THE KNOWLEDGE-CENTRIC ARTS ORGANIZATION: PRACTICES, PROCESSES AND THE PATH FORWARD

NEVILLE K. VAKHARIA,
Assistant Professor and Research Director, Drexel University
Divya Janardhan, Adjunct Faculty, Drexel University, and Independent Research Consultant

Neville K. Vakharia teaches in Drexel's graduate arts administration program, including courses in strategic planning, technology, management, and more while undertaking research and projects that focus on building capacity in the cultural sector.
Divya Janardhan is thesis advisor for Drexel's online graduate arts administration program, and conducts independent research on management practices and policies of local and international arts organizations.

ABSTRACT

This paper examines the challenges and progress of arts organizations as they seek to become knowledge-centric, using knowledge to advance their missions and goals. Structured, in-depth interviews at four small to mid-sized nonprofit arts organizations in Philadelphia, Pennsylvania, identified three components of operational capacity that are crucial to a knowledge-centric organization, namely, governance and leadership; resources and funding; and systems and tools. It was found that the process of strengthening and aligning these components would help organizations become knowledge-centric. Although gradual progress was being made to increase capacity in these areas, gaps and barriers impeded the organizations' efforts. Based on the unique needs of these organizations and the sector, a new model describing the flow of data, information and knowledge is proposed to facilitate the process of becoming knowledge-centric. The paper concludes that a holistic, phased approach to building capacity in the three component areas is key to becoming knowledge-centric.

Keywords: Knowledge, Information, Data, Management, Technology

INTRODUCTION

Over the past two centuries, American society has undergone several distinct technological evolutions, each with its own disruptive transitions. In the early American industrial society, economic growth was driven by the technologies of mass production and transportation. As the industrial society evolved into the subsequent information society, growth was driven by information technology, which sped up the commercialization of new ideas, created new forms of communication, and built new industries based on these technologies. Now, we have emerged into the knowledge society, where growth is driven by organizations and people that are able to create and use knowledge to advance their goals. Each of these transitions required wholesale changes in individual skills and institutional practices to ensure sustainability and relevancy in a rapidly changing environment.
It is the authors' assertion that arts organizations must strive to become knowledge-centric organizations in order to succeed in today's knowledge society. At its most fundamental level, a knowledge-centric organization is one in which multiple people, departments, and programs can use collective knowledge to advance organizational goals (Crawford, Hassan, Linger, Warne, 2009). A knowledge-centric organization creates a culture of learning and views knowledge as an institutional asset. Knowledge-centric organizations are able to gather and leverage disparate sources of data and information, and view knowledge as a core value. More importantly, knowledge-centric organizations gain a competitive edge over those that are not through the ability to innovate, operate more effectively, and respond more quickly to changes in their environment (Grant, 1996).

For the purposes of this study, the authors define a knowledge-centric, nonprofit arts organization as one that is able to remain financially sustainable and relevant to their constituents through the concerted effort to leverage multiple types of internal and external data; utilize systems and tools that support data-driven decision making; and exhibit the leadership to continually strive to use knowledge to serve its mission. The increasing amount and scope of information available to people and organizations require new ways of thinking and operating. It is no longer suitable to make decisions solely based on limited amounts of anecdotal information, intuition, and speculation. Today's arts managers will need to leverage new sources of data and technology-driven tools to build capacity, serve constituents, secure funding, and ensure success.
Through an in-depth study of four small to mid-sized nonprofit arts organizations, it is anticipated that the range of challenges and opportunities for these organizations will form a basis for understanding what similar arts organizations must do to become knowledge-centric organizations. The authors hypothesize that there are likely to be significant gaps in the gathering and use of data, as well as in the creation and management of information and knowledge, which prevents them from operating effectively; that there is a lack of an institution-wide, systematic emphasis placed on knowledge management; and that while there are emerging systems and tools to benefit these organizations, they are not used appropriately or organizations are not aware of them.

This paper examines the historic emergence of knowledge-centric organizations and how data, information, and knowledge are created within an organization. The authors' research then addresses key questions relating to arts organizations' ability to become knowledge-centric including current challenges and barriers, emerging practices and trends, and areas for further exploration. At this critical juncture for the nonprofit arts sector, the authors find this issue to be of significant importance for the future of the field.

BRIEF HISTORY OF KNOWLEDGE-CENTRIC ORGANIZATIONS

The concept of knowledge-centric organizations and collective knowledge are not new. The economist Friederich A. Hayek (1945) developed a key tenet of "joint knowledge" as a primary factor in an evolving society. Hayek states, "We must show how a solution is produced by the interactions of people each of whom possesses only partial knowledge." The further evolution of this concept came to the forefront of the business sector through leading management expert Peter Drucker (1967), who described the idea of a knowledge worker as one who works with his or her head, not hands, and produces ideas, knowledge, and information. He described a "knowledge organization" as the central reality of modern society, employing knowledge workers that produce ideas and information. He further describes knowledge organizations as defined by their results rather than their physical outputs, and that fulfillment of the knowledge worker would be a key social issue of the 20th century.
As knowledge-centric organizations evolved, primarily in the business sector, the concept of knowledge management became increasingly important. Knowledge management relates to the efficient use of diverse types of knowledge generated by an organization to attain its goals. In many companies, it is understood that successful knowledge management improves an organization's competitive advantage while also advancing organizational success (Sattar, 2012).

