Toward a Knowledge-Centric Arts Organization

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Abstract

This paper explores the definitions and frameworks of knowledge-centric organizations and the applicability of these concepts to arts and cultural organizations. Knowledge-centricity is examined as a means to enable organizations to become more sustainable and relevant, using knowledge to advance their missions and goals and operate in a knowledge-based society. Exploratory research and analysis on four small and mid-sized nonprofit performing arts organizations in Philadelphia, Pennsylvania, identified gaps and barriers that impede these organizations' ability to become knowledge-centric. These gaps and barriers fall under three broad themes: (1) governance and leadership; (2) resources and funding; and (3) systems and tools. The authors apply knowledge-centric frameworks to gain insights about these organizations and propose a working definition of a knowledge-centric arts organization. The findings of this paper seek to advance a relevant concept that has significant implications for the arts and cultural sector and contribute to growing the body of research in this nascent but important area.

Keywords: Knowledge-centricity, Data, Information, Knowledge, Organizational Practices

Overview

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.

The concept of a knowledge-centric organization has emerged as a term of art in many industries and sectors, with established definitions, models, and approaches. Business leaders have begun using the term as a means to understand how institutional knowledge serves as a major component of organizational effectiveness (Stonehouse and Pemberton 2005). With many nonprofit cultural organizations facing financial and operational challenges that hinder their effectiveness in serving their constituencies, it will be increasingly important to understand how the principles and practices of knowledge-centric organizations could benefit this sector.

This paper explores the evolution, definitions, and frameworks of knowledge-centric organizations as a means to understand their applicability to the nonprofit arts and cultural sector. Then, through exploratory research on a small cohort of nonprofit performing arts organizations, an understanding of potential barriers and challenges facing these organizations is assessed in the context of knowledge-centricity. Finally, a working definition of a knowledge-centric arts organization is proposed as a means to further the idea of knowledge-centricity in this sector.

The Evolution, Definition and Frameworks of Knowledge-Centric Organizations

The concepts leading to knowledge-centric organizations and collective knowledge are not new. The economist Friedrich 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." (530) 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. A report by the European Commission's Joint Research Centre states, "knowledge has become the key success factor of international competitiveness. As much as 70 to 80% of economic growth is said to be due to new and better knowledge." (Cadiou, Fahrenkrog 2000, 24).

As knowledge-centric organizations evolved, primarily in the corporate 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). Thus, knowledge management is a key function of a knowledge-centric organization. As knowledge management is more of an activity of a knowledge-centric organization, and indeed is its own field of study, it is not investigated in this paper.

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).

In 1997, international consulting firm KPMG developed and published the first widely-used framework by which organizations follow a process toward knowledge-centricity (Stonehouse and Pemberton 2005, 252). Termed the "knowledge journey," the framework identifies and defines five stages of a pathway to knowledge-centricity, with each stage building on the other. These stage are:

1. Knowledge-chaotic: The organization has not recognized the importance of knowledge; poor leadership and a lack of vision are apparent;

2. Knowledge-aware: The organization recognizes the value of knowledge and some systematic approaches have been taken. However, no efforts are made to use knowledge as an organizational resource;

3. Knowledge-enabled: The organization is using tools and processes to build knowledge. However, technical and cultural barriers exist;

4. Knowledge-managed: The organization has the processes in place to create and manage information and knowledge; processes are regularly reviewed and improved though knowledge typically remains only with senior leadership;

5. Knowledge-centric: The organization integrates the creation and use of knowledge into its mission and strategies; the leadership, culture, and infrastructure fully support the creation and management of knowledge.
(Stonehouse and Pemberton 2005, 253)

While the mission, scope, and programming of many arts organizations are diverse and unique when compared to other sectors, it should not serve as a rationale to avoid undertaking the knowledge-centric approaches used in other sectors. Knowledge-centricity is a concept that is directly and uniquely linked to the context in which the organization operates and each organization's approach toward

becoming knowledge-centric must accommodate this unique context (Cruywegen, Swart, and Gevers 2008).

