

Technology and the Performing Arts Field: Usage and Issues

Report on Research Commissioned by The Andrew W. Mellon Foundation, 2008-2010
Conducted by NPower, Inc. and Callahan Consulting for the Arts
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Executive Summary

The world is constantly evolving in how it uses technology. In consequence, the arts field has struggled, adapted, and sometimes excelled in its own utilization of technology. To capture and better understand these trends, The Andrew W. Mellon Foundation commissioned a study of technology usage in the arts field to learn about organizations' practices and needs. This summary provides an overview of the study, which combines a comprehensive survey of the arts field with more recent in-depth qualitative research.

In late 2008, the survey was administered to the memberships of five discipline-based arts service organizations: the Association of Performing Arts Presenters (APAP), Dance/USA (D/USA), the League of American Orchestras (LAO), OPERA America, and Theater Communications Group (TCG). The large data set collected from the survey provided a rich resource of information about organizations' range of experiences and attitudes towards technology. Newer qualitative research was conducted through case studies and interviews. A combined analysis seeks to present the survey information in its full depth and nuance, and augment it with up-to-date material that reveals the sometimes profound changes that organizations have undergone in their use of technology since the survey.

Within the research, the experiences of non-profit arts organizations are examined, with special consideration to questions about their trials and successes: What are the most prevalent technological barriers that organizations face? How do these barriers affect their management practices—and what kind of toll do they take on staff and boards? In what ways have arts organizations demonstrated creativity, resilience and leadership in adapting to technology use? And what are possible solutions and programs that would support the field?

In order to better understand the true circumstances of arts organizations, the analysis identifies themes that recurred among all of these sources. These themes are presented visually to convey a sense of their relative prevalence and importance in responses. Then, each key theme is explored individually, to reveal the detail and trends that the surveys conveyed and to incorporate the new research (case studies and interviews), which updates and illuminates the survey responses.

The themes and highlights that emerged from this analysis hint at future directions for technology research in the non-profit arts field and better prepare Mellon and service organizations to design responses to the field's technology needs.

Approach and Methods

Data Sources

The Original Survey Data. Mellon conducted the survey in conjunction with the nonprofit NPower. The instrument consisted of 72 questions, eight of which are qualitative, addressing resources, both human

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and otherwise; management practices; attitudes toward technology use among stakeholders; and an array of other circumstances that affect organizations' use of technology. Questions were asked about how organizations plan in general, and technology planning in particular. Data were gathered, in part, to inform any responses Mellon might consider to address these issues, one of which was the design of a technology course for the arts field. A high response rate of 42% was attained, resulting in a data set of 594 organizations, which was found to be representative of the field.¹

New Qualitative Analysis. The survey's eight qualitative questions were reviewed for frequency and intensity of themes. The four most substantive addressed pressing issues that organizations faced with technology, such as barriers to tech use and the success of recent projects.²

Interviews With Service Organization Heads. These leaders helped determine the representativeness of the data, obtain updates on members' use of technology, and test ideas from the data against their perceptions about their members' technology-related circumstances.

Case Studies. A series of interviews were conducted with select respondents in 2010 in order to delve deeper into the technological issues raised by survey questions and to highlight changes experienced by arts organizations since the survey. The case studies were chosen to achieve some representation of the following factors: organization type, venue, IT staff, budget size, artistic discipline, data management, and problem solving aptitude. Their budgets ranged from \$950,000 to \$11.5 million. They were ensured confidentiality to serve as an incentive to speak frankly to consultants, without worrying that their shortcomings would be known to Mellon. One to 10 staff members for each organization (a total of 24) attended the group interviews. Interviews sought deeper understanding of issues such as internal management, the interplay of staff with consultants, and particularly good or problematic areas of tech adaptation. Areas of tech use that have arisen or advanced since 2008, such as social media, and the effects of the recent economic downturn, were subjects of particular interest.