In order to understand how knowledge is created and managed within an organization, it is important to understand the relationships between data, information, and knowledge. These terms are often used interchangeably but are understood to be very distinct terms each with specific uses (Davenport & Prusak, 2000). Data refer to discrete facts and figures about objects or events; information is created when data are processed, summarized or classified; and knowledge is distilled from information to incorporate experience, values, insight and intuition. In an organizational context, knowledge becomes embedded into repositories, routines, and practices. Knowledge is most relevant to decisions and actions and is considered to be the most difficult type of content to manage, ultimately because it is based on a person's ability to integrate and frame information and data (Grover & Davenport, 2001). This linkage of data, information, and knowledge is often described as a hierarchy, where data creates information, which in turn creates knowledge. In the hierarchical model, value and meaning is increased when moving from data to information to knowledge. Other common models show the relationship as a linear progression, treating data, information, and knowledge as a continually moving process rather than a hierarchy of diminishing amounts. Figures 1 and 2 show these two common models.

FIGURE 1

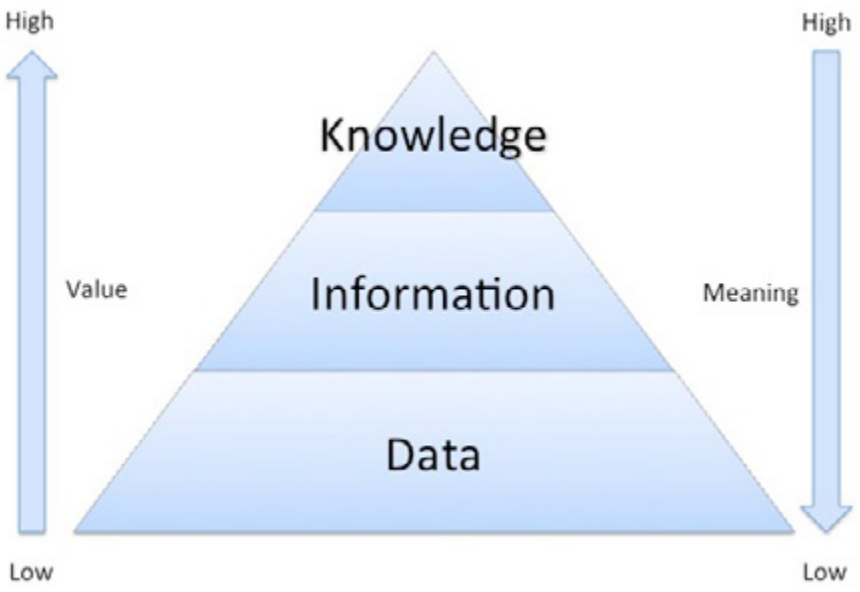


FIGURE 1 – DATA, INFORMATION, AND KNOWLEDGE HIERARCHY (CHAFFEY & WOOD, 2005)

FIGURE 2

FIGURE 2 – DATA, INFORMATION, AND KNOWLEDGE AS A PROCESS (GROVER & DAVENPORT, 2001)

While there are dozens of approaches and philosophies to address the definitions and concepts of data, information, and knowledge (Zins, 2007), all of them demonstrate an interrelation between the three terms and provide distinct definitions for each.

THE CHALLENGE: FROM DATA TO INFORMATION AND KNOWLEDGE

In a knowledge-driven society, the breadth and wealth of data that is continually generated creates unique challenges, especially to organizations that are not traditionally inclined towards analytic approaches to further their goals. The term "Big Data" has recently emerged to describe not only the sheer volume but also the scope of data that surrounds us (Manyika, Chui, Brown, Bughin, Dobbs, Roxburgh, Byers, 2011). Each day, hundreds of millions of electronic transactions, interactions, and digital activities are taking place (Tepper, 2012) and knowledge-centric organizations are those that are able to use this data. Big Data also includes a recent movement towards "Open Data," whereby governments, scientists, and research agencies have begun to allow the data they collect to be freely used, primarily non-commercially, by anyone with the capacity to do so. While these developments have heralded new forms of information and knowledge along with new tools and systems, many organizations are not able to leverage the power of Big Data or Open Data. The challenges include a lack of capacity to analyze and contextualize the data, a lack of interoperability of the various data types, and a lack of linkage to other relevant data (Hendler, Holm, Musialek, Thomas, 2012).