While much of the arts sector is familiar with the concept of a "learning organization" as outlined in the work of Senge (1990), it is not enough for arts organizations to simply aspire to this approach. Stonehouse & Pemberton (2005) differentiate a knowledge-centric organization from a learning organization. They describe a learning organization as one that is focused on organizational learning as well as learning about learning. A knowledge-centric organization, however, incorporates the elements of a learning organization, but also creates an organizational mindset where a more active function of knowledge creation and management are imbued within the core of the organization.

Related Conceptual Frameworks of Knowledge-Centricity:
In addition to the core definitions and frameworks of knowledge-centric organizations, three additional concepts are helpful in providing insights into how organizations can approach their knowledge-centric journeys. These three concepts, the sociotechnical paradigm; the explicit/tacit duality of knowledge; and the interrelationship of data, information, and knowledge, provide a deeper context to understanding knowledge-centricity.

A key element of knowledge-centric practices is the effective use of technology systems and tools to institutionalize knowledge. Many arts organizations face challenges in the implementation and utilization of these technology systems and tools. While arts leaders often feel that the technology system or tool itself is the biggest challenge, a broader, sociotechnical perspective is needed. Knowledge-centric organizations understand that there is a sociotechnical paradigm in the implementation and utilization of technology. This paradigm refers to "the relationships and interrelationships between social and technical parts of any system" (Coakes 2002, 5). Sociotechnical approaches place equal emphasis on people, technology, organizational structure, and tasks (Laudon and Laudon 2000). Thus, knowledge-centric organizations will take a holistic view of the role that technology plays in the creation of knowledge, incorporating the social environment in which it is used.

An important element of knowledge-centric organizations is the understanding that the term "knowledge" is not a singular item. It is important to acknowledge the existence of both explicit and tacit knowledge. Explicit knowledge refers to the public and transmittable knowledge we speak, hear, read and write (Kikoski and Kikoski 2004, 65), such as the knowledge gathered through the use of technology systems and tools. Tacit knowledge refers to "know-how" and intuition that is "unconsciously acquired from the experiences one has while immersed in an environment" (Lubit 2001, 166). Tacit knowledge is embedded in individuals and therefore more difficult to institutionalize, as it is often informally collected and shared. Nonaka (1991, 98) identified tacit knowledge as a key driver in the creation of new institutional knowledge and fundamental to continuous innovation.

Knowledge can also be viewed as the result of a process that is built from data and information. In the arts and cultural sector, the terms data, information, and knowledge are often interchangeably used. In the study of knowledge-centric organizations, these terms each have distinct definitions and specific uses. The important relationships between data, information, and knowledge influence the processes by which knowledge is created and managed within an organization (Davenport and 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, 6).

Relevance to the Field

Investigation into the current literature on knowledge-centric organizations and principles shows limited emphasis placed on the nonprofit sector, with even less of an emphasis on nonprofit arts and cultural organizations. Cullom and Cullom (2011) investigated the importance of knowledge-based strategies for nonprofit organizations to ensure sustainability. They cite the unique business model of nonprofit organizations and the need to develop tacit knowledge as critical factors for success. However, these knowledge-based strategies, while a useful starting point for nonprofit organizations, are somewhat general in approach and do not reflect the more nuanced approaches of knowledge-centric organizations in other fields and as identified in the literature.

Fortunately, some analysis specific to the arts sector and its needs has recently been undertaken, though there is significant room for more research. Manyika et. al. (2011) investigated 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 arts and entertainment sector from realizing significant value: a lack of a data-driven mindset and a lack of the organizational talent needed to embrace change. Going further, More, Carroll and Foss (2009) studied the role of tacit knowledge in dance artists as a knowledge management opportunity to provide dancers with future career development opportunities and sustainable futures after their dance performance careers. However, this study investigated a program created only for individual dance artists, and the program did not serve arts organizations.

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." However,

there is no significant research on the principles of knowledge-centricity and nonprofit arts organizations. Lilley and Moore (2013) have recently created a preliminary framework for data usage by arts and cultural organizations in the UK, termed the "Data Maturity Spectrum." This three-stage framework provides an approach to the use of data, but does not provide broader context into how the use of data can develop institutional knowledge, and provides no link to the concepts of knowledge-centricity.

