENTS

The final site visit for this IMLS-supported exploratory study was scheduled for the week of March 9, 2020. Instead of boarding their flights, however, the authors of this study—along with the final site staff—joined the rest of the nation in sheltering-in-place as the initial wave of the COVID-19 pandemic swept across the country. The final site visit was conducted virtually during the early stages of the crisis and the authors did their best to complete the study so that it accurately represents the world as it was before museums, libraries, and the communities they serve were irrevocably changed. As readers will learn, the impact of the global pandemic is not captured in the Social Wellbeing Study that follows.

The authors recognized, however, that adhering to the original intent of the study did not limit them from gathering enough information to understand how a global pandemic was influencing the way that museums and libraries operate. To that end, the authors conducted virtual interviews with the sites to gather enough information to understand the areas of greatest change—both innovative and regressive—so that future IMLS research may be able to use that information should it seek to conduct similar analyses of social wellbeing in a post-pandemic world.

The authors would like to thank the 24 sites for their contributions leading up to and during one of the most significant global events in recent history.

We acknowledge and applaud the museum and library staff, volunteers, and supporters who remain committed to their organizational missions and service to communities in both normal and extraordinary times:

1. Kentucky Science Center (KY)
2. Tri-Cities Historical Museum and Community Archive & Research Center (MI)
3. Visual Arts Center of NJ (NJ)
4. Como Park Zoo and Conservatory (MN)
5. Museum of Contemporary Art North Miami (FL)
6. Canterbury Shaker Village (NH)
7. Yavapai County Free Library District (AZ)
8. Spartanburg County Public Libraries (SC)
9. Whitman County Rural Library District (WA)
10. Liberal Memorial Library (KS)
11. C. E. Weldon and McWherter Public Libraries (TN)
12. Denver Public Library (CO)
13. Central Arkansas Library System (AR)
14. Milwaukee Public Library System WI)
15. Blue Ridge Regional Library (VA)
16. Fletcher Free Library (VT)
17. Victor Farmington, Geneva and Wood Libraries (NY)
18. Mid-Continent Public Library System (MO)
19. Mendocino Botanical Gardens (CA)
20. Prince George's African American Museum and Cultural Center (MD)
21. Mattress Factory (PA)
22. Lander Children's Museum (WY)
23. Chihuahuan Desert Research Institute (TX)
24. Woodlands Garden (GA)

In addition to the leadership and staff of the institutions that participated in this study, the study authors are grateful for the contributions of the subject matter experts and Steering Committee members whose efforts informed the development of the study, the interpretation of the study findings, and the presentation of the results of this work.

SUBJECT MATTER EXPERTS

Kathryn Edwards, *Associate Economist. RAND Corporation*

Denise Herrera, *Executive Director. Con Alma Health Foundation*

Mary Hyde, *Director, Office of Research and Evaluation. Corporation for National and Community Service*

Laura Leviton, *Senior Advisor for Evaluation – Emeritus. Robert Wood Johnson Foundation*

Pamela Paxton, *Professor of Sociology. University of Texas, Austin*

Meredith Polin, *Senior Officer. Pew Fund*

Eric Klinenberg, *Professor of Sociology. New York University*

Robert Buckley, *Senior Fellow in International Affairs. The New School*

Hillary Rhodes, *Director of Evaluation and Learning. William Penn Foundation*

STEERING COMMITTEE MEMBERS

Timothy Cherubini, *Former Executive Director. Chief Officers of State Library Agencies*

John Dichtl, Ph.D., *President & CEO. American Association for State and Local History*

Laura Lott, *President & CEO. American Alliance of Museums*

Cristin Dorgelo, *President & CEO. Association of Science-Technology Centers*

Larra Clark, *Deputy Director/Policy. American Library Association*

Laura Huerta Migus, *Former Executive Director. Association of Children’s Museums*

Josh Sterns, *Director. Democracy Fund, Public Square Program*

Natalie Evans Harris, *Chief Operating Officer. BrightHive*

Kathy Annette, *President & CEO. Blandin Foundation*

Dr. Andrew Furco, Ph.D., *Associate Vice President for Public Engagement. University of Minnesota*

Charles Rutheiser, Ph.D., *Senior Associate. Annie E. Casey Foundation*

The authors would like to acknowledge the IMLS leadership for supporting this project since its inception in Spring 2018. And finally, the authors are deeply grateful to all members of Reinvestment Fund’s Policy Solutions Team—Dr. Ira Goldstein, Emily Dowdall, Michelle Schmitt, Colin Weidig, Jacob Rosch, Janine Simmons, Alana Kim, and interns Evan Wise and Mallory Rappaport—along with Dr. Rebecca Reumann-Moore for their tireless contributions throughout the project.

AUTHORS

Michael H. Norton, Ph.D., *Reinvestment Fund*

Mark J. Stern, Ph.D., *Professor of Social Policy; Principal Investigator, Social Impact of the Arts Program, University of Pennsylvania*

Jonathan Meyers, *HR&A Advisors*

Elizabeth DeYoung, Ph.D., *Reinvestment Fund*

FOREWORD: RECOGNIZING MUSEUM AND LIBRARY EXPERIENCES DURING THE COVID-19 PANDEMIC

This foreword presents a snapshot of the diverse ways the museums and libraries in this study were adapting during the pandemic to new ways of operating their facilities, delivering their core services, and meeting an increasingly diverse and expanding range of needs in their communities. Virtually all museums and libraries closed physical spaces in the early days of the pandemic and the study team, with support from IMLS, agreed that it would be critically important to reconnect with the 24 site visit institutions before finalizing the analyses and reporting the study findings. They uncovered dynamic ways museums and libraries facilitate social interactions; make connections across individuals and institutions; provide hands-on learning opportunities; connect people to social, physical, and mental health resources; and generally function as critical connective tissue within their communities.

The additional information gathering occurred in September and October 2020, with the study team conducting follow-up interviews with museum and library directors at all 24 institutions that participated in the study. These interviews were conducted to understand:

- How their institutions were responding to the pandemic;
- The greatest challenges they were facing in terms of service delivery and sustainability;
- The opportunities they perceived for what lies ahead; and
- How their institutions were responding to the elevated awareness of racial inequality in American society.

For many of the museum and library directors who participated in these follow-up interviews, the opportunity to tell their story from March to September/October 2020 was simultaneously agonizing and cathartic; it was an opportunity to reflect on what they had led their organizations through, as well as an opportunity to think about what could be in the times to come. By the time this work is released, it will be roughly a year since these follow-up interviews were conducted a year in which the pace and scale of the changes that individuals, communities, and society are facing have little historical precedent.

Prior to the pandemic, the site visit institutions (libraries in particular) had increasingly come to occupy strategic positions within broader networks of support in their communities—connecting people to resources and services (and sometimes delivering those services) to meet an increasingly diverse range of needs. In addition to the delivery of their core services associated with stewarding collections and facilities, the libraries and museums that participated in this study maintained robust programming and partnerships that supported access to resources for their patrons and their broader communities, such as early childhood education, nutrition, physical and mental health services, and a diverse range of educational opportunities, among others.

In March 2020, the sudden closure of institutions across the country presented libraries and museums with an unprecedented set of challenges in continuing to

provide their core services, as well as the myriad other supports they provide to promote and enhance the wellbeing of their communities. Finding ways to continue this work during the pandemic presented immediate challenges that required the site visit institutions to rethink existing ways of being in the world. How do they stay operational? How do these institutions continue occupying their space in the community, which so many have come to rely on? What does it mean to be a museum or a library when no one is coming through the doors?

SITE VISIT LOCATIONS ADJUSTED QUICKLY TO PRE-EXISTING SERVICE DELIVERY MODELS

The site visit libraries and museums took measures to ensure their collections and resources remained available to their patrons. Realizing that not all populations are able to easily access the internet, libraries responded by expanding the range of their Wi-Fi into parking lots, extending check-out times for internet hotspots, and in some cases making Chromebooks available for check-out. Many libraries quickly shifted to curbside pick-up, which became particularly popular among the elderly and those with limited mobility. Several libraries anticipated they would continue these services when the pandemic wanes. For patrons unable to access pick-up services, some libraries were able to deploy bookmobiles to bring resources directly to people in their homes.

Unlike libraries, museums do not typically circulate their collections, creating additional challenges for maintaining connections with their patrons and the broader community. However, both museums and libraries also put together a range of “take away” activities that individuals and families could enjoy. These were simple things like craft packages, coloring sheets, puzzles, and collaborative activities, which collectively provided their patrons with opportunities to safely engage with content curated by the museum or library in their homes.

In addition to sending their collections and materials home with their patrons, multiple sites moved their programming outdoors to safely provide access to both resources and recreation. Some libraries and museums moved summer (2020) reading programs and camps outdoors in accordance with local social distancing protocols. Outdoor institutions such as the Chihuahuan Desert Research Institute in Texas and the Mendocino County Botanical Gardens on the California coast were able to re-open their sites in the summer with added restrictions to their visitor capacity and timed tickets to manage the flow of visitors. The Canterbury Shaker Village in New Hampshire was able to begin offering outdoor, socially distanced instrumental concerts and tours of the property early in summer 2020. For sites that were able to safely leverage their outdoor spaces, this provided an outlet for patrons in lockdown to enjoy an experience outside their homes in beautiful, peaceful places.

These types of rapid-response solutions and creative adaptations to make resources, collections, and spaces available allowed libraries and museums to maintain their connections with individuals and families during lockdowns in their communities.

21ST CENTURY TECHNOLOGIES PROVIDED OPPORTUNITIES TO CREATE EXTENSIVE NEW VIRTUAL OFFERINGS

As people across the country sheltered in place and days stretched into weeks, then into months, social isolation became a prevailing condition for individuals and families. Across the country, government agencies at every level, schools, and any business not designated as “essential” quickly segued into a fully “remote” digital world. To remain relevant during the pandemic lockdowns, and in some cases even to survive, site visit institutions had to find ways to inhabit virtual spaces.

The site visit libraries and museums increasingly found themselves experimenting with new or previously niche technologies. Despite some initial challenges in pivoting to virtual platforms, by the time of the follow-up interviews in September/October 2020, many sites had created extensive virtual offerings, and both museums and libraries had devised innovative ways to engage people and build a sense of community

online. Many of the libraries launched virtual storytimes and youth programs, book clubs, and online meditation classes. In Kansas City, staff at the Mid-Continent Public Library’s SquareOne Business Center created online home childcare classes amid increasing demand for supports, as more people than ever were looking for ways to supplement lost incomes.

Museum programming also moved online. Several sites launched virtual exhibits to promote interactive virtual visits. For example, the Museum of Contemporary Art in Miami and the Mattress Factory in Pittsburgh invested staff time and resources to move their teen collectives and summer camps online; they made both virtual workshops and at-home project ideas available, and teens engaged in art projects via social media. Recognizing the potential of therapeutic art in difficult times, the Visual Arts Center in New Jersey worked with their resident art therapist to create a series of short online videos focusing on ways to use art to relieve stress and anxiety.

Both libraries and museums noted that virtual programming allowed them to reach a broader audience, with participants logging on not only from across the county, but also from other countries. At the time of the follow-up interviews, the pivot to virtual programming was still in its earliest days. But even in these early stages, the museum and library directors already acknowledged that they were peering into new frontiers for the future and evolution of their institutions.

EXISTING AND EMERGING MUSEUM AND LIBRARY NETWORKS HELPED SUSTAIN SITE VISIT LOCATIONS

Several museums and libraries expressed gratitude for partnerships with peer institutions and sectoral networks that enabled them to answer questions and share resources about how to function during the pandemic. Many sites conferred with leaders from other institutions, networks, and professional associations in their

field, sharing strategies and challenges on a regular basis. This created a space for mutual exchange and knowledge-sharing around helpful resources, alternative programming ideas, and phases for safe re-opening. In some places, the mechanisms already existed for the site visit institutions to immediately access these networks.

For example, the Kentucky Science Center in Louisville activated partnerships with libraries and schools across the state to push out virtual programming developed for children to engage with exhibits at their facility. The Yavapai Library Network, which serves a county the size of New Jersey in central Arizona, leveraged their existing networks and connected more than 300 personnel throughout the county to share best practices and challenges collectively. In other places, responding to the pandemic spurred new levels of collaboration. In Pittsburgh, the Mattress Factory described an unprecedented level of communication between museums and other cultural institutions in the city that had not existed pre-COVID—relationships they hoped will continue in the future.

These connections with other institutions and peers within their communities and across the country helped to sustain the libraries and museums in this study. In many ways, drawing support from their peer networks provided a way for many of the site visit institutions to stay connected with their more localized networks of support in their communities in this time of crisis.

FINANCIAL STRUCTURES INFORMED INSTITUTIONS' ABILITY TO MEET LOCAL NEEDS

The publicly supported institutions tended to be more financially resilient and more intensively involved in responding to immediate needs in their communities than institutions that rely heavily on earned income from visitors and programming (i.e., most of the museums in the study). For instance, libraries within municipal departments were able to lend staff to support other departments in coordinating food distribution or homeless shelter access. Milwaukee Public Library was able to avoid furloughing staff by redeploying them to work in the Health Department doing

case management, contact tracing, research for medical staff, and staffing hotlines. Other libraries worked with partner organizations and social workers to connect people to food and housing resources. For example, in Little Rock, Arkansas, the library partnered with a local foundation to provide hot meals using eight of their libraries as access points, and worked with other sites around the city, including schools, to continue providing lunches to children and their families.

The financial pressures experienced by site visit institutions ranged from disruptions associated with transitions to remote work environments to existential crises for the institutions themselves. Some institutions were able to get Paycheck Protection Program loans or grants from the CARES Act to keep them afloat and operational. Others continued receiving funding through millage or property taxes, which were not affected by the pandemic and provided steady sources of income. Still other institutions were somewhat protected by being part of city governments. However, pay or hiring freezes were in effect at some sites, and other places had to furlough staff and reduce hours, or, in some cases, lay off employees. Many sites that rely heavily on volunteer support were struggling to function, as volunteer work was no longer possible. And sites with pre-existing financial challenges were unsure about the future direction of their institutions as the pandemic exacerbated their tenuous financial situations.

These challenges also heavily informed institutions' decisions about when and how to reopen their facilities. At the time of the follow-up interviews, the operational capacity of the site visit institutions ranged from fully closed to operating at about 80% of their capacity prior to the start of the pandemic. A number of museum and library directors expressed concerns about keeping their institutions closed for too long, lest their patrons forget they exist; they had to find ways to be available and participate in their communities. Like government and business leaders across the country, museum and library directors were actively engaged in decision-making processes that involved calculating and balancing risks that were always moving targets between the health and wellbeing of their staffs, their patrons, their institutions, their communities, and themselves.

A number of museum and library directors described this period as the most challenging time of their careers. For all institutions, a persistent sense of instability made it more difficult to plan for the future. Many leaders echoed one museum director's observation that, "the greatest challenge is managing through the unknown. The inability to plan ahead...we're spending a lot of time planning endless scenarios... trying to account for any scenario we might expect." Institutions were grappling with constantly changing external circumstances. These responsibilities, paired with the pervasive sense of fear, confusion, and stress within communities, made navigating uncharted waters extremely difficult for many museum and library leaders.

SOCIETAL UPHEAVAL AGAINST THE BACKDROP OF THE PANDEMIC

In May 2020, the murder of George Floyd refocused attention on the Black Lives Matter (BLM) movement, advancing further changes in the midst of the pandemic for some of the sites. Many libraries and museums issued public statements recognizing the work of the BLM movement and began curating their collections to center the contributions of Black people more conspicuously in their respective fields—for instance, highlighting the work of Black writers, artists, and scientists.

In Maryland, the Prince George's African American Museum and Cultural Center hosted a virtual vigil and two marches in conjunction with other community organizations. These events strengthened connections among activists, community leaders, and politicians in Prince George's County that the museum anticipated mobilizing for future programming and advocacy around racial justice and equality. Sites in Minneapolis-St. Paul (Como Park Zoo and Conservatory) and Louisville (Kentucky Science Center) were directly impacted by the protests and unrest. Como Park Zoo received information that protestors may try to release animals into the streets of St. Paul and Minneapolis following the death of George Floyd. Similarly, the Kentucky Science Center staff evacuated children from camp in anticipation of protests in downtown Louisville following the announcement of charges in the shooting death of Breonna Taylor by Louisville police.

Multiple sites described the BLM movement as a catalyst for reevaluating internal practices, hiring with diversity in mind, and staff training. Several libraries were in the process of conducting a diversity audit of their collections and internal systems, and some organizations were working toward having a more diverse board and staff. Despite a city-wide hiring freeze, the Denver Public Library was able to hire a Diversity, Equity, and Inclusion (DEI) manager, and the Mid-Continent Public Library System was able to contract with a consultant to conduct an audit of all their institutional systems and practices using a DEI lens.

In summer 2020, Milwaukee Public Library promoted their Deputy Director to Director and City Librarian, becoming the fourth woman and first African American woman to hold the position. The library was also in the process of rebuilding a branch library in a predominately African American neighborhood and was making intentional efforts to co-create the design and program offerings at the library with the support of a newly created community liaison position. While these changes are promising, it is still too soon to study or report on the long-term effects of these efforts and how they will influence long-term change.

THE PANDEMIC LED TO CHANGE AND INNOVATION

2020 was a year that catalyzed dramatic changes in the way people across the world live their lives in community with one another. As cities across the United States begin to more fully re-open, libraries and museums will continue to be part of the critical social infrastructure that will help communities create new ways of living with one another. Amidst the pandemic, the institutions in this study have provided critical supports and outlets for their communities, whether simply providing online activities and events for those in lockdown or working on the front lines to coordinate resources to those in need; some smaller institutions remain in dire need of ongoing supports themselves.

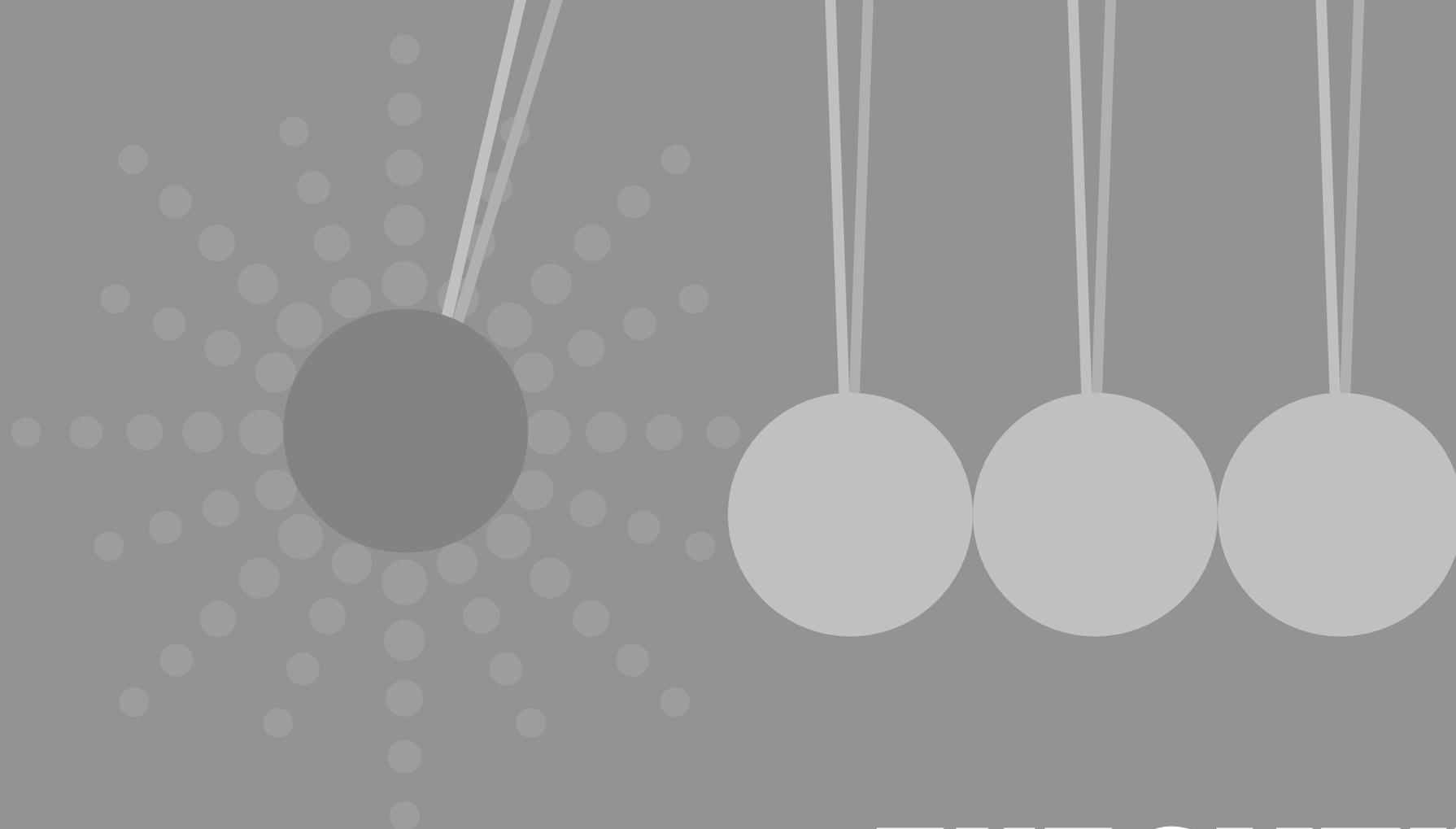
For many institutions, the early days of the COVID-19 pandemic highlighted the importance of being able to innovate, adapt, and evolve as an organization. Some organizations saw the break as a chance to think critically about what kind of institution they wanted to be—reorganizing, rebranding, and engaging in strategic planning for the future. Libraries and museums noted that the pandemic compelled them to innovate and engage rather than staying “comfortable” or stagnant; there was room for experimentation and more creative ways of working that will continue to inform programming and partnership priorities long after the pandemic.

In the time ahead, museums and libraries’ strategic positions within dynamic networks of support in their communities will continue to evolve. The findings presented in the main report, drawn from site visits conducted prior to the onset of the pandemic, suggest paradigmatic shifts in how to think about the contributions these institutions make to the overall health and wellbeing of their communities. While the ways libraries and museums will do their work in a post-pandemic world are rapidly evolving, the spirit and commitment these institutions bring to promoting the wellbeing of their communities was already inscribed in the missions these institutions exist to fulfill, and they will persist.



SECTION ENDS





EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

In 2016, the Institute of Museum and Library Services (IMLS) partnered with Reinvestment Fund to produce *Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts*, as part of its Community Catalyst Initiative (CCI). The study documented a range of ways that libraries and museums across the country engage with community concerns and visions through their programmatic activities and strategic partnerships. In addition, it situated the work of libraries and museums within a conceptual framework of social wellbeing to describe the contributions that these institutions make in their local communities.

Social wellbeing allows the field to think about its relationship to communities in a way that focuses on the direct and indirect ways that libraries and museums create social value—the dimensions of wellbeing their efforts support, the institutional structures they employ, the partnerships they develop, and the positions they occupy within broader networks of support for social wellbeing.

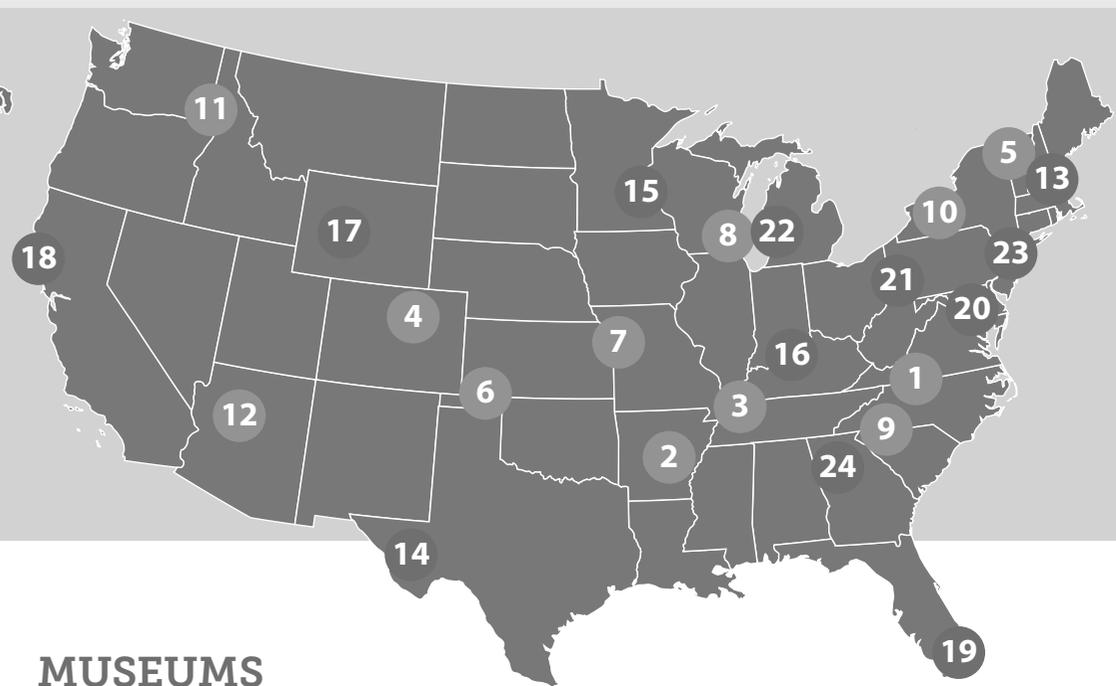
In 2018, building on the findings from *Strengthening Networks, Sparking Change*, IMLS reengaged Reinvestment Fund, in partnership with the University of Pennsylvania's Social Impact of the Arts Project (SIAP) and HR&A Advisors, to conduct a national, exploratory study of how libraries and museums across the country affect the social wellbeing of their communities.

From 2018 to 2020, Reinvestment Fund led data collection and analyses that employed a mix of quantitative and qualitative methods and a geographic perspective based on all counties in the continental U.S. The study team first created indexes to estimate the presence and usage of libraries and museums for every county in the country. At the same time, SIAP developed estimates of 10 dimensions of social wellbeing for every county. The 10 social wellbeing dimensions included measures for estimating economic wellbeing, ethnic and economic diversity, housing opportunities, institutional connection, cultural assets, school effectiveness, health access, personal health, and personal security.

The quantitative analyses employed multivariate models to identify associations between the presence and usage of libraries and museums and multiple dimensions of social wellbeing when economic standing and racial/ethnic composition are taken into consideration. The team then selected 24 public libraries and museums across the nation for in-depth site visits to understand how libraries and museums support different dimensions of social wellbeing in their communities.¹ Figure 1 presents the institutions that participated in the case studies.

FIGURE 1.

Site visits conducted from September 2019 to March 2020 with participating libraries and museums



LIBRARIES

- 1 **Blue Ridge Regional Library System** | Martinsville, VA
- 2 **Central Arkansas Library System** | Pulaski, AR
- 3 **C.E. Weldon and McWherter Public Libraries** | Weakley, TN
- 4 **Denver Public Library** | Denver, CO
- 5 **Fletcher Free Library** | Chittenden, VT
- 6 **Liberal Memorial Library** | Seward, KS
- 7 **Mid-Continent Public Library** | Platte, MO
- 8 **Milwaukee Public Library** | Milwaukee, WI
- 9 **Spartanburg County Public Libraries** | Spartanburg, SC
- 10 **Victor Farmington Library, Wood Library and Geneva Public Library** | Ontario, NY
- 11 **Whitman County Rural Library District** | Whitman, WA
- 12 **Yavapai County Free Library District** | Yavapai, AZ

MUSEUMS

- 13 **Canterbury Shaker Village** | Merrimack, NH
- 14 **Chihuahuan Desert Research Institute** | Jeff Davis, TX
- 15 **Como Park Zoo and Conservatory** | Ramsey, MN
- 16 **Kentucky Science Center** | Jefferson, KY
- 17 **Lander Children's Museum** | Fremont, WY
- 18 **Mendocino Coast Botanical Gardens** | Mendocino, CA
- 19 **Museum of Contemporary Art North Miami** | Miami-Dade, FL
- 20 **Prince George's African American Museum and Cultural Center** | Prince George's, MD
- 21 **The Mattress Factory** | Allegheny, PA
- 22 **Tri-Cities Historical Museum** | Ottawa, MI
- 23 **Visual Arts Center of New Jersey** | Union, NJ
- 24 **Woodlands Garden** | DeKalb, GA

KEY FINDINGS

Public libraries and museums are deeply embedded in their communities in ways that enrich the wellbeing of local residents. Through their core services, programming, and partnerships with other organizations, they catalyze broader networks of support that meet a diverse range of needs for individuals, organizations, and their broader communities.

This study found the presence and usage of public libraries and museums to be positively associated with multiple dimensions of social wellbeing—in particular, community health, school effectiveness, institutional connection, and cultural opportunity. Evidence for these relationships was observed quantitatively—notably, the connection of libraries with school effectiveness and community health—and qualitatively for all dimensions through the case studies. The case studies confirmed that both libraries and museums are actively engaged in supporting education and public health in their communities in increasingly diverse and innovative ways.

Libraries' and museums' contributions to social wellbeing are heavily informed by the local context—the type of community they serve (urban, suburban, or rural), the type and size of their institution, and the needs of local residents and communities. Libraries and museums that participated in this study have adapted to local contexts and have customized their services to advance their institutional missions and goals while being responsive to changing conditions and observed needs in their communities.

The study also found that these institutions promote the wellbeing of their communities by developing broader networks of support. Working with community partners, they are able to address community needs more effectively than they could alone. The

services the institutions provide, the collections they maintain, and the interactions that happen (intentionally and fortuitously) through their spaces and through their community networks are crucial threads in the broader social and institutional fabric of places that promote human flourishing. They curate knowledge, collective history, and cultural heritage honoring human achievement; they facilitate access to public knowledge and learning; they provide a place for children to learn and play; and they facilitate access to resources and services to get things done—from basic support for personal health and security, to building and maintaining your bicycle or garden, to starting your own recording studio.

The missions and programs of cultural institutions across the country afford an opportunity for communities to reflect their collective best selves. The findings from this study suggest that local libraries and museums are actively involved in animating social and institutional connections that catalyze the creativity, ingenuity, and empathy within their communities in ways that promote personal and social wellbeing. These unique features of libraries and museums make them critical institutions to advance ongoing efforts to promote inclusion and equity for historically underrepresented populations, particularly residents of color.

As an exploratory study, *Understanding the Social Wellbeing Impacts of the Nation's Libraries and Museums*, highlights implications for a variety of stakeholder groups including library and museum practitioners, funders and policy makers, and researchers.

KEY IMPLICATIONS FOR LIBRARY AND MUSEUM LEADERS AND STAFF

- **Institutional missions aligned with the community needs ensure relevance and impact.** Positioning institutional priorities at the intersection of mission, collections and services, and the needs of patrons, local residents, and the broader community will carry these institutions well into the 21st century.
- **Networks matter.** The personal and institutional relationships, as well as the networks that libraries and museums support, are the indispensable “value-add” to their communities.
- **Libraries and museums have important roles to play to advance racial equity and inclusion in their communities.** Through their broader interpersonal and institutional networks, these institutions create opportunities for diverse groups to meet one another, share experiences, learn from each other, and even collaborate to meet their unique needs.
- **Systematic and standardized data collection matters.** For libraries, the consistency of a tool like the Public Libraries Survey is a tremendous resource for the institution, policy makers, and researchers. For museums, moving toward systematic data collection and broad-based standardization, with differentiated data collection frameworks for different types of museums, would support local institutions and advance the field through research and policy making.
- **Evaluation and assessment matter.** There are multiple entry points to make effective use of evaluation and assessment within a library or museum. For most institutions, understanding and documenting their contribution to social wellbeing is more important than isolating the effects of individual programs or supports. Narrative structures that include multiple forms of evidence (quantitative and qualitative)—such as observed changes in program participants and their accounts of what participation meant for them—can provide supporting evidence of social value.

KEY IMPLICATIONS FOR FUNDERS AND POLICY MAKERS

- **Libraries and museums are increasingly critical actors supporting social service provision in the communities they serve.** In many places, these institutions are stepping into gaps left by depleted or absent public sector supports for education, public health, and social services. The roles they are taking on to fill these gaps often stretch their organizational capacity and missions in an effort to address resident needs that have historically been served by the public sector.
- **Libraries and museums are trusted institutions in their communities.** They are places people go to get information they know is reliable. They are places people go to meet other people, learn new things, engage with the institutions’ collections, and to enjoy themselves and the company of others. These trusted community institutions function as a “third place” (or “third space”) where people congregate outside of home or work in informal ways that build community.
- **Networks matter.** Libraries and museums are critical components of institutional and social networks. In smaller, more remote areas, they are often indispensable resources for local residents. The value these institutions provide flows from the connections they facilitate between individuals, groups, and other organizations. The vast majority of libraries and museums are not large employers and will never provide the muscle to significantly drive local economies, but they are indispensable connective tissue that keep healthy communities together.
- **Libraries and museums can be catalysts in their communities to promote racial equity and inclusion.** The reality that these institutions are highly networked in their communities, widely perceived as trusted organizations, and hosts to diverse populations who circulate through their spaces make libraries and museums potential catalysts to advance racial equity and inclusion in their communities.
- **Libraries and museums would benefit from additional funding streams.** Additional sustained financial support for basic operations and staffing, accessible sources of “innovation funding,” funding to intentionally develop programming and initiatives to advance racial equity and inclusion, and accessible sources of “emergency funding” would go a long way to ensure that libraries and museums continue to respond to local needs and sustain their work in stronger and weaker business cycles. Such supports are most urgently needed for institutions without sustained public support and that rely primarily on earned revenue (i.e., most museums).

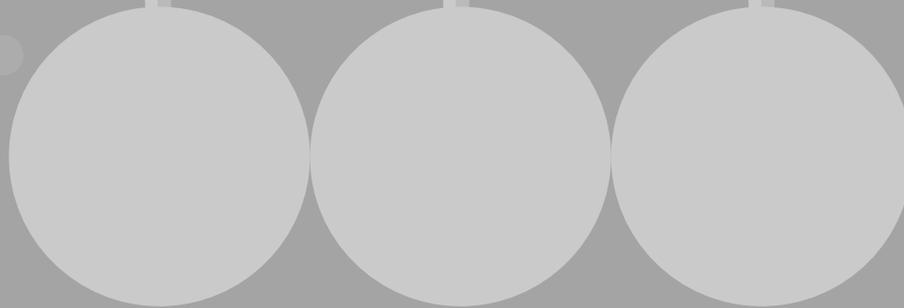
KEY IMPLICATIONS FOR RESEARCHERS

- **Use more precise geographies.** A county-level unit of analysis was pragmatically useful for this national, exploratory study. However, using a county-level geographic unit misses a great deal of socio-economic variation within counties, particularly in urban and suburban counties. This internal variation undoubtedly informs the relationships between library and museum activities and different dimensions of wellbeing at a neighborhood level. Future research with more precise geographies could develop more innovative approaches to estimating library and museum contributions to social wellbeing and community change.
- **Extend our understanding of how museums' and libraries' positions within neighborhood ecology affect social wellbeing.** The study found observable associations between library and museum activities and different dimensions of social wellbeing at the county level. Future research focused on neighborhood effects could develop more innovative approaches to estimating library and museum contributions to social wellbeing and community change.
- **It's all about the networks.** Innovative approaches to documenting the networks libraries and museums support and estimating their effects is critically important. Future studies also could develop approaches to estimating social cohesion and social capital formation and their connection to the work libraries and museums are doing in their communities.
- **Document and deepen our understanding of libraries' and museums' history of serving underrepresented populations and their current efforts to address racial equity and inclusion in their communities.** Future research designed to document and deepen our understanding of the various ways that these institutions can and do affect racial equity and inclusion would provide critical insights into approaches to meeting historical and ongoing challenges associated with racial discrimination, segregation, and exclusion in America.
- **Advance our understanding of how local context and institutional scale matter.** Future research to understand how libraries and museums promote social wellbeing in their communities can deepen our understanding of the importance of local context, recognizing the significance of different types of institutions operating in different types of places.
- **View economic contributions in the context of social value.** Innovative and appropriately calibrated approaches to estimating the economic contributions that libraries and museums make to their communities would be useful in making the case for sustained support for these institutions. Standard measures of economic impact are inadequate and inappropriate for a large portion of the nation's libraries and museums. Studies with an economic focus would do well to concentrate more on efficiency and social return on investment than on conceptualizing libraries and museums as drivers of local economic activity.



SECTION ENDS





FULL
REPORT



FULL REPORT

In 2016, the Institute of Museum and Library Services (IMLS) embarked on a new Community Catalyst Initiative (CCI). The CCI includes a combination of activities designed to elevate the capacity of museums and libraries to collaborate with local partners and advance common goals related to the health and vitality of the communities they serve. These include a mix of grant making and technical assistance to museums and libraries to support the adoption of best practices gleaned from the community development field; uncovering new opportunities for museums and libraries to serve specific populations; developing a field-level “theory of change” to articulate the diverse ways that museums’ and libraries’ activities promote positive change in their communities; and supporting research to understand how museums and libraries contribute to the social wellbeing of communities across the country.