Contextual Factors

Several factors are important in placing the analysis in context. *First, technologically speaking, times have changed radically since 2008, and it is clear that, to some degree, arts organizations have changed with those times.* The changes in technology use that took place in the nearly two years that elapsed between the survey and this analysis are highly evident in the case study interviews and interviews with leaders of the service organizations.³ *Second, the diversity of respondents suggests different needs, strengths, and characteristics that affect how the data are described in the full report.* Inherent

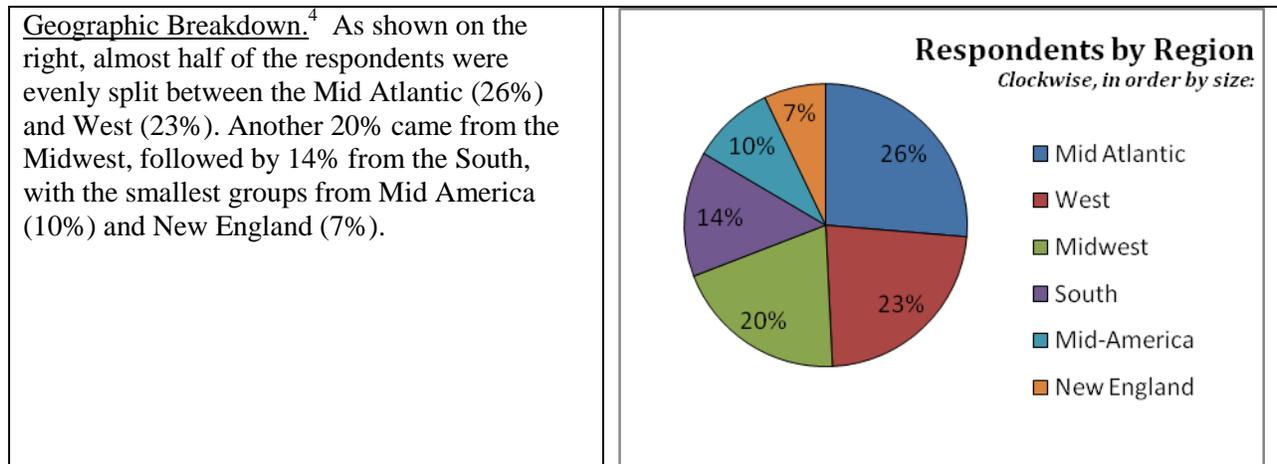
¹ To assess the survey's representativeness, the consultants compared survey respondents to evidence from three sources: service organization membership data, the National Center for Charitable Statistics, and in-depth interviews with service organization staff. The following conclusions were drawn: 1) The survey sample is generally representative. Factors such as revenue, size of staff, longevity, and location confirmed that the response rate and distribution of organizations was perfectly acceptable. 2) Geographic coverage is good, with the slight exception of New England. 3) Mid-sized organizations are more represented than small or large ones. 4) Responding organizations are slightly older than non-respondents. For a summary of this analysis and of respondents by state, see Appendices B and C in the full report.

² Throughout this report, "tech" refers to "technology," rather than any technical aspects of art production. The words "respondents" or "responses" always refers to survey respondents. The word "interviewees" or "interviews" refers to the conversations with case study organizations or service organization heads.

³ In December 2008, NPower provided a draft report to the Mellon Foundation. Following additional analyses and an addendum completed in March 2009, the five service organizations met with NPower and Mellon staff in April 2009 to discuss the report. A recommendation was made to re-examine the data and possibly undertake interviews and case studies to acquire a deeper understanding of the findings. After gathering information, soliciting opinions from other experts, and considering next steps, Mellon contracted Callahan Consulting beginning in February 2010 to re-analyze the data, particularly the qualitative material, and conduct new research. The delay had the positive consequence of allowing Callahan Consulting to see changes in responses (over a relatively short period of time) and provided, in a sense, some comparison data.