Thus, building from the limited research on knowledge-centric principles in arts and cultural organizations, inquiry into how the established definitions and frameworks of knowledge-centric organizations apply to the sector is relevant. This inquiry could help the sector in building sustainable, relevant organizations that can thrive in a knowledge society.

Inquiry: Knowledge-Centricity in Arts Organizations

To understand how the principles of knowledge centricity could apply to arts organizations, this qualitative study looked at four nonprofit performing arts organizations in Philadelphia, each well-established in their respective communities, with dedicated full-time staff and a solid programming base of ten years or more. A convenience sampling approach was used to select organizations representing a mix of performing arts disciplines and whose senior staff members were available to meet and willing to share their experiences in detail. The sample is not representative of the performing arts field in general nor is it indicative of the communities served by this field as a whole.

Additional criteria were used when selecting participating organizations as a means to create some consistency within the participants. These criteria were:

- Budget size of $1.5 million or less, which represents the large majority (over 90%) of all registered nonprofit arts organizations in the United States (National Center for Charitable Statistics 2013a). Typically, organizations in this budget range are considered small to mid-sized.

- Artistic discipline falls within one of the performing arts disciplines, which represents more than 20% of all registered nonprofit arts organizations in the United States based on National Taxonomy for Exempt Entities (National Center for Charitable Statistics 2013b).

- Original founder of the organization is still involved in a leadership capacity.

It is this particular type of arts organization that often faces unique challenges in the adoption of knowledge-centric principles, typically due to a founder's sole focus on mission and purpose rather than developing systems and the framework for sustainability (Stevens 2008). However, these smaller arts organizations might have

the ability to expedite decision-making and respond relatively quickly to opportunities and practices that can help them become knowledge-centric.

The research methodology incorporated the principles of inductive reasoning and comprised of in-depth interviews combined with a thorough review of strategic planning documents, audited financial statements, federal tax documents, and online content. 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 sociotechnical elements of 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 and the board; and the challenges faced in relation to the above areas. A total of four interviews (one per organization), with durations approximately ranging between 45 - 90 minutes gathered the primary data for the study. All interviews occurred in March – April 2013 and were recorded and transcribed. The transcripts were then reviewed in detail and data were classified in a spreadsheet under recurring themes to gather common insights and facilitate analysis. The transcripts were uploaded into Dedoose, a cross-platform research software used for qualitative and mixed methods research. Each recurring theme was used as a parent code in the Dedoose coding and analysis process. Final analysis was completed by March 2014.

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]	$833,532	$1,328,626	$910,936	$142,743
Earned/Contributed				

Revenue Mix (%)	50/50	30/70	70/30	30/70
Number of Board Members	13	26	11	12

1. Year-round, permanent staff.
2. Based on total expenses from FY2012 IRS Form 990.

Because the organizations selected represent a non-probabilistic, convenience sample, the key findings from the study are structured in such a way as to focus on common issues, 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.

In describing the findings below, "half" the organizations refers to two organizations, "most" refers to three and "all" refers to all four organizations.

Key Findings

The structured interviews brought up several common challenges in all four organizations, which hindered their ability to become knowledge centric and created potential threats to organizational stability. Based on the coding and analysis of the interviews, and in comparison to the existing definitions and frameworks of knowledge-centric organizations, three main themes emerged relating to each organization's operations. Barriers or challenges in these themes impeded each organization's ability to become knowledge-centric.

These three themes were:

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

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) 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.

As crucial as these three themes are to operational function, the research revealed that each organization faced challenges or barriers in some or all of these themes and these barriers interfered in the progress toward becoming a knowledge-centric organization. Table 2 summarizes the types of barriers found in these three themes.