At the outset of the CCI, IMLS partnered with Reinvestment Fund to produce *Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts*. In this pilot study, Reinvestment Fund conducted a scan of the literature and innovative practices underway in a number of museums and libraries at the forefront of engaging local partners to promote change. The results from this pilot study documented a range of existing ways that museums and libraries across the country engage with community concerns and visions through their programmatic activities and strategic partnerships.

In addition, the pilot study presented a conceptual framework of social wellbeing for understanding how to describe and assess the contributions that these institutions make in their local communities. Situating the work of museums and libraries within a social wellbeing framework provides a roadmap for thinking about the different ways that they work to address the dimensions of wellbeing their efforts support, the partnerships they develop, the institutional structures that support this work, and the positions they occupy within broader networks of support for social wellbeing. In addition, the social wellbeing framework represents a first step for translating a conceptual framework into measurable outcomes and more data-informed theories of change about the impact their efforts have in their local communities.

Building on the findings from this pilot project, IMLS re-engaged Reinvestment Fund—in partnership with the University of Pennsylvania Social Impact of the Arts Project and HR&A Advisors—to conduct the present, exploratory study on how social wellbeing is related to the presence and utilization of museums and public libraries across the country. Findings from this study, *Understanding the Social Wellbeing Impacts of the Nation’s Libraries and Museums*, are intended to contribute to an ongoing national conversation about the positions museums and libraries occupy in their communities and begin to recommend approaches to identify and measure these contributions.



THIS REPORT PRESENTS KEY FINDINGS FROM THE STUDY IN THE FOLLOWING SECTIONS:

SECTION II	Libraries and Museums Promote Social Inclusion and Wellbeing situates the work of libraries and museums within a conceptual framework of social inclusion and wellbeing.
SECTION III	Creating the Library and Museum Indexes presents the data and methods used to develop a Library Index and a Museum Index that represent the presence and usage of libraries and museums for all U.S. counties.
SECTION IV	Creating the Social Wellbeing Indexes presents the data and methods used to construct a multidimensional set of indexes of social wellbeing for all U.S. counties.
SECTION V	Estimating the Relationship Between Museum and Library Indexes and Social Wellbeing presents the methods and findings of how the presence and usage of museums and libraries are related to two key dimensions of social wellbeing: education and health.
SECTION VI	Case Study Selection, Data Collection, and Analyses presents the selection criteria used to identify 24 institutions for site visits, data collection activities for each site visit, and a description of the analyses conducted across all site visit institutions.
SECTION VII	Library and Museum Approaches to Supporting Education and Health presents key findings related to the different ways case study institutions support education and health through their programming; partnerships; and participation in local, regional, and national networks.
SECTION VIII	Library and Museum Approaches to Assessment and Sustainability presents key findings related to the different approaches libraries and museums take to assess the impact of their work in their local communities and their approaches to sustaining the work of their institutions in the future.
SECTION IX	Implications and Opportunities for the Field presents a series of implications for institutional data collection and assessment, future research, ongoing support for museums and libraries, and strategic directions for museum and library leaders.



THIS REPORT PRESENTS KEY FINDINGS FROM THE STUDY IN THE FOLLOWING APPENDICES:

APPENDIX I	Technical Appendix presents additional methodological details related to the estimation of the Social Wellbeing Indexes, the Library Index, and the Museum Index.
APPENDIX II	Case Study Selection presents individual profiles for all 24 site visit institutions that include a list of the data collected, key findings from interviews and document reviews, and a network map of each site's institutional connections.
APPENDIX III	Economic Input/Output Analyses presents an overview of the methodology and the results of economic input/output analyses examining how each site's institutional spending flows through their local economies.



SECTION ENDS



LIBRARIES AND MUSEUMS PROMOTE SOCIAL INCLUSION AND WELLBEING

Historically, studies of the welfare of a population have focused on single dimensions of wellbeing, like gross domestic product (GDP), household income, or the poverty rate. Over the past generation, and increasingly in the 21st century, interest has shifted to more synthetic concepts that pull together a variety of discrete measures.² Following this trend, this project has been guided by two concepts widely used in the international debates of disadvantage and inequality: social inclusion and social wellbeing.

SOCIAL INCLUSION

Social inclusion and exclusion are explicitly focused on the relationship between individual people and groups. These concepts were initially developed in the United Kingdom and the European Union. They are increasingly used in the United States, Asia, and other developing countries to characterize contemporary forms of social disadvantage that marginalize particular social groups, including racial or ethnic minorities, the long-term unemployed, or older people.³

Eurostat's report, *Combating Poverty and Social Exclusion: A Statistical Portrait of the European Union 2010*, defined social exclusion as the inability of residents "to enjoy

levels of participation that most of society takes for granted."⁴ The Eurostat report explicitly acknowledges the multidimensional features of social exclusion such that it distances residents "from job, income, and education opportunities as well as social and community networks and activities. They have little access to power and decision-making bodies and thus often feel powerless and unable to take control over the decisions that affect their day to day lives." The report identifies five particular domains of exclusion: 1) labor market, 2) educational institutions, 3) health, 4) housing, 5) social networks and the information society.

In this sense, social exclusion is an active process that separates individuals and groups from access to everyday opportunity structures and resources that are readily available in mainstream society. On the other hand, social inclusion requires that mainstream institutions must bear some of the burden to overcome exclusion. They can do this by supporting marginalized individuals and groups to help them surmount deficits that may frustrate their participation in the broader society. In the United States, museums and libraries are well-positioned to create mutually reinforcing opportunities for individuals and groups to participate in their communities (see Section VI, Section VII, Section VIII, and Appendix II).

SOCIAL WELLBEING

Social wellbeing conceptually extends social inclusion beyond mere participation in society by exploring what it means to live a life that promotes human flourishing. Social inclusion can generally be understood as a precondition for participation in society but not as an end in itself. This study examines the work of museums and libraries in their communities through a multidimensional understanding of social wellbeing. As a concept, social wellbeing extends the utility of social inclusion by recognizing the multiple facets of individuals' lives that collectively inform the capacity of those individuals—and their communities—to live a *good life* once they are securely included in society.⁵

Researchers tend to operationalize social wellbeing from one of two perspectives: as subjective wellbeing, or through a capabilities approach that focuses on structural and institutional data that documents the concrete opportunities open to the population.⁶ Studies focused on subjective wellbeing typically use surveys to measure an individual's self-assessment of their own psychological state.⁷

Sen, Stiglitz, and Nussbaum are leading theorists of a *capabilities approach* to wellbeing that focuses on the opportunities that individuals have and the degree to which they avail themselves of those opportunities. An important distinction that flows through a capabilities approach to wellbeing requires clear delineation between the actual opportunities available to a population (capabilities) and the behaviors associated with those opportunities (functionings). This distinction maintains a focus on individual choice and agency, while recognizing a more objective basis for understanding the range of options available for people in different contexts. The idea of *adaptive preferences*—that people adapt their preferences and behaviors to everyday environments that implicitly, and often explicitly, impose limits on the opportunities available to them—provides a critical starting point for a capabilities approach to wellbeing and implies that survey data alone is not a reliable way to assess wellbeing.⁸

This study adopts a capabilities orientation to understanding the relationship between museums and libraries and social wellbeing, and is guided by the following assumptions:

1. It is possible to observe and measure a range of underlying conditions within specific geographies that provide information about the range of opportunity structures available to individuals living in different places;
2. The collection of these different conditions coalesce into what can be considered the “quality of life” in a certain place; and
3. Institutions like museums and libraries respond to the prevailing conditions in the communities they serve to meet individuals’ needs by filling gaps where they exist, and by strengthening broader networks of support within their communities.

This exploratory study develops a set of multidimensional indexes of social wellbeing, delineating 10 dimensions that collectively represent what can be understood as the “quality of life” in counties across the United States: 1) economic wellbeing; 2) educational effectiveness; 3) community health; 4) health access; 5) institutional connection; 6) cultural assets; 7) ethnic diversity; 8) economic diversity; 9) housing opportunity; and 10) personal security. These 10 indexes provide an empirical foundation for understanding the context within which museums and libraries operate and a starting point for understanding the different types of contributions that these institutions can, and do, make to the quality of life in their communities. In operationalizing these concepts, the quantitative analyses for this study focus on understanding the relationships between the presence and usage of museums and libraries and a subset of these dimensions: economic wellbeing, community health, and school effectiveness.

LIBRARIES AND MUSEUMS ARE INCREASINGLY PROMOTING WELLBEING FOR ALL RESIDENTS IN THEIR COMMUNITIES

The IMLS report *Strengthening Networks, Sparking Change* presented a preliminary framework for understanding how the work of museums and libraries contributes to social wellbeing. The multidimensional understanding of social wellbeing described above provides a useful starting point for thinking about the diverse ways museums and libraries support different dimensions of the quality of life in their communities. Perhaps more important, it also reveals the critical position museums and libraries have come to occupy within broader institutional and interpersonal networks that support multiple dimensions of wellbeing in their communities. In the process of becoming critical features of place-based social infrastructure, museums and libraries have transcended historical roles as institutional agents of social exclusion to become institutional vehicles for social and cultural inclusion.⁹

Well-documented histories of Black residents being refused access to public libraries, art galleries, history museums, and other cultural institutions have largely given way to externally focused mission imperatives designed to meet the diverse needs of individual patrons and the broader communities these institutions serve.¹⁰ Indeed, the very presence of museums and libraries in communities are key inputs in the conceptual formulation of wellbeing indexes that measure the concentration of institutional connections and the cultural assets in a place. By simply being present, and through the development of strategic partnerships and targeted programming, these institutions promote wellbeing in diverse ways that reflect the needs of their communities.¹¹

The dynamic work of museums and libraries can potentially touch on each of the 10 dimensions of wellbeing examined in this exploratory study. However, to limit the scope of the study and to focus the data collection efforts at the case study institutions, three dimensions of wellbeing were identified for more targeted analyses: 1) school effectiveness (education), 2) community health (health), and 3) economic wellbeing.

These dimensions of wellbeing were selected for the following reasons:

1. All libraries and museums have a commitment to education and learning embedded in their mission statements, making education one of the most intentional ways that museums and libraries support wellbeing in their communities.
2. Health was selected based on findings from the pilot study, *Strengthening Networks, Sparking Change*, which identified innovative approaches museums and libraries are pursuing to support the health of their patrons and their broader communities. Moreover, the COVID-19 pandemic has underlined the consequences of ignoring public health and the role of public institutions in addressing it.
3. A community's economic wellbeing is a critical context for the role and function of its libraries and museums. In more affluent, educated counties, residents often demand cultural resources—including well-funded libraries and museums—as a means of enhancing their quality of life. In less advantaged communities, as our case studies suggest, libraries and museums have sought to move beyond their traditional functions to respond to the health and educational needs of their community.

The remainder of this section presents a review of different ways that museums and libraries support education, health, and economic wellbeing through their positions within broader networks of support for these dimensions of wellbeing.

PROMOTING INFORMAL AND FORMAL LEARNING IS THE REASON FOR BEING FOR VIRTUALLY ALL MUSEUMS AND LIBRARIES

Both museums and libraries have long occupied a “third place,” conceptualized as places where people spend time between home (“first” place) and work (“second” place). “Third places” provide spaces to connect and socialize, exchange ideas, and “hang out”; importantly, they are perceived as neutral, open, and accessible to all.¹² As “third places,” libraries and museums play increasingly diverse roles in their communities.¹³

In recent years, the museum and library fields' historical emphasis on lifelong learning and informal education has evolved to embrace programming focused on the promotion of multiple literacies.¹⁴ An institutional turn toward multiple literacies is grounded within increasingly ubiquitous 21st century skills—collaboration, creativity, critical engagement, fluency in technology and media¹⁵— Developing programs from a 21st Science Technology Engineering and Math (STEM) programming for school-age children; digital literacy for adults; and other skills-focused experiences, from coding to critical problem-solving activities.

Across broader networks that support formal and informal education, libraries and museums partner with school districts and early childhood education providers to create and deliver curricular content, activities, and professional development. Such efforts can fill critical gaps within highly stressed educational and early childhood education networks.¹⁶

For libraries in particular, the role of the librarian has evolved to be much more focused on early childhood literacy, parent and educator engagement, and hands-on teaching than in the past.¹⁷ In some communities, museums and libraries have formal relationships with school districts that carry substantial responsibilities for resource sharing, curricular development and delivery, and staff development—both for school staff and museum and library staff.

In addition to academically focused programming, opportunities to spur creativity and curiosity through the arts carries additional benefits for children by improving performance in visuospatial reasoning.¹⁸ Individuals participating in the arts may learn skills that they did not previously have and may demonstrate greater creativity.¹⁹ A well-established body of literature in the field documents that children engaged in the arts do better in other subjects and that an arts-integrated curriculum improves school performance.²⁰

Increasingly, museums and libraries are also offering an increasing array of STEM and STEAM (which adds the A for arts) programming that build upon local school curriculums and can be practiced in these institutions' maker spaces and by engaging with the institutions' collections and staff.

Indeed, supporting formal and informal education through formalized partnerships, co-curricular programming, on- and off-site offerings, and the general availability of collections and spaces has long been the bread and butter of the museum and library fields. The way these supports play out in different institutions reflects the diversity of the institutions themselves and the diversity of the needs in their local communities.

AS THEY INCREASE SUPPORTS FOR COMMUNITY HEALTH AND HEALTHY LIVING, MUSEUMS AND LIBRARIES ARE EXPANDING INTO NEW TERRITORY

Promoting the health of their patrons through direct supports for individuals and the promotion of health literacy is another way museums and libraries are increasingly contributing to the wellbeing of their communities. Libraries increasingly serve as places for people to not only access health information, but also to get help navigating the healthcare system itself—for instance, applying for healthcare coverage on a library computer or identifying resources on a community bulletin.²¹ Museums' and libraries' ability to expand their service offerings into these new territories is largely facilitated by their status as highly trusted institutions in their communities.²²

Museums and libraries also offer a variety of resources and programming that support physical and mental health, such as: delivering supportive programs and mental health services to people experiencing homelessness, military members, and veterans; designing programs and exhibits for people with autism or other developmental disabilities; offering cooking classes and nutrition classes that promote healthy eating; and a host of supports specifically for older adults that can range from accessing Medicare benefits to learning how to live with dementia to simply providing spaces for them to socialize and connect with others.²³

Museums and libraries that are committed to actively promoting the wellbeing of their communities have made great strides in adopting an outward-facing posture to meet people “where they are”—physically, socially, and emotionally. Adopting this outward-facing orientation to their communities also means offering their programming in different settings—schools, senior care facilities, childcare facilities, group homes, homeless shelters—bringing mobile digital training, learning labs, and workshops to neighborhoods and consistently showing up to participate in community events.²⁴

As public-serving, free institutions, libraries have increasingly become refuges for people experiencing homelessness, and library staff regularly encounter patrons in their buildings who experience a range of physical and mental illnesses. An increasing number of libraries are employing social workers, housed onsite, to connect patrons to public services to address the challenges they face.²⁵ These social workers play a “resource broker” role that is particularly crucial in high-need areas and for at-risk or vulnerable patrons.²⁶

For individuals, previous studies suggest that direct involvement with programming hosted by museums or libraries can improve one’s health and mental well-being.²⁷ Longitudinal studies and randomized controlled trials found evidence that by engaging in creative activity or attending an artistic event, physical health improves.²⁸ These benefits accrue when individuals engage in creative and artistic activities that have been found to both reduce stress and strengthen social bonds.²⁹ Involvement in this type of programming also can protect against or help manage a range of mental health conditions and support recovery.³⁰ Additionally, prior studies suggest that arts participation increases wellbeing, defined as “a dynamic state in which the individual is able to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community.”³¹

LIBRARIES AND MUSEUMS CONTRIBUTE ECONOMICALLY TO THEIR COMMUNITIES THROUGH DIRECT SPENDING, EMPLOYMENT, AND BY ADDING VALUE TO SURROUNDING PROPERTIES

In addition to the supports museums and libraries provide for formal and informal learning, and increasingly for promoting community health, these institutions are also employers in their local economies. Most libraries have at least some public sector support for their activities, while many museums are privately run

institutions. Regardless of the sources of the funds that support their operations, the operations themselves contribute directly and indirectly to economic activity in their local communities.

Much of the existing literature quantifying the impact of civic institutions such as museums and libraries tends to focus on jobs and spending.³² A secondary thread of the literature examining the economic impact of civic institutions focuses on real estate property and land valuations associated with the location and the perceived quality of these institutions in different markets. These studies primarily focus on the viability of community development strategies and view arts and cultural institutions like museums and libraries as one amenity within a broader bundle of amenities that will inform decisions made by individual and institutional buyers in local real estate markets.

IT’S ALL ABOUT THE NETWORKS

It is evident to anyone who regularly visits museums and libraries that these institutions support formal and informal learning. It is becoming increasingly clear that these institutions also provide critical supports for the health of their patrons and communities through direct service, programming, and information-sharing. It is also increasingly well understood, if not consistently measured, that these institutions contribute directly and indirectly to economic activity in their communities through employment, direct spending, and as valued amenities in local real estate markets.³³

Less obvious are the broad and deeply integrated networks of public institutions, private organizations and businesses, and individuals within which museums and libraries are situated. It is likely the case that these networks activate museum and

library spaces through the partnerships and programming they support. Presumably, by collaborating with other institutions and organizations in their networks, museums and libraries are better able to respond to community needs and promote the quality of life of all residents. As described elsewhere in this report, there is an opportunity for further data gathering and research to support the ability to quantify the impacts that these networks have on communities and individuals.

This exploratory study conceptually situates museums and libraries within broader networks of support for different dimensions of social wellbeing. Museums' and libraries' positions within these networks—and their connections to the other organizations, institutions, and the lives of individuals and families—are likely the means through which museums and libraries most directly promote the quality of life in their communities. This exploratory study was designed to better understand how museums and libraries operate within these networks, and how their efforts promote wellbeing in different places across the country.

The following section presents the methodology for creating Museum and Library Indexes and the distribution of these indexes that identify places in the country where these institutions are most heavily concentrated.



SECTION ENDS



CREATING THE LIBRARY AND MUSEUM INDEXES

The initial step to understanding the relationship between libraries and museums and the wellbeing of their communities is developing a way to know where libraries and museums are located and how actively they are engaged with patrons in their communities. This section presents an overview of the data and methods used to construct two separate indexes that measure the presence and usage of libraries and museums for 3,090 counties in the United States.

These indexes provide a starting point for:

1. Understanding how the presence and usage of these institutions are related to different dimensions of social wellbeing; and
2. The selection of the case study institutions included in this study.

DATA SOURCES AND PROCESSING FOR THE LIBRARY INDEX

The Library Index relies on data from the 2016 Public Libraries Survey (PLS), which is administered by IMLS.³⁴ Responses from the PLS contain data for about 9,200 unique public library systems throughout the country. PLS responses for all operational public libraries were aggregated to 3,090 individual counties, which served as the geographic unit for the Library Index.

All counties were then assigned to four broad geographic scales: 1) urban, 2) suburban, 3) micropolitan, and 4) rural areas.³⁵ Under this classification:

- Urban counties contain a principal city within a metropolitan area.
- Suburban counties are located within a metropolitan area but do not contain a principal city of that metropolitan area.
- Micropolitan counties contain the principal city of a micropolitan area (i.e., an area with fewer than 50,000 residents).
- Rural counties are all other counties.

The following measures related to library presence and usage were input into a factor analysis to create a single county-level index at each geographic scale (urban, suburban, micropolitan, and rural):

PRESENCE MEASURES:

Total Outlets; Total Square Footage; Total Staff; Total Print Materials; Total Audio Materials; Total Video Materials; Total Computers; Total Databases; Total Hours of Operation; Total Programs.

USAGE MEASURES:

Total Circulation; Total Audio Downloads; Total Video Downloads; Total Visits; Total Users; Total Program Attendance.

CONSTRUCTING THE LIBRARY INDEX

Estimating the Library Index within each geographic scale provided an initial way to control for the considerable variation in the size and population density in counties across the United States. In addition to stratifying counties into these categories, another population-based adjustment was made to each of the measures included in the factor analyses.³⁶

A factor analysis was used to estimate a single factor measure for library presence and usage at each geographic scale (urban suburban, micropolitan, and rural) using the standardized metrics described above.³⁷ Figure 1 presents a map of the spatial variation in the Library Index across 3,090 counties in the country. Counties in Figure 1, and all subsequent maps, are shaded to correspond to the decile within which their respective index scores fall [i.e., counties with index scores in the bottom 10 percent of all counties within their geographic scale are in the “bottom decile” (bright red), and counties with index scores in the top 10 percent of all counties within their geographic scale are in the “top decile” (bright green)].

CONSTRUCTING THE MUSEUM INDEX

Constructing the Museum Index followed a similar approach as the Library Index, with a few notable differences. First, the data available to estimate the Museum Index are less systematically collected and less complete than the PLS. Records for individual museums were drawn from the IMLS-maintained Museum Universe Data File (MUDF), which was provided to the study team in fall 2018.

The data cleaning and processing for the MUDF reduced the population of museums to those entities that met the following criteria:³⁸

- non-profit or government-run;
- non-academic;
- organized on a permanent basis for educational or aesthetic purposes;
- owns or uses tangible or intangible objects, either animate or inanimate;
- cares for these objects;
- exhibits these objects to the general public on a regular basis through facilities that it owns or operates (excludes solely online museums); and
- uses professional staff (paid or unpaid).

Nearly 24,000 unique institutions in the MUDF met these initial criteria, which resulted in a diverse group of institutions, including, but not limited to: art museums, history museums, science and industry museums, children's museums, zoos and aquariums, special interest museums, historical societies, botanical gardens, arboretums, and national parks. A large majority (nearly 80 percent) of all museums represented in the MUDF were either historical societies or were referred to simply as "general museums". Table 1 presents the distribution of museum types represented in the resulting database of museums.³⁹

TABLE 1.
Museum Types

Museum Type	#	%
Historical Societies	13,242	55.2
General Museums	5,716	23.8
History Museums	1,575	6.6
Art Museums	1,308	5.5
Botanical Gardens/Living Museums	739	3.1
Science Museums	461	1.9
Children's Museums	397	1.7
Zoos & Aquariums	395	1.7
Natural History/Science Museums	164	0.7
Total	23,997	100

Figure 2: The study measured the Museum Index scores of 3,090 counties across the United States using an index range of least to most elevated levels of museum presence and usage among counties of similar geographic scales—urban suburban, micropolitan, and rural. The highest Museum Index scores, indicating greater presence, tend to be clustered in population centers in the Northeast, Upper Midwest, West Coast, parts of the Mountain West, Texas, and Florida. Museum Index scores tend to be lowest, indicating less presence, across the Southeast and middle of country.

LIMITATIONS

There are a number of limitations associated with the creation of the Museum and Library Indexes that are important for readers to understand.⁴¹ Primarily, using a county as the geographic unit presents a number of challenges. Particularly in urban and suburban counties, a tremendous amount of internal variation exists along key dimensions of social wellbeing within counties, as well as where libraries and museums are located and how they operate across different counties. But for a national-scale exploratory study, the county provided the most stable geography for which the most data were publicly available.

Additionally, the combination of the way county-level aggregations and population adjustments were required for the Library Index created some anomalies in the results. This appears most obvious in California, for instance, where two different scenarios played out. Thirty-two of the state's 58 counties are classified as urban; Los Angeles County has the highest population of any county in the country and is an extreme outlier once county populations are standardized for urban counties across the country. No amount of library presence and usage would be enough to put Los Angeles County on the top end of the distribution. Many of the other counties classified as urban in California are, in fact, a mix of urban cities, suburban surroundings, and even remote areas, all within a single county. As a result of this internal variation, and the resultant variation in library systems' size and activities, they are not necessarily as comparable to more dense urban counties in other parts of the country that are more uniformly urban.

Despite these limitations, the Library Index provides a helpful starting point for understanding those parts of the country where libraries are most heavily concentrated and active. Even the Museum Index, notwithstanding the greater limitations in data, provides a rough sense of where these institutions are clustered throughout the country. Both of these indexes provided reliable guidance for the selection of the case study institutions for participation in the study.



CREATING THE SOCIAL WELLBEING INDEXES

The geographic distribution of the locations and usage of libraries and museums across the United States is informed by a range of factors that collectively represent the broader context of individual places throughout the country. Understanding the relationships between the presence and usage of museums and libraries with key dimensions of social wellbeing in their communities provides valuable insights into the contextual factors that inform the way these institutions structure their programmatic services and offerings, as well as insights into why and how these institutions promote different dimensions of wellbeing.

The degree to which the presence and usage of museums and libraries intersect with different dimensions of social wellbeing varies from tangential to highly interwoven into the Index itself. For example, most museums and libraries (although there are some exceptions) do not actively pursue programming and partnerships that directly address Housing Opportunity or Economic Diversity in their communities. As seen in Section I, museums and libraries actively support Education and increasingly support Community Health through their programmatic offerings and partnerships. In some cases, such as the Cultural Assets and Institutional Connection Indexes, the presence of museums and libraries are actually built into the Index itself; their very presence in their communities is a positive marker of the county's Cultural Assets and Institutional Connection.

Given these considerations, this section focuses on presenting the methodology used to create the following social wellbeing indexes and presenting their geographic distributions: Economic Wellbeing, Educational Effectiveness, and Community Health.⁴² Section V takes a deeper look at the relationships between the Museum and Library Indexes with Economic Wellbeing, School Effectiveness, and Community Health. The Technical Appendix presents: 1) additional details about the data and methods used for estimating the Museum and Library Indexes and the social wellbeing indexes; and 2) the data and methods used to create each of the different social wellbeing indexes and their geographic distributions.



DATA SOURCES FOR ECONOMIC WELLBEING, SCHOOL EFFECTIVENESS, AND COMMUNITY HEALTH INDEXES

The primary data sources used to estimate the Economic Wellbeing, School Effectiveness, and Community Health Indexes include:

- American Community Survey (2016, 5-year file): Economic Wellbeing;
- Stanford University Education Data Archive (SEDA): School Effectiveness;⁴³
- Robert Wood Johnson Foundation's County Health Rankings and Roadmaps: Community Health.⁴⁴

Table 2 lists the three dimensions, the data elements used in their estimation, and the share of the overall amount of variance across these data elements that was accounted for by the resulting index created.

For example, the Economic Wellbeing Index accounts for 72 percent of all the county-level variance observed among the different inputs used to create the index itself. Given the county geographic unit of analyses, the resulting indexes account for a substantial share of the variance across the inputs used to create each index.

TABLE 2.
Social Wellbeing Index – County Level Data Inputs

INDEX	INCLUDED MEASURES	% VARIANCE EXPLAINED
ECONOMIC WELLBEING	Educational attainment (percent of residents over age 25 with less than high school degree; percent of residents over 25 with bachelor's degree or higher); median household income; share of households with investment income; per capita income; poverty rate; share of residents over age 16 in the labor force.	72
SCHOOL EFFECTIVENESS	Average standardized math/reading scores on state assessments; graduation rates; dropout rates (share of 16- to 19-year-olds without a high school degree and not attending school).	66
COMMUNITY HEALTH	Premature death rate; share of residents reporting poor or fair health; uninsured adults; preventable hospital stays; diabetes monitoring rate; adults smoking rate; adult obesity rate; teen births; share of residents reporting poor physical/mental health days; low birthweight rates; mammography screening rate; diabetes rate; HIV rate; limited access to healthy food; premature mortality (age adjusted); child mortality; food environment index. ⁴⁵	64

ESTIMATING ECONOMIC WELLBEING, SCHOOL EFFECTIVENESS, AND COMMUNITY HEALTH

The data used to estimate each social wellbeing index varies from index to index, but the development of each index follows a fairly uniform procedure. For each index, the relevant variables were loaded into a factor analysis. The results from the factor analyses are then converted to a standardized index score for individual counties.

A factor analysis is a procedure that aggregates multiple data inputs that collectively represent an unmeasured concept. Stated differently, it's not possible to observe economic wellbeing but conceptually it is represented by a set of observable indicators. For instance, the Economic Wellbeing Index draws on income, labor force participation, and educational attainment. These indicators, taken together, represent economic wellbeing. The factor analysis results provide insight into how much of the total variation across all these indicators is explained by the resulting economic wellbeing factor, or index. They also provide a way to understand how closely associated each data input is with the resulting factor. These associations are referred to as factor loadings and represent the association between each individual data input with the resulting index score.



ECONOMIC WELLBEING

The Economic Wellbeing Index includes three concepts: 1) income, 2) labor force participation, and 3) educational attainment. Income includes median household income, along with income from interest, dividends, and rent, which represent sources of unearned income. Labor force participation, including unemployment and underemployment, represents capacity for earned income and associated tax benefits. Moreover, employment is considered a proxy for “societal participation,” which is a central concept in the social inclusion literature. Educational attainment represents the *potential earnings* capacity and is a complement to actual measures of income.

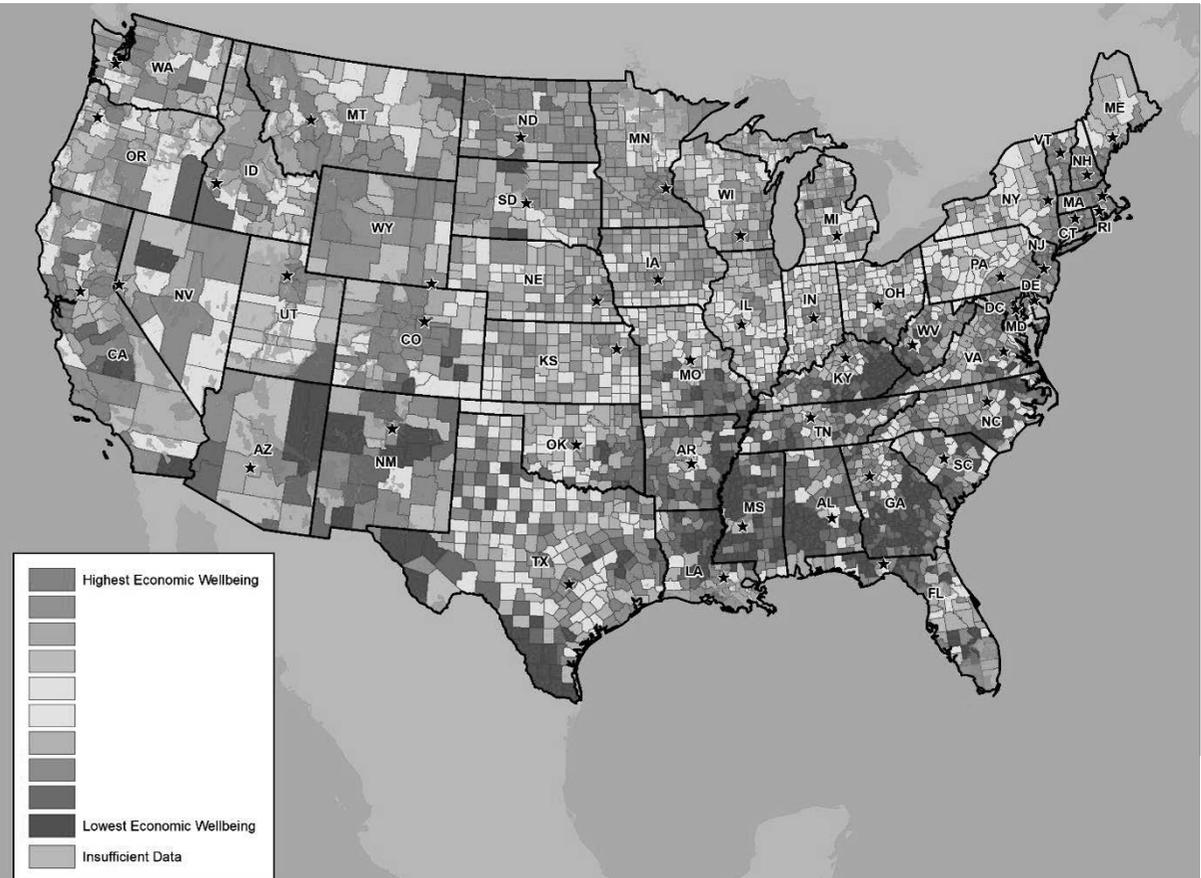
The following data elements were included in the Economic Wellbeing factor analysis:

- Percent of adults age 25 or older with a bachelor’s degree or higher;
- Percent of adults 25 or older with less than a high school diploma;
- Labor force participation rate;
- Median household income;
- Percent of households with interest, dividends, or rental income;
- Per capita income; and
- Poverty rate.

FIGURE 3.
Distribution of Economic Wellbeing Index Deciles

Figure 3 presents a map of the spatial variation in the Economic Wellbeing Index across the country.

Counties with the most elevated levels of Economic Wellbeing (green counties) tend to be clustered in the Northeast, Mid-Atlantic, Upper Midwest, Mountain West, along the Pacific Coast, and in urban pockets of the Southeast and southern parts of the country. Those counties with the lowest levels of Economic Wellbeing (red counties) tend to be concentrated in the Southeast and across the southern parts of the country.



SCHOOL EFFECTIVENESS

Constructing a county-level measure of School Effectiveness is an inherently challenging undertaking, principally due to the vast internal variation within counties. Counties are often home to multiple school districts and numerous individual schools whose performance often varies a great deal from district and county averages. The development of the School Effectiveness Index relied on the most consistent, publicly available data for all the nation's counties.

The primary data inputs include school districts' reports of standardized test scores in English and Language Arts (ELA) and math. Stanford University's Center for Education Policy and Analysis (CEPA) aggregates these data at the county level, using a variety of statistical techniques for standardizing data across ages, school districts, and states so they can be interpreted at a nationwide scale.⁴⁶

In addition to standardized test scores, the American Community Survey also provides county-level estimates of high school graduates and dropouts.

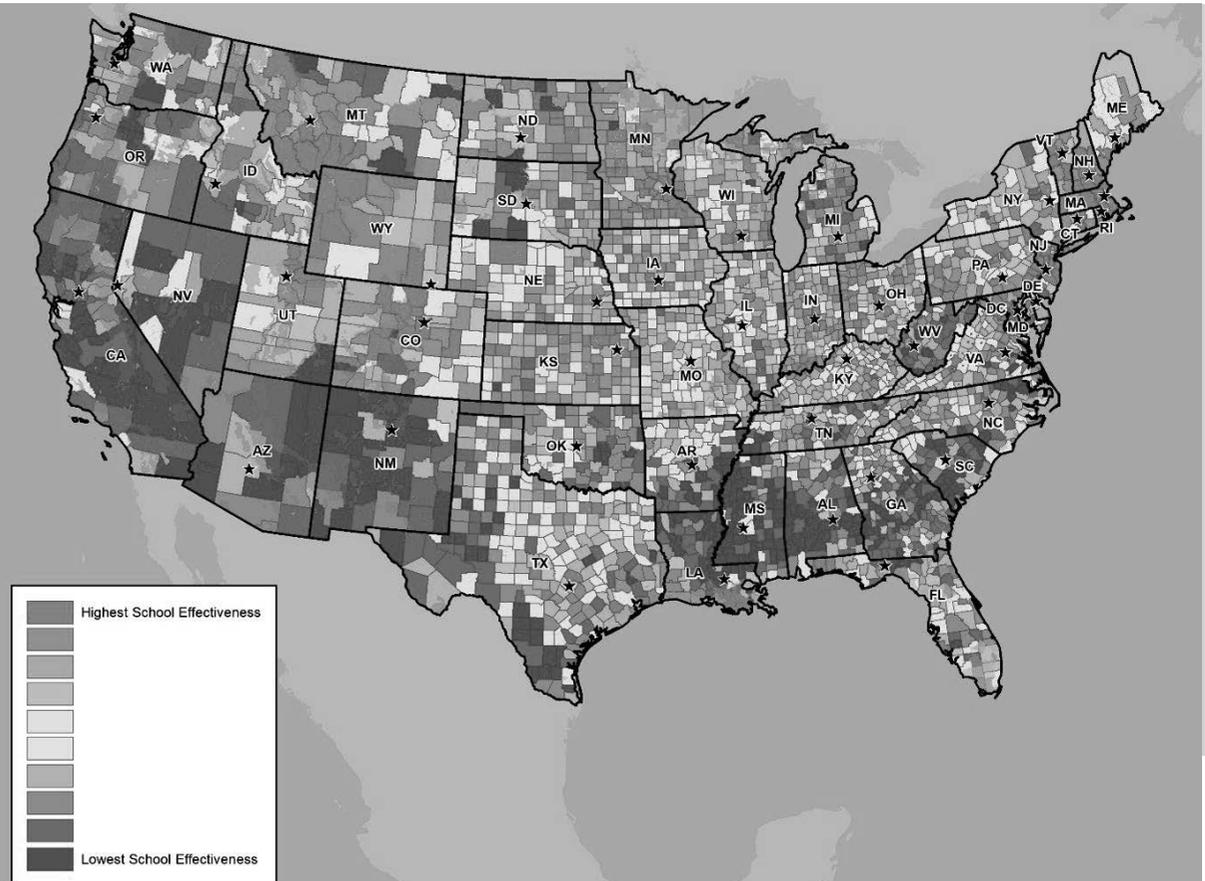
The following data elements were included in the School Effectiveness Index:

- Performance on standardized math state assessments;
- Performance on standardized English/Language Arts state assessments;
- High school graduation rate; and
- Percent of 16- to 19-year-olds who are not high school graduates or enrolled in school.

FIGURE 4.
Distribution of School Effectiveness Index Deciles

Figure 4 presents a map of the spatial variation in the School Effectiveness Index across the country.