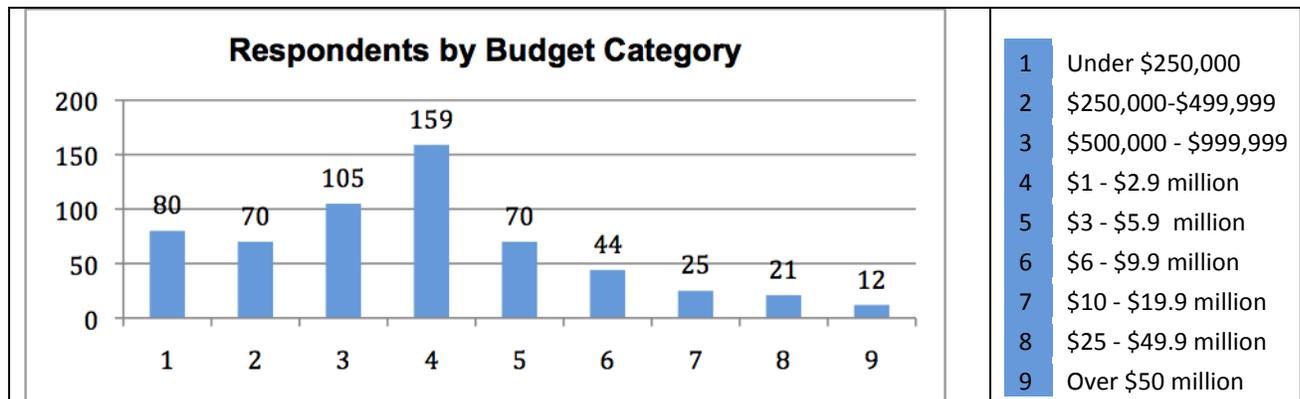
differences exist between producing organizations, which create and produce performances, and presenting organizations, which exist to join audiences with artists. A number of factors affect their need for technology, including access to, and management of, audience data, management of box office, and venue and audience size.

Overview



Year Founded. Respondents have longevity; nearly 85% (500) are over 20 years old. Only 15 were under five years old at the time of the survey.

Budget. Almost 44% of respondents' operating revenues were under \$1 million, and almost three-quarters (71%) were under \$3 million.



Staff Size and Leadership of Respondents. The majority of respondents (58%) had 10 or fewer employees. A larger majority (71%) had no designated IT staff. Most surveys were completed by executive directors (58%), and most respondents had four or fewer years in their role.

Discipline. While the overall representativeness of the five disciplines (dance, opera, orchestra, presenting, and theater) is good, some disciplines are more represented in the survey, and there is some variance in response rates by discipline. As the table below indicates, more than two-thirds of the sample is theater companies and orchestras. Dance companies, opera companies and presenters compose far less

⁴ Regions were assigned in line with the NEA's regional arts organizations.

of the sample. Meanwhile, opera companies and dance companies were far more likely to respond to the survey than presenters, with theater companies and orchestras falling in between.⁵

Distribution by Discipline					
Membership Category(s)	Invitations Sent	Total Members Responding	Primary Membership (see Note 5)	Percent of Sample	Response Rate
Association of Performing Arts Presenters	275	80	48	13.5%	29.1%
Theater Communications Group	485	194	186	30.5%	40.0%
League of American Orchestras	545	233	231	37.5%	42.8%
Dance/USA	133	67	58	7.4%	50.4%
Opera America	110	63	59	9.6%	57.3%
No Primary Membership Assigned	-	-	9	1.5%	-
Undetermined Membership	-	-	3	.5%	-

Technology Attitudes and Habits

Current Technology. When asked to describe their current technology, a full 80% of organizations considered their technology to be either only “serviceable” or “antiquated.”

Perceived Barriers to Tech Usage. Respondents were asked if they had experienced a series of barriers to effective adoption and use of new information technologies in the past five years. From the questions asked, three barriers emerged: lack of money (83% of respondents), lack of time (69%), and insufficient knowledge to make technological decisions (33%).