Without a strategic approach, organizations are unable to benefit from this surfeit of data. Additionally, many of these new sources of data are unstructured and require significant effort to convert into useful information and knowledge. Leaders and organizations that understand the importance of creating new approaches and strategies to leverage this abundance of data and information and convert it to usable knowledge will be those that are prepared to succeed in the knowledge society.
Further research into the current literature on knowledge-centric organizations and principles shows minimal emphasis placed on the nonprofit sector, with even less of an emphasis on nonprofit arts and cultural organizations. Fortunately, some analysis specific to the arts sector and its needs has recently been undertaken, though there is significant room for more research. The McKinsey Global Institute studied the ability of the arts and entertainment sector, along with other major industries, to leverage data and gain value from it. Their findings identified two key challenges preventing the sector from realizing significant value: a lack of a data-driven mindset and a lack of the organizational talent needed to embrace change (Manyika, et. al., 2011a). Abfalter, Stadler, and Müller (2012) investigated knowledge sharing in a seasonal arts festival, highlighting the challenge of sharing knowledge in a structure with "short-term collaboration and the dominance of one or a few individuals," though there is no major research on the knowledge management aspects of the more predominant non-profit arts organization with ongoing annualized programming and dedicated, year- round staffing. Zorloni (2012) found that major museums lacked a collective, knowledge-based framework by which to quantify results in a uniform manner, demonstrating the emerging importance of the understanding of knowledge-centric arts organizations. With the limited scope of research on nonprofit arts organizations and their ability to become knowledge-centric organizations, the authors' research and findings will add to the body of work and determine specific directions for further research.

METHODOLOGY

The research methodology for this qualitative study consisted of in-depth interviews with senior administrative staff at four nonprofit performing arts organizations in Philadelphia, Pennsylvania, combined with a thorough document review of strategic planning documents, audited financial statements, federal tax documents, and online content. The authors selected organizations that specifically offer ongoing, annual programming and have dedicated, full-time staff. All four organizations fall within a budget range of approximately $1.5 million or less, which mirrors more than 90% of the registered nonprofit arts organizations in the US. All four organizations fall within the performing arts disciplines, which represent more than 30% of all registered nonprofit arts organizations under the National Taxonomy of Exempt Entities categorization (Urban Institute, 2013). All four organizations are established in their art forms, have been in existence for at least 10 years, and are all still led in some manner by their original founder. It is this particular type of founder-led organization that often faces unique challenges in the transition towards becoming knowledge-centric, often due to a founder's sole focus on mission and purpose rather than developing systems and the framework for sustainability (Stevens, 2008). However, these types of organizations also have the opportunity to respond quickly to opportunities and practices that can help them become knowledge-centric.

The four organizations chosen for the study were Lantern Theater Company, a presenter of classic, modern and original theatrical productions; the Philadelphia Chamber Music Society, an organizer of chamber music concerts and other musical performances in multiple Philadelphia venues; Koresh Dance Company, an innovative modern dance company with a strong dance education mission and touring schedule; and Kun-Yang Lin/Dancers, a contemporary Asian-American dance company with a local and international performance repertoire and a solid touring schedule. Table 1 shows the general composition of the four participating organizations.

Table 1

Participating Organizations				
	Lantern Theater Company	Philadelphia Chamber Music Society	Koresh Dance Company	Kun-Yang Lin/Dancers
Year Founded	1994	1986	1991	1994
Number of Core Staff [1]	8	9	8	3
Operating Budget[2]	$812,941	$1,387,346	$882,623	$124,306
Earned/Contributed Revenue Mix (%)	50/50	30/70	70/30	30/70
Number of Board Members	13	26	11	12

A standardized, open-ended interview format was used, with a detailed, three-part interview guide serving as the primary research tool. Key areas investigated were organizational structure and dynamics; internal and external communications; processes and workflow relating to data, information, and knowledge; systems and tools used; the role of leadership of the board; and the challenges faced in relation to the above areas. All interviews were recorded and transcribed. Interviewee responses were coded and categorized in a database to gather common insights, facilitate analysis, and develop key findings.

Because the organizations selected represent a non-probabilistic sample, the key findings from the study are structured in such a way as to focus on common themes, challenges, and emerging practices rather than specific, individualized responses. These common themes are those that related to all or most of the organizations, with the potential to reflect similar themes of a broader sample of nonprofit arts organizations.

KEY FINDINGS

The structured interviews brought up several common challenges and potential threats to organizational stability. Some gradually evolving practices were also observed, that with continued emphasis, could support the organizations in the process of becoming knowledge-centric.

Based on the coding and analysis of the interviews, three common components of operational capacity emerged that relate to each organization's ability to become knowledge-centric.
These components of operational capacity are:

1) Governance and Leadership – The dynamics and communication between board and leadership and the processes commonly used to support the flow of information and knowledge between them.

2) Resources and Funding – The human and financial resources in place and needed; the facilities and infrastructure; and other forms of support that facilitate the knowledge management process.