Counties with the most elevated levels of School Effectiveness (green counties) tend to be clustered in the Northeast, Upper Midwest, Great Plains, and Mountain West. Those counties with the lowest levels of School Effectiveness (red counties) tend to be concentrated in the Southeast, across the southern parts of the country, and the West Coast. This spatial pattern is similar to distribution of the Economic Wellbeing Index, and the two indexes have a correlation of ($r = 0.67$), suggesting there is a relatively strong and positive association between a county's Economic Wellbeing and School Effectiveness.



COMMUNITY HEALTH

Community Health refers to the aggregate levels of the physical health of residents within each county. The primary data sources for the Community Health Index include the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System that is compiled for counties by the Robert Wood Johnson Foundation's County Health Rankings and Roadmap.⁴⁷

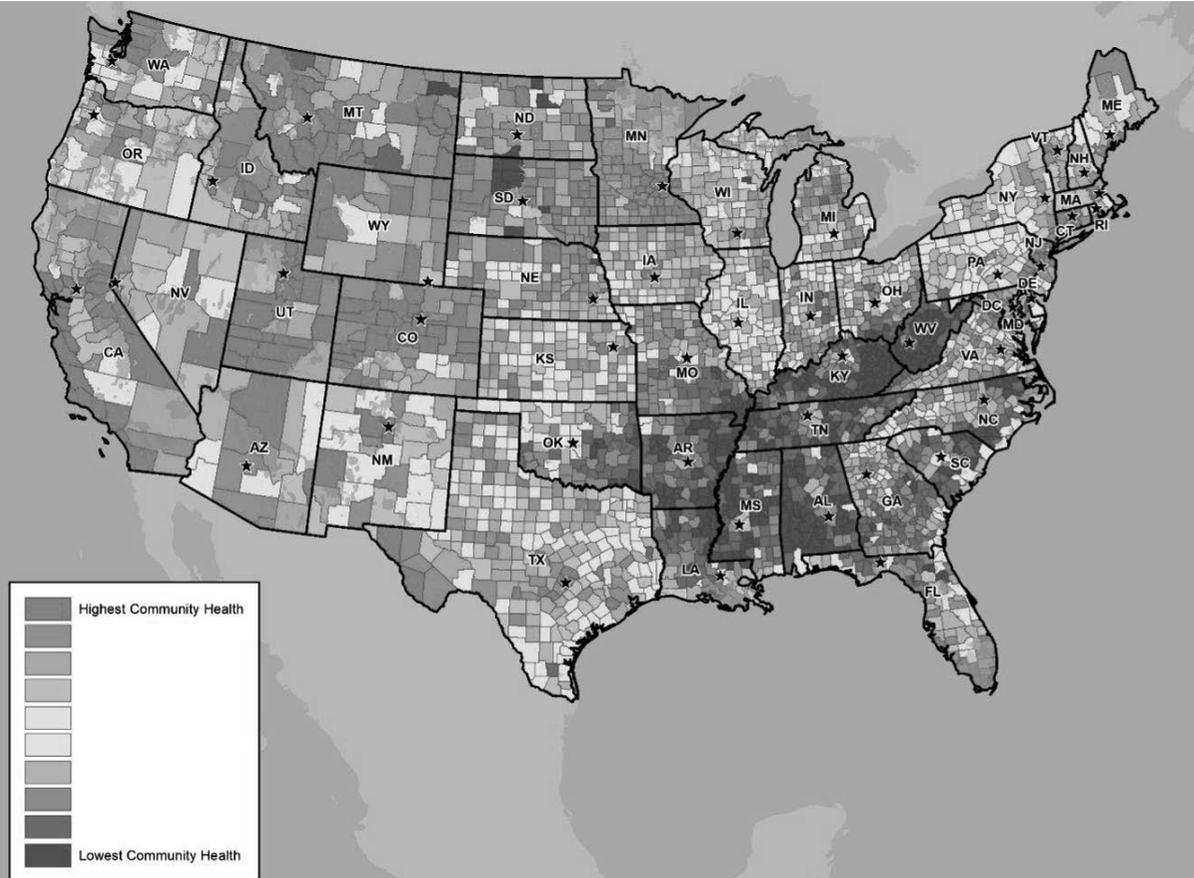
The following metrics were used to estimate the Community Health Index:

- Premature death rate;
- Share of residents reporting poor or fair health;
- Uninsured adults; preventable hospital stays;
- Teen births;
- Diabetes monitoring rate;
- Adult smoking rate;
- Adult obesity rate;
- Low birthweight rates;
- Diabetes rate;
- HIV rate;
- Mammography screening rate;
- Limited access to healthy food;
- Premature mortality (age adjusted);
- Child mortality;
- Share of residents reporting poor physical/mental health days; and
- Food environment index.⁴⁸

FIGURE 5.
Distribution of Community Health Index Deciles

Figure 5 presents the spatial variation in the Community Health Index across the country.

Counties with the lowest levels of Community Health (red counties) tend to be concentrated in the Southeast. Counties with the highest levels of Community Health (green counties) tend to be concentrated in the upper-Midwest, parts of New England, and the western half of the country. Similar to the School Effectiveness Index, this spatial pattern is similar to distribution of the Economic Wellbeing Index, and the two indexes have a correlation of ($r = 0.76$), suggesting that once again there is a relatively strong and positive association between a county's Economic Wellbeing and Community Health.



SUMMARY

The indexes for Economic Wellbeing, School Effectiveness, and Community Health presented in this section offer a high-level glimpse into the diverse range of experiences and how relative advantages and disadvantages cluster in different parts of the country. These conditions—the relative Economic Wellbeing, School Effectiveness, and Community Health in individual counties—offer a glimpse of the broader context within which museums and libraries operate in different parts of the country.

As seen in Section II, there is good reason to believe that museums and libraries are actively working in their communities to support education and are becoming increasingly involved in efforts to promote personal and public health. The following section presents findings from a set of multivariate analyses conducted to better understand the associations between the Museum and Library Indexes and two key dimensions of social wellbeing: School Effectiveness and Community Health. The results from these analyses provided a starting point for the selection of the 24 case study locations described in Section VI.



SECTION ENDS



ESTIMATING RELATIONSHIPS BETWEEN MUSEUM AND LIBRARY INDEXES AND SOCIAL WELLBEING INDEXES

Two sets of analyses were developed to examine the relationship between the Museum and Library Indexes and social wellbeing. First, a set of correlations was analyzed between the Museum and Library Indexes with the Economic Wellbeing, School Effectiveness, and Community Health Indexes. The results of these initial analyses were then used to develop a set of generalized linear (regression) models to examine the relationship between the Museum and Library Indexes and the School Effectiveness and Community Health Indexes. This section presents findings from each set of analyses.

TABLE 3.
Correlations Between Museum, Library Indexes with Economic Wellbeing, School Effectiveness, and Community Health Indexes

	MUSEUM INDEX	LIBRARY INDEX	ECONOMIC WELLBEING
ECONOMIC WELLBEING	.500	.258	1.000
SCHOOL EFFECTIVENESS	.235	.176	.674
COMMUNITY HEALTH	.372	.262	.762

n=3090 counties

ESTIMATING RELATIONSHIPS BETWEEN SOCIAL WELLBEING INDEXES AND MUSEUM AND LIBRARY INDEXES

Prior research has demonstrated that several dimensions of wellbeing—particularly Economic Wellbeing—has a strong impact on many other dimensions. As seen in Table 3, Economic Wellbeing is positively correlated with School Effectiveness ($r=0.67$), and Community Health (0.76). Economic Wellbeing is also positively correlated with the Museum index (0.50), but less so with the Library index (0.25).

Given the strong positive associations between the Economic Wellbeing, School Effectiveness, and Community Health indexes, analyses of how the Museum and Library Indexes influence the latter two must take the Economic Wellbeing of a county into account. This finding aligns with much of the literature, which suggests that while economic status is not the only influence on social wellbeing, it remains one of the strongest.⁴⁹

The study's conceptual model of how museums and libraries support School Effectiveness or Community Health in their communities flows through the *social connections* these institutions maintain and facilitate between disparate individuals, groups, and organizations in their communities. In other words, the social connections associated with a greater presence and usage of libraries and museums can serve to either reinforce (in the case of better-off counties) or mitigate (in the case of poorer counties) the relationship between economic status and social wellbeing.

For each model, the outcome is the School Effectiveness or the Community Health Index score. The predictors, the Museum and Library Indexes, are included as a set of dummy variables that represents quintiles of where an individual county falls along the distribution of each index. In addition, three control variables are included in each analysis: 1) the Economic Wellbeing Index, 2) the percent of the population that is non-Hispanic White, and 3) the geographic scale of the county (urban, suburban, micropolitan, rural). Separate models also were estimated at each geographic scale (urban, suburban, micropolitan, rural).

TABLE 4.
General Linear Model Outcomes, Predictors, and Controls

Table 4 presents the general structure for the general linear models developed to assess the relationships between the Museum and Library Indexes and two dimensions of social wellbeing: School Effectiveness and Community Health.

OUTCOMES	PREDICTORS	CONTROLS
1. School Effectiveness Index	1. Library Index Quintile	1. Economic Wellbeing Index
2. Community Health Index	2. Museum Index Quintile	2. Non-Hispanic White Population
		3. Geographic Scale (urban, suburban, micropolitan, and rural counties)*

**The geographic 'control' was imposed in two ways: by including dummy variables for a single model with all counties and then by estimating separate models for each type of county.*



TABLE 5.
Significant Associations Between the Museum, Library Indexes with School Effectiveness and Community Health Indexes, by Geographic Scale*

LIBRARY INDEX		All counties	Micropolitan	Rural	Suburban	Urban
	N	3,109	545	1,417	619	476
	School Effectiveness	0.13	-	0.095	0.167	0.17
	Community Health	0.105	-	0.263	-	0.23

MUSEUM INDEX		All Counties	Micropolitan	Rural	Suburban	Urban
	N	3,109	545	1,417	619	476
	School Effectiveness	-	0.155	-	-	-
	Community Health	-	-	-	-	-

Note: 52 counties were not classified into a rural, micropolitan, suburban or urban designations. For this reason the total counties in each geographic scale do not equal the total counties presented in the table.

* All cells with values are statistically significant ($p < .01$). Blank cells are associations that were not significant.

RELATIONSHIPS BETWEEN THE MUSEUM AND LIBRARY INDEXES AND THE SOCIAL WELLBEING INDEXES

Overall, the Library Index had a more consistent relationship with elevated levels of social wellbeing than the Museum Index. The Library Index was found to have a statistically significant relationship with both School Effectiveness and Community Health, while the Museum Index’s relationships were not significant for either. When the analyses are run separately for different types of counties, the significance of the relationships observed for all counties fluctuated. Similar to the overall results, the relationships between the Library Index and School Effectiveness and Community Health were more consistently significant than were those for the Museum Index.

Table 5 presents the statistically significant beta coefficients from the generalized linear models used to estimate the associations between the Library and Museum Indexes with School Effectiveness and Community Health, controlling for the effects of Economic Wellbeing, the non-Hispanic White population, and county type.

Following R.J. Sampson, we see race as “a marker for the cluster of social and material disadvantages that both follow from and constitute racial status in America.” In other words, there is a host of influences—some measurable, some not—that are embedded in the experience of individuals and communities of color that is best taken into consideration by using race as a control.⁵⁰

As seen in Table 5, all the significant associations between the Library Index are positive, suggesting that where the Library Index is higher, so too are the School Effectiveness and Community Health Indexes. These results suggest that on average, moving from one quintile of the Library Index to the next higher quintile is associated with a 0.130 increase in the School Effectiveness Index score and a 0.105 increase in the Community Health Index score. This overall pattern was mirrored in both rural and urban counties as well, and the magnitude of the relationship between the Library Index with the Community Health Index increased rather substantially in rural (0.263 v. 0.105) and urban counties (0.230 v. 0.105).

To better visualize these results, Figure 6 presents predicted values for School Effectiveness and Community Health at increasing levels of the Library Index. In Figure 6, 0 represents the national average for the School Effectiveness and Community Health Indexes.

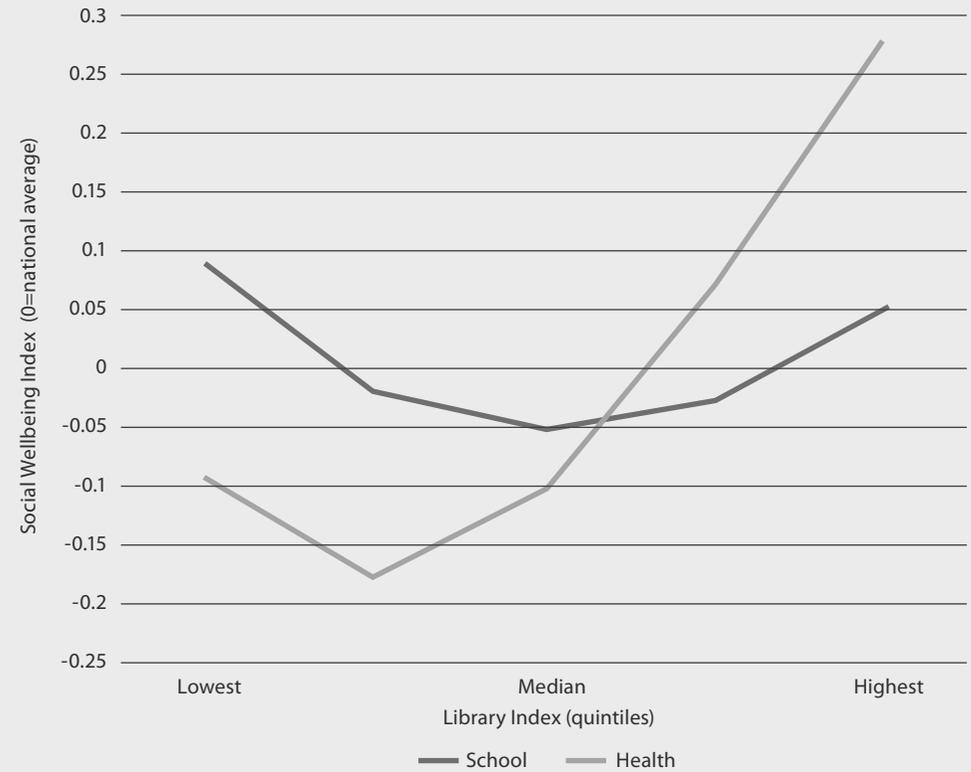
When the predicted values for the Community Health and School Effectiveness Index are plotted in this way, two U-shaped patterns emerge that are not immediately obvious in the regression coefficients presented in Table 5. Moving from the lowest Library Index quintile to the next is actually associated with initial downward performance on both the Community Health and School Effectiveness Indexes. However, subsequent movement along the Library Index is associated with dramatic increases in the Community Health index, and the School Effectiveness Index also turns at the mid-point of the Library Index.

The most consistent set of relationships between the Library Index and School Effectiveness and Community Health was found in rural areas.⁵¹ Figure 7 presents predicted values for School Effectiveness and Community Health at increasing levels of the Library Index in rural counties.

When the predicted values for the Community Health and School Effectiveness Indexes in rural counties are plotted in this way, the relationship with School Effectiveness appears more modest, while the relationship with Community Health is far more positive and pronounced.

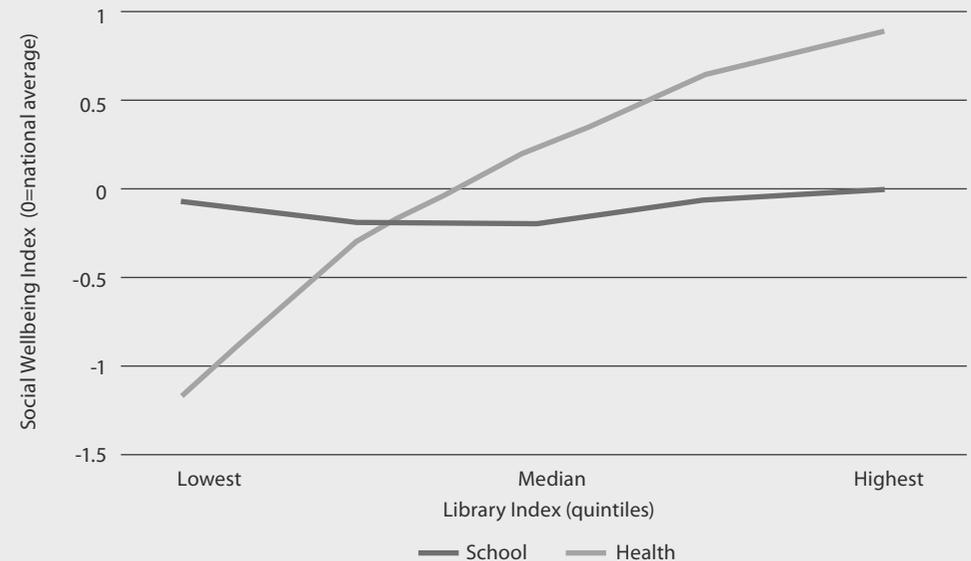
ALL COUNTIES

FIGURE 6.
Predicted Values of School Effectiveness and Community Health and Library Index Quintiles



RURAL COUNTIES

FIGURE 7.
Predicted Values of School Effectiveness and Community Health Indexes and Library Index Quintiles



Indeed, moving from a rural county with a Library Index score in the lowest quintile to a rural county with a Library Index score in the highest quintile is associated with nearly a 2-point increase in the Community Health index. It is important to recall that the social wellbeing indexes are all standardized units, meaning that the increase from the first to the fifth Library Index quintile is associated with roughly a 2 standard deviation unit increase in the Community Health Index—a substantial increase.

These findings suggest that Community Health and School Effectiveness are positively related to the Library Index, even after controlling for Economic Wellbeing and the size of the White population. The relationship with the Community Health Index is most striking, particularly in rural counties.⁵² The results presented in this section suggest that the Library Index has more explanatory value with respect to social wellbeing than the Museum Index. Although all the statistical relationships observed in these analyses are modest, they do support a conclusion about the mutually reinforcing relationships between a well-developed library sector, School Effectiveness, and Community Health.

At the same time, exploratory studies such as this one often point to more questions than they answer. As seen previously, the utility of the Museum Index is hampered by profound limitations in the data itself (i.e., heterogeneity within the “museum

group,” as well as the limited availability of consistent measures of the presence and usage of museums across the country). While the Library Index appears to have held together as an index and performed in more expected ways, the Public Libraries Survey also has limitations, particularly related to aspects of libraries’ work most closely associated with their role as community catalysts.⁵³

Given the challenges associated with conducting these analyses at the county level, it was remarkable to observe the positive associations between the Library Index with the Community Health and School Effectiveness Indexes presented in this section. Another key goal of this study was to understand what is happening within counties that would make these associations observable at a national scale. To address this question, the study team identified 24 counties across the country to better understand how the work of libraries and museums supports education and health in the communities they serve. The following section presents the methodology for selecting the case study locations, data collection activities, and analyses conducted for each of the case study institutions. Sections VII and VIII present findings from the case studies.



SECTION ENDS



CASE STUDY SELECTION, DATA COLLECTION, AND ANALYSES

SELECTION OF CASE STUDY INSTITUTIONS

Twenty-four case studies were conducted to explore the different ways that museums' and libraries' activities within individual counties promote School Effectiveness and Community Health. The goal in selecting case study sites was not to select a set of counties that would be representative of different types of counties across the nation. Rather, case study counties were purposively selected when there was good reason to believe that: 1) that museum and library activities in a county may be connected to School Effectiveness or Community Health; and 2) that a deeper understanding of these efforts could provide valuable insights for other museum and library professionals, public officials, and other key stakeholders whose work intersects with museums and libraries in their communities.

For these reasons, the findings presented from the case studies should not be considered generalizable to the broader museum and library community. Rather the case studies do two things: 1) they explain how the activities of libraries and museums intersect with School Effectiveness and Community Health to provide some insight into the observed correlations between the Museum and Library Indexes and wellbeing; and 2) they provide insights into promising and replicable approaches that museums and libraries are using to promote the wellbeing of their patrons, their staff, and their communities.

Case study selection followed a purposive selection process guided by a literature review and the quantitative analyses presented in the previous sections. A three-step process initially identified pools of eligible counties for case studies. First, all counties were assigned to three broad geographic scales—urban, suburban,

and micropolitan using the Office of Management and Budget definitions for metropolitan and micropolitan areas.⁵⁴ A county was classified as urban if it contains a principal city within a metropolitan area. A county was classified as suburban if it is within a metropolitan area but does not contain a principal city of that metropolitan area. A county was classified as micropolitan if it contains the principal city of a micropolitan area.⁵⁵

Second, in each type of county, counties were eligible for case study selection if they had Museum or Library Index scores in the top quartile of the Museum and Library Indexes at each geographic scale.

Third, counties were eligible for case study selection based on elevated or depressed levels of the School Effectiveness or the Community Health Indexes. Counties with School Effectiveness or Community Health Index scores in the top or bottom quartiles were eligible at each geographic scale.

Following this process, a sampling frame for urban, suburban, and micropolitan counties was reviewed in consultation with IMLS to identify a mix of institutions that represented diversity in size, location, and type. **Figure 8 presents the name and locations of each institutions, followed by Tables 6 and 7, which present the following information for each institution selected for a site visits: county; name of the institution; the county's decile on the Museum or Library Index (10 is the highest; 1 is the lowest); and whether the county was in the top or bottom quartile of the Community Health or School Effectiveness Indexes.**

NOTE: To better represent common understandings of county "types," the remainder of this report will refer to micropolitan counties as rural. Though they do not meet the OMB definition of rural, these counties are the least densely populated counties that were included among the case study counties.



FIGURE 8.
 Site visits conducted from September 2019 to March 2020 with participating libraries and museums

LIBRARIES

- 1 **Blue Ridge Regional Library System** | *Martinsville, VA*

- 2 **Central Arkansas Library System** | *Pulaski, AR*

- 3 **C.E. Weldon and McWherter Public Libraries** | *Weakley, TN*

- 4 **Denver Public Library** | *Denver, CO*

- 5 **Fletcher Free Library** | *Chittenden, VT*

- 6 **Liberal Memorial Library** | *Seward, KS*

- 7 **Mid-Continent Public Library** | *Platte, MO*

- 8 **Milwaukee Public Library** | *Milwaukee, WI*

- 9 **Spartanburg County Public Libraries** | *Spartanburg, SC*

- 10 **Victor Farmington Library, Wood Library and Geneva Public Library** | *Ontario, NY*

- 11 **Whitman County Rural Library District** | *Whitman, WA*

- 12 **Yavapai County Free Library District** | *Yavapai, AZ*

MUSEUMS

- 13 **Canterbury Shaker Village** | *Merrimack, NH*

- 14 **Chihuahuan Desert Research Institute** | *Jeff Davis, TX*

- 15 **Como Park Zoo and Conservatory** | *Ramsey, MN*

- 16 **Kentucky Science Center** | *Jefferson, KY*

- 17 **Lander Children’s Museum** | *Fremont, WY*

- 18 **Mendocino Coast Botanical Gardens** | *Mendocino, CA*

- 19 **Museum of Contemporary Art North Miami** | *Miami-Dade, FL*

- 20 **Prince George’s African American Museum and Cultural Center** | *Prince George’s, MD*

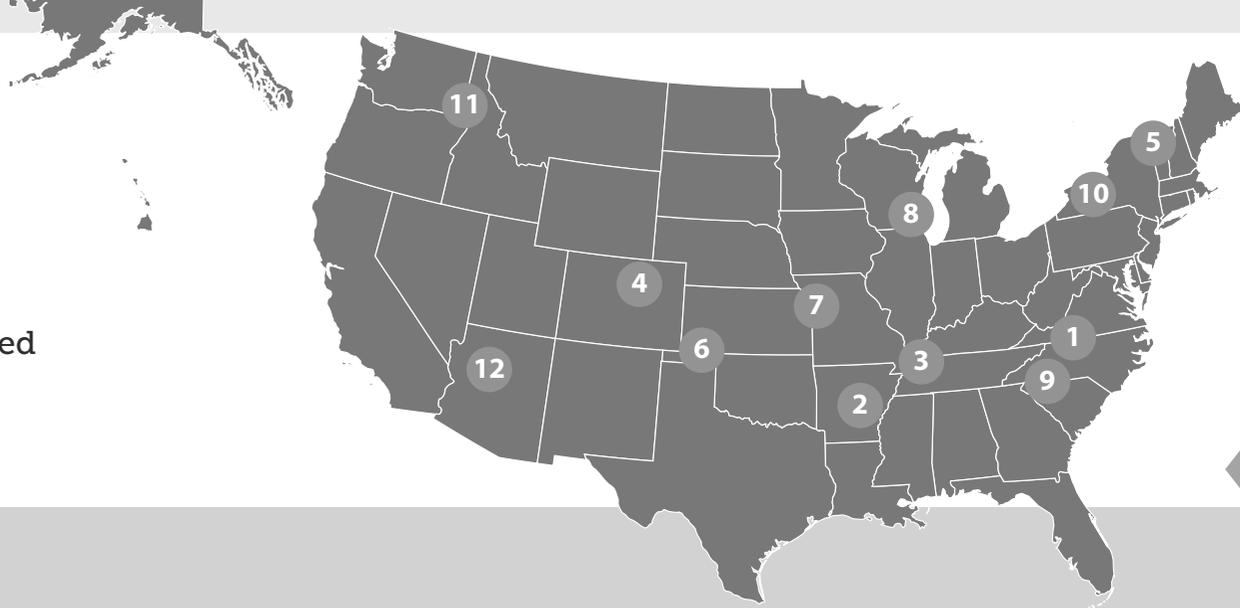
- 21 **The Mattress Factory** | *Allegheny, PA*

- 22 **Tri-Cities Historical Museum** | *Ottawa, MI*

- 23 **Visual Arts Center of New Jersey** | *Union, NJ*

- 24 **Woodlands Garden** | *DeKalb, GA*

It is important to note that library case studies were structured to focus specifically on their institutional programming and partnership related to education or health, whereas the museum case studies were structured to focus on both education *and* health.



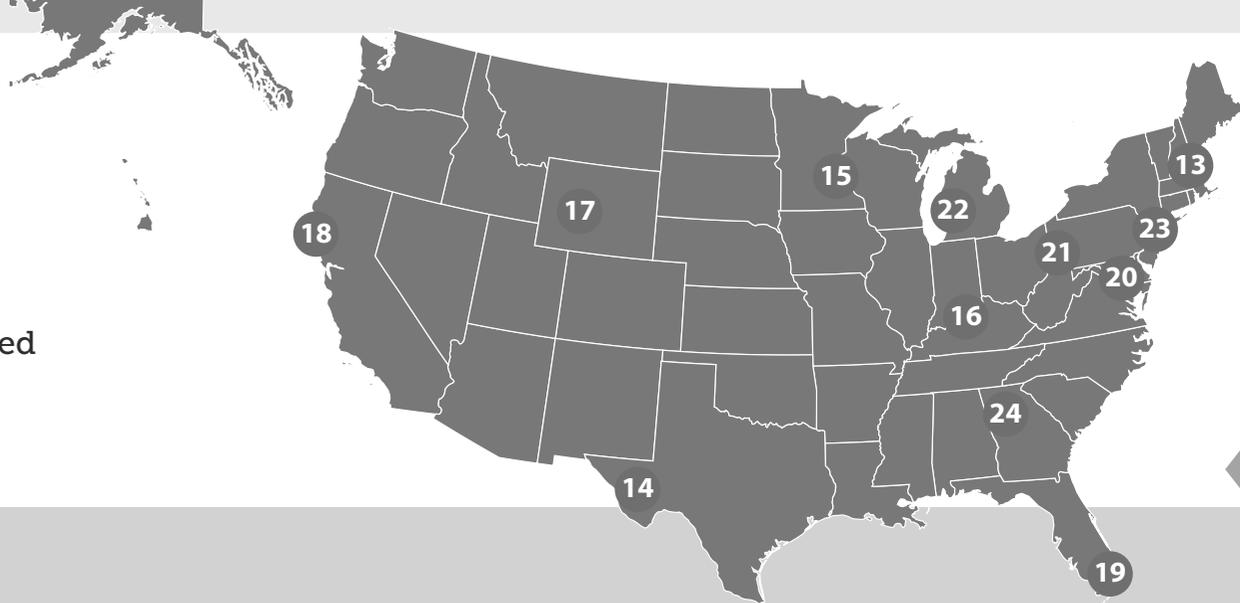
LIBRARIES

TABLE 6.

Library Case Study Counties and Institution(s)

GEOGRAPHY	COUNTY		INSTITUTION	LIBRARY INDEX DECILE	PERSONAL HEALTH (HIGH/LOW)	EDUCATIONAL EFFECTIVENESS (HIGH/LOW)
Urban	Denver, CO	4	Denver Public Library	10	High	
	Pulaski, AR	2	Central Arkansas Library System	9	Low	
	Chittenden, VT	5	Fletcher Free Library	9		High
	Milwaukee, WI	8	Milwaukee Public Library	9		Low
Suburban	Ontario, NY	10	Victor Farmington Library, Wood Library, and Geneva Public Library	9	High	
	Spartanburg, SC	9	Spartanburg County Public Libraries	7	Low	
	Platte, MO	7	Mid-Continent Public Library	9		High
	Yavapai, AZ	12	Yavapai County Free Library District	9		Low
Rural	Whitman, WA	11	Whitman County Rural Library District	10	High	
	Martinsville, VA	1	Blue Ridge Regional Library	10	Low	
	Weakley, TN	3	C. E. Weldon and McWherter Public Libraries	7		High
	Seward, KS	6	Liberal Memorial Library	7		Low

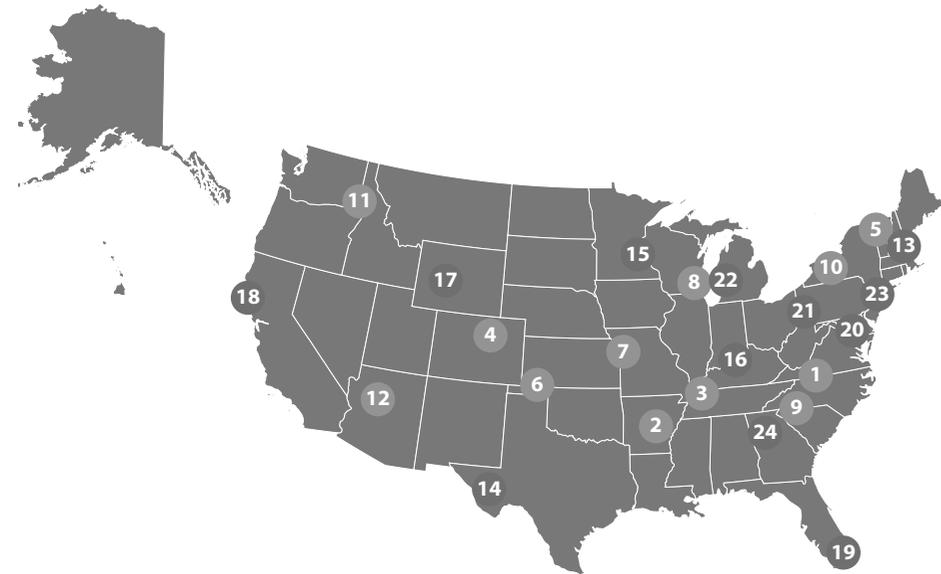
It is important to note that library case studies were structured to focus specifically on their institutional programming and partnership related to education or health, whereas the museum case studies were structured to focus on both education *and* health.



MUSEUMS

TABLE 7.
Museum Case Study Counties and Institution(s)

GEOGRAPHY	COUNTY		INSTITUTION	MUSEUM INDEX DECILE	PERSONAL HEALTH (HIGH/LOW)	EDUCATIONAL EFFECTIVENESS (HIGH/LOW)
Urban	Allegheny, PA	21	Mattress Factory	10	Low	High
	Miami-Dade, FL	19	Museum of Contemporary Art North Miami	10	High	High
	Ramsey, MN	15	Como Park Zoo and Conservatory	10	High	Low
	Jefferson, KY	16	Kentucky Science Center	9	Low	Low
Suburban	DeKalb, GA	24	Woodlands Garden	10	High	Low
	Ottawa, MI	22	Tri-Cities Historical Museum	10	High	High
	Prince George's, MD	20	Prince George's African American Museum and Cultural Center	10	Low	Low
	Union, NJ	23	Visual Arts Center of New Jersey	10	High	High
Rural	Fremont, WY	17	Lander Children's Museum	10	Low	Low
	Merrimack, NH	13	Canterbury Shaker Village	10	Low	High
	Jeff Davis, TX	14	Chihuahuan Desert Research Institute	9	High	Low
	Mendocino, CA	18	Mendocino Coast Botanical Gardens	10	High	Low



The resulting set of 24 institutions includes 12 libraries and 12 museums located in four urban, four suburban, and four rural counties where School Effectiveness and Community Health were either particularly high or low.

The assumption underlying this selection process is that these institutions are likely not the drivers of their counties' scores on the School Effectiveness or the Community Health Indexes; rather, where their counties fall along these indexes likely informs the type of activities they pursue, the partnerships they create, and the programming they offer to support education and/or health in their local communities. On the high end, we expected these institutions' activities and partnerships to bolster either education or health in their communities. On the low end, we expected to see these institutions' activities and partnerships operating to respond to unmet needs in their communities.

CASE STUDY DATA COLLECTION ACTIVITIES

The goal for the case studies was to explore the mechanics of how the work that museums and libraries do in their communities intersects with either education or health.

The case studies were guided by five broad exploratory research questions:

1. What activities, programs, and partnerships do museums and libraries engage in that link to education or health?
2. What position(s) do museums and libraries occupy within local networks that support education or health?
3. What economic contributions do museum and library purchasing and spending have on local economic activity in their communities?
4. What efforts are currently underway to assess the contribution that museums and libraries activities make to promote education or health?
5. How can museums' and libraries' activities and assessments inform the work of other museums and libraries promoting education and health in other counties?

Data collection for each case study included two principal components:

- 1) background research prior to site visits; and
- 2) site visits.

BACKGROUND RESEARCH

Following the selection of each case study institution, the study team conducted an online search of the institution in the target county. This was followed by preliminary interviews with primary contacts at the museum or library to confirm their participation in the study and to identify additional participants for interviews during the site visit itself.

SITE VISITS

Site visits were conducted by teams of two: one lead team member who conducted semi-structured interviews, and another who took detailed notes during all data collection activities. Site visits included a combination of individual and group interviews of the following local stakeholders: museum and library representatives, public officials, local school staff or administrators, community-based organizations, local businesses, and other actors as determined by the local context. In addition, site visit institutions provided administrative documentation of their recent revenues and expenditures, documentation of the partnerships they maintain, and sample tools or materials that support different aspects of their work.

Analyses of data collected from site visits included qualitative analyses of background research ahead of the site visits, interviews conducted with museum and library staff and stakeholders, and documents that were collected during or after the site visit. The analyses of the site visit data included the development of analytic memos for each case study institution.

ECONOMIC INPUT-OUTPUT ANALYSES

For each case study institution, an economic input-output analysis was conducted to estimate how the institution's revenue and spending circulate through the local economy. Economic impact studies are typically designed to estimate the economic benefits that an individual project, industry, or institution contributes to the local economies and surrounding communities. These studies use financial and economic data to estimate economic outputs such as GDP or employment and tax revenues associated with changes in the level of economic activity that

result from a specific project or industry.⁵⁶ At a macroeconomic level, economic input-output analyses rely on a matrix of industries that permit analyses of how different sectors of the economy are interconnected. Conducting economic input-output analyses using these matrices can provide insight into how changes in one sector can send ripples throughout the rest of the economy.⁵⁷

For this project, the study team relied on the nationally recognized input-output model Economic Modeling Specialists Intl. (EMSI) to estimate the economic activity associated with the case study libraries and museums. EMSI traces the pattern of commodity purchases and sales between industries that are associated with each dollar's worth of a product or service sold to a customer. It then analyzes interactions among 1,000 industrial sectors that are represented by North American Industrial Classification System (NAICS 6-digit codes) using assumptions about spending that take place outside of each county.⁵⁸ EMSI's software license is free, making this methodology more replicable by others who want to assess the economic activity associated with museums and libraries.

ESTIMATING ECONOMIC ACTIVITY ASSOCIATED WITH MUSEUMS AND LIBRARIES

The study team, in consultation with the subject matter experts informing the study, identified a set of NAICS codes to represent libraries and museums.⁵⁹ For each NAICS code, EMSI provides a set of industry multipliers, which summarize the circulation of dollars through a local economic system. Applying these industry multipliers to the annual budgetary spending for each of the case study museums and libraries provided an opportunity to better understand the ripple effects of library and museum spending within each of the case study counties.⁶⁰

The total economic activity associated with museums and libraries consists of direct spending and jobs supported, indirect spending and jobs supported, and induced spending and jobs supported.

Direct spending primarily supports museum and library salaries and staffing; **indirect economic activity** represents spending between a museum and library and other local businesses in the community; and **induced economic activity** represents secondary and tertiary economic activity associated with a museum or library’s spending, like the dollars spent by their staff and vendors in the local economy.

It is important to note that there are many activities that a museum or library supports directly or indirectly that may have an economic value that are not captured using this standardized approach to measuring economic inputs and outputs. Table 8 presents a sample of activities that are, and are not, captured using this methodology.