Key Themes

Four of the eight open-ended questions framed a deeper understanding of the tech issues and needs facing respondents. Major themes that emerged from this close analysis of the qualitative responses are outlined below. They are followed by visuals that aid in understanding the recurrence of these themes among questions (the colors to the right correspond with the visuals).⁶

Funding. Respondents reiterated the sheer need for funds for technology in general or for specific tech projects, and the degree to which their lack of resources earmarked for technology was make-or-break to their success in using it.

Integration of Data Systems. Respondents registered their strong desire to purchase systems that would integrate their data, most often for ticketing and donor development. Occasionally mentioned were accounting, customer relationship management (CRM), general databases, and web interactions

⁵ Eight percent (48) of respondents indicated membership in more than one of the organizations, most of which belonged to APAP and one or two other associations. In order to avoid confounding the analysis where discipline is involved, these organizations were assigned a “primary membership” based on their mission. Nine could not be determined. Subsequently, changes to these primary membership assignments were made, and 58 rather than 42 are now assigned to Dance/USA, and 48 to Arts Presenters.

⁶ While the graphics presented here frame a picture of the qualitative findings, they are not meant to imply statistically significant findings, but more so an overview of the strong recurrence of issues.

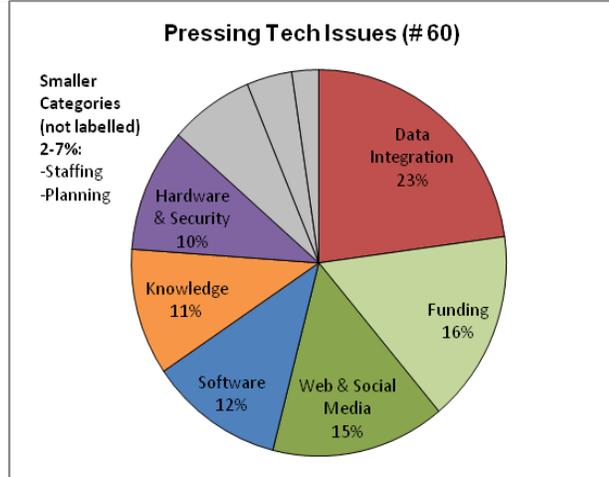
<p>(e-blasts) with audiences. Some desired to integrate two or more systems to avoid duplicating their efforts in data entry and reporting.</p>	
<p><u>Staffing (or Time) and Leadership.</u> Respondents stressed the human resources that were needed to learn and use technology, often emphasizing the lack of available staff, given competing priorities for their time. Time was considered a euphemism for staffing, which could include internal, contracted, and pro bono human resources, as well as related data about their attitudes, interactions, and leadership.</p>	
<p><u>Up-to-Date Knowledge.</u> Respondents desired more expertise and knowledge, so they could use technology to its fullest potential. This included the process of researching and choosing technology. They strongly desired to <i>keep current</i> on technology trends in order to know how systems were changing. They desired <i>training</i>, so staff would know how to use the technology they purchased.</p>	
<p><u>Upgrading Hardware and Other Technology.</u> Respondents regularly had to replace hardware and software; the need to purchase was never-ending and hard to pay for.</p>	
<p><u>Upgrading Software.</u> Respondents strongly desired to install and maintain up-to-date versions of software systems and products. Sometimes responses were merely a long list of a wide range of software such as ticketing, box office, donor, operating systems, accounting, and database programs. Respondents often named the type but not a specific brand. The need for software was interrelated with the need for the knowledge to use it.</p>	
<p><u>Web and Social Media.</u> Respondents mentioned their goal of updating websites, with little specificity about how or to what end. Some wished to update sites themselves and others wanted more ease updating sites, even if they worked with consultants to do so. Social media was rarely mentioned and tended to imply a general interest in usage rather than a strategy or success, though there were occasional references to blogs, podcasts and YouTube (remember that this survey was collected in 2008).</p>	
<p><u>Smaller Categories.</u> Issues that appeared in 7% or fewer of the responses were: planning and decision making (often reflections on how lack of planning in tech projects hindered outcomes) and other (comments on miscellaneous areas, most often art production).</p>	

Together, the qualitative questions reveal interesting consistencies and contrasts of these themes within the data, which are illustrated in the charts below. The analysis looks first at the urgency respondents felt in relation to their technology use—the breadth of pressing issues that needed to be addressed at the time of the survey. Then, a closer examination of recently undertaken tech projects reveals what worked, or did not work, in completing them; it shows an interesting convergence among the few themes that appear to make or break success. Finally, a visual shows ongoing barriers to adapting and using technology within organizations.