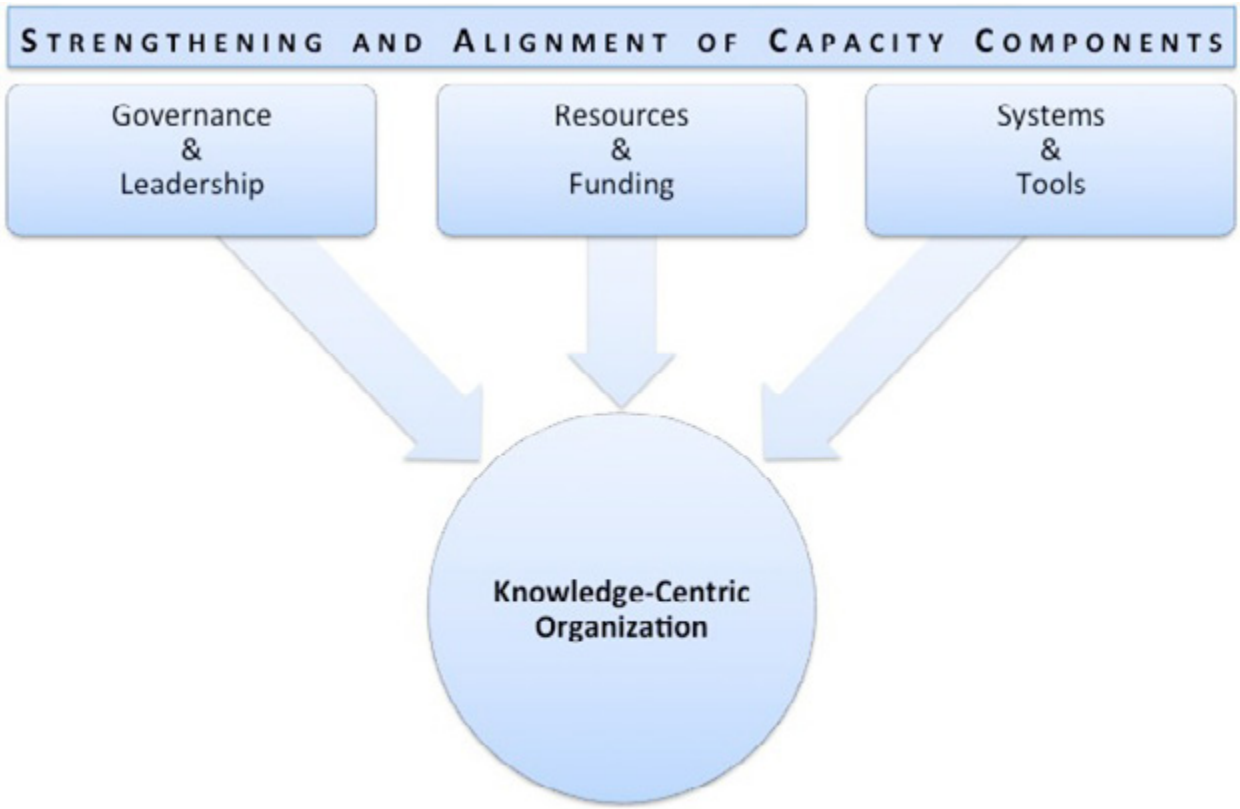
3) Systems and Tools – The technology, data, information sources, media and means employed for knowledge flow.

1 Year-round, permanent staff.
2 Total expenses from fiscal year 2011 IRS Form 990.

A critical finding was that these three capacity components contribute in a combinative way in helping these organizations becoming more knowledge-centric. It is only by strengthening and aligning all three of these capacity components that these organizations can leverage collective knowledge to serve their constituents and, ultimately, their missions. Figure 3 schematically depicts the three key components of operational capacity that support a knowledge-centric organization.