It is also important to note that the estimates presented for the case study sites represent an overall estimate of all economic activity associated with a library’s or museum’s revenue and expenditures, and do not represent an estimate of spending that would only accrue by virtue of the presence of the library or museum itself. That is, the estimates presented do not suggest that the aggregate amount of spending and jobs associated with an individual library’s or museum’s spending in a local economy would not have circulated through the community if the library or museum was not part of the local economy. Appendix III contains detailed findings for each case study site.

NOTE: *Data collected from each institution was not uniform; some institutions provided very robust financial information, while others provided very little. Due to this variation, it was necessary for the study team to make modifications to the economic input-output analyses for each institution depending on the data provided. In addition, the focus of the economic output analyses were restricted to “business as usual” operations spending (rather than, for example, spending associated with construction of new facilities) to obtain a clearer sense of the ongoing local economic activity these institutions support, rather than the sporadic and more limited activities associated with construction.*⁶¹

TABLE 8.
Museum and Library Activities Represented
in Economic Input/Output Analyses

	TYPE OF ACTIVITY	HOW MEASURED IN INPUT/OUTPUT MODELLING
Activities that can be detected by the economic input/output analysis	Spending by an institution on materials and goods	As direct and indirect impacts if purchases occur in the same county
	Spending by an institution on salaries	As indirect impacts if employees live and spend within the same county
	Paid visitors to an institution	Only to the extent that institutional revenue is spent within the same county
Activities that cannot be detected by the economic input/output analysis	Free visits; benefits to program participants	Not measured
	Circulation of materials; benefits to participants of community programs	Not measured
	Volunteer hours	Not measured

INSTITUTIONAL NETWORK ANALYSES

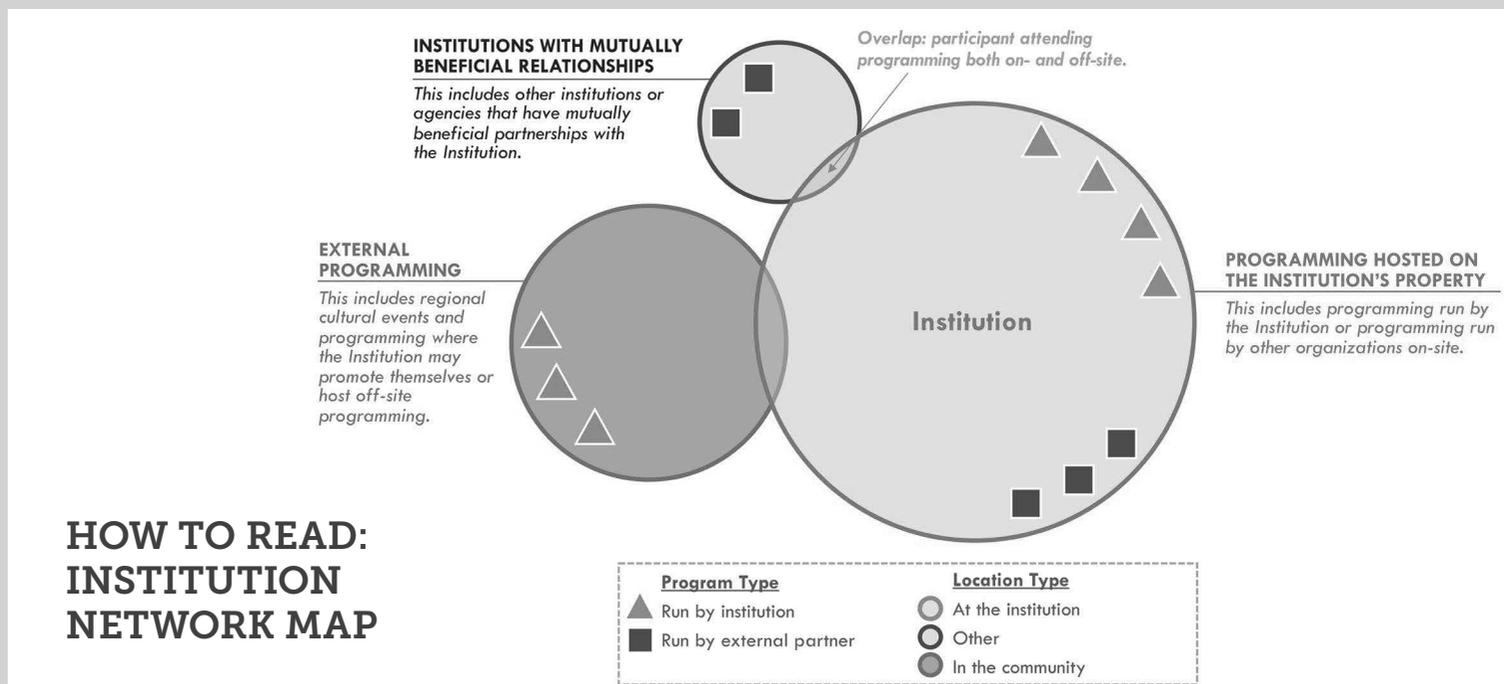
For each case study institution, the study team developed a network map to descriptively represent how each institution was connected to different types of organizations and institutions in their communities.⁶² For each case study institution, the study team developed network maps for a *sample* of the connections maintained by the museums and libraries that participated in the study. Using records provided by each institution related to partnerships with other institutions, funding sources, and program types and attendance summaries, the operations of each institution were put into the following categories:

- Programming hosted on the institution’s premises: programming run by the institution or other partners that occurs on-site;
- Regional programming: regional events where the institution may promote their programming and attract attendees, or the institution may offer programming in off-site locations;
- Partner institutions with reciprocal benefits: this includes other institutions or organizations where membership to one institution may be used to access another, or some other mutually beneficial relationship.

FIGURE 9.
Template of Case Study Institutional Network Maps

Figure 9 presents a template for how these descriptive network maps were developed.

The network maps created for each case study profile are purely descriptive, and in most cases represent a sample of the connections maintained by the individual museums and libraries that participated in the study.



LIBRARY AND MUSEUM APPROACHES TO SUPPORTING EDUCATION AND HEALTH: FORGING PARTNERSHIPS AND ANIMATING COMMUNITY, REGIONAL, AND NATIONAL NETWORKS

The data collected from the 24 case study institutions revealed a diverse range of approaches to supporting education and health. Museums' and libraries' approaches to supporting education and health in their communities were directly informed by the size of their institutions, local conditions within their communities, and by how they defined their mission and role in the community.

Museums also were informed by the focus and scale of their collections. For both libraries and museums, supporting education is built into the very DNA of these institutions and is simply part of the "what it is to be" a library or museum. At the same time, supports for health varied considerably between libraries and museums, between different types of museums, and across the diverse communities served by the case study institutions.

Libraries are profoundly community-oriented institutions; staff interact with a broad cross-section of their communities daily, and leadership is keenly aware of their heavy reliance on local funding. As a result, many have developed finely tuned approaches to identify community needs. What varies from one library system to another tends to be not the presence of certain types of activities that support social wellbeing, but their scale and variety. All case study libraries provided staff-run programming and engaged with local partners on additional offerings. Libraries are committed to long-running, popular programming while also continually trying new approaches. The primary criteria for programming and partnership decisions tend to be mission alignment, an identified community need, their own institutional capacity, and their partners' capacity.

In a sense, museums represent a more diverse and varied set of institutions. They range in size, focus, business model, and primary audience. Collections include historical artifacts and documents, contemporary art, plants and animals, and the landscape itself. Some of the case study museums employed only one full-time staff person and relied heavily on a working board and volunteers to staff their operations and fulfill their mission. Other museums employed hundreds of full- and part-time staff members. Museums can be primarily funded through earned income like ticket sales and memberships, as departments of local governments, and/or depend on foundation and support from individual donations. Despite their differences, educational programming is central to the work of all museums profiled here and a key pathway for museums to engage their communities. For many of the case study museums, engagement with their collections promoted the health and physical wellbeing of their patrons and enhanced their knowledge of what it means to live a healthy and holistic life.

Partnerships play a significant role in supporting programming at both museums and libraries. Partners conduct ongoing programming, introduce new programming ideas, help expand community connections, contribute to data collection and assessment efforts, and enhance institutional sustainability.

Most libraries are positioned in a web of partnerships; in some partnerships they are at the center of the web, while in others they occupy a more peripheral role. Libraries' trusted position in the community and multiple branches located in different neighborhoods make them a highly valued partner, enabling other organizations to connect with local communities. Museums are also highly valued community assets. In general, partner organizations tend to value them for their resources, their collections and physical spaces, and the content knowledge and expertise of museum staff rather than as places to connect to the general public.

Another important difference between the libraries and museums that participated in this study was the way their institutions connected with broader networks of support in their communities. Libraries tended to operate as traditional network nodes, playing a substantive role in supporting partnerships and fostering community cohesion. Individuals, organizations, and other partners made connections with one another in the physical space of the institution or through outward-facing programming that was run and/or sponsored by the libraries to meet a diverse set of needs. Museums, on the other hand, tended to more actively go out into the surrounding community to make connections that extended their reach. Often, these efforts also were tied back to finding ways to get more visitors in the doors.

These sectoral differences related to the positions these institutions play within their networks matter; they carried substantial implications for the types of programming and partnerships these institutions pursued and how they did it. Some were more reactive while others had the resources and strategic ability to be more proactive. Across both sectors, institutions of every size and type were finding creative ways to reinforce existing strengths and innovating new approaches to meet emergent needs in their communities.

This section presents key findings related to the diverse ways all 24 case study institutions supported wellbeing in their communities related to:

- Library and museum approaches and partnerships to promote education;
- Library and museum approaches and partnerships to promote health;
- The different roles museums and libraries play in broader networks of support for education and health.

LIBRARIES AND MUSEUMS SUPPORT EDUCATION FROM A FRAMEWORK THAT LEARNING IS AN ESSENTIAL, MULTI-FACETED, AND LIFELONG PURSUIT

Every case study institution had some direct partnership or connection to a local school, school district, a college or university, early childhood education center, or various combinations of these. Most of these museums and libraries made explicit efforts to align their programmatic content and delivery with state educational standards, further weaving themselves into the broader network of institutions supporting formal education. At all sites, formal educational activities ranged from annual field trips to creating standards-aligned curriculum guides to sustained professional development and teacher training. Their collections and core programming existed to support formal and informal education across a diverse range of content areas and modalities relevant for all patrons, from the young to the elderly. Museums' and libraries' core commitments to knowledge preservation and active support for their patrons' formal and informal educational pursuits directly contributed to their embeddedness in their communities and ultimately, wellbeing.

LIBRARIES AND MUSEUMS SUPPORT EARLY CHILDHOOD EDUCATION THROUGH PROGRAMS AND PARTNERSHIPS THAT SERVE THE COMMUNITY ON- AND OFF-SITE

Many libraries have expanded their support for early childhood education (ECE) beyond traditional story hours. The Milwaukee Public Library (MPL) operates in a county with tremendous needs in the local public schools and early childhood sector. MPL has long been deeply connected to support for public education. As that connection has deepened, the library was identified as the appropriate home for a new city department: The Office of Early Childhood Initiatives (OECI) was created to ensure that children ages 0–3 throughout the city have access to quality ECE programs. MPL's director oversees OECI, which is located in the Central Library.

OECI's goals included enhancing parent engagement, ensuring access to high-quality childcare, supporting sustainable careers for ECE providers, and providing policy recommendations and programs that support these aims.

In Burlington, VT, the Fletcher Free Library (FFL) ran a kindergarten-readiness program targeting in-home childcare centers that did not meet the state's high-quality standards. A successful initial pilot program sent trained AmeriCorps volunteers to provide pre-literacy support to these childcare providers, which allowed them to build capacity. FFL was able to scale the program by training additional volunteers and matching them with 11 centers. In addition, the Denver Public Library (DPL) in Colorado and the Spartanburg County Public Libraries (SCPL) in South Carolina coordinated and ran Language ENvironment Analysis (LENA) Start programs at library sites. This national program seeks to build school readiness and engage families in more interactive conversations with their children.⁶³ In addition to hosting LENA groups, both DPL and SCPL served as hubs for LENA in their communities, developing and supporting additional community partners to implement the program.

Two case study museums, Canterbury Shaker Village in New Hampshire and the Lander Children's Museum in Wyoming had preschool programs that were co-located at their sites. Both preschool programs benefited from their location within the museums, though their business arrangements were different. In Lander, the preschool was a part of the museum, and the STEM-focused curriculum was embedded in the museum exhibits in a coordinated and mutually reinforcing way. At Canterbury Shaker Village, the nature preschool was a rent-paying tenant and benefitted from access to the Village's diverse outdoor environment. In both cases, the museum facilities offered uniquely rich learning environments for young children. In return, the preschool programs provided sustained, reliable income and maintained connections between the wider community and the museums.

FORMAL INSTITUTIONAL PARTNERSHIPS EXIST ACROSS THE K-16 SPECTRUM AND INCLUDE SHARING MATERIALS, CURRICULAR-ALIGNED SUPPORTS FOR STUDENTS, TRAINING FOR EDUCATORS, AND CONTINUING EDUCATION FOR PRACTITIONERS

Yavapai County, AZ, is a vast, largely rural county (roughly the size of New Jersey) where public schools were challenged to meet their students' needs with limited public resources. The Yavapai Library Network, which is coordinated by the Yavapai County Free Library District, brought together 42 public, municipal, academic, K-12 and museum libraries to share resources, including books, e-books, online databases, and academic journals. Participating members include independent libraries, municipal libraries, school districts, and local colleges. In some remote areas, the Yavapai County Free Library District facilities serve as the school library, which had been casualties of reduced school funding in parts of the county. Any member of the Library Network could access any item and it could be delivered to any point in the county, no matter how remote. The format leveraged each institution's collective resources to benefit all the people in the county.

In another resource-challenged county, Milwaukee's Public Schools was similarly challenged in terms of public resources and benefited from library support. Milwaukee Public Library (MPL) operated LibraryNow, a large-scale collaboration with the School District and a number of charter schools that provided full digital access to MPL's online resources for every student. Students automatically received a digital library account through their student ID number. This made online tutoring, homework help, instructional videos, writing labs, e-books, music, and other resources available for more than 70,000 students on any device. In both MPL and Yavapai County, many residents (urban and rural) lacked access to high-quality educational resources, and libraries were able to provide resources, access, and guidance.

Even in counties where schools were well-funded and higher achieving, school districts also had resource-sharing partnerships with local libraries. Public school librarians in Burlington, VT, relied on the Fletcher Free Library (FFL) for important resources beyond their own budget limits; FFL connected high school students to electronic journals for research projects and provided elementary schools with print materials. The Teacher Assist program at the Mid-Century Public Library in suburban Kansas City, MO, provided relevant subject matter materials (books, DVDs, etc.) to any local educators who requested them. Teachers in traditional schools, day care centers, and homeschool settings could submit an online form to the librarians, who then collected the library materials. The success of these types of programs relied in large part on library staff who went into schools and worked with educators and students in person.

Libraries also can be a place where students who have had difficulty in a school setting can reconnect with learning. In Liberal, KS, school district staff sometimes used the library to work with children who had been expelled from a traditional school setting. And in Weakley County, TN, the public library also partnered with a local housing authority to provide STEM backpacks full of materials and experiments for young people who may not have otherwise engaged with the library.

Museum facilities and their unique collections also complemented the efforts of their partners in educational institutions. Schools relied on museums to bring classroom subject matter to life, and museum education staff developed tools to ensure students learned from their visits. Curriculum guides designed by museum staff often directly tied the collections and exhibits of the museum to state educational standards. Teachers could use these guides to facilitate field trips or incorporate digital collections that engaged children in standard-specific knowledge. For example, the educational programming at the Woodlands Garden in Decatur, GA, was tied to Georgia's statewide educational standards. Staff at the Kentucky Science Center aligned their after-school programming with state academic standards and further customized the curriculum to fit the requirements of each school district. At the Tri-County Historical Museum, permanent exhibits reflected Michigan's statewide curriculum.

In Fort Davis, TX, the Chihuahuan Desert Research Institute (CDRI) likewise provided hands-on educational experiences aligned to state science standards for elementary and middle school students from across the region. They also partnered with Sul Ross State University's graduate students to conduct research studies on animals, insects, and geological formations within the landscape. CDRI also sponsored a yearly scholarship to support local graduate research. Similarly, the State University Extension Services of the University of California (Mendocino Botanical Gardens), University of Georgia (Woodlands Garden), University of Texas A&M (CDRI), and University of New Hampshire (Canterbury Shaker Village) used different case study museums' grounds as classrooms for their education programs. Mendocino Botanical Garden's location was attractive for the UC Cooperative Extension Service, which provided educational opportunities across the large, sparsely populated county. The Mendocino Garden's extensive collections and natural land enhanced UC's Master Gardener curriculum. The University of New Hampshire taught their Natural Resources Steward training at Canterbury Shaker Village, making use of the extensive outdoor space and utilizing it as a living, open air classroom.

Some museums partnered with schools and districts to facilitate ongoing learning experiences beyond a common field trip. Como Park Zoo and Conservatory's (Como) Residency program provided a weeklong, full school day, free onsite experience for second- and third-grade classes focused on the scientific method and conservation. Como staff served as lead teachers during the visit. Tri-County Historical Museum (TCHM) brought classes and groups of students into the museum for a range of educational experiences, often linked to local curricula. In the Homegrown program, teachers and students partnered with an organization that charged them with a problem to solve. For example, TCHM asked a group, "How might we communicate how families and schools have changed from the pioneer era until now?" Students worked on the problem over multiple visits, with museum staff providing documents and images for students to examine to inform their problem-solving. In the Museum Explorers program, TCHM invited teachers to develop lessons in math, science, and history that linked to museum exhibits. In a Spring 2019 pilot, three first-grade teachers from the same school

used the museum as their classroom for three consecutive days, teaching all their subjects through the lens of history and engaging students in individual research on a topic. At the end of the program, students presented their findings to their family and friends and acted as museum docents.

Museums also provided professional development to increase the effectiveness of their community's teachers. For example, elementary school teachers participating in Como's Residency program took part in summer training and often planned related activities before and after the residency to extend learning. The Kentucky Science Center also engaged in substantive professional development for teachers. In particular they worked with teachers on facilitating a "maker" curriculum in the classroom, providing guidance on equipment and ways to integrate "making" into math, history, science, and other disciplines. And in Union, NJ, the Visual Arts Center arranged for museum and district staff to jointly attend CALTA-19 training, a new curriculum that uses the arts to teach English as a Second Language (ESL). The training helped spark new collaborations to support an underserved community.

One commonality that runs through libraries' and museums' collaborations with local educational institutions is that their efforts are not specifically designed to improve students' standardized test scores. Rather, their efforts facilitate engaging educational experiences that enhance the overall wellbeing of children. These supports extend beyond educational experiences for young and school-aged children to enhance learning opportunities and wellbeing for patrons of all ages across a range of interest areas.

LIBRARIES AND MUSEUMS OFFER CREATIVE PROGRAMMING THAT IS FUN AND EXTENDS LEARNING INTO INFORMAL SETTINGS

Libraries and museums view education as essential, multi-faceted, and a lifelong pursuit that is practical and enjoyable. This orientation drives these institutions to provide educational programming for a wide variety of audiences and needs. It also makes them dependable and adaptable partners for formal education

providers and a natural home for informal learning—a place to keep kids engaged in learning outside school hours in creative, imaginative ways.

Many libraries make learning fun and engaging to promote educational effectiveness and lifelong learning. For example, in suburban Kansas City, MO, the Mid-Continent Public Library partners with Mad Science, an organization that brings STEM-focused shows and edutainment to children at the library. Various branches coordinate and host the events, and Mad Science performs one of 20 different 45- to-60-minute shows. Mad Science also organizes coding classes and an all-girls coding group. In rural Weakley County, TN, the C. E. Weldon Public Library also focuses on making STEM accessible. The library hosts a weekly STEAM club with experiments that mirror what would be offered in a school district's gifted and talented program; however, the club is open to any student who chooses to attend. C. E. Weldon also offers supports for older adults that include delivery of materials to local senior centers, as well as hosting off-site painting classes at these facilities.

Informal educational offerings were at the heart of museum programming and exhibits. Museums built on the strengths of their collections, developing engaging and creative ways to connect with visitors. For example, museums with outdoor collections and facilities (e.g., Como Park Zoo and Conservatory [Como], Mendocino Botanical Gardens, Chihuahuan Desert Research Institute, the Woodlands Garden, and Canterbury Shaker Village) offered themed, guided walks on a variety of topics, from mushrooms to bird watching. Mendocino Botanical Gardens also participated in BioBlitz, an annual event where visitors identify and catalogue plant and animal species found in the garden.

Museums with indoor collections also drew on their strengths to create a variety of innovative approaches to informal learning. Como held a weekly two-hour program for preschoolers with hands-on activities, animal encounters, and stories. The Lander Children's Museum, the Kentucky Science Center, and Como offered more traditional fee-based summer programs for children. Other museums focused programming on engaging teens. The Museum of Contemporary Art North Miami's Teen Art Force

created a weekly, free, after-school art class for middle and high school students in North Miami. Since these types of programs are informal, they can feel more like fun than learning. Nonetheless, well-planned camps and classes supplement more formal educational opportunities.

Museums also provide informal educational opportunities off-site in their communities. The Kentucky Science Center organized extensive off-site programs at hubs throughout the state where they have a year-round presence. Through their mobile work with libraries and schools, they reached communities in all counties in Kentucky and in 90 percent of counties in Indiana. The Science Center also participated in local Makers Fairs and Science Fairs across the two states. As part of the city government, the Museum of Contemporary Art North Miami supported “pop-up” activities in local recreation centers and at city-sponsored events.

Other off-site programming created opportunities for audiences unable to access museums in person. In Michigan, Tri-Cities Historical Museum set up seven mini-exhibit locations at government buildings and libraries throughout the area. Tri-Cities and Canterbury Shaker Village also held educational programs in local retirement communities. And the Visual Arts Center of New Jersey offered art therapy classes for memory patients in senior centers, for veterans’ homes, and for incarcerated individuals at a county jail.

LIBRARY SUPPORTS FOR PHYSICAL AND MENTAL HEALTH ARE GROUNDED IN A COMMITMENT TO SOCIAL CONNECTION AND COHESION

Libraries support physical and mental health in some obvious ways and in some other ways that extend traditional understandings of what libraries do. Providing access to information through books, bulletin boards, and flyers is the most traditional library service when it comes to health. For instance, the Whitman County Rural Library System in rural Washington serves as a community hub, providing a place for local organizations to publicize nutrition programs, food pantries, flu shot clinics, and resources for seniors and disabled residents. Libraries also maintain

databases and e-journal subscriptions that allow patrons to look up the latest peer-reviewed research on different types of illnesses.

Many libraries also host exercise classes, like yoga and dance, and provide workshops on health topics like nutrition. In Martinsville, VA, the Blue Ridge Regional Library offered health-related programming informed by community needs, including workshops on opioid awareness, nutrition, and diabetes care and prevention. The Pioneer Library System in Ontario County, NY, hosted support groups for cancer survivors, Alzheimer’s caregivers, and Alcoholics Anonymous. Denver Public Library offered Memory Cafes at multiple library branches. These offered support, resources, enriching activities, and fun to people living with memory loss and their caregivers. Many case study libraries also offered support for patrons to enroll in programs like Medicare and WIC benefits.

Some libraries work with partners to bring resources and services to library branches so that customers have easier access. Denver Public Library partners brought laundry and shower trucks for people experiencing homelessness. Spartanburg County Public Libraries’ (SCPL) partners conducted blood drives and mobile mammography at library branches and mobile farmers markets rotated among branches from spring through fall. The Whitman County Rural Library System worked with a local health agency to provide seasonal flu shots and vaccines at their branches and conducted a monthly blood drive at their main branch. SCPL and Central Arkansas Library System (CALs) supported programming to collect and distribute menstrual products to women in their facilities and out in their communities.

The Denver Public Library made an extraordinary commitment to public health. The library launched its Community Resource Specialists in 2015 with one social worker and the goal of working with library customers experiencing homelessness. The team grew to include four social workers and six peer navigators; peer navigators have lived experience with some of the challenges the library’s highest-need patrons face, as well as knowledge of relevant resources in Denver. The Community Resource Team helped customers address a wide variety of needs, including employment,

food access, shelter, legal aid, mental health, and immigration status. They helped patrons navigate challenges through outreach, mentoring, coaching, connecting them to resources, and developed multiple partnerships to support these efforts. Peer navigators and social workers worked across all 26 branches, connecting to customers through drop-in hours and outreach. While some positions were originally grant-funded, all became permanent library positions funded by the City. The program weaves support for public health and a welcoming atmosphere into all its efforts.

Many libraries function as summer meals distribution sites when schools are closed, including Liberal, KS; Burlington, VT; and Milwaukee. In Little Rock, AR, the Central Arkansas Library System (CALs) led a city-wide effort to tackle nutrition and hunger. In response to chronic food insecurity faced by many residents, their “Be Mighty Initiative” provided after-school meals in addition to summer meals. With grant funding, CALs also partnered with the Arkansas Hunger Relief Alliance, Rock Region Metro Transit, Little Rock School District, and Equal Heart (a meal vendor in Texas) to dramatically expand the usage of two federally supported feeding programs throughout Little Rock. In the summer of 2019, the program distributed more than 1,200 bus passes for people throughout the city to use to get to summer meals distribution sites. Overall, the program served 280,198 summer meals and CALs served about 7,700 of them. This was a 43 percent increase in provision at library sites.

Some libraries aimed to address the trauma some of their customers have experienced. Spartanburg County Public Libraries staff received training about Adverse Childhood Experiences (ACES) and the protective factors framework. Trainings were organized by age group (children, tween, teen). The central library’s Teen Hub sought to empower and build resiliency as a response to ACES. DPL and CALs also worked to educate staff about trauma and to build their capacity to respond to trauma. A trauma-informed approach was key to enacting the libraries’ values of welcome, connection and equity, and informs programming, interactions with customers, and even the design of physical spaces.

MUSEUMS’ SUPPORT FOR PERSONAL AND PUBLIC HEALTH TENDS TO BE ASSOCIATED WITH PATRONS’ ENGAGEMENT WITH THE COLLECTIONS AND PROGRAMMING

The facilities and grounds of case study museums were an important asset in supporting community health. Woodlands Garden in GA, the bucolic setting of the Canterbury Shaker Village in NH, Mendocino Botanical Gardens in CA, and the Chihuahuan Desert Research Institute in TX all provided places for their communities to be physically active and, in most cases, to reap the benefits of being surrounded by nature. Other museums such as the Visual Arts Center of New Jersey, Lander Children’s Museum, Kentucky Science Center, and Como Park Zoo and Conservatory (Como) provided opportunities within their facilities for patrons with audio/visual sensitivities or developmental differences to interact with others in welcoming and accessible spaces that nurtured their needs for developmental stimulation. In both outdoor and indoor settings, health programming and partnerships provided a key pathway for museums to enhance the wellbeing of their patrons and to stay connected to their community.

Case study museums primarily engaged in health programming through their grounds and surroundings, offering environments where visitors could enjoy moderate physical exercise by walking through the outdoor settings while enjoying the museum collections. Visitors also benefited from the tranquility and serenity afforded by these museums’ natural surroundings. The Chihuahuan Desert Research Institute was popular with locals and visitors for its well-maintained and wide-ranging trails through grasslands, mountains, canyons, and native plant gardens; the vast landscape was noted to be a source of both physical and mental health. The Woodlands Garden in suburban Atlanta is located in a rapidly growing area with little available open space and offers a much-needed environment for passive engagement and outdoor recreation. In rural CA, Mendocino Botanical Gardens similarly provided an environment for walking in nature and enjoying their plant collections. In Mendocino, interviewees noted that there is no other available space in the area that is open to

the public to enjoy. The Canterbury Shaker Village offered access to its grounds, as well as programs such as medicinal herb walks, yoga, Tai Chi, and art and spirituality seminars. Their staff described the site as a place of refuge and emphasized that outdoor spaces supported health, not only for exercise, but as a crucial mental health and wellness opportunity for visitors.

Several museums hosted and co-created programs for individuals with mental and/or physical differences or challenges. Museum facilities are seen as safe, welcoming, and comfortable for visitors who may not feel at ease in other public settings. Como, Mendocino Botanical Gardens, the Visual Arts Center of New Jersey, the Mattress Factory, Kentucky Science Center, Tri-Cities Historical Museum, and the Museum of Contemporary Art North Miami all partnered with social service organizations to provide appropriate programs and welcoming spaces and to ensure that a wider swath of the community could enjoy and connect with their collections. For example, the Mattress Factory partnered with the Wesley School to create appropriate museum experiences for children who are on the autism spectrum or who have other emotional and social needs. In one session, the students used the museum's exhibits to interpret and explore the six main human emotions (sadness, happiness, fear, anger, surprise and disgust).

Museums offer a variety of classes and programs that provide a social outlet to combat isolation for individuals and families. For older adults, museums often provided a place for both continued learning and community-building. Como offers Senior Strolls, opportunities for seniors to socialize and visit the grounds at quieter, less crowded times. The Visual Arts Center of New Jersey engaged seniors by providing weekly programs at a local adult day care center. Museum staff reported that the act of making art and expanding self-expression made a powerful impact on the participants. Many museums had robust volunteer programs, which created a space not only for socializing and educational exchange but also to knit older adults into their community. At Mendocino Botanical Gardens, Como, and the Woodlands Garden, a core group of older volunteers regularly tend the gardens. Over the years, they have formed lasting social bonds and camaraderie.

PLACE MATTERS—FOR PROGRAMMING, PARTNERSHIPS, AND NETWORK POSITIONS

Libraries' physical locations make them critical partners in support of education and health. The branch and headquarters system present in many case study counties made for a web of relatively well-resourced, free, community facilities. In one-branch systems, libraries are often located in the traditional downtown (whether the downtown is urban, suburban, or rural). In either form, libraries create civic infrastructure and a set of trusted, welcoming points of entry for organizations operating within the community. In rural areas—such as Whitman, WA; Liberal, KS; Weakley, TN; Martinsville, VA; and Yavapai, AZ—library branches were often one of very few community spaces accessible to the public. In more urban areas like Little Rock, Milwaukee, Spartanburg, and Denver, staff similarly noted the importance of their neighborhood branches and how they facilitated access for residents throughout the city.

While branch libraries are located where people live, main branches and centrally located single-branch locations often offered convenient, accessible meeting places easily reachable by foot or transit. The library in Burlington is located downtown and is accessible by bus from almost anywhere in the city. In Milwaukee's library system, which has 12 branches, the Central Library downtown was also widely used as a meeting place and host for large gatherings. In both cases, the locations helped libraries "meet people where they were," bringing targeted programs to the people who needed them.

Libraries' ability to offer both centrally located main branches and distributed smaller locations that reach out into rural areas and urban neighborhoods make them a particularly valuable partner. In Ontario County, NY, for instance, libraries were first-choice partners for the county's Office for the Aging because they were central to the towns that dotted the county, and therefore able to promote programming widely. Similarly, partners in Yavapai County, AZ, and in Whitman County, WA, described the libraries as vital access points to reach locals and provide information and services

beyond “traditional” library services in rural areas (i.e., notary services, building code information, parenting supports, mail/package collection). For example, the Yavapai County Development Services office organized a rotating schedule of traveling workshops to bring information on building permits and technical advice to remote places. In rural areas, many residents choose to live in very remote locations and when they need something or in the case of emergencies (i.e., floods, fires, etc.), the library is a point of refuge and support.

Place informs programming differently for museums. They often have just a single location and charge admission fees. While this may limit their role as a conduit for outside partners to connect with the community broadly, museums still added to their community’s civic infrastructure by increasing the number of “third places” in their communities. For example, Lander Children’s Museum functioned as a safe, child-friendly indoor recreation space for the community. Staff at the museum indicated there are few indoor recreational spaces available in the area, which is particularly important during the long, cold winters. In North Miami, the Museum of Contemporary Art is located in the town square. The building’s large plaza opens to the street and is a gathering spot for adults and teenagers. It sits along the main thoroughfare of the city and the area’s main bus stop. The museum’s free monthly jazz concert series is a point of local pride that activates the plaza and engages residents, whether they are passing through or came out specifically to enjoy the music.

These “third places” have important implications for supporting education and health and a range of other dimensions of wellbeing. This was apparent in all the case study institutions, whether in rural, suburban, or urban areas. Each existed in a reciprocal relationship with their communities, creating a sense of “place” while also responding to the unique characteristics and needs of the surrounding area and its residents. Strengthening social connectedness and a sense of belonging was a key facet of this work. By offering spaces for people to exchange, learn, and engage, libraries and museums support the health, education, and overall wellbeing of residents in their communities.

In rural areas, case study institutions functioned as a critical outlet for residents to engage with staff and other patrons; one librarian noted that for some residents, this

was their only means of social interaction. Programs cited for their social benefits included craft-based programming in rural Whitman, WA, for seniors who would otherwise be isolated, and storytelling workshops in suburban Kansas City, MO. The importance of place was not only evident in rural areas, however. This was a guiding motif in Denver for all their library programming. It also influenced the design of new Milwaukee branch libraries, developed in partnership with community stakeholders to reflect the surrounding neighborhood. The Prince George’s African American Museum and Cultural Center also grew specifically from a place-based perspective, rooted in the county’s Black history and providing a space to promote Black culture and bolster community. Gathering in social spaces and making personal connections are key to sustaining public health. In this sense, libraries’ and museums’ rootedness in place also reflects their commitment to health, education, and promoting the overall wellbeing of their communities.

In addition to informing the services they offer and how they are delivered, where museums and libraries are located also carries considerable implications for how they collaborate with other institutions and the broader public. Sectoral differences between libraries and museums are also important in understanding the different ways that libraries and museums connect to broader networks of support for different dimensions of wellbeing in their communities. The following sub-sections describe the different ways libraries, and then museums, participate in these broader networks of support.

LIBRARIES PLAY MULTIPLE CRITICAL ROLES IN BROADER NETWORKS OF SUPPORT

Libraries are a critical part of networks in every context but often take on a greater or lesser role based on the local mix of other institutions and social wellbeing needs. They tend to be more crucial when there are fewer other institutions, limited resources, and higher levels of need.

Libraries are astute observers of their local networks—identifying gaps and opportunities to bridge them. Sometimes they endeavor to bridge the gaps themselves, but they also approach partners they see as better suited to take on a specific role. For example, the Fletcher Free Library in Burlington, VT, approached their local Head Start office to suggest they apply to a specific grant program to facilitate family reading for parents whose first language is not English. In rural Weakley County, TN, a parent mentioned that their child’s class was struggling with math when she ran into the local librarian at the grocery store, leading the library to start an after-school tutoring program. Some libraries take a less active role in identifying gaps but are perceived to be willing partners for broader collaborative efforts.

Libraries also place a heavy emphasis on finding what they are good at and ensuring they excel in that role; at the same time, libraries are also flexible enough to innovate in response to perceived local needs. Some libraries feel more comfortable “choosing a lane,” or at least had concerns about stepping on the toes of other institutions (or being perceived as doing so). But many libraries, particularly rural ones with fewer resources, will often consider any opportunity to support and engage their communities, which is how their programming and partnerships frequently intersect with multiple dimensions of wellbeing.

Some libraries play key roles in networks targeted to address important community issues. Spartanburg Community Indicators Project is a decades-long initiative run by a local university. It collects data about indicators in seven key areas and reports on progress in these areas over time. Spartanburg County Public Libraries served as an area leader for the Civic Health indicator area, convening leaders to work together to improve outcomes. A Community Engagement librarian helped coordinate these efforts. Denver Public Library staff participated in multiple networks in a wide range of social issues and populations, such as people experiencing homelessness; older adults; refugees and immigrants; early learning; and the maker movement.

In rural areas, networks tended to be more “informal” and “ad-hoc” and relied on inter-personal relationships. In Martinsville, VA’s Blue Ridge Regional Library System,

overlapping participation in organizations and personal relationships created and strengthened informal community networks and became one of the driving forces for the library to organize its Health and Hope Initiative (a two-night resource fair) to enlarge that network. Community networks were also evident in Yavapai County, AZ; partners cited the library as a nexus for solving problems collectively, leveraging relationships, and collaborating on issues where there are very few public resources or solutions. One library partner related that they needed a summer reading program in their rural area; the library became the site, a local service organization funded a bus to transport kids from across the area to the program, and community members worked together to make it happen.

While there are often fewer networks in more rural areas, existing networks may address broader needs, engage a wider constituency and play a greater variety of roles than in urban areas. In Kansas, the Liberal Area Coalition for Families (LACF) convened a monthly meeting of government, non-profit, civic, and business organizations for the purposes of networking and sharing information related to community health and services. LACF also sought out and administered grants to benefit the community. Liberal Memorial Library hosted and participated in the meetings and has partnered with LACF on some grants (e.g., serving as a site and/or receiving funding). LACF also helped Liberal Memorial Library staff remain informed about community-based needs, publicize library events, and develop partnerships. One librarian mentioned that participating in the coalition was another avenue to get information out about the library; if the library wanted to be relevant in the community, then library staff have to be in these conversations.