**Table 2: Barriers to Knowledge-Centricity in Arts Organizations
Categorized by Theme**

Systems and Tools	Governance and Leadership	Resources and Funding
Lack of measures, metrics, data collection, and dissemination	Board is not proactive or up to date on responsibilities	Lack of targeted, operational funds
Inefficient use of current systems and technologies; lack of training in specialized skills	No emphasis placed on institutional knowledge and founder knowledge transfer	Limited staff capacity; over-reliance on temporary staff/interns for critical functions
Inability to remain current on emerging systems and tools	Limited long-term focus on sustainability and business model	Over-reliance on unsystematic, person-to-person information sharing

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 themes.

The following sub-sections provide further details of the findings in each of the three themes, including challenges, and emerging effective practices that could lead to knowledge-centricity.

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 are 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 product in a useful, 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 toward becoming knowledge-centric. These tools include the use of customer relationship management (CRM) systems, the Cultural Data Project (CDP), and institutional dashboards. CRM systems can serve as singular, comprehensive repository of institution-wide data, though only one organization had just begun to use this type of tool to build knowledge. While all four organizations were registered users of the 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. The use of institutional dashboards can provide immediate and shared access to a variety of key metrics that can be used to inform data-driven decisions, providing staff and leadership with

clear and easily readable information based on real-time or recent data to create a common vocabulary of measures and information, which in turn leads to the creation of new knowledge. All four organizations were not using dashboards as a means to ensure that useful data are collected and tracked, which could help them form the basis of a shared vocabulary of important metrics used by leadership, board, and staff.

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. The 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 maximizing the use of new technologies. This is an example of a successful approach that will help ensure that the effective use of systems and tools are made a priority and could help create a link to the two other themes (i.e governance and leadership, and resources and funding) to move the organization toward becoming knowledge-centric.

Governance and Leadership:
Founder-based leadership, a familial board, and a collegial working culture characterize all four of these organizations. However, the interviews also brought up a mixture of challenges in creating a culture where knowledge is a focal point. 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 to possibly include knowledge-centric practices 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 tacit knowledge and 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 succession planning to ensure continuity in institutional knowledge 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 both a formalized document and 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 as a result of this process.

<u>Resources and Funding</u>:
The research brought into focus a clear need for increased capacity in a range of financial and human resources including contributed support, staff training, and information sharing amongst staff members. Most of the organizations are heavily reliant on contributed funds, and all four organizations are experiencing the negative effects of dwindling levels of 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. This deficit can also bear a direct influence upon organizational and stakeholder knowledge processes. For instance, most of the organizations cited a need for more resources to train staff in up-to-date tools and technologies to improve their ability to manage and share knowledge. Also, 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 these efforts.

Like many similar-sized organizations in the sector, most of the organizations studied operate on a meager mix of permanent staff, temporary staff, interns, and volunteers and face challenges in establishing role-clarity, documenting work-related responsibilities and ensuring continuity in knowledge-oriented organizational practices. The primary reliance on the singular knowledge of individuals in the organization and undocumented person-to-person sharing of information led to an inability to preserve institutional memory. Further, the research found that most of the organizations also relied on some amount of paper-based processes and documents, with no electronic or shareable version made readily 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. As a result, most of them also face challenges with capital funding and projects to improve or maintain their spaces. The lack of dedicated financial resources combined with the lack of long-term, institutional knowledge resulted in most of the organizations being significantly undercapitalized.

Despite these challenges, all of the organizations are focused on remaining resilient 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 individual donors. 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

organization 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 share information and knowledge by combining informal conversations, impromptu brainstorming sessions, and text messaging into their regular staff meetings. Also, most of the organizations are contemplating ways to maximize the usage of their facilities, are cognizant about the limited resources and funding available, and have articulated these needs in their strategic plans.

Findings as related to Knowledge-Centric Frameworks

Viewing these organizations' approaches and challenges through the existing frameworks could help place them within the context of knowledge-centricity and help plan future organizational processes. Applying KPMG's conceptual framework of the "knowledge journey," these four organizations can be classified as being in the second or "knowledge-aware" stage of the five-stage framework, wherein the organization recognizes the value of knowledge and demonstrates the beginnings of relevant systematic approaches but has not employed knowledge as an organizational resource.