Pressing Tech Issues

When asked about their most pressing technological issues, survey respondents revealed, in the aggregate, how the key themes above reflect their tech-related priorities. Of prime importance to them were software-related applications. Responses began to hint at how funding for, and knowledge of, technology were crucial in solving their tech issues.

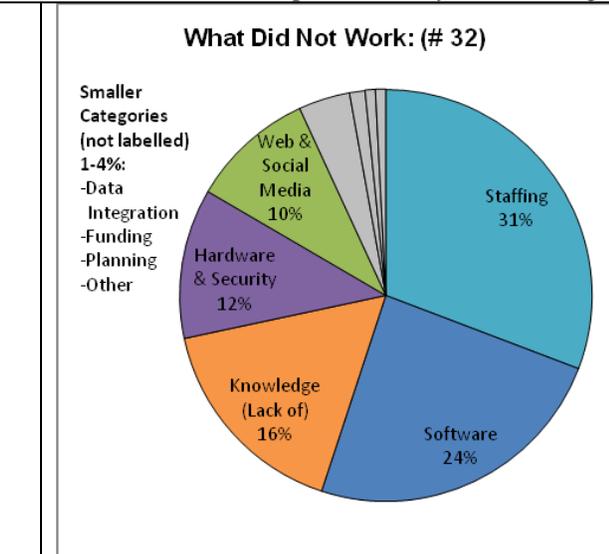
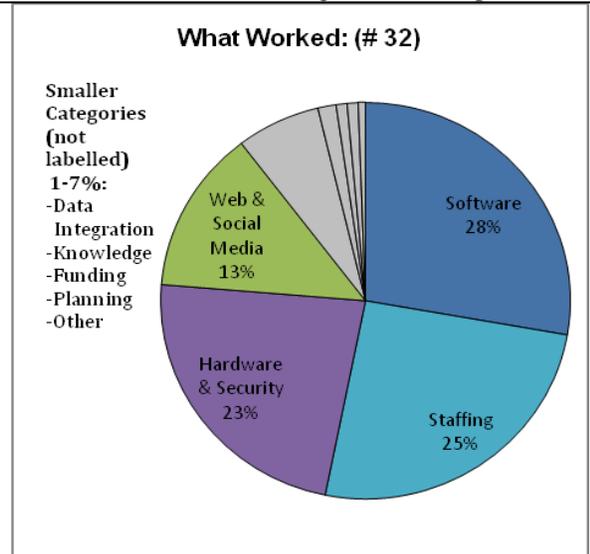
The most prevalent need was for workable systems to integrate data, mainly for ticketing and donors. Frequently mentioned was the need to stay up to date with a range of other software upgrades along with their websites; less frequently mentioned was learning to use social media. Finally, respondents lamented their need for greater knowledge of how to make the best use of software once it is installed. The dilemma, for some, was in realizing that they would need funds and knowledge of software to fully address these needs.



What Worked and What Did Not Work in Implementing Tech Projects

One question asked about a specific “project” that had already been undertaken. Projects ranged from large and ambitious, such as converting to the Tessitura system, to small and commonplace, such as creating a Google Calendar. In completing these projects, there was a close divide between the staff-related factors that contributed to their success and those that were blamed for their failure. A prevalent factor emerges when projects failed: the lack of knowledge, as shown below.