Another key function in rural areas in particular was access to Wi-Fi. Although this can be a challenge in urban and suburban places, the lack of complete cell phone network connectivity in remote areas can intensify the digital divide. In Whitman County, WA, the library began to leave its Wi-Fi network on after closing to allow residents to access the Internet on their personal electronic devices from their cars in the parking lot. This practice was found across many of the case study libraries.

Libraries also helped patrons navigate larger networks of support. Staff often provide direct help with applications for Medicare and other programs. In some cases, staff from relevant local agencies will come to the library to connect with people who need assistance; this might include partnerships with the Goodwill Industries for workforce development, local legal aid, or non-profits that specialize in benefits outreach.

LIBRARIES TEND TO CONVENE, HOST, OR PARTICIPATE, AND ONLY LEAD WITHIN BROADER NETWORKS OF SUPPORT

Libraries are widely perceived as safe, welcoming places where people can simply be together, convene a meeting with others, or just be themselves. They are also one of the few public spaces people can go without having to pay an entry fee or buy something. The accessibility of public libraries makes them unique places in their communities for anyone to simply show up on their own, or with others. Making libraries welcoming, in addition to simply open to the public, is often done with great intentionality and is sometimes stated explicitly in mission statements. Interviewees in Liberal, KS, reported that all people in the community—including undocumented people, people with mental health challenges, people experiencing homelessness, and people who speak English as a second language—perceived the library as a safe space. This was also true in Whitman County, WA, where the librarians' strong connections with the community engendered a sense of trust and welcome. Broadly, most interviewees at all case study institutions related that libraries were perceived as safe spaces, open to all regardless of income, or religious or political affiliation.

The approach of suburban Kansas City's Mid-Continent Public Library was to connect with existing networks, learn about the work already happening, and either support existing activities or fill in gaps identified in the field. Their Square One Small Business Services program began their work by connecting with business development networks through local chambers of commerce (there are 18 in the service area) and Kansas City Source Link to learn what programming was already available to businesses in the area. They identified food truck owners and low/moderate

income entrepreneurs as needing access to business development programming, and tailored programs to those audiences. Experiential programs for low/moderate income entrepreneurs have proven effective because that audience is less responsive to traditional lecture-formatted classes, and in this program, food truckers taught other entrepreneurs about the business.

When libraries do lead, it is often at the urging of other partners. Their reluctance to occupy leadership positions in community-wide initiatives tends to come from the need to strike a balance between their public mission imperatives with their status as non-political, public-serving institutions. This was the case in Little Rock when the Arkansas Hunger Alliance approached CALS to be the institutional leader for the Be Mighty Campaign due to the location of their facilities along city transit lines, the accessibility of their buildings to the populations experiencing food insecurity, and the unambiguous perception of the library as a “neutral actor” in the community.

MUSEUMS OFTEN PARTICIPATE IN LOCAL AND NATIONAL NETWORKS RELATED TO THEIR FOCUS AND INSTITUTIONAL NEEDS

Many museums pursue partnerships and become involved in networks to connect to their community, to expand their audiences, to generate revenue for grant-funded programs, to generate earned income through tickets sales and memberships, to pursue collaboration and sharing related to their museum's focus, and to advance their organizational mission and goals. Museums played a variety of roles within networks depending on both their capacity and the way that network participation impacted their mission. Virtually all the case study museums offered their own programming; they participate in community-wide events and gatherings, run community-wide fundraisers, conduct outreach to potential patrons and partners, and collaborate with similar institutions to varying degrees. These institutions had the capacity to actively participate in networks, and in turn, participation helped them further their mission to expand and engage audiences.

In some instances, museums hosted community-wide events and gatherings, which strengthened networks and bolstered a sense of community. The Prince George's African American Museum and Cultural Center (PGAAMCC) in Maryland hosted local artists, poets, and events at the site; there was overlap among performers at PGAAMCC and other spaces, creating an informal network of performers and venues that extended outside the museum into the wider area. PGAAMCC also led a Team Natural Weekend, a celebration of natural hair and workshops centered around health, wellness, and mindfulness practices for local communities of color. In other instances, museums made a concerted effort to connect to different aspects of civic life in their communities. At the Tri-Cities Historical Museum in Michigan, the Board and Director charged curators with joining community organizations and committees—for instance, the local lighthouse conservancy board or historic preservation committee—and younger staff were encouraged to join the local young professionals' network.

Individual museum networks may be specific, but they often extended beyond the community to connect with other institutions across the region and country. The broader geography of these networks served their communities and leveraged outside connections. For example, residents of North Miami benefited from Museum of Contemporary Art North Miami's ties to the art world when the museum attracted contemporary female artists to participate in their programming for women and girls. Similarly, the Kentucky Science Center's Science in Play2Go program was a collaboration with libraries across the entire state to provide hands-on learning experiences in their facilities in some of the most remote parts of the state.

Museums also networked regionally to increase attendance from tourists. With the help of the local destination marketing organization, Mendocino Botanical Gardens worked with other attractions in the county to entice visitors from the Bay Area who might not make the trip for just one museum, but may "make a weekend" out of visiting the Gardens, the nearby Sea Glass Museum and the historic Skunk Train among others. The similarly rural Chihuahuan Desert Research Institute coordinated with the nearby McDonald Observatory; historic Fort Davis; a nearby state park; and museums in Marfa, TX, to attract visitors from outside the region to support the local economy.

SUMMARY

The programs libraries offer to support education and health tend to be similar in the types of activities they conduct but different in their scale and variety. Early childhood education, creative STEM programming, and workshops and activities that supported physical and mental health for all ages were fairly common throughout the case study institutions. The largest institutions and systems, such as the Denver and Milwaukee Public Libraries, stood out for their ability to offer extensive programming and to serve in leadership roles in larger networks across their service areas. Network systems like those in Spartanburg, SC, and in suburban Kansas City, MO, tended to be better positioned to expand offerings than single-branch systems due to fundraising power and a larger workforce that enabled bigger systems to do more long-range planning and experimentation.

While there were some broad similarities among case study museums, like partnering with local schools or school districts, museums as a category are more heterogeneous in terms of how they support education and health. The differences were largely driven by their institutional capacity (financial, staffing, space), the focus of their collection and mission, and their ability to leverage outside networks. Smaller museums like Lander Children's Museum and Prince George's County African American Museum and Cultural Center supported efforts that were deeply embedded in the civic life of their communities that were mutually beneficial for all involved. Larger museums like the Kentucky Science Center and the Como Park Zoo and Conservatory were able to draw from regional and even national networks to attract financial support for their programming.

Both museums and libraries leveraged partnerships to expand the scope and reach of their education and health programming. In terms of education, partnerships with schools and school districts were common, and programs were sometimes explicitly designed to reinforce statewide educational curricula. Resource-sharing partnerships like the Yavapai Library Network and Milwaukee's Library Now program also supported access to educational materials in places with limited public resources.

Partnerships also allowed libraries and museums to reach and engage with diverse audiences, including senior citizens, young people, individuals with mental and physical differences or challenges, and more vulnerable populations.

Both museums and libraries were consistently outward-facing and actively sought ways to fill gaps in services and resources within their communities. Whether it was serving as summer meals distribution sites, providing supports for early childhood education, offering outside health services, or bringing their programs into communities, these institutions' roles have become increasingly focused on "meeting people where they are" and targeting resources outside of their walls. Their place in broader networks of support depended on their size and capacity and ranged from "ad hoc" to formalized contracts. However, it was clear that all the case study institutions were embedded in wider networks that intersected with multiple dimensions of wellbeing in their communities.

The role of museums and libraries as gathering spaces, or "third places," contributed to a prevailing sentiment that these institutions are critically embedded in the social and institutional ecology of their communities. Libraries in particular were notable for their role as trusted information-brokers and places that were safe, welcoming, and accessible to all. Their centrality in communities also allowed partner organizations to reach more patrons. This was most evident in rural areas, where the importance of libraries and museums as "third places" was heightened because they were fewer and farther between and often one of the only, if not the only, organizations that provided the services they do within these communities. Regardless of location, both museums and libraries offered spaces that fostered social connectedness and community-building among patrons, reflecting their commitment to social wellbeing.



SECTION ENDS



LIBRARY AND MUSEUM APPROACHES TO ASSESSMENT AND SUSTAINABILITY

Planning for long-term sustainability within a museum or library implies an understanding of how well one's institution meets its core goals and the degree to which it meets the needs of its patrons. From this perspective, assessment and sustainability are closely intertwined; for museums and libraries to effectively plan for the future, they need to clearly understand how well their past and present efforts are advancing their goals.

All the museum and library directors interviewed during the site visits either explicitly or implicitly articulated the importance of the connection between assessment and sustainability. Virtually all case study museums and libraries had clear ideas and plans related to their institutional sustainability. However, the degree to which assessment was integrated into these plans varied considerably across libraries and museums, across institutions of different sizes in different types of communities, and across institutions with different focus areas.

These differences became even more pronounced in the extent to which libraries and museums were actively engaged in assessing the impact of their programming and partnerships on wellbeing in their local communities. Most institutional efforts dedicated to assessment tended to focus on improving internal programming; understanding needs in their communities; and tracking outputs like circulation,

visitors, and program participation that aligned to core programmatic activities or funding streams. However, outcomes that pertain to education and health, like changes in individual behavior and beliefs or impact on community wellbeing, are generally more difficult to measure. Even at the largest and most sophisticated institutions that participated in the study, there was often limited staff capacity and expertise to extend rigorous assessment efforts from the collection of *outputs* to the measurement of outcomes—for either individual program participants or the broader community.

Despite these limitations, the case study institutions and their partners were engaged in a wide range of assessment efforts—sometimes in concert with one another, and sometimes along parallel tracks. Moreover, the learnings that the case study institutions gained through these efforts were finding their way into key elements of sustainability planning in a way that foregrounds an important shift in the way museums and libraries think about themselves, the value they represent to their communities, and how they articulate this value to ensure the ongoing support of their public and private supporters.

This section presents key findings from across all 24 case study institutions related to:

- **Institutional approaches to assessment; and**
 - **Institutional approaches to sustainability.**
-

LIBRARY ASSESSMENTS TEND TO FOCUS ON COMMUNITY NEEDS, PROGRAM IMPROVEMENT, AND OUTPUTS

Among the case study libraries, formative types of assessment (i.e., assessments designed to inform/refine program operations or offerings) were far more common than programmatic evaluations or assessments of individual or community outcomes. The most robust assessment activities were front-end assessments of community needs to determine how their institutions could most effectively meet these needs. For instance, identification of illiteracy, food insecurity, and low-wage jobs in their communities has led libraries to coordinate service delivery related to early childhood education, nutrition, and workforce development.

Most libraries also engage in some forms of assessment of their programming to review results and to make programmatic refinements. These processes were often informal and involved counting participants and chronicling what worked and what didn't work in a particular program or activity. In Martinsville, VA, for instance, library surveys were not aggregated but reviewed for general themes, and feedback was incorporated into planning for future programming. Library staff and several partners indicated that their ongoing relationships with individual residents and other network actors helped them gauge the importance of their work. These informal processes helped libraries respond to needs in their communities and to be intentional about setting realistic expectations for what they could bring to their partnerships.

Another common assessment activity was tracking outputs. In addition to tracking basic usage, like the number of visitors, cardholders, and circulation, many libraries recorded the number of program sessions, and some tracked the number of attendees; these are also datapoints that ultimately feed into the IMLS Public Libraries Survey.⁶⁴ This information was often used for program and space management (especially when space was limited), rather than for impact assessment. For instance, in Spartanburg, SC, the library tracked program attendance by age group, then evaluated programs based on how many people came and feedback from the program leader. Staff analyzed these data to generate monthly reports across the library system; these reports were used to make sure resources were allocated in the right place. This

approach was applied to their summer reading program and helped inform what types of programming worked well at which branches.

Satisfaction surveys continue to be key assessment tools for many libraries to collect participant feedback on specific programs, to assess audience interest, and to guide programmatic content. For example, in suburban Kansas City, MO, the Mid-Continent Public Library's LitUp Festival distributed a simple survey to attendees. After every program, it asked how they liked the program on a 1-10 scale and included an open-ended question for general comments. The surveys for each program had a unique shape and color (e.g., an orange rocket) so staff could easily collate and tabulate feedback from concurrent programs.

While these types of methods are helpful for identifying needs in the communities, developing programmatic offerings, and assessing participant satisfaction to inform future programming, these assessment activities do not neatly extend to measuring impacts for participants or the broader community.

CERTAIN TYPES OF LIBRARY PARTNERS HAVE MORE RIGOROUS ASSESSMENT OBLIGATIONS

It was common for libraries to have partners who were doing their own, sometimes fairly sophisticated, assessments of their library programming. It was also common to find that libraries did not necessarily know these partners were doing the assessments, and that the partners had not shared the results of their assessments with the libraries.

There were a variety of tools used by partners that libraries could draw from to conceptualize the impact of their work. Some of these were pre- and/or post-assessments generally used to assess changes in participants, like changes in knowledge, skills, beliefs, or behavior. For example, the Arizona Children's Network,

a library partner in the Yavapai County Free Library District, ran a series of parent education workshops in area libraries. They used a survey specifically designed to track changes in participant behavior as a result of the program; after the workshops, participants used a scale to rate if their level of confidence and competence in parenting had increased, along with their knowledge of community resources. The survey also asked respondents to describe something new or different they had done at home because of the program and how it would help their family.

In Little Rock, the library partnered with the University of Arkansas Cooperative Extension Service on a nutrition education program for adults. The UA staff conducted a pre- and post-test survey that measured if participants' knowledge had increased around healthy grocery shopping and eating, and whether they had tried any new recipes in their homes. The Arkansas Children's Hospital's "Cooking Matters" program at the library was similarly focused on education around healthy, budget-friendly meals. At the beginning, participants filled out a form with information on their income, finances, purchasing and cooking habits; this continued every few months, and the program followed up at the end with phone surveys. These types of surveys are as simple to implement as more common opinion questionnaires (i.e., rate this program 1-5), but specifically measure changes in behavior, skills, and knowledge as a direct result of programming.

Some libraries and partners also used strategic planning elements to measure impact. For instance, Spartanburg Public Libraries' Children's Services Department used a logic model to guide their work. Desired outputs included that children reach developmental milestones and that families were equipped with literacy tools they could use at home. Longer term outcomes included kindergarten readiness, third-grade reading proficiency, and eighth-grade math mastery, especially for children in vulnerable areas. The Milwaukee Public Library ran a variety of out-of-school learning programs, and as a 21st Century Learning Center grantee, there was an external evaluator responsible for tracking progress toward meeting specific goals that link to school-based curricular outcomes, such as literacy acquisition and reading growth.

EVEN IN THE MOST SOPHISTICATED LIBRARY SYSTEMS, CONSISTENT DATA COLLECTION AND ASSESSMENT IS A WORK IN PROGRESS

The Denver and Milwaukee public libraries were outliers in that they had significant assessment capacity. In 2019, Milwaukee Public Library hired a data analyst to enhance and expand their capacity to collect and use data. Librarians widely expressed their desire to develop a more systematic and outcomes-based approach to assessment, recognizing that this approach would better shape programming and capture long-term impact across the diverse range of their offerings.

Also in 2019, Denver Public Library created a new department—Performance, Initiative, and Evaluation (PIE)—to strengthen its data collection and measurement capabilities. PIE included a director and a data specialist and the adoption of a new relational database that will allow them to connect and analyze data from across an increasing number of sources. Goals for the department included establishing a consistent and more formal evaluation structure systemwide. Multiple interview respondents hoped that PIE would help them better track outcomes.

Within the broader Denver system, some programs and departments also were experimenting with broader data collection focused on program-specific outcomes. For example, the Community Resources Team (CRT) collected data specific to their team's implementation and potential impact. The CRT collects data related to customers' living situation, their connections to other services, and any substance abuse after contact with the CRT; similarly, they tracked 911 calls made by library staff. These data provided opportunities to identify successes and areas for further development (e.g., connecting customers with needed services to improve their health and wellbeing). They also can provide an example for other DPL departments and programs that are still in the early stages of building out their data collection practices.

It is important to note that the work Milwaukee and Denver are doing to systematize their institutional data collection was still very much in the nascent stage at the time of the site visits. They require investments in technology and staff with technical skills to develop and maintain relational databases that will allow these systems to make cross-institutional linkages between programmatic outcomes and other core activities. Once these data are captured and stored in a centralized location, understanding the most effective ways to use them to document impact will still be a challenge.

MUSEUMS' ASSESSMENTS TEND TO FOCUS ON UNDERSTANDING THEIR MARKETS, TRACKING REVENUE-ORIENTED OUTPUTS, AND ORGANIZATIONAL SUSTAINABILITY

Most museums experienced challenges in formal evaluation and assessment. While some of the larger and more sophisticated institutions had ways of assessing impact, most museums had a small staff and lacked capacity to develop these types of processes. More often, museums tracked information associated with sustaining the organization, rather than the impact the organization was having on individual program participants or their community. This included output tracking and key performance indicators associated with a strategic plan.

Most museums recorded visitor and volunteer information, ticket sales, museum memberships, partnerships, and attendance at mobile and on-site programs. For instance, in Grand Haven, MI, staff at the Tri-Cities Historical Museum used attendance data to determine what topics were of interest to the community, and if a program should be discontinued. Most museums also administered some type of survey to their visitors, volunteers, staff, and program participants and used the results to make changes to programs or to quantify their work to external audiences (like funders). These indicators helped museums understand their audience and measure the scope of their outreach efforts.

Museums also relied on informal feedback gleaned through relationships. Staff at several museums observed audience engagement with exhibits and programming and the enthusiasm of participants to understand their impact. Informal feedback and listening also served to strengthen relationships between the museum and its volunteers and partners. These conversations set up relationships where museum partners and volunteers could share their experiences and the museum could be responsive and accountable. In Maryland, for example, the Prince George's African American Museum and Cultural Center held bi-weekly check-in interviews with interns to ensure that their learning and experience goals were being met. The museum also held focus groups with long-term partners to assess what was working and areas to improve to further strengthen collaborations.

MORE FORMAL ASSESSMENTS CAN BE QUITE SOPHISTICATED AND A GUIDE FOR OTHERS

More robust examples of assessment among the case study institutions tended to be catalyzed by strategic plans, theories of change, and programmatic logic models. Como Park Zoo and Conservatory's 2016 strategic planning process for education services led to a campus-wide focus on generating learning experiences for visitors and the creation of a grant-funded Learning Experiences Division, which used Denver Zoo's ROADMAP (Reaching Our Audience by Developing Mission-Aligned Programs) as a model. Using the ROADMAP program development framework, zoo staff identified concepts and a guiding question, used a template to build on the guiding question, and identified outcomes related to each of three areas: "Feel, Learn, Act."

Como's existing data collection included widespread use of surveys to gather participant feedback on program implementation, satisfaction, and impact. Depending on participant age and program setting, survey data were collected by hard copy or electronically. Como staff (e.g., summer camp instructors and education staff) also completed surveys or evaluations, as well as teachers whose classes visited Como or

received educational visits from Como staff. At some events, staff conducted random surveys in an effort to gather feedback from participants. Como staff recognized the need to develop an evaluation approach that could build their capacity to measure the desired outcomes identified in ROADMAP. They adopted Team-Based Inquiry (TBI) as an evaluation framework. TBI is an ongoing inquiry cycle that includes generating questions, investigating, reflecting, and improving.

Some institutions intentionally viewed strategic planning as an ongoing process that evolves with their institutions over time. The Kentucky Science Center in Louisville also emphasized impact assessment and outcome measurement as part of strategic planning—identifying measurable and quantifiable outcomes using performance indicators, and long-term/short-term ways to achieve their strategic “pillars.” Key indicators that were tied to the Science Center’s strategic goals were regularly collected and reported in quarterly reports to the Science Center Board to represent progress in achieving their institutional goals.

Even in the smallest of institutions, there were examples of rigorous assessments that provided valuable insights to museum staff and their partners in the community. In Wyoming, the Lander Children’s Museum’s Little Curious Minds preschool implemented a STEM-based curriculum that was integrated with the Museum’s exhibits, and the preschool used the Bracken School Readiness Assessment to assess the effectiveness of its curriculum on students as they left the program. The results of these assessments were then shared with the local elementary school when children matriculated in kindergarten.

Partner organizations also conducted impact assessments of their work and sometimes shared these with the museums. The Office of Veterans Affairs implemented a randomized controlled trial of outcomes accruing to participants of the New Jersey Visual Arts Center’s art therapy program for veterans. The Visual Arts Center worked with their partners to identify measurable emotional and behavior outcomes that could be tracked over time among veterans participating in their program and had a control group of veterans not receiving art therapy to quantify the impact of their coursework. At the Mattress Factory in Pittsburgh, one partner described doing their own pre- and post-programming assessment of participants and discussing those

results with museum staff. For example, partner schoolteachers assessed autistic students’ ability to identify emotions before and after participating in Mattress Factory programming designed to help children use verbal communication, body language, and identify situationally appropriate emotions.

LIBRARIES AND MUSEUMS HAD VARYING CAPACITY TO PROACTIVELY ADDRESS DIFFERENT DIMENSIONS OF SUSTAINABILITY

Assessment is an important facet of museum and library sustainability, often a requirement for external funders, and a critical component of program efficacy. Effective use of assessment tools can, and should, inform institutional approaches to sustainability so that these institutions stay attuned to patrons’ and community needs, strategically strengthen existing programs and shape new ones, ensure targeted engagement with the right audiences, and demonstrate the contributions their institutions make to partners.

Libraries and museums displayed varying levels of sophistication and approaches to thinking about and articulating their sustainability efforts across the following critical dimensions:

- Financial Sustainability;
- Staff Knowledge and Skills; and
- Facilities Sustainability.

FINANCIAL SUSTAINABILITY FOR LIBRARIES VARIES ALONG KEY DIFFERENCES IN PUBLIC SUPPORT AND ORGANIZATIONAL BUSINESS MODELS

The institutional position of libraries within city/county government structures makes a big difference for their long-term financial stability. Some libraries are a line item in local budgets, some are departments of local or county government, and still others rely on periodic tax levy votes. Systems with more stable finances are better able to grow successful programs, experiment with new offerings, and invest in their physical infrastructure to support new resources, programming, and innovative forms of engagement.

Larger systems also may have access to stabilizing resources that many smaller systems do not. Some case study libraries, like the Denver and Milwaukee public libraries, had legally distinct 501(c)(3) “Friends of the Library” foundations that played a major fundraising role and supported further programming. These organizations appeared to be most common in urban library systems. However, many smaller, rural library systems like in Whitman, WA, Weakley, TN and Martinsville, VA, also had “Friends of” groups which, while not necessarily legally incorporated, provided funds and other forms of support.

Many systems are dependent on grant funding for specialized services, programming, and/or materials that extend beyond core operational services. For instance, the Mid-Continent Public Library’s Story Center in suburban Kansas City, MO, was grant-funded on a two-year cycle to provide a 12-part storytelling course in partnership with a local community college, a speaker series, and an in-house publisher available for local writers. The Denver Public Library often initiated new or innovative programming with grant funding; once they collected data about the program and its impact, it was sometimes possible to receive ongoing funding through their city budget allotment to achieve program sustainability.

Most libraries are supported by their cities’ budgets. However, staff time and facility space, rather than financial considerations, can be the primary constraints on

programming sustainability. The C. E. Weldon and McWherter libraries in Weakley County, TN, were supported by their respective city budgets, but staff capacity determined program delivery. Most library programs served only 10 to 15 participants, and while some carried material costs, it was not uncommon for librarians to contribute “sweat equity” to make ends meet (e.g., sewing their own theatre costumes or delivering books to patrons in their own vehicles).

Capacity is very much determined by place, and different library systems take different approaches to delivering programs and making resources accessible. In Arizona, the Yavapai County Free Library District used an innovative method to share resources in a large, physically spread out, rural. In this context, there is little public infrastructure and few public dollars for small towns, and taxpayers are generally concerned about those dollars being spent in a fiscally responsible way. The Free Library District spearheaded the creation of the Yavapai Library Network (Network) to share services across long physical distances and to reduce overall fiscal burden. The Network consists of different entities and institutions across the county—academic, public, and school libraries—who paid dues to the Network depending on capacity. They pooled their collective resources in a single platform catalog, making books, entertainment, and educational and digital materials available to any member of the Network, anywhere in the county. All members were eligible for cataloguing services from the Free Library District, and they also managed transit of resources from place to place. To participate, each institution signed an Inter-Governmental Agreement with the consent of their respective legal counsel and governing boards. Participating institutions had their own rules and regulations but there were Network rules that everyone had to follow. Maintaining the Network was an iterative process; there were challenges in coordinating disparate independent entities, sometimes across large physical distances. The result, however, meant that resources could be leveraged for library access in even the most under-resourced and remote areas.

MUSEUMS' FINANCIAL SUSTAINABILITY RELIES HEAVILY ON THEIR BUSINESS MODEL

The case study museums fell along a sustainability continuum from surviving to thriving. Two museums—the Museum of Contemporary Art North Miami and the Como Park Zoo and Conservatory in St. Paul, MN—were departments of city government, which provided a comparatively stable source of funding. Another, the Tri-Cities Historical Museum, received funds through millage from several local governments; the millage depended on the local communities' vote for renewal every few years. Some museums were on tenuous ground, experiencing leadership transition, seeing dwindling attendance, or adjusting to population changes and shifting interests. Others were adapting to changes in their community, engaging new audiences, increasing their annual budgets, and sustaining long-held partnerships. Business models, size, location, and facilities all impacted a museum's ability to sustain their work.

Case study museums generally relied on earned income and private donations to support their work and tended to raise their budgets through a combination of contributed and earned income. Most of the museums that participated in the study also had an endowment that generated investment revenue, but these funds are typically not accessed to support general operations and programming. The size of museums' endowments varied considerably, with some museums reporting endowment balances that could sustain multiple years of operations, while others represented only a small fraction of the museums' annual revenue.

Contributed income at case study museums included foundation grants and individual donations. Earned income most often included membership and admission fees and, in some cases, income from food sales, parking, and gift shops. Unlike libraries, museums must balance the need to generate income to sustain themselves with their mission directives to engage with the public. For many museums, education and outreach aligned well with these needs, generating revenue, attracting foundation dollars, and furthering the mission of the organization.

Museum business structures also were quite diverse. Size was a primary factor influencing the business models for museums. In general, larger places tended to have sophisticated business models that generate considerable revenue, supplemented through grants and other philanthropic/corporate giving. However, smaller museums tended to lack the resources to hire staff solely dedicated to raising funds, which limited their ability to increase their revenues via grants, donations, or expanded earned income opportunities.

In some places where there was not enough "client base" to generate sustainable revenue streams, the institution's connection to the local community ensured its sustainability through local donations, charity, philanthropy, and volunteerism. In Lander, WY, the Lander Children's Museum was widely seen as a resource for encouraging out-of-school learning and creative play. The revenue from its preschool, community philanthropy, and the labor of committed volunteers allowed the museum to run. Interviewees remarked that the museum was a critical part of the community, and while there would never be enough revenue "earned" to keep the museum open, there was clear community commitment to providing the financial and volunteer support to ensure the museum remained operational. Volunteerism and partnerships with other cultural institutions also were critical factors for the Chihuahuan Desert Research Institute in Fort Davis, TX. They maintain reduced admissions agreements with a local art museum and a nearby planetarium to entice visitors at these locations to visit the CDRI. They also relied heavily on volunteers, who helped facilitate school group visits and guided tours; some came from a local university and logged hours to gain certification as Master Naturalists.

LIBRARIES AND MUSEUMS NEED STAFF WITH THE RIGHT KNOWLEDGE AND SKILLS TODAY AND TOMORROW

The initial Community Catalyst report, *Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts*, identified a range of emerging skills that museum and library staff need to successfully engage their communities through expanded delivery of their core services and through their programming.

These include:

- Expanding services and programming on-site;
- Serving diverse populations;
- Expanding outreach into communities; and
- Playing multiple roles in community-oriented partnerships.

Findings from the case study sites suggest these skills continue to be increasingly critical for museum and library staff to engage with their patrons. They are charged with meeting an expanding set of needs—both for patrons that walk through the doors of their buildings and those they encounter beyond their walls. The degree to which the case study institutions can hire for or train their staffs to cultivate these new skills varied considerably depending on the size of the institution and its content focus. Particularly in smaller institutions but also in larger organizations, staff members commonly found themselves doing multiple jobs that require a diverse range of skills and competencies—some of which they were trained to perform, others that they gained through professional development, and still others are simply learned on the job on a day-to-day basis.

A focus on professional development was evident in several case study libraries and museums. Some of this connected to career and professional progression. At the Tri-Cities Historical Museum, each curator was required to complete 40 Continuing Education (CE) hours of their choice annually; the goal was to inspire staff to develop and network rather than remaining static in their positions. This professional development also provided support for staff to meet the strategic

plan goal of increased engagement with the community. At the Kentucky Science Center, the senior management team conducted periodic performance reviews with full-time staff, part-time staff, and volunteers that was directly tied to their strategic plan. These reviews were designed to assess and re-evaluate staff skills—like working with communities or managing partnerships—and to identify how to best support these staff members to move to the next level in the organization should they wish to do so.

Other times, the focus was on serving populations. For example, staff from the Denver Public Library attended trainings on how the older brain learns to help them more effectively serve seniors. Spartanburg County Public Libraries (SCPL) offered in-house trainings on working with specific populations, like people experiencing homelessness or who have disabilities such as autism, as well as crisis prevention and intervention training, including de-escalation for those patrons experiencing mental health or substance abuse issues. SCPL was unusual in that it had a dedicated training department, including a director and two staff. The training director also was responsible for progress on their strategic plan, like developing action teams and measuring impact. The training department supported staff skill development and prepared staff to support the achievement of larger library goals related to promoting health and wellbeing. The training budget also provided funding to send staff to the Public Library Association conference and to other local conferences. SPCL's training program ensured that staff kept learning new skills and facilitated peer-to-peer learning across the system.

A skills mismatch appeared in every case study library. Librarians increasingly engage in program development and management, and these skills tend to be learned on the job. Libraries' increasingly flexible, outward-facing role as a community connector and a nexus for health and education services and outreach demands an adapted set of skills for librarians. Milwaukee Public Library focused on responding to shifting skills and hiring practices within the library field. Librarians suggested that experience in social work, early childhood, or adult education, for instance, could prove just as

valuable as a library degree. A Master of Library and Information Science degree is often a hiring requirement, but staff noted that the skills learned in these degree programs did not always translate to the reality of libraries. In Denver, they revised hiring requirements for their Peer Navigator and IDEALab technology programs to reflect the different skillsets needed. Similarly, in Martinsville, VA, the Blue Ridge Regional Library System's library director changed a policy that branch managers must hold a master's degree. They preferred that staff know the community and its people over formal library training.

This focus on new and shifting skills is also true for museum staff. Several case study museums noted that an expanded emphasis on outreach programming, especially working with schools, demanded classroom management skills, flexibility, adaptability, and the ability to engage with children. This was true, for instance, at the Visual Arts Center of New Jersey, the Mattress Factory in Pittsburgh, and the Kentucky Science Center, all of which had robust off-site and outreach programs. This knowledge is not part of the usual skillset for museum staff, nor is it typically taught in school. Volunteers also have adapted beyond traditional roles. Mendocino Botanical Gardens' volunteers transported food donations to food banks and planned large community events in addition to their traditional "gardening" roles. Rural institutions tend to have fewer specialized staff and are more likely to ask employees to play multiple roles, making their efforts to hire and train the right people at the right time to do multifaceted jobs critically important, but all the more challenging for the sustainability of these organizations.

VOLUNTEERS AND INTERNS PROVIDE CRITICAL STAFFING CAPACITY FOR MANY LIBRARIES AND MUSEUMS

All of the case study institutions relied on volunteers to deliver different aspects of their core services and programming. The number of volunteers, their roles and responsibilities, and the degree to which these volunteers were integrated into broader organizational operations varied across different types of institutions and across institutions of different sizes. Museums, more so than libraries, tended to rely

on volunteers to perform critical functions at their institutions; this was particularly true among some of the smaller institutions in the study. Despite some of these differences, volunteers occupy an important place in the staffing structure for all museums and libraries. Finding the most effective ways to leverage their strengths and integrate them into the broader organization was critically important for all the case study institutions.

At some case study museums, volunteers contributed by leading docent-style tours through the museums' collections or supported programming in a variety of ways. At the Kentucky Science Center in Louisville, volunteers supported an array of Science Center programming, from staffing summer camps to supporting community events throughout the year. The Science Center also made intentional efforts to link volunteers' work to the strategic goals of the institution. This practice keeps volunteers engaged and invested in the success of their efforts by making it clear to them how their contributions made a difference. At Canterbury Shaker Village, volunteers demonstrated traditional Shaker crafts such as weaving or letterpress printing on site. In addition, members of the Natural Resource Stewards classes held at the Village could spend some of their required post-course 40 volunteer hours at the Village. The University of New Hampshire Extension staff who ran the course shared lists of needed projects with the stewards.

Como Park Zoo and Conservatory deployed volunteers and interns in a wide range of roles (e.g., special events, animal interpreter, or horticulture work), to both support Como's strategic goals and meet the needs of the participants. Como developed position descriptions that allowed the volunteer coordinators to place individuals based on their skillset and also made clear the expectations for their role. Volunteers participated in a Como-wide volunteer orientation and received further training about their own work area from a supervisor, ensuring they are well-versed in the institution's strong emphasis on visitor engagement. Staff reported high volunteer and intern satisfaction, as well as high volunteer retention rates. In 2019, more than 1,040 volunteers and interns played both ongoing and episodic roles.

Regular, long-term volunteer programs at museums also deepened connections between the museums and the local community, particularly at some of the smaller institutions. In Fort Davis, TX, volunteers led tour groups of the Chihuahuan Desert Research Institute, helped maintain the grounds, and ran local school field trips. Volunteer opportunities provided an additional way for the community to engage with the organization—indeed, the two most recent executive directors of the Institute initially started out as volunteers. In Lander, WY, the executive director of the Children’s Museum was a volunteer, as were most of the staff who supported the museum. In suburban Atlanta, Woodlands Garden’s local corporate groups, Eagle Scouts, classes from Emory University, and local resident-gardeners all volunteered their time maintaining the Garden. Doing so supported the Garden but also created a sense of camaraderie among the participants. The importance of these volunteers to the organization, and to the wellbeing of their community, was relevant across many of the smaller museums that participated in the study. A Garden’s staff member observed that wellbeing is also about being around like-minded people who are committed to stewarding a specific place and knowing that you are part of a collective project to preserve it for each other.

At libraries, volunteers supported a range of core functions and programming as well as more strategic institutional priorities. Libraries, more so than the museums in this study, found ways to obtain full-time committed volunteers through grants or programs like AmeriCorps to fill specialized roles that their budgets could not support. In Little Rock, the Central Arkansas Library System had a team of Volunteers In Service To America (VISTA) members working to support programming that addressed food insecurity and homelessness, as well as help the institution develop broader approaches to data collection and program assessment across the institution. In suburban Kansas City, MO, the Mid-Continent Public Library obtained AmeriCorps volunteers through a partnership with Turn the Page Kansas City, A-Plus, and Reading Boosters—a reading initiative for children in grades K-3. Through this partnership, high school volunteers received training from A-Plus to tutor K-3 students who either had trouble learning reading skills or had advanced skills and wanted to read more.

These approaches, and reliance on volunteers in general, helped support institutions’ capacity but also created risks that individual learning could be short-lived if there

were not intentional efforts to capture institutional knowledge when a grant or AmeriCorps term runs out. For example, the Blue Ridge Regional Library System that serves Martinsville, VA, created a project coordinator position in the last year to encourage the community outreach work of an existing staff member working in the circulations department. Many partners cited this work as instrumental for programming. Yet, despite the demonstrated value of the position, the library already foresaw being unable to support it long-term.

Indeed, smaller organizations with a limited staff, working Board members, and heavy dependence on volunteer labor were in tenuous positions. Relying on volunteer labor for duties typically performed by staff impacted core functions like reliable opening hours and risked overburdening individual staff members and the volunteers themselves.

FACILITY SUSTAINABILITY

Both libraries and museums encountered challenges when it came to maintaining their facilities. Institutions alternately faced outdated or burdensome buildings, increased emphasis on accessibility, the need to attract new visitors, and more broadly, changing circumstances around how patrons perceive and use their spaces. Many libraries struggled with inadequate space to meet growing demand for programming, like quiet study spaces and facilities where groups can meet. Many library buildings still reflect a time when activities were limited to browsing for books and quiet reading. Staff at each of the three case study libraries in Ontario County, NY, talked about the frequent scheduling conflicts they encountered with limited meeting rooms and requests to use the space for lectures, chair yoga, homework help, and other activities. In the Victor Farmington Library in New York, small glassed-in pods were built to accommodate one-on-one tutoring or other small-group meetings, but these were seen as a temporary fix as they worked on raising the capital to build a larger library building.

The C. E. Weldon Public Library in Weakley County, TN, was preparing to begin construction on a new facility located across the street from its historic home at the end of the city's main commercial corridor. The new facility, which will vastly expand the library's size and capacity, was funded by local donations and city funds. While the library staff were excited for their new home, questions about the additional capacity and funding needed to sustain the new facility were beginning to emerge. The new facility would likely require additional staff and carry higher operating costs than the library's existing facility. City staff were confident that the city would provide any additional funding needed to support the new expanded facility. Some perceived the new library as an investment in the city's future, a signal to current and future residents that the town was a thriving, growing place.