The knowledge that the organizations possessed or aspired to generate was found to be almost exclusively explicit knowledge, such as the utilization of basic organizational data and information. Systematic methods had not been put in place to institutionalize tacit knowledge, the other critical component in the explicit/tacit knowledge paradigm. Tacit knowledge is gained through individuals' experiences within the environment and includes the institutional memory accumulated through the years of the organization's existence.

From a sociotechnical perspective these organizations have not recognized the interrelationship between the social and technical aspects of organization systems. Rather they were focused mostly on the technical aspects of building knowledge without placing equal emphasis on the social/human aspects.

Conclusion and Implications:
Toward Defining a Knowledge-Centric Arts Organization

Using the established concepts of knowledge-centric organizations as a foundation for an exploratory study of four small and mid-sized nonprofit performing arts organizations, 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 lacked either awareness or usage of emerging systems and tools that could provide benefit toward addressing these issues.

The interviews brought to light the three themes that support a knowledge-centric organization as well as the barriers that exist within them. Being aware of these barriers can help organizations understand what new approaches may guide them in their future work and might possibly lead to the elimination of challenges and consequently assist in incorporating knowledge-centric approaches into organizational practices.

Applying the knowledge-centric frameworks demonstrate that these organizations are at an early stage of their knowledge-centric journeys and provides perspective into strategies to address the barriers observed. Understanding the lack of a truly sociotechnical approach to building knowledge identifies that human-centered approaches must be combined with technological systems in order for these systems to succeed. Finally, the focus of these organizations solely on explicit knowledge, with limited emphasis on tacit knowledge, identifies an opportunity for organizations to improve how they institutionalize individuals' knowledge.

Based upon the insights obtained via this research a working definition for a knowledge-centric arts organization can be put forth which incorporates organizational practices that address barriers in the three themes. Thus the following definition is proposed:

> *"A knowledge-centric arts organization serves its artistic mission and constituents through a systematic, sociotechnical emphasis on increasing the amount of knowledge it uses to ensure its sustainability and relevancy. Its systems and tools are effectively implemented in a manner that creates a cycle of collecting and analyzing data to generate the information necessary for informed decision-making. Its board and leadership have the information and knowledge they need and incorporate it into the strategic planning process. It has the resources and funding to ensure that the right people are engaged in the right organizational processes and are provided with the proper training and support. Ultimately, insights gained through knowledge resonate throughout all functions of the organization."*

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 themes identified. Future research could involve a broader sample of arts organizations and compare organizational practices in the three themes and examine their influence on overall financial, programmatic and operational performance. Such research could lead to

the development of a series of key success indicators of knowledge-centric arts organizations. Grantmakers, arts service organizations, and technical assistance providers could use these indicators to help small and mid-sized arts organizations move toward increased-knowledge-centricity.

The implications of this research and its findings can play a key role in developing knowledge-centric arts organizations that are sustainable and relevant. When the leadership and management of an arts organization are able to embrace the concepts and principles outlined herein, the organization can experience improved operational efficiencies and a better understanding of its external environment and constituencies. Arts leaders that seek, acquire, and use shared knowledge can make fact-based, strategic decisions. Achieving this will require a proactive approach in both organizational change and the human capital necessary to become knowledge-centric.

Arts leaders must also be cognizant of the current barriers and challenges that impede their ability to become knowledge-centric. While it is easy to place blame on a single barrier such as a lack of technology, a lack of funding, or a lack of effective leadership, it is only by addressing barriers in all three themes in a comprehensive, outcome-oriented manner that the wholesale changes necessary to overcome them will be achieved.

The benefits and impacts of a knowledge-centric arts organization are clear and have broad implications for the field. While this study focused on small and mid-sized nonprofit performing arts organizations, the concepts of a knowledge-centric organization are not specific to a particular budget size, artistic discipline, or geographic region. Rather, arts organizations and leaders that embrace the principles of a knowledge-centric organization as an organizational philosophy, viewing knowledge as an institutional asset and a core value, will be those that continue to thrive even in challenging circumstances.

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 approach toward the practices of a knowledge-centric arts organization can help ensure sustainability and relevancy in our knowledge society.

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