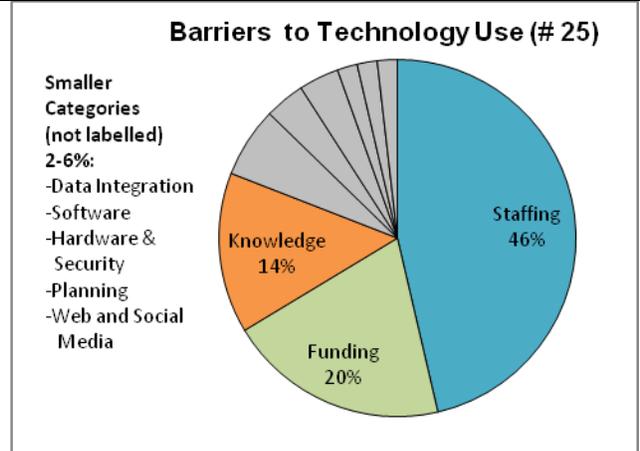
Here, the element of staffing could influence a project’s success, depending on whether or not staff was enthusiastic and working as a team (on the left), or whether they were resistant to, or insufficient for, the project (on the right). Again, respondents whose projects failed lamented the lack of know-how, due to either the shortfalls of staff or of the consultant/vendors they chose, who promised more than they delivered, lacked knowledge, or over-reported the abilities of the software products they were selling.



Barriers to Technology Use

Interestingly, when asked about *barriers* to adopting and using technology effectively, responses focus largely on the lack of human and financial resources. This supports the notion, as presented above, that these factors were the means to an end, in their success.

As shown, the main barriers to usage were shortfalls in **staffing** and **knowledge**--as well as in financial resources, or **funding**. It appears that their perceptions of ongoing barriers to *usage* of technology related more to having the human power and expertise to know what to buy, how to operate it, and troubleshoot problems, as well as the funding to pay for it.



The Case Studies: Updated and Deeper Impressions

The information gathered from the case study interviews serves to illuminate much of the data presented in the charts above. By creating a more in-depth picture of the technology needs and strengths of organizations, the case studies reveal the sometimes radical changes that took place in the two years that elapsed since the survey and give insight into the experiences that prompted the survey responses. The area in which case study organizations had the most experience and insight to share was recent technology efforts, which varied widely in their scope, ambition, and levels of success. Integration of software, particularly donor and ticketing systems, was a frequently mentioned project, as was using social media. The degree to which case study organizations had increased their interest in and emphasis on website enhancements related to what they now viewed as the potential of both these websites and social media to reach and cultivate audiences. This is a dramatic change from the original survey, which rarely mentioned social media. Interviewees were specific about their technological goals, and several demonstrated creative, forward-thinking attitudes. Still, the success that organizations experienced in their recent technological efforts was strongly tied not only to what they could afford but also to the amount of knowledge they possessed, and to their attitudes toward technology as positive challenges that would bring them opportunities and save time. The differences and continuities between the case studies and surveys are explored below.

Key Themes

The Key Themes are presented in the order of their prevalence and/or importance to the data itself. This order coincides with how the themes are presented in the full report.

Staffing and Leadership

Across both survey and case study responses, organizations were greatly impacted by their human resources—the amount of staff as well as their knowledge and training. Most lacked in-house IT staff, relying instead on a mix of contractors and other non-IT employees—which, survey responses revealed, were inadequate for their needs. Tech vendors received high praise and sharp criticism at

both survey and case study organizations, as their role was seen as pivotal to a tech project's success. Even if employees lacked tech expertise, a positive, problem-solving mentality was sometimes enough to make tech projects succeed. Leaders that were committed to new technology made it easier to realize goals, while resistant leaders could be major barriers. Those on the board or staff who solved tech problems or took on projects were lauded as heroes. As survey responses showed, most staff and leadership in organizations recognized the importance of using technology. However, the lack of sufficient time and manpower to learn and operate new products was a source of frustration.

On the survey, the vast majority of respondents (91%) cited "time" as a major barrier to tech use ("time" may be a euphemism for the need for more staffing to relieve overburdened workers). Given other priorities, staff's size, hours, and tech expertise were inadequate; only 14% of survey respondents thought they had sufficient IT support. Within the case studies, IT staff (whether internal or contracted), when it did exist, primarily focused on infrastructure and was usually not involved in actual data management or broader strategies related to tech use. This left non-IT staff to learn systems in order to retrieve information and set tech strategies.