FIGURE 3

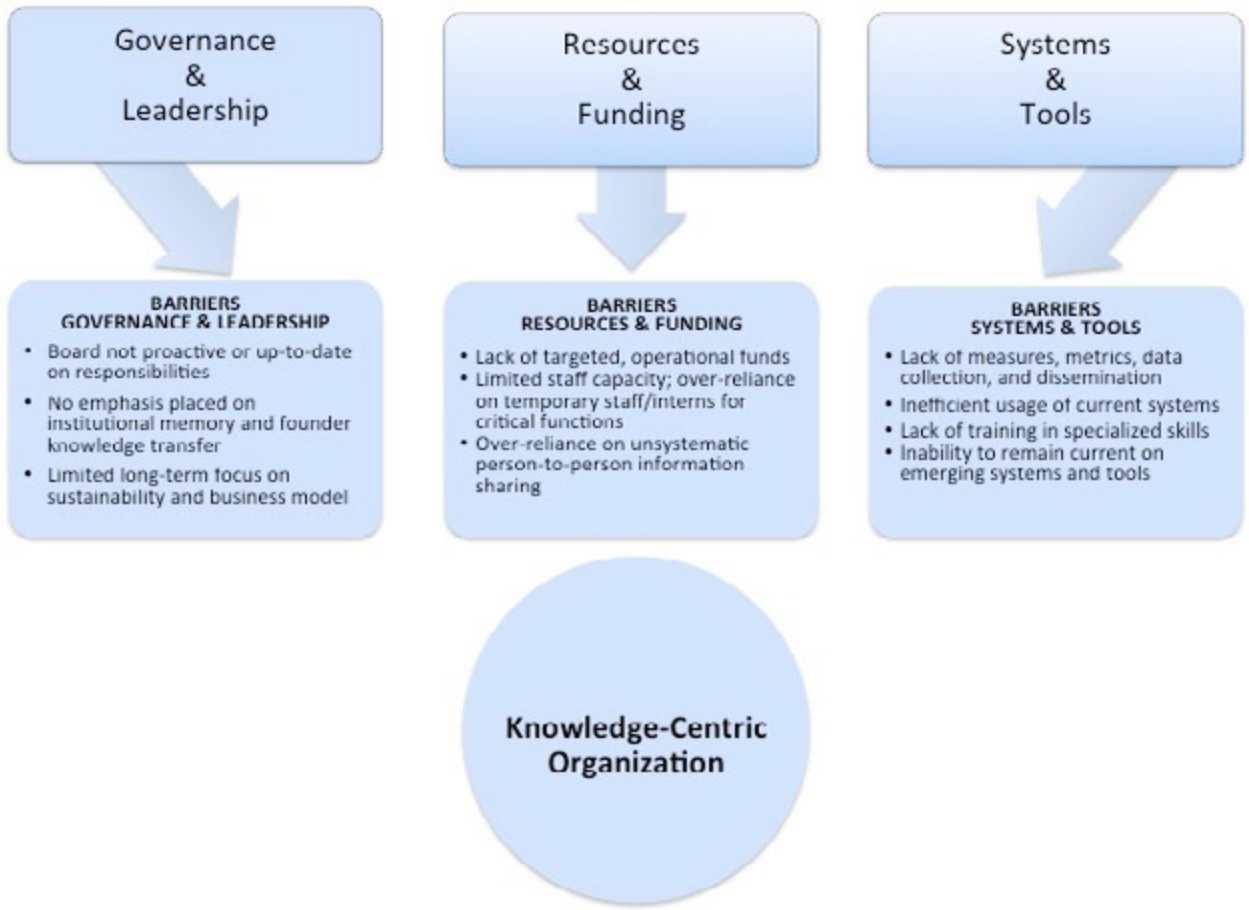
THE THREE KEY COMPONENTS OF OPERATIONAL CAPACITY THAT SUPPORT A KNOWLEDGE-CENTRIC ORGANIZATION



As crucial as these three capacity components are, all the organizations faced challenges and barriers in some or all of them. These barriers interfered in their progress towards becoming a knowledge- centric organization. Figure 4 summarizes the types of barriers found as related to the three components of operational capacity.

FIGURE 4

BARRIERS TO THE KNOWLEDGE-CENTRIC ORGANIZATION



While some of the identified barriers are significant structural issues, others are more operational or tactical. Varying amounts of effort and time are needed to remove these barriers. Despite the range of barriers, all organizations are making gradual progress in one or more of the three capacity components.

The following sub-sections provide further details of the findings in each of the three components of operational capacity, including common themes, challenges, and emerging effective practices.

Governance and Leadership:

Founder-based leadership, a familial board, and a collegial working culture characterize these organizations. However, the interviews also brought up a mixture of challenges. Half the interviewees expressed a need for their boards or at least some committees to be more responsive and take a “hands-on” approach to help acquire much-needed funds and resources. The general trend in these organizations is to recruit board members from a familiar circle of those interested and invested in the organization but this, in some cases, does not guarantee a strong, governing board. For example, one organization has experienced a trend of 75% board absenteeism at some meetings and a general lack of proactive board members. The leadership and board of another organization are trying to rise above the day-to-day, tactical activities and become more forward-thinking but are finding this difficult to accomplish with the limited resources that they have. Additionally, it was found that only half the organizations maintain records of board meetings, creating a significant lack of institutional knowledge.

The artistic founders of these organizations are the primary holders of institutional memory, but responsibilities are shared and collaborative decision-making is encouraged. Being founder-led, these organizations are at least aware of the importance of successful planning and demonstrate an equal mix of formal and informal succession planning processes. For two organizations, the succession "plan" is merely a common, verbal agreement among the staff and board on who would take over in the event of artistic transition. Another organization has a formal succession document in place, while only one organization has not just a formalized and systematic succession plan but also a board that is deeply involved in the succession planning process.
The organizations recognize the importance of strategic planning and the board and leadership together support this process. At the time of the study, most organizations were actively reviewing their strategic plans and reported increased levels of interaction between the board and senior administration.