Facility accessibility also can present a challenge to libraries. In South Carolina, Spartanburg County Public Libraries used grant funding to partner with a local non-profit to assess accessibility at several branch locations, and to target programming to patrons with a wide range of abilities and needs. The partner provided suggestions for physical changes to make the library more accessible, like making some tables usable for people with wheelchairs. Other efforts included greater outreach to the nearby South Carolina School for the Deaf and the Blind (several staff were learning sign language) and creating more programming for people with sensory processing issues.

Several museums were limited by their facilities. Mendocino Botanical Gardens and Woodlands Garden both lacked adequate parking to accommodate more visitors or buses. This kept their grounds tranquil but hampered their ability to increase earned income. Other museums were outgrowing their indoor facilities. Lander Children's Museum was a small space that would benefit from a better location and more outdoor access, which would mean increased capacity and visibility. The museum hoped that more space would help stabilize their staffing structure and expand their exhibits and programmatic offerings.

For some museums, like the Canterbury Shaker Village, a new location will never be an option, and caring for their current facilities was a financial burden. The Village's geographic isolation, paired with older structures and land holdings, made it difficult

to attract visitors. Staff, partners, and the Board related that the organization's survival required a different approach. Recognizing this reality, the Village has taken steps to capitalize on the unique aspects of their space, co-locating a preschool and partnering with a food co-op to set up an organic garden, which was then used as a space for a local university's Master Gardener program. For museums experiencing challenges with their facilities, drawing upon strengths and seeking new opportunities to grow can contribute to future sustainability.

SUMMARY

As institutions, museums and libraries have evolved and expanded their roles over time, providing services and programming both on-site and off-site that promote wellbeing in diverse ways in their communities. This has involved making front-end assessments of community needs to coordinate service delivery and targeting programs to specific issues related to wellbeing, from early childhood education to nutrition to mental health. Both libraries and museums are increasingly charged with meeting these needs, and their staffing approaches continue to evolve in response. The institutional shift to increased community engagement and service delivery has not been without its challenges but has far-reaching implications for these institutions' support for social wellbeing. Libraries and museums clearly understand the importance of assessment in capturing these impacts and sustaining their work.

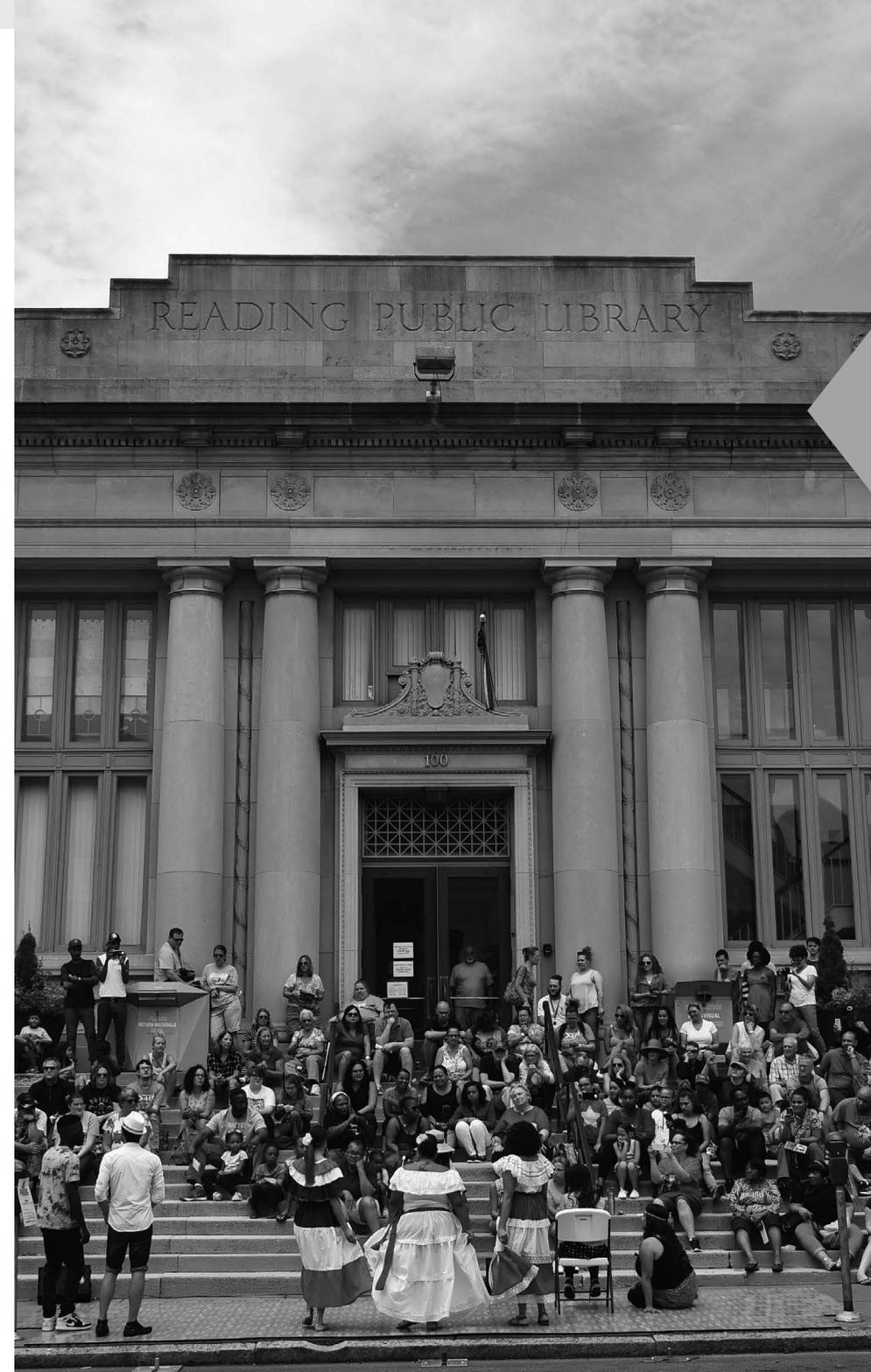
Institutional capacity is informed by place and institutional business models; the museums and libraries that participated in the study varied tremendously in terms of their internal assessment activities and their approaches to sustainability. Virtually all the institutions that participated in the study had processes in place to track their activities and some basic outputs; the libraries were guided by the Public Libraries Survey, and the museums generally were guided by the informational needs of their business models. In terms of measuring outcomes for participants in their programming or outcomes in the community, these efforts were generally associated

with external partnerships that included evaluation components or were being conducted by external partners. All of the institutional leaders that participated in the study understood the value of assessment and the role it could play to improve their institutional operations and to articulate the contributions their institutions make in their communities. However, only the most well-resourced and sophisticated institutions had the staff expertise or capacity to engage in ongoing assessment of the impact of their activities on their local communities.

In terms of sustainability, those institutions with public support tended to find themselves on firmer footing than those that relied solely on earned revenue and philanthropy. These differences tended to be sectoral, with all libraries receiving a base level of public support. Those museums with public support (i.e., as part of city budgets, recipients of in-kind space, millage beneficiaries, etc.) were generally in more stable financial positions than those without regular public support.

In addition, staff sustainability and capacity were consistent challenges across the libraries and museums that participated in the study. The largest institutions had fairly well-developed staffing structures and approaches to engaging, supporting and developing their staff. Smaller institutions were consistently challenged to staff their buildings to offer their core services, leaving little time for additional programming that could extend these services into the community. Every institution in the study relied heavily on volunteers and interns to varying degrees—sometimes to provide supplemental support for core staff, and in some instances to deliver core programming.

A third challenge that virtually all sites faced was related to their physical space. Some institutions had vast spaces that required considerable resources to maintain and preserve (when they are historic buildings), while others were constrained by the size of their buildings or by the property boundaries of the natural spaces they steward. Each of the institutions participating in the study encountered and articulated challenges related to their facilities—challenges that carried implications for their financial stability and their ability to offer programming that may not be supported by their existing physical assets. Despite these challenges, leaders and staff at the case study institutions were generally optimistic about what lies ahead for their organizations, and their partners tended to perceive these institutions as critical elements in the broader fabric of their communities.



SECTION ENDS

IMPLICATIONS & OPPORTUNITIES FOR THE FIELD

The findings from this study point to a range of implications and opportunities for those who run and work in the country's libraries and museums and for the people, organizations, and government entities that support these institutions. Now more than ever, libraries and museums occupy critical positions in their communities, supporting the ability of individuals and organizations to meet an increasingly diverse set of needs. While libraries and museums inhabit different sectors, and thus operate and sustain themselves in different ways, the institutions that participated in this study were unequivocally committed to serving the needs of their communities through their programmatic offerings, partnerships, and collaborative efforts to support different dimensions of wellbeing.

Moving firmly into the 21st century, museums and libraries have a tremendous opportunity to be part of projects that stabilize and support the revitalization of high-need communities and that bolster the quality of life in thriving places. One opportunity for development for both libraries and museums is to find ways of more consistently documenting the contributions they make to promoting social wellbeing in their communities. This involves reimagining what it means to be a museum or library in the 21st century, and what that role implies for shaping

priorities that guide the development of programming and partnerships. This also requires ongoing development of organizational data collection practices to document these institutions' contributions to their communities and then using such data to link their organizational activities to key indicators of their patrons' and community's wellbeing.

Fortunately, museums and libraries are not starting from scratch, nor are they alone in this project. Networks of funders, both public and private, implicitly understand the value museums and libraries have for their communities, and networks of researchers understand the dynamic ways that museums and libraries can and do support the dimensions of wellbeing in *different* parts of the country. Many people who run museums and libraries, and those staff who work directly with the public, see their institutions as critical pieces in the social and institutional networks that connect people to each other and what they need in their communities. Participants in the present study, as well as those from the initial Community Catalyst study from 2016, have very much appreciated the social wellbeing framework as a way of articulating a more fulsome understanding of the impacts of their work.

This section offers key implications from the findings presented in the previous sections related to:

- **Implications for Museum and Library Leadership and Institutional Strategic Directions;**
 - **Implications for Policy Makers and Funders Who Support Museums and Libraries;**
 - **Implications for Future Research; and**
 - **Implications for Institutional Data Collection and Assessment.**
-

IMPLICATIONS FOR MUSEUM AND LIBRARY LEADERSHIP AND INSTITUTIONAL STRATEGIC DIRECTIONS

The findings presented in this report highlight important opportunities for museum and library directors to think about how their institutions fit into their communities in the 21st century. Situating the work of their institutions within the context of broader networks of support for the quality of life in a given place makes it possible to revisit fundamental ideas about their organizations, such as:



What does it mean to be your institution in the 21st century, and what does this imply for your institutional obligations and responsibilities to your staff, your patrons, your organizational partners, the broader community, and your colleagues in the field?

Many of the museum and library directors who participated in the study are actively grappling with these foundational questions. And many have arrived at inspiring responses that are inscribed in strategic planning documents, vision statements, and organizational goals. The most developed institutions are keenly aware of what they want to be, how they plan to get there, and what information they need to tell others that they are succeeding along the way. Fulfilling their mission demands that they are highly integrated into their communities, responsive to their needs, and continually assessing the degree to which their core activities meet these needs for both their patrons and the broader community.

What this means for different types of institutions is highly informed by their collections, their core services, and perhaps most important, their location. Museums and libraries in large metropolitan areas tend to have more stable financial support. They also tend to be connected to diverse and multi-faceted networks where their institutions operate in a range of capacities that vary from program to program and across different networks of support for different dimensions of social wellbeing. And in many metropolitan areas, museums and libraries are not necessarily the only institutions providing those supports. The

existence of these broader networks provides options for museum and library leaders to pick and choose where their institutions can most effectively contribute to different needs in their communities.

On the other hand, in small towns and rural communities, libraries and museums often find themselves as one of the only institutions in their communities that offer the services they provide. At the same time, rural museums and libraries are often more financially precarious, where public dollars are often sparse and prospects for earned revenue are limited by small populations. Should these organizations cease to exist, substantial holes will emerge in their communities with little to no alternatives to fill the gaps left behind.

The challenge for the field—for both libraries and museums—is to continue documenting their activities in ways that allow them to clearly articulate the value their institutions have in their communities. These institutions are accessible to virtually everyone in the community and are trusted by their patrons and the broader public as honest brokers of information. This societal trust stems from public recognition that these institutions are grounded in commitments to lifelong learning and the generational transmission of knowledge and culture throughout their communities. From this position, museums and libraries have tremendous opportunities, and responsibilities, to support the quality of life in their communities and are ideally positioned to support efforts in their communities to become more inclusive places to live. Whether it be core services designed to further lifelong learning, emerging efforts to address food and housing insecurity, or ongoing efforts to keep every generation connected to their communities, these institutions are tightly knitted into the fabric of the places they serve.

Libraries and museums also have important roles to play to advance racial equity and inclusion in their communities. Through the broader interpersonal and institutional networks, these institutions create opportunities for diverse groups to meet one another, share experiences, learn from each other, and even collaborate to meet their

unique needs. As museums and libraries continue to evolve to meet the challenges of the 21st century, including increasingly complex societal issues, it will be critically important for these institutions to occupy positions as public-serving institutions that are committed to meeting their communities' needs, preserving their cultures, and enhancing the quality of life.

IMPLICATIONS FOR POLICY MAKERS AND FUNDERS WHO SUPPORT MUSEUMS AND LIBRARIES

In the same way that museum and library staff are developing new ways to talk about and demonstrate the contributions their institutions make to local communities, those entities that support museums and libraries also have opportunities to update the way they think about the role that these institutions play, the impact they have on local conditions, and the kinds of resources they need to best serve their communities.

Investments in museums and libraries, particularly in rural areas and small towns, can be thought of as investments in social infrastructure. In many places, libraries—and in some instances, museums—are at the front line of a range of community-serving efforts, and as trusted institutions in their communities, they are places people look to for information, support, and resources.

Findings from this study suggest that supporters of museums and libraries can make substantial contributions to the overall organizational health and sustainability of these institutions by strategically developing approaches to support the following areas:

- General Operations Support;
- Programming;
- Promoting Racial Equity and Inclusion; and
- Professional Development.

GENERAL OPERATIONS SUPPORT

General operations support tends to focus on staffing, materials to execute core functions, and space. For public libraries, tax revenue has long been and will likely continue to be their primary source of revenue and general operations support. However, many of the libraries participating in this study cited ongoing challenges associated with the stability of their funding for various reasons. Moreover, in places with a limited tax base, keeping libraries open and operating remains a challenge, even though it is often in smaller, more remote areas that libraries themselves play an outsized level of importance in the daily lives of local residents.

Unlike libraries, most museums do not have the benefit of municipal support for their operations. The museums in this study that did have public sources of revenue or other forms of public support (typically rent-free or reduced-rent space) have much more secure financial positions than those without this support. Indeed, most museums rely on a mix of earned revenue, philanthropy, and charitable donations to maintain their operations. In smaller museums in more remote areas, earned revenue will never be enough to sustain their institutions.

Finding ways to enhance general operations support for museums and libraries, particularly those in small towns or remote parts of the country and those with limited or no public support, is critically important for the long-term sustainability of many smaller institutions.

PROGRAMMING

Supports for innovative programming at museums and libraries should focus on areas where they have existing or expanding content expertise and should emphasize approaches that enhance the connections between museums and libraries and other entities in their communities. Findings from the present study and the pilot Community Catalyst study highlighted the network effects that museums and libraries

can have in their communities. In small towns, museums and libraries depend on these networks for their own sustainability, while at the same time enriching lives of local residents who support these institutions. In larger markets, connections with other institutions and organizations amplify the resources of museums and libraries in ways that expand their reach to populations and communities they wouldn't otherwise serve. Future support for museum and library programming should focus on ways to deepen these existing relationships and challenge the institutions to cultivate new partnerships that will enhance broader networks of support. Museums and libraries could also benefit from supports that facilitate virtual (and eventually sometimes in-person) regional or national networks focused on specific kinds of innovative programming or areas such as program design or assessment. Some museums and libraries are well-positioned to play leadership roles in such networks, enabling peer institutions to share, problem-solve with, and learn from each other.

PROMOTING RACIAL EQUITY AND INCLUSION

Libraries and museums are trusted institutions in their communities. They are places people go to get information they know is reliable. They are places people go to meet other people, learn new things, engage with the institutions' collections, and to enjoy themselves and the company of others. These trusted community institutions function as "third place" (or "third space") where people congregate outside of home or work in informal ways that build community.

The reality that these institutions are highly networked in their communities and are widely perceived as trusted organizations and hosts to diverse populations who circulate through their spaces make libraries and museums potential catalysts to advance racial equity and inclusion in their communities.

PROFESSIONAL DEVELOPMENT

Ongoing support for professional development related to data collection and assessment remains a critical need for both museums and libraries. As libraries and museums continue pursuing program activities that mirror services typically provided by the public and non-profit sector, adopting some best practices from

these fields can help improve program delivery, data collection, assessment, and support fundraising for these activities. These efforts should be grounded in helping museum and library leaders and staff to align their programming, data collection, and assessment efforts with institutional strategic plans and goals whenever possible.

By establishing institutional practices where museum and library staff develop guiding theories of change and logic models, they can then intentionally tie initiatives and programming back to strategic plan objectives. This provides a conceptual and data-informed road map for these institutions to document how their institutions enhance the quality of life in their communities. This type of professional development also can be provided in a peer-to-peer way, with some of the leading institutions in the museum and library field supporting their colleagues at other places that are still developing these approaches to their work.

IMPLICATIONS FOR FUTURE RESEARCH

Museums and libraries are multidimensional institutions whose activities and core programming support multiple dimensions of wellbeing. This implies a need for multidimensional approaches to articulating the value of these institutions. The most sophisticated analyses of museum and library effects on individual patrons and their communities tend to be attached to external funding streams and are typically conducted by third-party experts. From a research perspective, more innovative approaches to estimating network effects, impacts on community change, and the economic contributions these institutions make in their communities likely require support from researchers in academic and applied settings who can dedicate the time, energy, and resources to developing methodologies and can adapt these for future implementation as the field continues to develop.

Importantly, future researchers also should be keenly aware to document and deepen our collective understanding of library and museums' history of serving,

or not serving, underrepresented populations and their current efforts to address racial equity and inclusion in their communities. Adopting a racial equity and inclusion lens in conducting future research can provide critical insights into the various ways that these institutions can and do affect racial equity and inclusion. These efforts would provide critical insights into approaches to meeting historical and ongoing challenges associated with racial discrimination, segregation, and exclusion in America.

ESTIMATING NETWORK EFFECTS AND IMPACTS ON SOCIAL WELLBEING

The network analyses and the economic input/output analyses conducted for each case study institution provide initial examples for thinking about different ways to represent these networks and the social and economic effects these connections can have on local communities (see Appendices II and III). The results of these exploratory efforts provide fruitful starting points for additional research focused more closely on assessing how museums and libraries fit into broader networks of support and how these networks influence different dimensions of wellbeing in their communities.

Many of the lessons learned in the pilot Community Catalyst study were confirmed in the present study. There are good conceptual reasons to believe that museum and library activities promote different dimensions of wellbeing in their communities, and the present study provides both qualitative and quantitative evidence to suggest that this is true. A preliminary application of network analysis to the museum and library sector is another aspect of this study in which the work completed to date suggested a number of interesting areas for subsequent data-gathering and further analysis. The detailed site visits and local interviews conducted as part of the research suggest clear networks of institutions within communities. However, these initial investigations into the museum and library sector also underscore that it is often not possible, using existing data, to establish a reliable quantitative framework for evaluating the size, impact, or efficacy of these networked relationships. If such a framework were developed, it would be possible to assess the relative impact of

areas with “stronger” networks compared to their peers to examine the association between the existence of stronger networks and other dimensions of wellbeing in communities.

From an institutional and field-based perspective, developing methodologies to measure and describe the network effects that museums and libraries have in their communities can provide the most broadly applicable contribution to museums and libraries across the country.

From an institutional perspective, the findings from this study point to the following lines of inquiry:

- Developing approaches to estimate social cohesion, social capital formation, and their connection to the work museums and libraries are doing in their communities; and
- Developing approaches to estimate the relative importance of museums and libraries within broader networks of support in their communities.

One possible approach at a local level would be to purposively select a set of small to mid-size cities with a well-developed library or museum sector and then develop a complete picture of the connections these institutions maintain with other organizations and institutions. Having the ability to work intensively with a small number of institutions in manageably sized markets would present an opportunity to more deeply understand the type and range of connections museums and libraries maintain and to develop techniques to quantify their relative importance vis-à-vis different institutions within these broader networks.

A network-focused analysis could be conducted with a combination of qualitative methods, using diagrams to represent different connections between institutions, and quantitative methods such as visitor surveys and economic impact analyses to develop estimates about various features of different networks—their size, cohesiveness, and centrality.

Table 9 presents an overview of key quantitative measures that could be observed and measured in a robust network analysis.

The framework presented in Table 9 could provide a basis for more in-depth studies of museum and library networks. In order to establish these frameworks, subsequent studies might focus on developing surveys or other tools to gather community-wide data that cut across multiple institutions and allow for a more nuanced understanding of their linkages. For example, at the 2015 proceedings of the International Forum on Knowledge and Dynamics, Venturelli, et al. proposed a specific methodology for considering the multidimensional impact of networks of museums.⁶⁵ In that paper, the authors proposed a methodology to assess network impacts that would rely on a robust set of data on local visitors across a network of museums.

To establish such a base of information, local institutions could consider systematic collection and sharing of data, potentially including:

- More detailed and systematic counting of programming occurrences, relationships among partners, and participation across institutions;
- The frequency with which programs are held across institutions and the overlap across participants;
- The size of the institution’s network in terms of both total numbers of visitors/users, and the overlap of those users with other institutions in the network; and
- The cultural impact of the network. Deploying periodic participant/patron surveys, it may be possible to understand both ways in which participants utilize programs throughout an entire network, and other ways in which the network provides value to the participants themselves through complementary services.

TABLE 9. Key Network Statistics*

STATISTIC	WHAT IT SHOWS	EXPLANATION
SIZE		
Number of nodes—the people in the network	Size of the network	Number of individuals in the network
Number of links—social connections/relationships between nodes (e.g., friendship, family ties)	How “busy” the network is	Number of relationships between individuals in the network (in total)
Number of unique links	How “busy” the network is, taking out relationships that are duplicated	Number of relationships between individuals in the network, with duplicates removed
COHESIVENESS		
Number of components—distinct groups in the network	Whether there may be sub-groups in the network	Number of discrete groups in the network
Density	The extent to which nodes are interconnected—lower density networks have fewer links between nodes	The proportion of all links that are actually present
Diameter	Size of the network	Greatest number of steps between any pair of nodes
Mean average distance between nodes	How “close” (in network terms) the nodes are to each other	Average number of steps needed to go from one node to any other
CENTRALITY		
Mean degree	How central (on average) nodes in the network are	Average number of links that pass through the nodes
Mean between-ness	How central (on average) nodes in the network are	Average number of unique paths that pass through the nodes

* Source: UK Home Office

Within this framework, strong and weak partnerships and interdependencies can be identified and high and low frequency programming can be observed. It would also be conceptually possible to identify ideal, or typical, constellations of network utilization that could inform institutional partnership and network development. This exercise creates a visual representation to understand how communities are impacted by museums and libraries operating as networks and not singular entities.

These areas represent some of the most broadly relevant, and least understood, institution-level impacts that museums and libraries likely have in their communities. Developing ways for the museum and library field to talk about how their institutions knit their communities together, and how critical their institutions are within different networks of support, gets to the heart of many of these institutions' mission and vision.

There is certainly value in developing additional methodologies to estimate the impacts of specific museum and library efforts to contribute to specific dimensions of wellbeing by using program-specific data collection and assessment. From an institutional perspective, moving the field toward a place where museums and libraries can talk about their institutions in these broader ways will only enhance their ability to articulate the value of their institutions to their patrons, supporters, and the broader public. And it will allow the nation's libraries and museums to demonstrate their impact beyond that which is purely economic, highlighting the other ways their work enhances the wellbeing of their patrons and communities.

ESTIMATING THE ECONOMIC CONTRIBUTIONS OF MUSEUMS AND LIBRARIES

Having highlighted the various ways that the nation's libraries and museums enhance wellbeing, it is also important to understand their economic impacts, even if they are not the primary impetus for the institution's programming. The present study offers a preliminary way of thinking about the economic contributions that museums and libraries make in their communities—contributions associated

with their employment and institutional spending in the community. The results of these exploratory analyses (see Appendix III) provide an initial approach to conceptualizing how museum and library employment and spending circulates through their local economies. However, there are additional ways to think about how to monetize the value of the services provided by museums and libraries that were beyond the scope of this exploratory study, some of which can be straightforward and others much more speculative.

Most economic and fiscal impact analyses operationalize institutional value as the institution's annual spending and the spillover effects associated with institutional direct spending. The most prevalent approach to assessing the monetizable impact of museums and libraries is through traditional economic and fiscal impact analyses. Many studies employ economic impact analyses at the county or state level to identify the impact of civic institutions on jobs, wages, tax revenue, and GDP.⁶⁶ In some studies these analyses focus on the impact of a specific expense, such as construction spending and how that ripples through the economy as jobs, wages, and taxes.⁶⁷ Other studies include the economic impact of audiences visiting civic institutions who spend money on supportive industries, such as restaurants, parking garages, hotels, and retail stores. For example, Americans for the Arts found in 2012 that the non-profit arts and culture industry generates \$135.2 billion of economic activity—\$61.1 billion in direct spending by the nation's non-profit arts and culture organizations in addition to \$74.1 billion in indirect event-related expenditures by their audiences.⁶⁸

More narrowly, real estate studies attempt to isolate the value of these institutions to local real estate markets through measurements of real estate transactions and property values. Since the early 2000s, new research has focused on the ability of civic institutions to spur urban revitalization. Much of the literature views these institutions as real estate amenities that generate a value premium,⁶⁹ reflected primarily in residential property prices and improved "attractiveness" of the overall neighborhood.

A third way it should be possible to assess the economic contributions that museums and libraries make in their communities is through the monetization of the psychosocial benefits that accrue to patrons that visit their institutions and participate in their programming. Today, there is no existing body of evidence related to this type of research. However, there are empirical reasons to believe that the psychosocial benefits created by museums and libraries also carry measurable economic contributions. For example, a number of studies have quantified the effect of mental health, creativity, or social capital on employment and productivity at a national scale.⁷⁰ Even though a body of literature does not presently exist to demonstrate a direct connection between the psychosocial benefits for museum and library patrons and measurable economic benefits, such studies will be increasingly important for the field in the years to come.

This is perhaps the most complex and uncertain area for further investigation from this analysis and points back to the underlying premise for the economic input-output analyses conducted for each case study institution. Traditionally, this frame of analysis accepts and amplifies the idea that an entity's "value" to the local community is best measured in simple economic units of jobs and dollars spent. However, at a fundamental level, findings from this study suggest that while those measures are important, they do not provide a full picture of the value proposition that museums and libraries contribute to their local economy.

For instance, the presence of museums that provide specialized collections or public facilities may reduce the need for spending by local school systems; the presence of reliable internet connections, computers, and other technological equipment in libraries may reduce the need for residents to spend household funds on such items. The interviews conducted at the case study institutions uncovered numerous examples of this type of contribution but have also underscored the lack of systematic data availability to allow for large-scale analyses to evaluate the value proposition of institutions within the local economy. Further studies can target specific geographies or institutions and consider a tailored study design to begin to measure these questions. While an input-output analysis is a useful starting point, this study has shown that a traditional perspective is not sufficient to estimate the economic components of institutional impact.

Future research efforts to estimate the economic contributions of museums and libraries should proceed with caution. As discussed previously, economic wellbeing is an important dimension of the quality of life in a place, but it is not the only one. More important, the activities, services, and programming offered by museums and libraries do not typically generate outcomes that neatly align with monetary estimates (see Appendix III). Future researchers examining the contributions that these institutions make to their communities would be best served by focusing on those dimensions of social wellbeing that align with the work museums and libraries are already doing in their communities. Efforts to estimate economic activity beyond general estimates of spending and employment or easily monetized outputs run the risk of fetishizing economic outcomes at the expense of efforts to better understand how museums and libraries more directly affect other dimensions of social well-being.

IMPLICATIONS FOR INSTITUTIONAL DATA COLLECTION AND ASSESSMENT

In positioning themselves as catalysts for positive change in their communities, it is increasingly imperative for museums and libraries to be able to articulate how this happens in practice. The tremendous diversity among museums and libraries themselves, in addition to the diversity of their programming and initiatives that support different dimensions of wellbeing, creates the somewhat daunting task of identifying common metrics for each field. These metrics would need to speak to the fields' ability to enhance the quality of life in their communities. The good news is that the creation of fieldwide metrics to assess community impacts is already underway in the library field through the American Library Association's Project Outcome, and through the Chief Officers of State Library Agencies' Measures that Matter initiative.⁷¹ Similar efforts among museums are more fragmented across different industry groups and not always centrally located or as easily accessible.⁷²

Initial steps in this process require developing consistent ways of talking about how museums and libraries enhance the quality of life in their communities. Articulating a consistent narrative that is accessible for museum and library supporters, patrons, staff, and the broader community is critical for helping different constituencies understand how these institutions contribute to shaping places where people want to live and work. Institutional and programmatic theories of change can be invaluable guides for designing assessment activities that document the change museums and libraries make in their communities. The most well-developed institutions have these types of theories inscribed in their institutional missions, goals, and strategic planning documents and they use these tools to guide their institutional priorities and decision-making related to programming and partnership development. These institutions understand the “change in the world” they want to see, and well-developed strategic plans outline how they will help bring this about.

A strategic planning process that is grounded in a theory of change about the way the institution will be part of a healthy and thriving community is a crucial first step in identifying what information will be needed to convince others that the institution is achieving these goals. At the highest level, this involves a process of developing ways to measure change—changes in individuals that pass through the institution or participate in programming, as well as changes in the wider community.

The most straightforward ways for museum and library leaders and staff to support assessment of their programming is to focus on accurately collecting administrative and programming data related to participants that can be useful for policy makers and research partners.⁷³ There are a range of resources available to help museum and library staff develop approaches to data collection and reporting practices across a wide range of programmatic offerings that could be used to support formal and informal educational assessments. Developing institutional data collection practices within existing frameworks for assessment and evaluation can remove a lot of the “heavy lifting” for research partners to get this work off the ground.

Table 10 on the following pages presents a set of approaches and examples of tools for measuring change along formal and informal educational outcomes that generally overlap with some of the most common types of programming at libraries

and museums. Many of these approaches and suggested tools can be adapted to a range of situations and populations—from the largest and most complicated programs to those that serve very few people in remote settings. Even the smallest places that participated in this study were engaged in some form of assessment designed to inform their programming; making minor adjustments to their existing practices to begin documenting basic changes in their participants can go a long way to helping others understand the value of their work for individuals and the broader communities they serve.

NOTE: *Many of the tools listed in Table 10 were developed by expert researchers and require substantial resources of time and expertise to administer, analyze, and make substantive use of the results. The tools in Table 10 are likely not “off the shelf” solutions for museums and libraries but are listed here to provide a conceptual touchstone for thinking about approaches to assessment of their programming that overlaps with these different domains. Moving from the sample tools listed in Table 10 to off the shelf options for libraries and museums likely will require technical assistance from either IMLS or other external experts that could create a resource bank for libraries and museums to have ready-to-go starting points for their assessment efforts. An effort like this would also need to take into consideration the capacity and needs of the smallest institutions serving some of the most remote areas in the country. In many of these places the programming supports may never reach sizeable populations from a research perspective, but the importance of the supports they provide for their patrons and the community are critically important in many of the case study institutions in this study.*

TABLE 10. Formal and Informal Learning Outcomes & Assessment Tools

CONTENT FOCUS	INFORMAL OUTCOMES	FORMAL OUTCOMES	TOOLS
<p>General Learning Outcomes</p>	<ul style="list-style-type: none"> • Changes in Attitudes/Values • Evidence of Enjoyment/Inspiration/ • Creativity/Curiosity/Problem Solving • Evidence of Behavioral Progression • Evidence of Motivation 	<ul style="list-style-type: none"> • Increased Knowledge and Understanding: critical thinking; engagement with material; cognitive skills • Increased Social Skills: relationship/interpersonal skills; teamwork skills; empathy • Increased Self-Awareness: personal responsibility; sense of identity; self-reliance; leadership 	<ul style="list-style-type: none"> • Holistic Student Assessment (HSA) (PEAR) • Developmental Assets Profile (DAP) • Social Skills Improvement System (SSIS)⁷⁴ • Survey of Academic and Youth Outcomes (SAYO)⁷⁵ • Afterschool Outcome Measures Online Toolbox⁷⁶
<p>Early Literacy/ Story Time Activities</p>	<ul style="list-style-type: none"> • Fun/Play • Socialization • Reading Habit Formation • Sensory/"Hands-on" Experiences • Increased Enjoyment of Reading (children) • Increased Skills for Reading Aloud and Discussing Books with Children (parents/guardians) 	<ul style="list-style-type: none"> • Language Acquisition • Literacy • Communication • Kindergarten Readiness • Social-emotional Development • Parent Engagement 	<ul style="list-style-type: none"> • Benchmarks Curricular Planning and Assessment Framework (BCPAF)⁷⁷ • Program Evaluation Tool (PET)⁷⁸ • Family Reading Habits Survey • The Dynamic Indicators of Basic Early Literacy Skills (DIBELS)⁷⁹ • Kindergarten Readiness Tools (nearly all states have them in some fashion) • Tools to assess oral language development such as 1) vocabulary (e.g., Peabody Picture Vocabulary Task IV)⁸⁰ or 2) pragmatics (e.g., MacArthur Communicative Development Inventory)⁸¹
<p>Teen Programming/ Youth Development</p>	<ul style="list-style-type: none"> • Changes/Identification of Attitudes/Values • Self-Esteem/Confidence • Social/Emotional Development • Identity Development • Sense of Ownership/Belonging 	<ul style="list-style-type: none"> • Attachment to School/Community • Leadership Skills/Empowerment • Increased Educational Attainment • 21st century skills, including: 1) Learning Skills (critical thinking, creative thinking, collaborating, communicating); 2) Literacy Skills (information literacy, media literacy, technology literacy); 3) Life Skills (flexibility, initiative, social skills, productivity, leadership) 	<ul style="list-style-type: none"> • Surveys re: frequency of use, visits, attendance in programming, attitudes toward library • Assessments of 21st century skills, e.g., self-rating questionnaires, situational judgment tests⁸²

TABLE 10. Formal and Informal Learning Outcomes & Assessment Tools (Continued)

CONTENT FOCUS	INFORMAL OUTCOMES	FORMAL OUTCOMES	TOOLS
STEM	<ul style="list-style-type: none"> • Interest in STEM — “I like to do this” • Capacity to Engage in STEM — “I can do this” <ul style="list-style-type: none"> ○ Participation ○ Purposeful Activities ○ Engagement with STEM • Value STEM Goals — “This is important to me” • STEM Identity Formation • Youth Development in STEM <ul style="list-style-type: none"> ○ Relationships ○ Relevance • Youth Voice 	<ul style="list-style-type: none"> • Scientific Knowledge Acquisition <ul style="list-style-type: none"> ○ STEM Content Learning ○ Engaging in Scientific Inquiry ○ Engaging in Scientific Practices ○ Reflecting on Science • Academic Performance • Awareness of STEM in everyday life 	<ul style="list-style-type: none"> • The Common Instrument Suite (CIS) (PEAR) • Dimensions of Success (DoS) (PEAR) • STEM Pathways survey (pre-test and post-test for students) • Science Opinion Survey (SOS)⁸³ • Concept maps • Structured interviews or focus groups — coded discourse analysis
Adult Education / Workforce Development	<ul style="list-style-type: none"> • Sense of Empowerment/ Confidence • Change in Attitudes, Behavior, Perspectives • Evidence of Motivation • Sense of Ownership/Belonging 	<ul style="list-style-type: none"> • Increased Knowledge and Skills: literacy; numeracy; digital and financial skills • Improved Access to Resources for Employment • Placement and Retention in Employment • Improved Rates of GED Attainment • Social and Democratic Participation 	<ul style="list-style-type: none"> • Tracking GED and ESL class completion • Track passage rates of U.S. Naturalization Text • Tracking number of library users who complete programs and go on to employment • National Reporting System for Adult Education⁸⁴ • Surveys re: frequency of use, visits, attendance in programming, attitudes toward library

For most institutions, documenting the contributions their efforts make to promoting wellbeing is more important than isolating the effects of individual programs or supports. Documenting changes among the populations that visit museums and libraries or participate in their programs provides a useful data point in what should be a multidimensional, narrative process. A narrative structure that includes multiple forms of evidence (quantitative and qualitative), such as observed changes in program participants and their accounts of what their participation meant for them, attests that a positive contribution was made, even if it is not possible to isolate the effect of a museum or library programming on individuals' knowledge, skills, or behaviors.