On the survey, 58% of respondents received day-to-day tech support from contracted service providers, while 74% turned to professional IT consultants and 40% to vendors for advice. Some responses gratefully reported that vendors and consultants could contribute to tech projects' success. However, as other survey respondents lamented, with frustration and cynicism, the shortfalls of vendors were sometimes a major reason for the failures of their tech projects.

A theme across the case studies was that it mattered greatly who was advocating for new technology, and whether they were in a position of power. If leadership was committed to adopting new technology, the organization found it easier to make its technological goals a reality (as some survey responses agreed). However, case studies suggested that if leaders were resistant to adopting new technology, they became a hindrance to the process.

Despite the reservations about disinterested leadership expressed in some of the case study interviews, most survey respondents expressed positive attitudes towards technology on the part of staff and leadership. Survey data indicated only minimal resistance or disinterest towards technology, when compared to their concerns about lack of time and support. Most (83%) implied that their organization's staff were willing or able to adapt to new technology, and most (88%) agreed that their executive leadership had a clear vision for how technology supports the organization and advances its missions. 83% agreed that their board endorsed investments in new technology.

Up-to-Date Knowledge

Survey respondents and case studies stressed the need for increased technology knowledge and the ways in which lack of information about technology can deter tech usage and progress. Respondents wanted to make effective technological decisions and purchases, but lacked the time and expertise to conduct the necessary research. The fact, supported by survey responses, that over half of organizations had no budget for technology training shows the difficulty of keeping up with constant technological advancements.

The vast majority of organizations (91%) on the survey felt that insufficient knowledge was a major problem in their current usage of technology. While over half of all organizations (55%) did not budget for technology training for staff (the incidence of tech training was increased at higher budget levels), even organizations with the budget and inclination to train staff still struggled with inadequate understanding of technology. While lack of funding was cited consistently as a reason why organizations

had not advanced technologically, case studies corroborated the sense on the survey that funding alone would not solve the tech problems within organizations but should be one element of a strategy that included an emphasis on learning.

Survey organizations were concerned that their grasp of technology was not strong enough for them to wisely choose, purchase, and use products. Guidance was needed to solve dilemmas about what to buy and how much money to invest in technology. Shortcomings in knowledge surfaced when organizations attempted to install software, and it became evident that staff lacked the ability and/or training to implement these new systems, sometimes leaving respondents with expensive programs they were not fully or effectively using.

Upgrading Hardware, Software, and Other Technology

Survey respondents discussed the constant struggle to upgrade their tech systems—including software, but also hardware and security programs. The difficulty of acquiring funds to accomplish these goals was a major barrier for many on both the survey and in the case studies. It became clear, particularly on the survey, that only about half of organizations had a budget line item to update their technology more often than every five years, and most did not keep up-to-date.

The software programs most frequently cited as in need of updating were ticketing, donor, and financial systems; comments about hardware most often referred to computers and servers. Respondents stressed that they could not complete these projects because of lack of resources, and even those who did receive grants could have problems when associated costs escalated unexpectedly. Responses about product upgrades fell into three categories. In the first, software, updating basic operating systems, upgrading ticketing programs and getting online ticketing were priorities. The second type, hardware, also included concerns about aging equipment and being able to afford needed upgrades. The third type of upgrade was security for both systems and data—organizations were concerned about the possibility of losing valuable information if their systems failed, and wanted to ensure the privacy of online financial transactions. Similarly to survey respondents, a constant cry within every case study was for funding to pay for the necessary updating of hardware and software.

Tech Planning and Decision Making

Respondents tended to operate with strategic plans, and around half had one or more written plans for various areas of operations. While an implied shortfall within the survey was the lack of bona fide tech plans, case studies and service organization heads strongly suggested that some degree of tech planning is, in fact, being conducted within individual departments. Survey responses revealed that IT staff rarely participated in the strategic planning process, and conversely, board members rarely participated in technology planning, oversight, and/or decision-making. Decisions about technology appeared to be made in an ad hoc manner, as equipment broke and systems became outdated.