Resources and Funding:

The research brought into focus a clear need for increased capacity in a range of financial and human resources. The capacity issues raised include contributed support, staff training, and information sharing amongst staff members.
Most of the organizations are heavily reliant on contributed funds, and all organizations are experiencing the negative effects of dwindling operating support from their grantmakers. The constant struggle to deliver quality programming with limited operational funds is something that all organizations cited as a critical issue for their future sustainability. As a result, most of the organizations have limited operating reserves to sustain themselves in the event of any potential disruption to their normal operations.
Most of the organizations also cited a need for more resources with regards to training of their staff in up-to-date tools and technologies to improve their ability to manage and share knowledge. Half the organizations would like to form deeper connections with their audiences and the local community but cannot afford the systems or staff training to support this effort. These organizations also knew that staff could be more effective in using the tools they had but haven't prioritized training in these tools due to more pressing, immediate needs.

Most organizations operate on a meager mix of permanent staff, temporary staff, interns, and volunteers. At the time of the study, one organization was also utilizing consultants provided by a grantmaker and was concerned about how to retain the knowledge of the consultants when their assignment would be completed. The interviews brought up the need for greater clarity of roles, the need to formalize and document work-related responsibilities and job functions, and the need to reduce undue pressure on staff created by inefficiencies.

Also related to staffing capacity was the primary reliance on the singular knowledge of individuals in the organization. Most of the organizations relied in some manner on person-to-person sharing of information. However, that information was not then translated or documented into any other system. This could lead to a lack of institutional memory should there be a change in staffing. The research found that most of the organizations also relied on some amount paper-based processes and documents, with no electronic or shareable version made available to those who required it.

These organizations, like many in their sector, operate in a wide range of physical spaces and need the resources to maintain and support their day-to-day operations in these spaces. Most of them also face challenges with capital budgets and projects to improve or maintain their spaces. At the time of the study, one organization was being forced to relocate due to a change in ownership of its facility. Adding this challenge to an already resource-limited organization could be a potential threat to the organization's stability and sustainability.

Despite these challenges, all of the organizations are focused on building resilience and maintaining levels of programming and outreach. One organization reported increasing levels of earned income and significant growth in subscriptions. Another has built a reserve fund through successful fundraising from individuals. Yet another organization has become an important part of its local community through increased outreach and collaboration efforts. Supporting all of this is the close-knit work culture of the staff and open communication channels between people. One of the organizations follows a deliberate "flat organization" structure wherein information sharing and decision-making are cross-organizational, collective activities. Half the organizations reported that it is not unusual for staff members to combine informal conversations, impromptu brainstorming sessions, and text messaging into a regular schedule of staff meetings. Also, most organizations are thinking about ways to maximize the usage of their facilities and are cognizant about the limited resources and funding and articulate these needs in their strategic plans.

Systems and Tools:

Interviewees described both the technical systems and tools used in their operations as well as the people-based processes that drive the flow of data, information, and knowledge. All interviewees expressed some level of frustration with their current usage of systems and tools, and all felt that they could be more effective with either the proper types of tools or the proper usage of the tools they have in place. A key, overarching theme was a general lack of data collection and dissemination, resulting in the inability to make informed decisions, respond quickly to external issues, and think strategically. In essence, these organizations lacked the data needed to create information and knowledge.
The absence of integration among various systems was cited as another challenge. Organizations were unable to generate the information they needed in a timely and consistent manner due to multiple systems that did not share common data or metrics. This required repetitive data entry and resulted in a loss of consistency in information generated. In one organization, even the calendars used by staff and departments were not shared or synchronized in any way.
The ability to track, store, and retrieve programmatic and artistic information is of high importance to these organizations, particularly since their artistic founders have been in their roles for a significant amount of time. This type of information can range from simple descriptions and archives of programming history to recordings of performances and repertoire. All of the organizations cited the inability to readily access historic information on their programming and artistic information in a useful and timely manner. This can create a significant lack of institutional memory when founding artistic staff leave the organization, leading to potential instability through the loss of important organizational knowledge.

While all the organizations had some form of social media presence, a common challenge cited was a lack of measuring success. These organizations were unable to know how successful their social media efforts were for awareness building and audience development. None of the organizations cited the use of any advanced social media analytical tools.

All the organizations had made modest progress in improving some of their operational systems to reflect commonly used, established technologies. However, none of the organizations in the study had begun to effectively utilize emerging tools and best practices that have proven to help organizations move towards becoming knowledge-centric. These tools include the use of customer relationship management (CRM) systems, the Cultural Data Project (CDP), and institutional dashboards.