Moving from individual- to community-level contributions is considerably more challenging, not just for those who want to assess the impact of museums and libraries on their local communities, but even for the most experienced researchers who specialize in measuring neighborhood change. Generally, neighborhoods tend to stay the same over time when measuring place-based dimensions of social wellbeing, like those presented in Section IV. When neighborhoods do change, that change is often gradual and influenced by multiple mutually reinforcing or countervailing influences; these create conceptual and methodological challenges for assessing the degree to which a single institution's behavior is influencing community-level conditions.⁸⁵

Museums and libraries would do well to focus their effort to assess their contributions to community-level changes by aggregating up from observable changes their supports have on individuals to broader populations within the community. Large institutions whose efforts have a broad reach can feel confident extending observed changes for individual program participants to a community level. But for most institutions, and for smaller programs and initiatives that do not reach substantial proportions of target populations, it is critically important for museums and libraries to situate the contributions their efforts do make within larger networks of support for wellbeing in their community. By understanding what dimension(s) of wellbeing individual programs or initiatives support, documenting changes in participants, combining those observable changes with accounts of how individual experiences made a change in their lives, and situating their

institutions within broader networks of support, museums and libraries can craft a compelling narrative describing how their efforts are promoting the wellbeing of their communities—even if their individual efforts are not widespread enough to observe community-level change. This inductive orientation to describing how their institutions support and enhance the wellbeing of their patrons and communities is likely to yield greater success than more deductive approaches to isolating the impacts of specific programs or institutions.

At many of the case study institutions, museum and library staff identified the connections that their institutions facilitated as potentially the most impactful contribution they made in their communities. From a social wellbeing perspective, library and museum directors and their staff continually described the role their institutions played in promoting social capital and activating networks of mutual support across a range of focus areas. While nearly every museum and library director acknowledged the importance of their position within broader networks of support in their communities, the level to which institutions were pursuing efforts to assess the effect of these networks varied.

As noted previously, many museum and library partners are currently evaluating the impacts of their programming in museums and libraries, or they have external experts conducting these evaluations. The results of evaluations are not consistently shared with museum and library staff. Understanding what programs are being evaluated, by who, and requesting access to the results of these efforts is a great starting point for museums and libraries in understanding and documenting the impact of their work on individuals and their communities.

LIBRARIES HAVE A SECTORAL HEAD START IN STANDARDIZED DATA COLLECTION

Institutional data collection, data management, and data use vary considerably across all museums and libraries. Most of the institutions that participated in this study made concerted efforts to collect programmatic data to document what they do and who they serve. However, there are substantial systemic differences between libraries and museums. Public libraries across the country benefit from the standardization associated with IMLS' Public Libraries Survey (PLS). While the PLS has limitations—such as excluding academic libraries, the inability to identify unduplicated users and program participants, the inability to differentiate individual programs, and the absence of community-based metrics (among others) — its long tenure in the field and the remarkable annual response rate by libraries across the country establish a solid data floor for understanding a great deal about the library sector.

For museums, there is no comparable data collection tool, nor a comparable set of metrics that apply to the museum field. A primary challenge for the museum sector is the fundamental diversity of a sector that includes history museums and historical societies, art museums, science museums, children's museums, botanical gardens, and zoos and aquariums, among others.

MOVING TOWARD MORE SYSTEMATIC DATA COLLECTION AND REPORTING AMONG MUSEUMS IS WORTH THE EFFORT.

Sectoral differences among museums matter when it comes to data collection, and systematic data collection would be enhanced by allowing museums to self-select into different museum types with a tailored set of metrics. Categories could include: history museums; art museums; science/industry museums; children's museums; zoos and aquariums; botanical gardens; historical societies; and "other museums". Across each of these different types, there would need to be a mix of indicators that are on the one hand, aligned for basic institutional information, and on the other hand, specific to their relevant sub-fields. It also may be important for museums to

have opportunities to self-identify into multiple content areas depending on their institutional priorities and programmatic offerings.

Basic institutional data collection for all museums could include some mix of the following:

- **Type of Museum** — history; art; science/industry; children's; zoos and aquariums; conservatories/botanical gardens/natural spaces; historical societies; other;
- **Locations** — hours/days/seasons of operation;
- **Assets** — value of collection(s); value of real estate/land; size of endowments;
- **Revenue** — earned revenue, grants/donations revenue; public revenue from municipal appropriations; revenue from endowments;
- **Expenditures** — staffing, space and programming expenses; materials expenses; collection expenses;
- **Staffing** — total full-time staff; total part-time staff; total volunteers; and
- **Visitors** — total visitors; total visits; visitor ZIP codes.

Every museum that participated in the study already collects these indicators in some way. Creating a centralized place and process for the museum field to annually submit these basic indicators about their institutions would greatly enhance the ability of the field and its supporters, like IMLS, to better understand the diversity, depth, breadth, and stability of the sector overall. In addition to these general metrics, a common data collection platform should provide opportunities for museums to enter additional data specific to their "type." Indicators should be developed in close consultation with representatives from these different institutions and the industry groups that support them to ensure that the data collection protocols and parameters are practical from the perspective of the institutions.

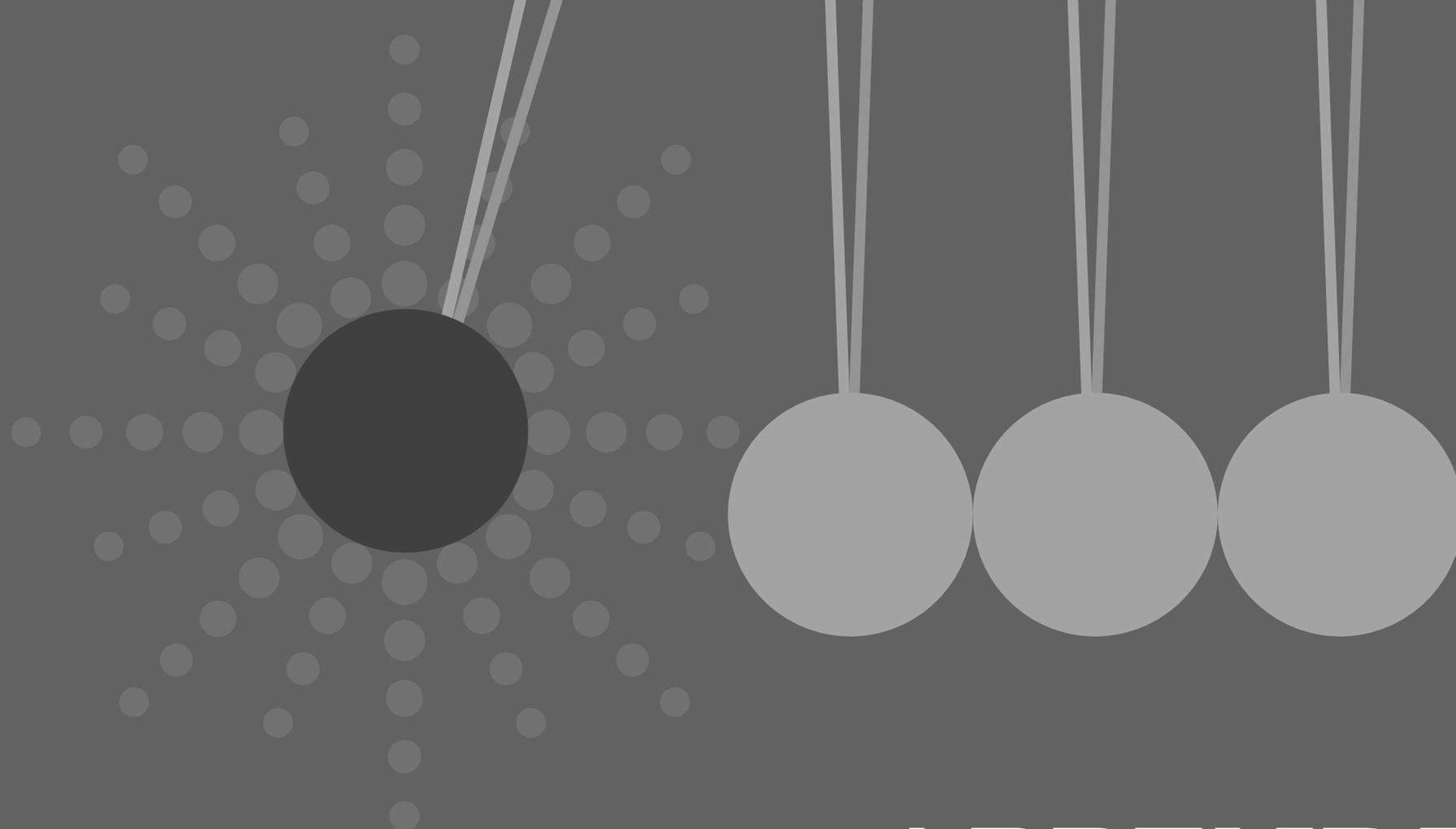
SUMMARY

The findings presented in this study provide important implications for those who work in libraries and museums, those who support these institutions, and researchers seeking to better understand how these institutions enhance the quality of life in their communities. As the nation eventually emerges from the COVID-19 pandemic, people will reconnect with one another and adapt to new ways of being with one another and new ways of participating in their communities. Museums and libraries have important roles to play in these processes and will be critical institutions in knitting communities back together in the times ahead. The degree to which these institutions can evolve while remaining true to their institutional missions will inform the cultural landscape of the places they occupy well into the 21st century.



SECTION ENDS





APPENDICES

APPENDIX I: TECHNICAL APPENDIX

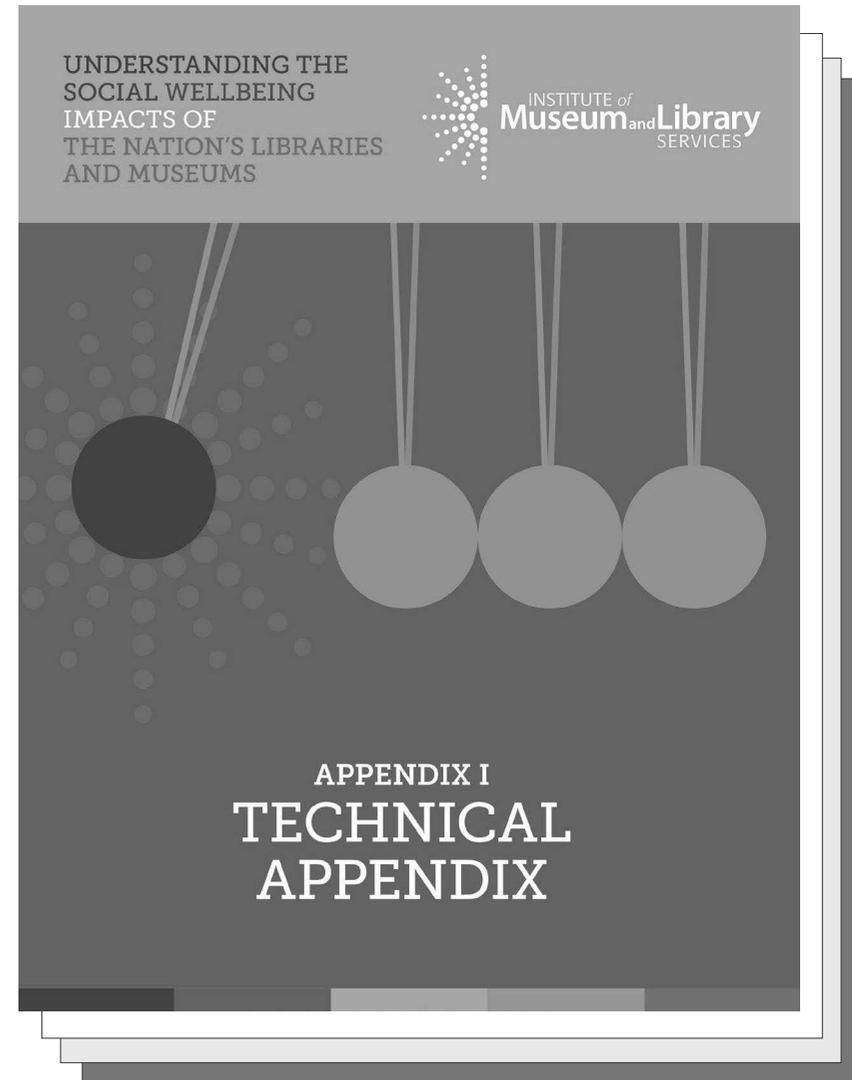
The technical appendix presents additional details, methodological considerations, and limitations of the:

SOCIAL WELLBEING INDEXES

The study team estimated 10 indexes that represent different dimensions of social wellbeing. Each index was estimated for all counties across the United States for which data were available.

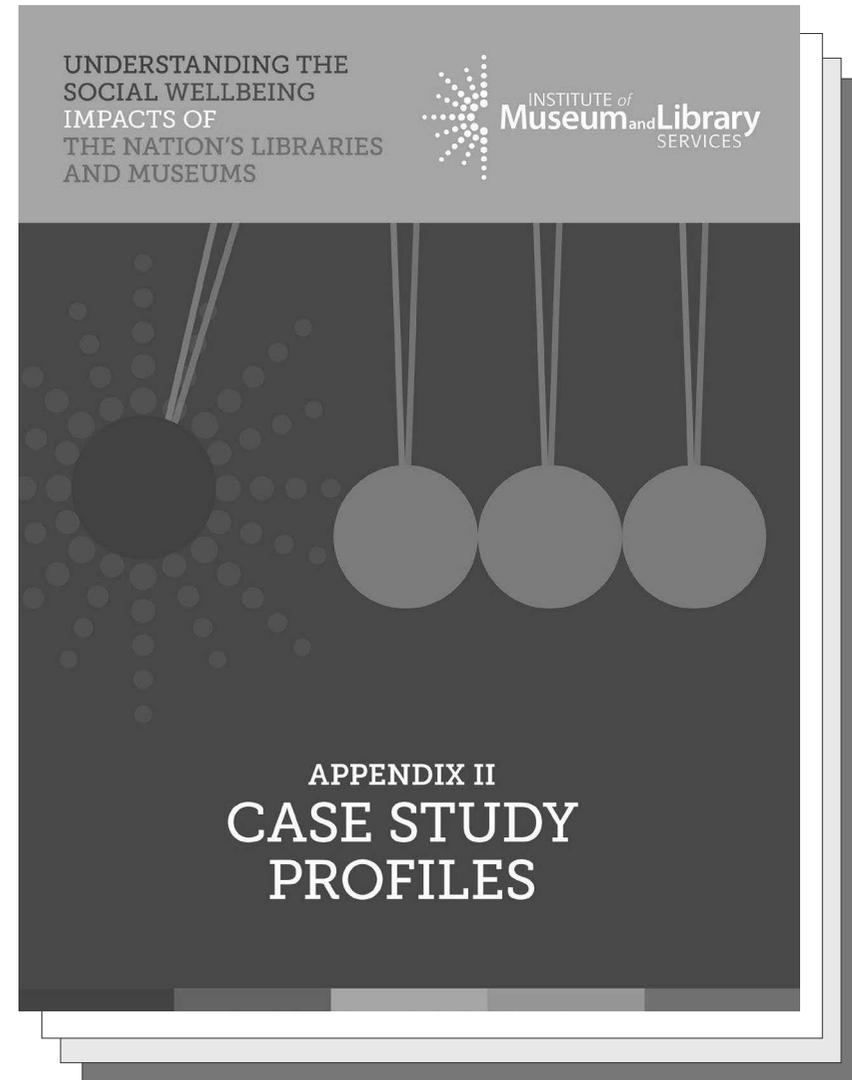
LIBRARY AND MUSEUM INDEXES

These indexes were created to help the study team understand how the presence and usage of these institutions are related to different dimensions of social wellbeing



APPENDIX II: CASE STUDY PROFILES

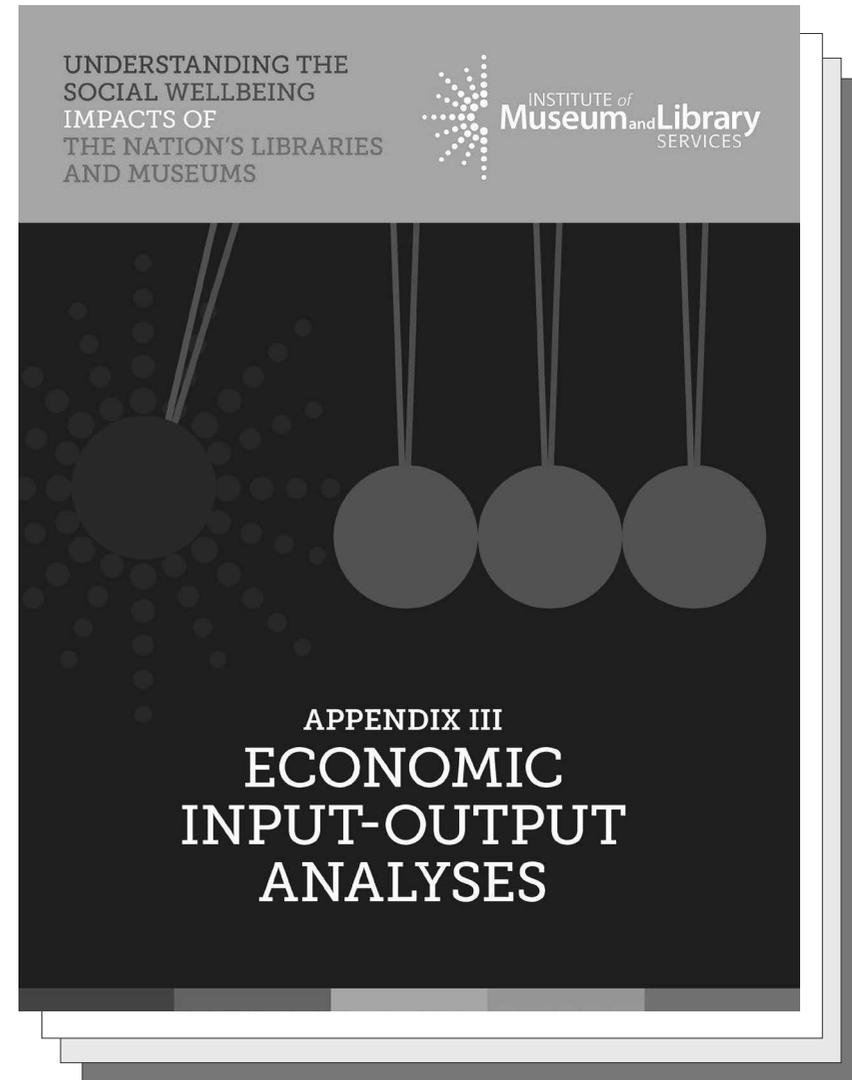
This appendix presents individual profiles for all 24 site visit institutions that include a list of the data collected, key findings from interviews and document reviews, and a network map of each site's institutional connections. The site profiles presented in this Appendix were developed to highlight key learnings from each case study institution related to their programming, partnerships, and broader networks of support for community wellbeing, especially those that promote education and/or health in their communities.



APPENDIX III: ECONOMIC INPUT-OUTPUT ANALYSES



This appendix presents an overview of the methodology and the results of economic input/output analyses examining how each site's institutional spending flows through their local economies. Economic impact studies are typically designed to estimate the economic benefits that an individual project, industry, or institution contributes to the local economies and surrounding communities. These studies use financial and economic data to estimate economic outputs such as gross domestic product (GDP) or employment and tax revenues associated with changes in the level of economic activity that result from a specific project or industry.⁸⁶



APPENDIX IV: BIBLIOGRAPHY

- Aabø, S. "Libraries and return on investment (ROI): a meta-analysis." *New Library World* 110, no. 7/8 (2009): 311–324.
- Abbott, K. A., M. J. Shanahan, and R. W. Neufeld. "Artistic tasks outperform non-artistic tasks for stress reduction." *Art Therapy* 30, no. 2 (2013): 71–78.
- Albert, M. *Impact of an arts-integrated social studies curriculum on eighth graders' thinking capacities*. Lexington: University of Kentucky, 1995.
- Alliance for the Arts. *Culture Builds New York: The Economic Impact of Capital Construction at NYC Cultural Institutions 2003–2010*. Alliance for the Arts, 2007. http://www.allianceforarts.org/pdfs/CultureBuildsNY_2007.pdf
- Americans for the Arts. *Arts and Economic Prosperity IV: The Economic Impact of Nonprofit Arts and Culture Organizations and their Audiences*. Americans for the Arts, 2012. https://www.americansforthearts.org/sites/default/files/pdf/information_services/research/services/economic_impact/aepiv/NationalStatisticalReport.pdf
- American Library Association (ALA). *The State of America's Libraries 2018*. 2018. <http://www.ala.org/news/state-americas-libraries-report-2018>
- Andrews, F. and S. Withey. *Social indicators of well-being*. New York: Plenum Press, 1976.
- Angus, J. *An Enquiry Concerning Possible Methods for Evaluating Arts for Health Projects*. Durham: Centre for Arts and Humanities in Health and Medicine (CAHHM), University of Durham, 1999.
- Burchardt, T., J. Le Grand, and D. Piachaud. "Introduction." In *Understanding Social Exclusion*. Edited by J. Hills, J. Le Grand, and D. Piachaud. Oxford: Oxford University, 2002.
- Bureau of Economic Analysis. *Gross Domestic Product by County, 2019*. 2020. <https://www.bea.gov/data/gdp/gdp-county-metro-and-other-areas>
- Cantillon, Z. and S. Baker. "DIY Heritage Institutions as Third Places: Caring, Community and Wellbeing Among Volunteers at the Australian Jazz Museum." *Leisure Sciences* (2018).
- Chatterjee, H. and G. Noble. *Museums, Health and Wellbeing*. London: Routledge, 2016.
- Cohen, R., W. Schaffer, and B. Davidson. "Arts and Economic Prosperity: The Economic Impact of Nonprofit Arts Organizations and Their Audiences." *The Journal of Arts Management, Law, and Society* 33, no. 1 (2003): 17–31.
- Coulton, S., S. Clift, A. Skingley, and J. Rodriguez. (2015). "Effectiveness and cost-effectiveness of community singing on mental health-related quality of life of older people: randomised controlled trial." *British Journal of Psychiatry* 207, no. 3 (2015): 250–255.
- Crapuchettes, J., H. Robinson, and D. James. *EMSI Multi-Regional Social Accounting Matrix (MR-SAM) Modeling System*. EMSI, 2017. <https://www.economicmodeling.com/wp-content/uploads/SAM-Public-Doc.pdf>
- Deasy, R. J. *Critical links: Learning in the arts and student academic and social development*. Washington, D.C.: Arts Education Partnership, 2002. <https://files.eric.ed.gov/fulltext/ED466413.pdf>
- de la Peña McCook, K. *Rocks in the Whirlpool*. American Library Association, 2006. <http://www.ala.org/aboutala/missionhistory/keyactionareas/equityaction/rockswirlpool>
- Dewhurst, M. and K. Hendrick. "Dismantling Racism in Museum Education." *Journal of Folklore and Education* 3, (2016): 25–30.
- Department for International Development (DFID). *Reducing Poverty by Tackling Social Exclusion: A DFID Policy Paper*. DFID, 2005. http://www2.ohchr.org/english/issues/development/docs/social_exclusion.pdf

APPENDIX IV: BIBLIOGRAPHY

Diener, E. and E. M. Suh. (eds.) *Culture and Subjective Well-being*. Cambridge, MA: MIT Press, 2000.

Eid, M. and R. J. Larsen. (eds.) *The Science of Subjective Well-being*. New York: Guilford Press, 2008.

Embrick, D.G., S. Weffer, and S. Dóminguez. "White sanctuaries: race and place in art museums." *International Journal of Sociology and Social Policy* 39, no. 11/12 (2019): 995–1009.

Espinal, I., T. Sutherland, and C. Roh. "A Holistic Approach for Inclusive Librarianship: Decentering Whiteness in Our Profession." *Library Trends* 67, no. 1 (2018): 147–162.

Eurostat. *Combating poverty and social exclusion: A statistical portrait of the European Union 2010*. Luxembourg: Publications Office of the European Union, 2010. <https://ec.europa.eu/eurostat/documents/3217494/5723553/KS-EP-09-001-EN.PDF.pdf/beb36abc-ff29-48a0-8518-32b64ad73ca5>

Farmer, J., T. De Cotta, K. McKinnon, J. Barraket, S. A. Munoz, H. Douglas, and M. J. Roy. "Social enterprise and wellbeing in community life." *Social Enterprise Journal* 12, no. 2 (2016): 235–254.

Feldman, E.N. "Benchmarks Curricular Planning and Assessment Framework: Utilizing Standards Without Introducing Standardization." *Early Childhood Education* 38 (2010): 233–242.

Fischer, D., S. Anila, P. Moore. "Coming Together to Address Systemic Racism in Museums." *Curator: The Museum Journal Forum* 60, no. 1 (2017): 23–31.

Fiske, E. *Champions of change: the impact of the arts on learning*. Washington DC: Arts Education Partnership President's Committee on the Arts and Humanities, 1999. <https://files.eric.ed.gov/fulltext/ED435581.pdf>

Flood, A. "Rep. John Lewis tells National Book awards how he was refused entry to library because he was black." *The Guardian*. Nov. 7, 2016. <https://www.theguardian.com/books/2016/nov/17/rep-john-lewis-national-book-awards-refused-entry-to-library-because-black>

Galster, G. C. *Making our Neighborhoods, Making Ourselves*. Chicago: University of Chicago Press, 2019.

Gibson, A. N., R. Chancellor, N. Cooke, N. Park Dahlen, S. A. Lee, and Y. Shorish. "Libraries on the frontlines: neutrality and social justice." *Equality, Diversity and Inclusion* 36, no. 8 (2017): 751–766.

Green, A., J. Preston, and J. Janmaat. *Education, Equality and Social Cohesion: A Comparative Analysis*. London: Palgrave Macmillan, 2011.

Guetzow, J. *How the Arts Impact Communities: An introduction to the literature on arts impact studies*. Taking the Measure of Culture Conference. Princeton: Princeton University, 2002. https://culturalpolicy.princeton.edu/sites/culturalpolicy/files/wp20_-_guetzkow.pdf.

Hacking, S., J. Secker, H. Spandler, L. Kent, and J. Shenton. "Evaluating the impact of participatory art projects for people with mental health needs." *Health and Social Care in the Community* 16, no. 6 (2008): 638–648.

Halsey, M. *Economic Impact Analysis of Cultural Institutions: A comparison of Mass MoCA and the Dia: Beacon Riggio Galleries*. Williamstown: Williams College, 2005.

Hickey, S. and A. du Toit. *Adverse Incorporation, Social Exclusion and Chronic Poverty (Working Paper No. 81)*. Chronic Poverty Research Centre, University of Manchester, 2007. http://www.chronicpoverty.org/uploads/publication_files/WP81_Hickey_duToit.pdf

Hills, J., J. Le Grand, and D. Piachaud. (eds.) *Understanding Social Exclusion*. Oxford: Oxford University Press, 2002.

Horrigan, J. *Libraries 2016*. Pew Research Center, 2016. <https://www.pewresearch.org/internet/2016/09/09/libraries-2016/>

APPENDIX IV: BIBLIOGRAPHY

- Institute of Museum and Library Services (IMLS) *IMLS-Funded Health Literacy Projects 2015–2017*. 2017. <https://imls-spr.imls.gov/Public/Projects>
- Jensen, A. "Beyond the borders: The use of art participation for the promotion of health and well-being in Britain and Denmark." *Arts Health* 5, no. 3 (2013): 204–215.
- Kahneman, D. and A. B. Krueger. "Developments in the measurement of subjective well-being." *Journal of Economic Perspectives* 20, no. 1 (2006): 3–24.
- Kaimal, G., K. Ray, and J. Muniz. "Reduction of cortisol levels and participants' responses following art making." *Art Therapy* 33, no. 2 (2016): 74–80.
- Keyes, C. L. M. "Social well-being." *Social Psychology Quarterly* 61 (1998): 121–140.
- Khader, S. J. *Adaptive Preferences and Women's Empowerment*. Oxford: Oxford University Press, 2011.
- Klinenberg, E. *Palaces for the people: How social infrastructure can help fight inequality, polarization, and the decline of civic life*. New York: Crown, 2018.
- Knowlton, S. A. "The "Negro Branch" Library in Memphis: A Case Study of Public Services in a Segregated Southern City." *Libraries: Culture, History, and Society* 1, no. 1 (2017): 23–45.
- Knott, C. *Not Free, Not for All: Public Libraries in the Age of Jim Crow*. Amherst: University of Massachusetts Press, 2016.
- Laurence, J. "The Effect of Ethnic Diversity and Community Disadvantage on Social Cohesion: A Multi-Level Analysis of Social Capital and Interethnic Relations in UK Communities." *European Sociological Review* 27, no. 1 (2011): 70–89.
- Layard, R. *The Economics of Mental Health*. IZA World of Labor, 2017. <https://wol.iza.org/uploads/articles/321/pdfs/economics-of-mental-health.pdf?v=1>
- Lin, H., N. Pang, and B. Luyt. "Is the library a third place for young people?" *Journal of Librarianship and Information Science* 47, no. 2 (2014): 1–11.
- Luo, L., D. Estreicher, P. Lee, C. Thomas, G. Thomas. "Social Workers in the Library: An Innovative Approach to Address Library Patrons' Social Service Needs." *Qualitative and Quantitative Methods in Libraries (QQML)* 1 (2012): 73–2. http://qqml.net/papers/July_Issue/8QQML_Journal_2012_Luo_Estreicher_Lee_Thomas_Thomas_1_73-82.pdf
- Menger, P. M. *The Economics of Creativity*. Cambridge, MA: Harvard University Press, 2014.
- Missingham, R. "Libraries and economic value: a review of recent studies." *Performance Measurement and Metrics* 6, no. 3 (2005): 142–158.
- Morales, M., E. C. Knowles, and C. Bourg. "Diversity, social justice, and the future of libraries." *Libraries and the Academy* 14, no. 3 (2014): 439–451.
- Morse, N., L. Thomson, Z. Brown, and H. J. Chatterjee. "Effects of creative museum outreach sessions on measures of confidence, sociability and well-being for mental health and addiction recovery service-users." *Arts and Health* 7, no. 3 (2015): 231–246.
- Neuman, S., N. Moland, and D. Celano. *Bringing Literacy Home: An Evaluation of the "Every Child Ready to Read Program."* Public Library Association and Association for Library Service to Children, 2017. <http://everychildreadytoread.org/wp-content/uploads/2017/11/2017-ECRR-Report-Final.pdf>
- Institute of Museum and Library Services (IMLS). *IMLS Funded Health Literacy Projects 2015–2017*. 2017. <https://imls-spr.imls.gov/Public/Projects>
- Norton, M. and E. Dowdall. *Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts*. Prepared for IMLS by Reinvestment Fund, 2017. <https://www.imls.gov/publications/strengthening-networks-sparking-change-museums-and-libraries-community-catalysts>

APPENDIX IV: BIBLIOGRAPHY

- Nussbaum, M. *Creating Capabilities: The Human Development Approach*. Cambridge, MA: Harvard University Press, 2011.
- Oldenburg, R. *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*. Boston: Da Capo Press, 1999.
- Oxford Economics. *Museums as Economic Engines – An Economic Impact Study for the American Alliance of Museums*. American Alliance of Museums, 2017. <https://www.aam-us.org/wp-content/uploads/2018/04/American-Alliance-of-Museums-web.pdf>
- Pindell, H. "Art World Racism: A Documentation." *New Art Examiner* 16, no. 7 (1989): 32–36.
- Plumstead, J. *America's School of Mines: Economic Impact Analysis*. 2012. <https://www.pwc.com/gx/en/mining/school-of-mines/2012/pwc-realizing-the-value-of-your-project-economic-impact-analysis.pdf>
- Putnam, R. *Bowling Alone: The collapse and revival of American community*. New York: Simon and Schuster, 2000.
- Putnam R. "E pluribus unum: Diversity and community in the twenty first century. The 2006 Johan Skytte prize lecture." *Scandinavian Political Studies* 30, no. 2 (2007): 137–174.
- Randall, P., M. Dian, and C. Miller. *Art works!: prevention programs for youth and communities*. Rockville, MD: National Endowment for the Arts and the Center for Substance Abuse Prevention, 1997. <https://files.eric.ed.gov/fulltext/ED451428.pdf>
- Remmers, V. *A Brief History of Input-Output*. Implan, 2018. <https://blog.implan.com/history-of-io>
- Ruppert, S. S. *Critical evidence: How the arts benefit student achievement*. Washington, D.C.: National Assembly of State Arts Agencies, 2006. <https://files.eric.ed.gov/fulltext/ED529766.pdf>
- Sampson, R. J. "Neighborhood Effects and Beyond: Explaining the Paradoxes of Inequality in the Changing American Metropolis." *Urban Studies* 56, no. 1 (2019): 3–32.
- Sen, A. *Social Exclusion: Concept, Application, and Scrutiny (Social Development Papers No. 1)*. Asian Development Bank, 2000. <http://www.adb.org/sites/default/files/publication/29778/social-exclusion.pdf>
- Sen, A. "Capability and Well-being." In *The Quality of Life*, 30–53. Edited by M. Nussbaum, and A. Sen. Oxford: Clarendon Press, 1993.
- Sen, A. *Commodities and Capabilities*. Amsterdam: North-Holland, 1985.
- Sheppard, S., K. Oehler, B. Benjamin, and A. Kessler. *Culture and Revitalization: The Economic Effects of MASS MoCA on its Community*. North Adams: Center for Creative Community Development, 2006. <https://web.williams.edu/Economics/ArtsEcon/library/pdfs/NA%20Economic%20Impacts%2032006.pdf>
- Sheppard, S. "Museums in the Neighborhood: the local economic impact of museums." In *Handbook of Economic Geography and Industry Studies*, Chapter 8. Edited by F. Giarattani, G. Hewings, and P. McCann. Edward Elgar Publishing, Cheltenham, 2013.
- Sibley, D. *Geographies of Exclusion: Society and Different in the West*. Oxfordshire: Routledge, 1995.
- Sikes, S. "Rural public library outreach services and elder users: A case study of the Washington County (VA) Public Library." *Public Library Quarterly* 39, no. 4 (2020): 363–388.
- Sonnie, A. *Advancing Racial Equity in Public Libraries: Case Studies from the Field*. Local and Regional Government Alliance on Race and Equity, 2018. https://www.racialequityalliance.org/wp-content/uploads/2018/04/GARE_LibrariesReport_Issue-Paper-April-2018.pdf
- Stern, M. J. and S. C. Seifert. "The Social Wellbeing of New York City's Neighborhoods: The Contribution of Culture and the Arts." *Culture and Social Wellbeing in New York City* 1, (2017).

APPENDIX IV: BIBLIOGRAPHY

- Stern, M. J. and S. C. Seifert. *Civic Engagement and the Arts: Issues of Conceptualization and Measurement*. Animating Democracy: A Program of Americans for the Arts, 2009. https://animatingdemocracy.org/sites/default/files/CE_Arts_SternSeifert.pdf
- Stiglitz, J., A. Sen, and J. P. Fatoussi. Report by the Commission on the Measurement of Economic Performance and Social Progress, 2009. <https://ec.europa.eu/eurostat/documents/8131721/8131772/Stiglitz-Sen-Fitoussi-Commission-report.pdf>
- Stuckey, H. L. and J. Nobel. "The connection between art, healing, and public health: A review of current literature." *American Journal of Public Health* 100, no. 2 (2010): 254–263.
- Todd, C., P. M. Camic, B. Lockyer, L. J. Thomson, and H. J. Chatterjee. "Museum-based programs for socially isolated older adults: understanding what works." *Health and Place* no. 48 (2017): 47–55.
- UK Home Office. *Social Network Analysis: How-To Guide*. 2016. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/491572/socnet_howto.pdf
- University of Pennsylvania Social Impact of the Arts Project (SIAP) and Reinvestment Fund. "Culture and Social Wellbeing in New York City: Highlights of a Two-Year Research Project." *Culture and Social Wellbeing in New York City* 2 (2017).
- Van Heertum, R. and J. Share. "A New Direction for Multiple Literacy Education." *McGill Journal of Education* 41, no. 3 (2006): 249–265.
- Van Lith, T., P. Fenner, and M. Schofield. "The lived experience of art making as a companion to the mental health recovery process." *Disability and Rehabilitation* 33, no. 8 (2011): 652–660.
- Van Lith, T., M. J. Schofield, and P. Fenner. "Identifying the evidence-base for art-based practices and their potential benefit for mental health recovery: a critical review." *Disability and Rehabilitation* 35, no. 16 (2013): 1309–1323.
- Venturelli, A., F. Caputo, P. Palmi, A. Tafuro, and G. Mastroleo. *Measuring the Multidimensional Performance of a Museum Network: Proposal for an Evaluation Mode*. Paper presented at International Forum on Knowledge and Dynamics, Bari, Italy, 2015. https://www.researchgate.net/profile/Andrea-Venturelli/publication/279178178_Measuring_the_Multidimensional_Performance_of_a_Museum_Network_Proposal_for_an_Evaluation_Model/links/558c2e6508ae591c19d9f24f/Measuring-the-Multidimensional-Performance-of-a-Museum-Network-Proposal-for-an-Evaluation-Model.pdf
- Wan, Y., M. J. Ludwig, and A. Boyle. *Review of Evidence: Arts Education Through the Lens of ESSA*. American Institutes for Research, 2018. Retrieved from: <https://www.wallacefoundation.org/knowledge-center/Documents/Arts-Education-Evidence-Report.pdf>
- White, R.G., M. G. Imperiale, and E. Perera. "The Capabilities Approach: Fostering contexts for enhancing mental health and wellbeing across the globe." *Global Health* 12, no. 16 (2016). Retrieved from: <https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-016-0150-3>
- Williams, K. "Ostracism." *Annual Review of Psychology* 58, no. 1 (2007): 425–452.
- Zionts, N., J. Apter, J. Kuchta, and P. Greenhouse. "Promoting Consumer Health Literacy: Creation of a Health Information Librarian Fellowship." *Reference and User Services Quarterly* 49, no. 4 (2010): 350–359. <https://journals.ala.org/index.php/rusq/article/viewFile/3628/3962>



SECTION ENDS

APPENDIX V: ENDNOTES

1 Site visits proceeded from September 2019 to March 2020. The final site visit to the Chihuahuan Desert Research Institute in Fort Davis, Texas, was conducted virtually due to travel restrictions associated with the onset of the COVID-19 pandemic.

2 <https://wellbeingindex.sharecare.com/>; <https://opportunityinsights.org/>; <https://www.socialprogress.org/>; <https://uwaterloo.ca/canadian-index-wellbeing/>; <https://www.winmeasures.org/statistics/winmeasures>; <https://www.rand.org/multimedia/video/2017/09/29/wellbeing-project.html>

3 D. Sibley, *Geographies of Exclusion: Society and Different in the West* (Oxfordshire: Routledge, 1995); K. Williams, "Ostracism," *Annual Review of Psychology* 58, no. 1 (2007): 425–452; Department for International Development (DFID), *Reducing Poverty by Tackling Social Exclusion: A DFID Policy Paper* (DFID, 2005), http://www2.ohchr.org/english/issues/development/docs/social_exclusion.pdf; S. Hickey and A. du Toit, *Adverse Incorporation, Social Exclusion and Chronic Poverty* (Working Paper No. 81) (Chronic Poverty Research Centre, University of Manchester, 2007), http://www.chronicpoverty.org/uploads/publication_files/WP81_Hickey_duToit.pdf; A. Sen, *Social Exclusion: Concept, Application, and Scrutiny* (Social Development Papers No. 1) (Asian Development Bank, 2000), <http://www.adb.org/sites/default/files/publication/29778/social-exclusion.pdf>; J. Hills, J. Le Grand, and D. Piachaud (eds), *Understanding Social Exclusion* (Oxford: Oxford University, 2002).

4 Eurostat, *Combating poverty and social exclusion: A statistical portrait of the European Union 2010* (Luxembourg: Publications Office of the European Union, 2010), <https://ec.europa.eu/eurostat/documents/3217494/5723553/KS-EP-09-001-EN.PDF/beb36abc-ff29-48a0-8518-32b64ad73ca5>

5 F. Andrews and S. Withey, *Social indicators of well-being* (New York: Plenum Press, 1976); C. L. M. Keyes, "Social well-being," *Social Psychology Quarterly* 61, (1998): 121–140; R. Putnam, *Bowling Alone: The collapse and revival of American community* (New York: Simon and Schuster, 2000); J. Farmer, T. De Cotta, K. McKinnon, J. Barraket, S. A. Munoz, H. Douglas, and M. J. Roy, "Social enterprise and wellbeing in community life," *Social Enterprise Journal* 12, no. 2 (2016): 235–254.

6 E. Diener and E. M. Suh, *Culture and subjective well-being* (Cambridge, MA: MIT Press, 2000).

7 Ibid; M. Eid and R. J. Larsen (eds.), *The science of subjective well-being* (New York: Guilford Press, 2008); D. Kahneman and A. B. Krueger, "Developments in the measurement of subjective well-being," *Journal of Economic Perspectives* 20, no. 1 (2006): 3–24.

8 R. G. White, M. G. Imperiale, and E. Perera, "The Capabilities Approach: Fostering contexts for enhancing mental health and wellbeing across the globe," *Global Health* 12, no. 16 (2016), <https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-016-0150-3>; M. Nussbaum, *Creating Capabilities: The Human Development Approach* (Cambridge, MA: Harvard University Press, 2011); S. J. Khader, *Adaptive Preferences and Women's Empowerment* (Oxford: Oxford University Press, 2011); A. Sen, "Capability and Well-being," in *The Quality of Life*, eds. M. Nussbaum and A. Sen (Oxford: Clarendon Press, 1993), 30–53; A. Sen, *Commodities and Capabilities* (Amsterdam: North-Holland, 1985).

9 For further detail on the ways in which libraries and museums are working to center inclusion and address historical social exclusion and racism see I. Espinal, T. Sutherland, and C. Roh, "A Holistic Approach for Inclusive Librarianship: Decentering Whiteness in Our Profession," *Library Trends* 67, no. 1 (2018): 147–162; M. Dewhurst and K. Hendrick, "Dismantling Racism in Museum Education," *Journal of Folklore and Education* 3 (2016): 25–30; A. Sonnie, Local and Regional Government Alliance on Racial Equity, *Advancing Racial Equity in Public Libraries: Case Studies from the Field* (Racial Equity Alliance, 2018), <https://www.racialequityalliance.org/resources/advancing-racial-equity-in-public-libraries-case-studies-from-the-field>; A. N. Gibson, R. Chancellor, N. Cooke, N. Park Dahlen, S. A. Lee, and Y. Shorish, "Libraries on the frontlines: neutrality and social justice," *Equality, Diversity and Inclusion* 36, no. 8 (2017): 751–766; M. Morales, E. C. Knowles, and C. Bourg, "Diversity, social justice, and the future of libraries," *Libraries and the Academy* 14, no. 3 (2014): 439–451; K. de la Peña McCook, *Rocks in the Whirlpool* (American Library Association, 2006), <http://www.ala.org/aboutala/missionhistory/keyactionareas/equityaction/rockswirlpool>

10 For further detail on historical structural racism within libraries and museums see D. G. Embrick, S. Weffer and S. Dóminguez, "White sanctuaries: race and place in art museums," *International Journal of Sociology and Social Policy* 39, no. 11/12 (2019): 995–1009; D. Fischer, S. Anila, and P. Moore, "Coming Together to Address Systemic Racism in Museums," *Curator: The Museum Journal Forum* 60, no. 1 (2017): 23–31; S. A. Knowlton, "The 'Negro Branch' Library in Memphis: A Case Study of Public Services in a Segregated Southern City," *Libraries: Culture, History, and Society* 1, no. 1 (2017): 23–45; A. Flood, "Rep. John Lewis tells National Book awards how he was refused entry to library because he was black," *The Guardian*, November 7, https://www.theguardian.com/books/2016/nov/17/rep-john-lewis-national-book-awards-refused-entry-to-library-because-black?CMP=twt_gu; C. Knott, *Not Free, Not for All: Public Libraries in the Age of Jim Crow* (Amherst: University of Massachusetts Press, 2016); H. Pindell, "Art World Racism: A Documentation," *New Art Examiner* 16, no. 7 (1989): 32–36.

11 M. Norton and E. Dowdall, *Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts* (Prepared for IMLS by Reinvestment Fund, 2017), <https://www.imls.gov/publications/strengthening-networks-sparking-change-museums-and-libraries-community-catalysts>

I APPENDIX V: ENDNOTES

- 12 Z. Cantillon and S. Baker, "DIY Heritage Institutions as Third Places: Caring, Community and Wellbeing Among Volunteers at the Australian Jazz Museum," *Leisure Sciences* (2018); H. Lin, N. Pang, and B. Luyt, "Is the library a third place for young people?" *Journal of Librarianship and Information Science* 47, no. 2 (2014): 1–11; R. Oldenburg, *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community* (Boston: Da Capo Press, 1999).
- 13 E. Klinenberg, *Palaces for the people: How social infrastructure can help fight inequality, polarization, and the decline of civic life* (New York: Crown, 2018).
- 14 American Library Association, *The State of America's Libraries 2018* (2018), <http://www.ala.org/news/state-americas-libraries-report-2018>.
- 15 R. Van Heertum and J. Share, "A New Direction for Multiple Literacy Education," *McGill Journal of Education* 41, no. 3 (2006): 249–265.
- 16 M. Norton and E. Dowdall, *Strengthening Networks, Sparking Change: Museums and Libraries as Community Catalysts* (Prepared for IMLS by Reinvestment Fund, 2017), <https://www.imls.gov/publications/strengthening-networks-sparking-change-museums-and-libraries-community-catalysts>.
- 17 S. Neuman, N. Moland, and D. Celano, *Bringing Literacy Home: An Evaluation of the "Every Child Ready to Read Program"* (Public Library Association and Association for Library Service to Children, 2017), <http://everychildreadytoread.org/wp-content/uploads/2017/11/2017-ECRR-Report-Final.pdf>
- 18 J. Guetzhow, *How the Arts Impact Communities: An introduction to the literature on arts impact studies, Taking the Measure of Culture Conference*, (Princeton: Princeton University, 2002), https://culturalpolicy.princeton.edu/sites/culturalpolicy/files/wp20_-_guetzkow.pdf
- 19 P. Randall, M. Dian, and C. Miller, *Art works!: prevention programs for youth and communities* (Rockville, MD: National Endowment for the Arts and the Center for Substance Abuse Prevention, 1997), <https://files.eric.ed.gov/fulltext/ED451428.pdf>; E. Fiske, *Champions of change: the impact of the arts on learning* (Washington DC: Arts Education Partnership President's Committee on the Arts and Humanities, 1999), <https://files.eric.ed.gov/fulltext/ED435581.pdf>
- 20 Y. Wan, M. J. Ludwig, and A. Boyle, *Review of Evidence: Arts Education Through the Lens of ESSA* (American Institutes for Research, 2018), <https://www.wallacefoundation.org/knowledge-center/Documents/Arts-Education-Evidence-Report.pdf>; R. J. Deasy, *Critical links: Learning in the arts and student academic and social development* (Washington, D.C.: Arts Education Partnership, 2002), <https://files.eric.ed.gov/fulltext/ED466413.pdf>; S. Ruppert, *Critical evidence: How the arts benefit student achievement* (Washington, D.C.: National Assembly of State Arts Agencies, 2006), <https://files.eric.ed.gov/fulltext/ED529766.pdf>; M. Albert, *Impact of an arts-integrated social studies curriculum on eighth graders' thinking capacities* (Lexington: University of Kentucky, 1995).
- 21 N. Zions, J. Apter, J. Kuchta and P. Greenhouse, "Promoting Consumer Health Literacy: Creation of a Health Information Librarian Fellowship," *Reference and User Services Quarterly* 49, no. 4 (2010): 350–359, <https://journals.ala.org/index.php/rusq/article/viewFile/3628/3962>
- 22 J. Horrigan, *Libraries 2016* (Pew Research Center, 2016), <https://www.pewresearch.org/internet/2016/09/09/libraries-2016/>
- 23 Institute of Museum and Library Services, *IMLS-Funded Health Literacy Projects 2015–2017*, (2017), <https://imls-spr.imls.gov/Public/Projects>
- 24 Ibid.
- 25 L. Luo, D. Estreicher, P. Lee, C. Thomas, and G. Thomas, "Social Workers in the Library: An Innovative Approach to Address Library Patrons' Social Service Needs," *Qualitative and Quantitative Methods in Libraries* (QQML) 1, (2012): 73–2, Retrieved from: http://qqml.net/papers/July_Issue/8QQML_Journal_2012_Luo_Estreicher_Lee_Thomas_Thomas_1_73-82.pdf
- 26 ALA, *The State of America's Libraries 2018*, (2018), <http://www.ala.org/news/state-americas-libraries-report-2018>
- 27 J. Guetzhow, *How the Arts Impact Communities: An introduction to the literature on arts impact studies, Taking the Measure of Culture Conference* (Princeton: Princeton University, 2002); N. Morse, L. Thomson, Z. Brown, and H. J. Chatterjee, "Effects of creative museum outreach sessions on measures of confidence, sociability and well-being for mental health and addiction recovery service-users," *Arts and Health* 7, no. 3 (2015): 231–246; H. Chatterjee and G. Noble, *Museums, health and well-being* (London: Routledge, 2016); C. Todd, P. M. Camic, B. Lockyer, L. J. Thomson, and H. J. Chatterjee, "Museum-based programs for socially isolated older adults: understanding what works," *Health & Place*, no. 48 (2017): 47–55; S. Sikes, "Rural public library outreach services and elder users: A case study of the Washington County (VA) Public Library," *Public Library Quarterly* 39, no. 4 (2020): 363–388.
- 28 S. Coulton, S. Clift, A. Skingley and J. Rodriguez, "Effectiveness and cost-effectiveness of community singing on mental health-related quality of life of older people: randomized controlled trial," *British Journal of Psychiatry* 207, no. 3 (2015): 250–255; A. Jensen, "Beyond the borders: The use of art participation for the promotion of health and well-being in Britain and Denmark," *Arts Health* 5, no. 3 (2013): 204–215.

I APPENDIX V: ENDNOTES

- 29 J. Angus, *An Enquiry Concerning Possible Methods for Evaluating Arts for Health Projects* (Durham: Centre for Arts and Humanities in Health and Medicine (CAHHM): University of Durham, 1999); G. Kaimal, K. Ray, and J. Muniz, "Reduction of cortisol levels and participants' responses following art making," *Art Therapy* 33, no. 2 (2016): 74–80; K. A. Abbott, M. J. Shanahan, and R. W. Neufeld, "Artistic tasks outperform non-artistic tasks for stress reduction," *Art Therapy* 30, no. 2 (2013): 71–78.; H. L. Stuckey and J. Nobel, "The connection between art, healing, and public health: A review of current literature," *American Journal of Public Health* 100, no. 2 (2010): 254–263.
- 30 T. Van Lith, M. J. Schofield, and P. Fenner, "Identifying the evidence-base for art-based practices and their potential benefit for mental health recovery: a critical review," *Disability and Rehabilitation* 35, no. 16 (2013): 1309–1323; S. Hacking, J. Secker, H. Spandler, L. Kent, and J. Shenton, "Evaluating the impact of participatory art projects for people with mental health needs," *Health and Social Care in the Community* 16, no. 6 (2008): 638–648; T. Van Lith, P. Fenner, and M. Schofield, "The lived experience of art making as a companion to the mental health recovery process," *Disability and Rehabilitation* 33, no. 8 (2011): 652–660; S. Coulton, S. Clift, A. Skingley, and J. Rodriguez, "Effectiveness and cost-effectiveness of community singing on mental health-related quality of life of older people: randomized controlled trial," *British Journal of Psychiatry* 207, no. 3 (2015): 250–255.
- 31 A. Jensen, "Beyond the borders: The use of art participation for the promotion of health and well-being in Britain and Denmark," *Arts Health* 5, no. 3 (2013): 204–215.
- 32 Oxford Economics, *Museums as Economic Engines—An Economic Impact Study for the American Alliance of Museums* (American Alliance of Museums, 2017), <https://www.aam-us.org/wp-content/uploads/2018/04/American-Alliance-of-Museums-web.pdf>; R. Cohen, W. Schaffer, and B. Davidson, "Arts and Economic Prosperity: The Economic Impact of Non-profit Arts Organizations and Their Audiences" *The Journal of Arts Management, Law, and Society* 33, no. 1 (2003): 17–31; S. Aabo, "Libraries and return on investment (ROI): a meta-analysis," *New Library World* 110, no. 7/8 (2009): 311–324; R. Missingham, "Libraries and economic value: a review of recent studies," *Performance Measurement and Metrics* 6, no. 3 (2005): 142–158.
- 33 S. Sheppard, K. Oehler, B. Benjamin, and A. Kessler, *Culture and Revitalization: The Economic Effects of MASS MoCA on its Community* (North Adams: Center for Creative Community Development, 2006), <https://web.williams.edu/Economics/ArtsEcon/library/pdfs/NA%20Economic%20Impacts%2032006.pdf>
- 34 <https://www.ims.gov/research-evaluation/data-collection/public-libraries-survey>
- 35 <https://www.gpo.gov/fdsys/pkg/FR-2010-06-28/pdf/2010-15605.pdf>
- 36 See the Technical Appendix for a full description of decisions and processes used to create the Library Index.
- 37 See the Technical Appendix for a detailed description of the data and methodology used to create the Library Index.
- 38 These criteria were adapted from the International Council of Museums: <https://icom.museum/en/resources/standards-guidelines/museum-definition/>.
- 39 These categories were pre-existing in the museum data file maintained by IMLS and do not necessarily represent mutually exclusive or exhaustive categories for the different types of museums represented in the overall dataset.
- 40 See the Technical Appendix for a detailed description of the data and methodology used to create the Museum Index.
- 41 See the Technical Appendix for a more thorough description of the limitations associated with data and methodologies used to create the Library and Museum Indexes.
- 42 Detailed reviews of data sources and the geographic distribution of all ten Social Wellbeing Indexes are presented in the Technical Appendix.
- 43 <https://exhibits.stanford.edu/data/catalog/db586ns4974>
- 44 <https://www.countyhealthrankings.org/>
- 45 See the Technical Appendix for a full description of the data sources included in the Community Health Index.
- 46 <https://cepa.stanford.edu/projects>
- 47 <https://www.countyhealthrankings.org/>
- 48 See the Technical Appendix for a full description of the data sources included in the Community Health Index.

APPENDIX V: ENDNOTES

49 J. Stiglitz, A. Sen, and J. P. Fatoussi, *Report by the Commission on the Measurement of Economic Performance and Social Progress* (2009), <https://ec.europa.eu/eurostat/documents/8131721/8131772/Stiglitz-Sen-Fitoussi-Commission-report.pdf>; E. Diener and E. M. Suh (eds.), *Culture and Subjective Well-being* (Cambridge, MA: MIT Press, 2000); A. Sen, *Commodities and Capabilities* (Amsterdam: North-Holland, 1985); M. Nussbaum, *Creating Capabilities: The Human Development Approach* (Cambridge, MA: Harvard University Press, 2011).

50 R. J. Sampson, "Neighborhood Effects and Beyond: Explaining the Paradoxes of Inequality in the Changing American Metropolis," *Urban Studies* 56, no. 1 (2019): 3–32.

51 In the rural areas, these coefficients are more likely to be statistically significant because the number of rural counties is so large; although the magnitude of the Community Health coefficients are rather substantial.

52 Although notable, it is important to treat these results with a degree of caution since many of the underlying variables in the social wellbeing indexes were less accurately measured for rural than other types of counties.

53 See the Technical Appendix for a more robust discussion of limitations associated with the Library and Museum Indexes.

54 <https://www.gpo.gov/fdsys/pkg/FR-2010-06-28/pdf/2010-15605.pdf>

55 This geographic selection criteria excludes outlying counties that are not part of metropolitan or micropolitan statistical areas from consideration. This decision was made on the assumption that counties will need to meet a critical population threshold (i.e., at least one urbanized areas with at least 10,000 residents to viably observe and measure museum and library activities that could be plausibly linked to different dimensions of social wellbeing).

56 J. Plumstead, *America's School of Mines: Economic Impact Analysis* (PricewaterhouseCoopers (PwC), 2012), Retrieved from: <https://www.pwc.com/gx/en/mining/school-of-mines/2012/pwc-realizing-the-value-of-your-project-economic-impact-analysis.pdf>

57 V. Remmers, *A Brief History of Input-Output* (2018), <https://blog.implan.com/history-of-io>

58 J. Crapuchettes, H. Robinson, and D. James, *EMSI Multi-Regional Social Accounting Matrix (MR-SAM) Modeling System* (EMSI, 2017), <https://www.economicmodeling.com/wp-content/uploads/SAM-Public-Doc.pdf>

59 See Appendix III for a list of NAICS codes used for this study.

60 Ibid.

61 The results of the economic input/output analyses for each case study institution are presented in Appendix III.

62 The most relevant studies for understanding and representing how museum and library networks influence local dimensions of social wellbeing were piloted among arts and cultural institutions. These studies provide a promising starting point that could be further developed into a replicable methodology for understanding the impact of networks of civic institutions on individuals and the wider community. See University of Pennsylvania Social Impact of the Arts Project (SIAP) and Reinvestment Fund, "Culture and Social Wellbeing in New York City: Highlights of a Two-Year Research Project," *Culture and Social Wellbeing in New York City*, 2 (2017); M. Stern and S. Seifert, "The Social Wellbeing of New York City's Neighborhoods: The Contribution of Culture and the Arts," *Culture and Social Wellbeing in New York City* 1 (2017); UK Home Office, *Social Network Analysis: How-To Guide* (2016), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/491572/socnet_howto.pdf

63 www.lena.org

64 <https://www.ims.gov/research-evaluation/data-collection/public-libraries-survey>

65 A. Venturelli, F. Caputo, P. Palmi, A. Tafuro, and G. Mastroleo, "Measuring the Multidimensional Performance of a Museum Network: Proposal for an Evaluation Mode," *Paper presented at International Forum on Knowledge and Dynamics*, (Bari, Italy, 2015), https://www.researchgate.net/profile/Andrea-Venturelli/publication/279178178_Measuring_the_Multidimensional_Performance_of_a_Museum_Network_Proposal_for_an_Evaluation_Model/links/558c2e6508ae591c19d9f24f/Measuring-the-Multidimensional-Performance-of-a-Museum-Network-Proposal-for-an-Evaluation-Model.pdf

66 Oxford Economics, *Museums as Economic Engines—An Economic Impact Study for the American Alliance of Museums* (American Alliance of Museums, 2017), <https://www.aam-us.org/wp-content/uploads/2018/04/American-Alliance-of-Museums-web.pdf>

I APPENDIX V: ENDNOTES

67 Alliance for the Arts, *Culture Builds New York: The Economic Impact of Capital Construction at NYC Cultural Institutions 2003–2010* (Alliance for the Arts, 2007), http://www.allianceforarts.org/pdfs/CultureBuildsNY_2007.pdf; M. Halsey, *Economic Impact Analysis of Cultural Institutions: A comparison of Mass MoCA and the Dia: Beacon Riggio Galleries* (Williamstown: Williams College, 2005).

68 Americans for the Arts, *Arts and Economic Prosperity IV: The Economic Impact of Non-profit Arts and Culture Organizations and their audiences* (Americans for the Arts, 2012), https://www.americansforthearts.org/sites/default/files/pdf/information_services/research/services/economic_impact/aepiv/NationalStatisticalReport.pdf

69 S. Sheppard, "Chapter 8: Museums in the Neighborhood: the local economic impact of museums" in *Handbook of Economic Geography and Industry Studies*, eds. F. Giarattani, G. Hewings, and P. McCann (Edward Elgar Publishing, Cheltenham, 2013).

70 R. Layard, *The Economics of Mental Health* (IZA World of Labor, 2017), <https://wol.iza.org/uploads/articles/321/pdfs/economics-of-mental-health.pdf?v=1>; P. M. Menger, *The Economics of Creativity* (Cambridge, MA: Harvard University Press, 2014).

71 <http://www.ala.org/pla/initiatives/performance/measurements>; <https://www.cosla.org/MtM>

72 <https://www.npi.org/museum-associations>; <https://www.aam-us.org/>; <https://aamd.org/>; <https://childrensmuseums.org/>; <https://www.astc.org/>; <https://dataarts.smu.edu/artsresearch/>; <https://www.aza.org/?locale=en>

73 M. J. Stern and S. C. Seifert, *Civic Engagement and the Arts: Issues of Conceptualization and Measurement* (Animating Democracy: A Program of Americans for the Arts, 2009), https://animatingdemocracy.org/sites/default/files/CE_Arts_SternSeifert.pdf

74 <https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Behavior/Social-Skills-Improvement-System-SSIS-Rating-Scales/p/100000322.html>

75 <https://www.niost.org/Training-Descriptions/survey-of-afterschool-youth-outcomes-youth-survey-sayo-y>

76 <http://www.afterschooloutcomes.org/about.html>

77 E. N. Feldman, "Benchmarks Curricular Planning and Assessment Framework: Utilizing Standards Without Introducing Standardization," *Early Childhood Education* 38 (2010): 233–242.

78 https://www.michigan.gov/documents/mde/PET_Template_502379_7.pdf

79 <https://dibels.uoregon.edu/>

80 <https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Academic-Learning/Brief/Peabody-Picture-Vocabulary-Test-%7C-Fourth-Edition/p/100000501.html>

81 <https://mb-cdi.stanford.edu/>

82 <https://www.ncbi.nlm.nih.gov/books/NBK84226/>

83 <https://www.informalscience.org/science-opinion-survey-sos>

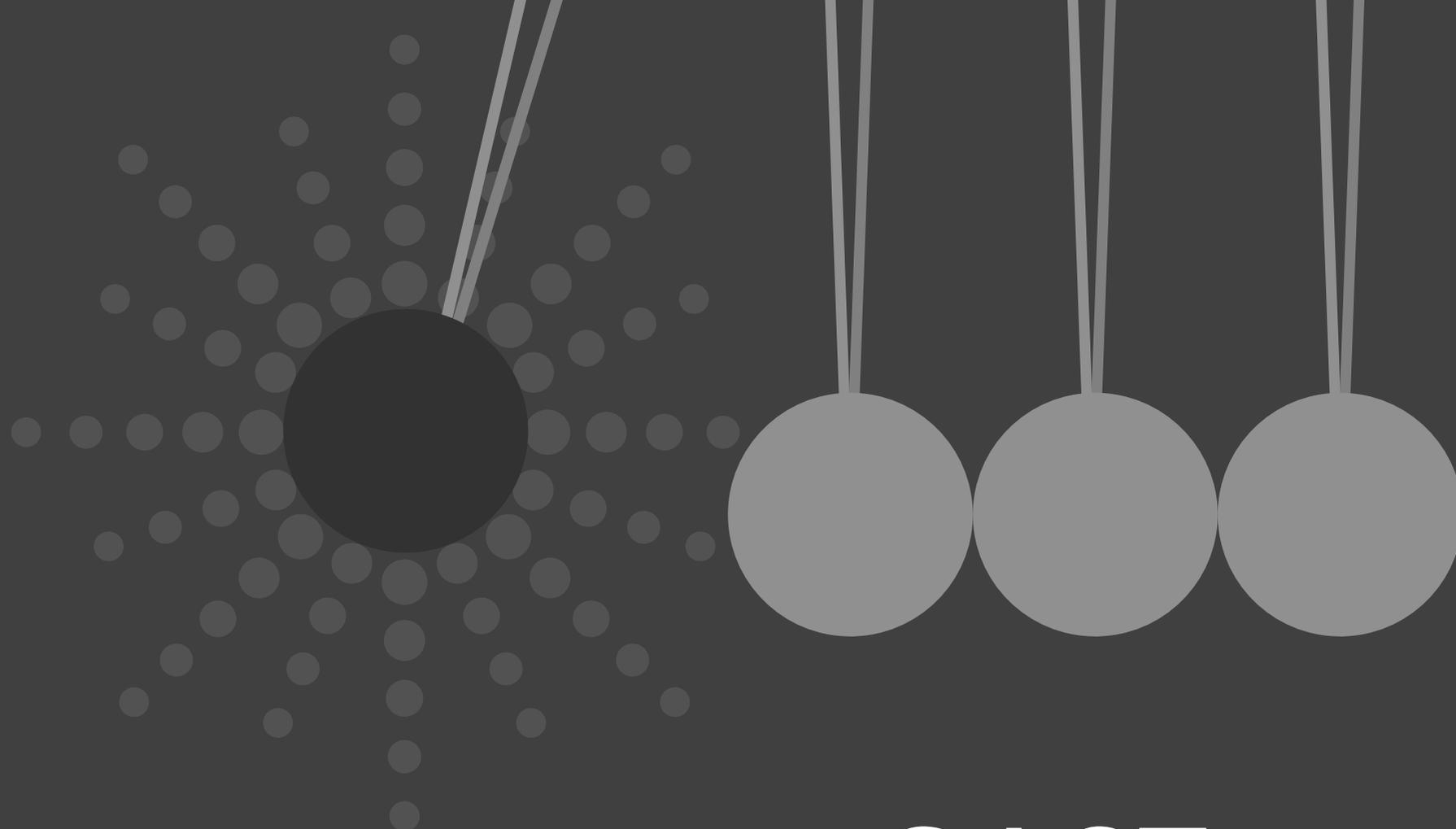
84 <https://www.nrsweb.org/>

85 G. C. Galster, *Making our Neighborhoods, Making Ourselves* (Chicago: University of Chicago Press, 2019); R. J. Sampson, "Neighborhood Effects and Beyond: Explaining the Paradoxes of Inequality in the Changing American Metropolis," *Urban Studies* 56, no. 1 (2019): 3–32.

86 Janice Plumstead, "2012 Americas School of Mines: Economic Impact Analysis," PricewaterhouseCoopers, May 16, 2012, <https://www.pwc.com/gx/en/mining/school-of-mines/2012/pwc-realizing-the-value-of-your-project-economic-impact-analysis.pdf>.



SECTION ENDS

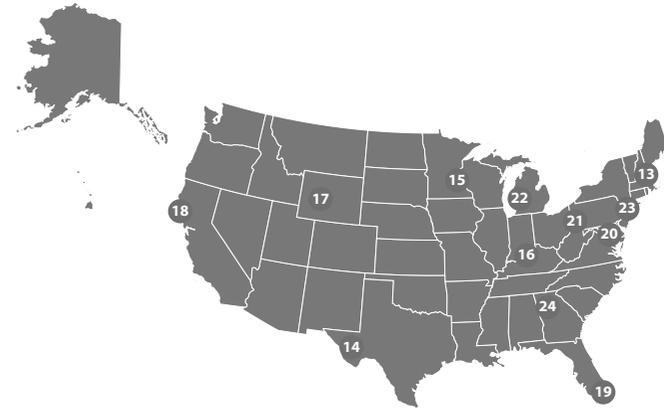


CASE STUDIES

CASE STUDIES

As part of its research, the Reinvestment Fund also selected 24 sites across the nation for in-depth site visits to understand how libraries and museums support different dimensions of social wellbeing in their communities.

To learn more about the findings from each site, please navigate to each of them using the interactive map features on the following pages.



MUSEUMS



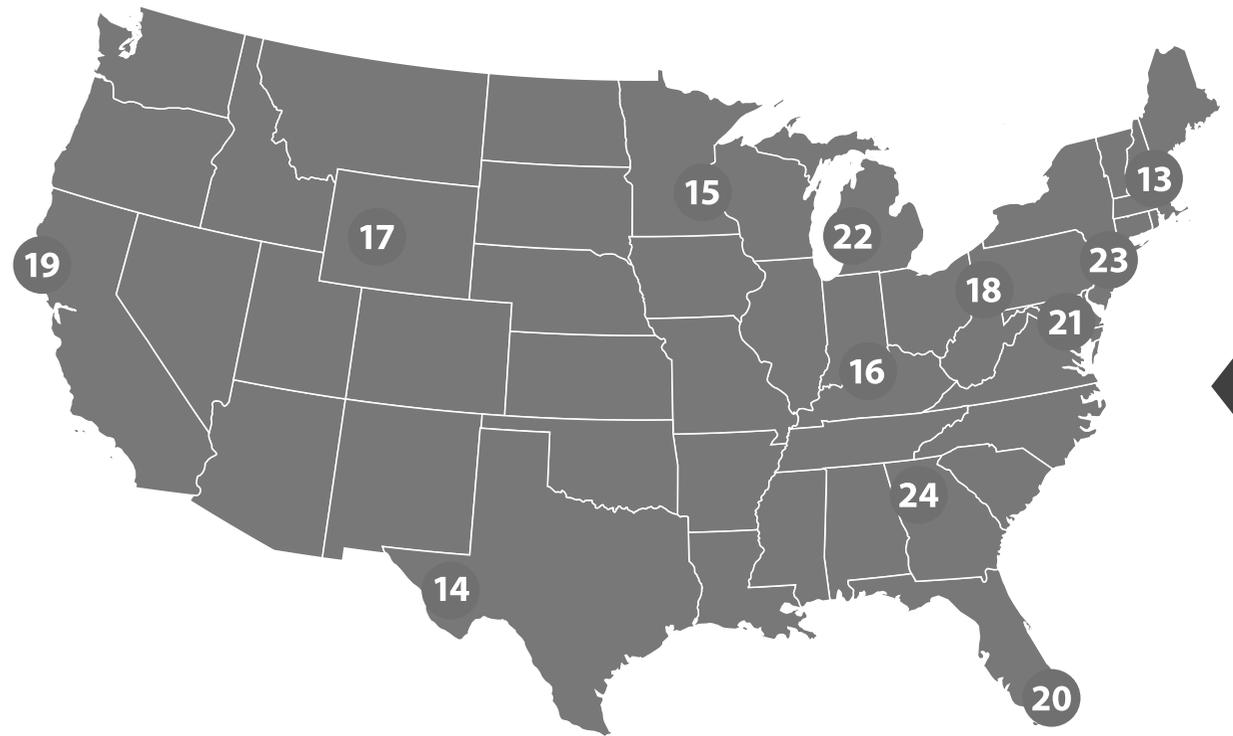
LIBRARIES

CONTINUE



MUSEUMS

	INSTITUTION	COUNTY
13	Canterbury Shaker Village	Merrimack, NH
14	Chihuahuan Desert Research Institute	Jeff Davis, TX
15	Como Park Zoo and Conservatory	Ramsey, MN
16	Kentucky Science Center	Jefferson, KY
17	Lander Children's Museum	Fremont, WY
18	Mattress Factory	Allegheny, PA
19	Mendocino Coast Botanical Gardens	Mendocino, CA
20	Museum of Contemporary Art North Miami	Miami-Dade, FL
21	Prince George's African American Museum and Cultural Center	Prince George's, MD
22	Tri-Cities Historical Museum	Ottawa, MI
23	Visual Arts Center of New Jersey	Union, NJ
24	Woodlands Garden	DeKalb, GA



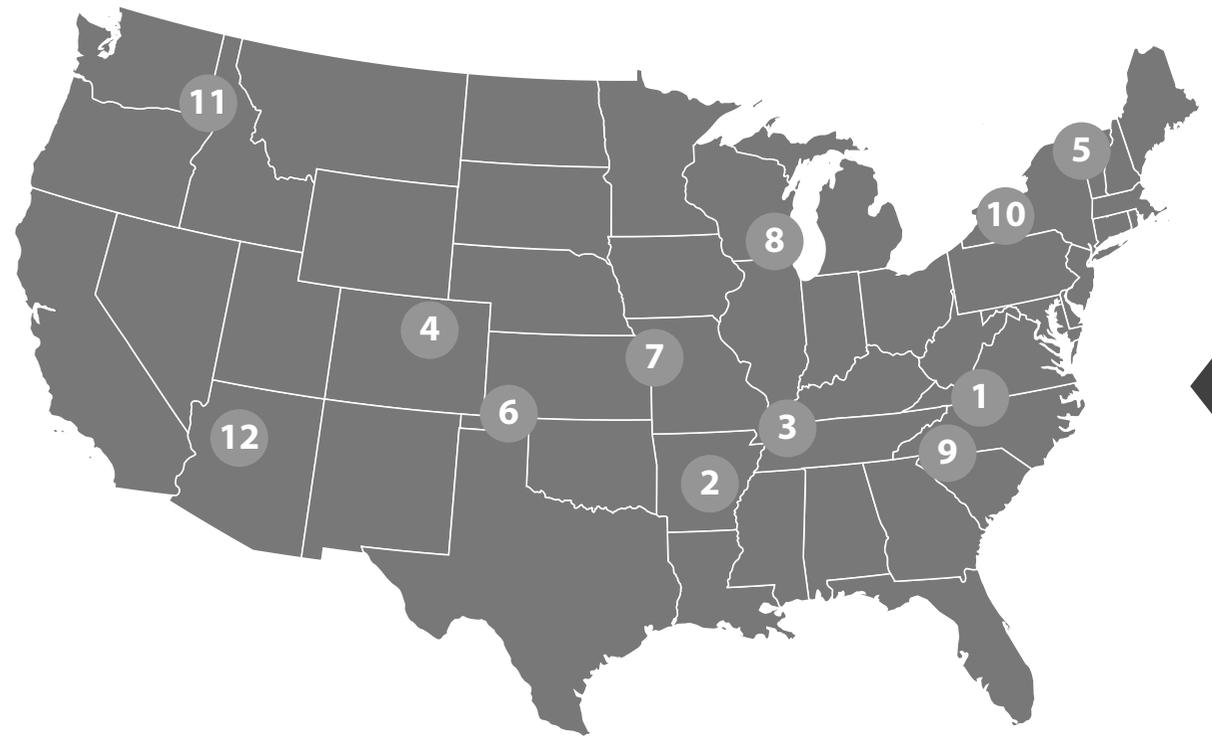
CLICK ON THE MAP

#

VIEW LIBRARIES

LIBRARIES

	INSTITUTION	COUNTY
1	Blue Ridge Regional Library	Martinsville, VA
2	Central Arkansas Library System	Pulaski, AR
3	C. E. Weldon and McWherter Public Libraries	Weakley, TN
4	Denver Public Library	Denver, CO
5	Fletcher Free Library	Chittenden, VT
6	Liberal Memorial Library	Seward, KS
7	Mid-Continent Public Library	Platte, MO
8	Milwaukee Public Library	Milwaukee, WI
9	Spartanburg County Public Libraries	Spartanburg, SC
10	Victor Farmington Library, Wood Library, and Geneva Public Library	Ontario, NY
11	Whitman County Rural Library District	Whitman, WA
12	Yavapai County Free Library District	Yavapai, AZ



CLICK ON THE MAP

#

VIEW MUSEUMS



SECTION ENDS