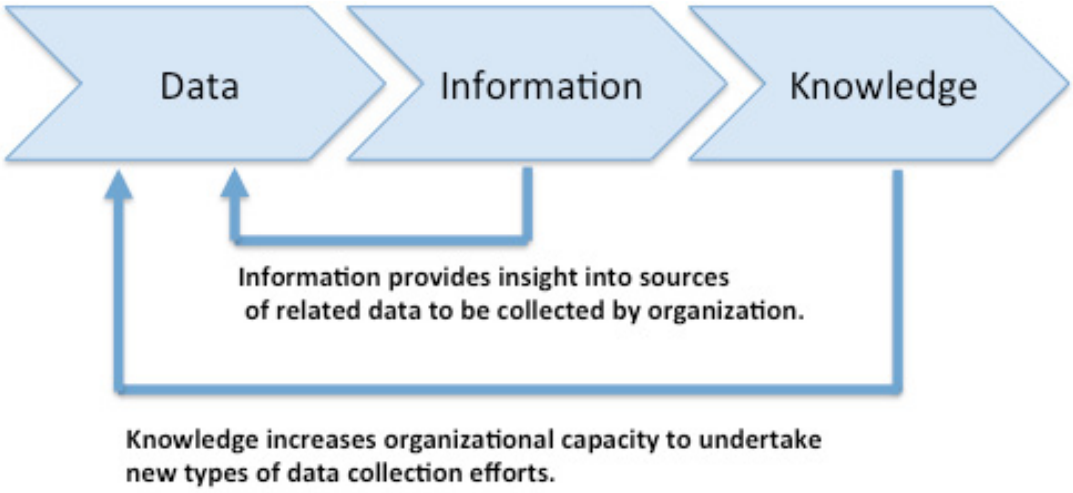
CRM systems serve as a singular, comprehensive tool to collect, track, and report on institution-wide data and are growing in usage in many types of nonprofit organizations. CRM systems were not utilized by most of the organizations; one organization had begun using a common CRM tool but was not using its full capabilities and was still reliant on additional systems to collect important data.
While all organizations studied were registered users of the Cultural Data Project (CDP), a web-based tool that provides free analytical reports to easily convert financial and programmatic data into useful information, none of the interviewees cited their usage of this tool to track important trends in their performance or to benchmark themselves against other organizations.

Many organizations have begun using institutional dashboards to provide immediate and shared access to a variety of key metrics that can be used to inform data-driven decisions. Dashboards provide staff and leadership with clear and easily readable information based on real-time or recent data. Dashboards help create a common vocabulary of measures and information, which in turn lead to the creation of new knowledge. All organizations interviewed were not using dashboards as a way to ensure that useful data are collected and tracked. Even a simple dashboard, created in-house, can form the basis of a shared vocabulary of important metrics used by all of the organizations leadership, board, and staff.

An important finding relates to the organizations and the flow or hierarchy of data, information, and knowledge. For these arts organizations, the previously cited models of data, information, and knowledge may not be fully applicable. It is clear that these organizations need to generate more types of data in order to create the information they need and build the institutional knowledge to serve their missions and constituents. Therefore, using even their current, limited data more effectively will lead to the generation of new information. This new

information will in turn help the organization collect new types of related data. Furthermore, as new knowledge is eventually created, it will in turn build organizational capacity, which will help to identify entirely new types of data and move the organization toward knowledge-centricity. The authors' revised model views data, information, and knowledge as a two-stage cycle rather than a hierarchy or linear process. We show this two-stage, cyclical process in Figure 5.

FIGURE 5
THE TWO-STAGE CYCLICAL PROCESS OF DATA, INFORMATION, AND KNOWLEDGE



Fortunately, all of the organizations recognize at least some of the issues they face and are aware that the current state of their systems and tools does not allow them to be effective. These organizations also acknowledge that, in some cases, these issues may create an unsustainable situation and therefore addressing them is critical. One organization's current strategic plan specifically outlined the need for increased and improved data collection, and seeks to "implement new data collection systems and to update reporting to reflect important new metrics" as part of its audience development goals. Its strategic plan also states that the organization will "maximize the use of new technologies." This is an example of a successful approach that will ensure that the effective use of systems and tools are made a priority and will help create a link to the two other operational capacity components to move the organization towards becoming knowledge-centric.

CONCLUSION AND IMPLICATIONS

As originally hypothesized, the authors found gaps in the gathering and use of data, as well as the creation and management of information and knowledge. There was a definitive lack of an institution-wide, systematic emphasis placed on the collection of data, the creation of useable information from the data, and the building of institutional knowledge. The organizations studied also lacked either awareness or usage of emerging systems and tools that could provide benefit towards addressing these issues.

In finding that there are three components of operational capacity that collectively support a knowledge-centric organization, these organizations can begin to understand what new approaches may guide them in their future work. Understanding that it is only when all three components are strengthened and aligned serves as the starting point for an organization to move towards becoming knowledge-centric. This understanding provides important insights into how these organizations can eliminate barriers and develop strategies to achieve this. While all the organizations studied had made some incremental progress in one or two of the capacity areas, without a holistic approach the barriers and challenges identified herein will continue to hinder significant progress on the path to becoming knowledge-centric.

Ideally, organizational practices that strengthen and align the three operational capacity components would be based on achieving the following outcomes:

- Governance and leadership places a priority on having the information and knowledge it needs, and uses and incorporates it into the strategic planning process.

- Resources and funding ensure that the right people are doing the right things, and are provided with the proper training and support.

- Systems and tools are effectively implemented to begin the cycle of collecting and using basic types of data to ensure they have the information necessary to make informed decisions and gain insights through knowledge.

Because the organizations studied had limited amounts of fundamental data being used effectively, the traditional hierarchical or linear models of data, information, and knowledge found in other industries were not applicable. The authors' proposed model defines the relationship between data, information, and knowledge as a two-stage cycle, where new information helps create related data, and knowledge helps create new data. This model could provide a vital understanding for these organizations, helping to conceptualize the interrelation of data, information, and knowledge as a means to build organizational capacity.

While this study was conducted on a small number of organizations, their size and scope is indicative of a large portion of the nonprofit arts sector, and the insights gained could be used to support further research into a larger group of arts organizations of varying disciplines, sizes and geographic regions. This research has also opened a new area for exploration, whereby successful models for knowledge- centric arts organizations could be developed based on the three operational capacity areas identified. For example, future research could lead to the development of a series of key success indicators of knowledge-centric arts organizations. These indicators could then be used by arts organizations, grantmakers, and other service providers to help small and mid-sized arts organizations move toward increased knowledge-centricity.

Without a doubt, the artistic mission should be the cornerstone that guides the practices and processes of a nonprofit arts organization. As important as it is for these organizations to remain focused on serving their missions, it is also vital that a strong emphasis is placed on the role of data, information, and knowledge in service of the mission. Knowledge can help build internal capacity, improve overall operations and serve as a powerful tool to provide a deeper connection to an organization's constituents. A holistic and phased approach toward the practices of a knowledge-centric organization can help ensure sustainability and relevancy in our knowledge society.

REFERENCES:

Abfalter, D., R. Stadler and J. Müller. 2012. "The Organization of Knowledge Sharing at the Colorado Music Festival." International Journal of Arts Management, Vol. 14, no. 3, p. 4-15,67.

Chaffey, D. and Wood, S. 2005. Business Information Management: Improving Performance Using Information Systems. New York: Financial Times/Prentice Hall.

Crawford, K., H. Hassan, H. Linger and L.Warne. 2009. "From Traditional Knowledge Management in Hierarchical Organizations to a Network Centric Paradigm for a Changing World." Emergence: Complexity and Organization, vol. 11, no. 1, p. 1-18.

Davenport, T. and Prusak, L. 2000. Working Knowledge: How Organizations Manage What They Know. Boston: Harvard Business School Press.

Drucker, P. 1967. The Effective Executive. New York: Harper & Row.

Grant, R. 1996. "Toward a Knowledge-Based Theory of the Firm." Strategic Management Journal, Vol. 17, no. 2, p. 109-122.

Grover, V. and Davenport, T. 2001. "General Perspectives on Knowledge Management: Fostering a Research Agenda." Journal of Management Information Systems, Vol. 18, no. 1, p. 5-21.

Hayek, Friedrich A. 1945. "The Use of Knowledge in Society." The American Economic Review, Vol. 35, no. 4, p. 526.

Hendler, J., J. Holm, C. Musialek, and G. Thomas. 2012. "US Government Linked Open Data: Semantic.Data.Gov." Intelligent Systems, IEEE, Vol. 27, no. 3, p. 25-31.

Manyika, J., M. Chui, B. Brown, J. Bughin, R. Dobbs, C. Roxburgh and A. Byers. 2011. Big Data: The Next Frontier for Innovation, Competition, and Productivity. San Francisco: McKinsey Global Institute.

Sattar, S. 2012. "Exploring Knowledge Management Practices." International Journal of Learning and Development, Vol. 2, no. 1.

Stevens, S. 2008. Nonprofit Lifecycles: Stage-Based Wisdom for Nonprofit Capacity. St. Paul: Stagewise Enterprises, Inc.

Tepper, A. 2012. How Much Data is Created Every Minute?. Mashable Social Media. Mashable.

Urban Institute, National Center for Charitable Statistics, 2013. Custom Report Builder, retrieved from http://nccsweb.urban.org on February 21, 2013.

Zins, C. 2007. "Conceptual Approaches for Defining Data, Information, and Knowledge." Journal of the American Society for Information Science and Technology, Vol. 58, no. 4, p. 479-493.

Zorloni, A. 2012. "Designing a Strategic Framework to Assess Museum Activities." International Journal of Arts Management, Vol. 14, no. 2, p. 31-47,72.