On the survey, 80% of respondents reported having up-to-date strategic plans, and 60% had completed plans within the past three years. Most (62%) rated their ability to develop and implement plans as good to excellent, and organizations that had written tech plans rated their overall planning abilities highly. Those at higher budget sizes rated themselves higher at successfully developing and implementing plans. By the time of the case studies, little had changed in organizations' overall planning practices—all cases had a strategic plan.

Less than one-quarter of survey respondents had technological plans, and only 18% involved IT staff in planning. While none of the case studies had developed a formal or written technological plan, per se, they conveyed numerous examples of planning, progress and problem solving in the area of technology, including software installations and innovative use of technology for production. Most service organization heads agreed that tech planning was happening in more roundabout ways, within departments. Decisions about technology purchases fell on different people within different organizations. Most reported that their technology purchases were made on a case-by-case basis and heavily depended upon available funds. Whether this approach worked varied according to the organization, its attitude toward technology, and its resources.

Active planning and budgeting could contribute to survey respondents' successes with technology. Some seemed frustrated about the amount of staff time needed to complete projects; responses were split on whether this was due to inefficiencies or to unpredicted challenges during the implementation process, as well as how these shortcomings were affected by planning. Engaging in in-depth software research generally led to rewarding results. Understanding the end users of technology was crucial when making these decisions, including effectively matching the organization's needs with the product's true capabilities.

Integration of Data Systems

The topic of integrated software systems for data management was the most frequently reported tech need on the survey and continued to be a major issue in the case studies. Often the greatest success stories and worst disappointments that organizations reported had to do with the acquisition and installation of integrated software. Generally, organizations got these new programs for two major reasons: to better track donations and ticketing, and to decrease the burden of work for employees forced to use separate systems to enter donor data and track income. However, the extent to which organizations' software purchases met these needs appeared to depend heavily on both the systems they chose and the amount of technological training possessed by those who installed and operated them. Integrated software for accounting and box office was an aspiration of many survey respondents; service organization heads also emphasized this necessity.

Case studies showed how urgent need could be a catalyst for moving to an integrated data management system, with several sharing stories about being forced to migrate to a new system when vendors discontinued their current product or when they could no longer stand the confusion and labor of using multiple systems.

One prevalent theme throughout both survey and case studies was uncertainty about which data integration system to choose, and with good reason: case studies showed that organizations who purchased software without knowing what they really needed could become saddled with an irrelevant product. Case studies revealed that the manner in which software was installed had a huge impact on its ultimate usefulness—while some made the transition to new software fairly smoothly, others did not know how to get the product working. Case study organizations whose staff lacked the knowledge necessary to install and operate their new programs found that these purchases led to more work for employees, not less. Successful installations, on the other hand, were often the result of careful pre-purchase research, staff who had technological expertise, and support from leadership and peers. Even after converting to new software, some survey respondents' programs would not integrate with their other systems. These problems seemed either the result of software incompatibility or the program being inaccurately advertised.

The responses gathered from organizations that had converted to integrated software in the survey and the case studies indicated that there were both strong advantages and disadvantages to using one unified system instead of the multiple databases they had before. Those that had installed programs such as Tessitura were for the most part very positive about their results, including the ease of compiling comprehensive donor/audience information, tracking finances, and cutting down on duplicate entry. One barrier, however, was the prohibitive cost of the new programs, including a huge upfront expense in addition to ongoing dues and add-on fees. A second barrier was the difficulty in installing and learning to operate them.

Website and Social Media

More than for any other issue, there was a striking change in attitude towards website and social media use between the time of the survey and recent interviews. Social media was barely addressed in survey responses, and website upgrades were treated as just one more non-specific tech need. However, during the interviews with case study organizations and service heads, it became clear that using social networking to reach out to and engage audiences was an increasingly high priority. The strategies for implementing these applications revealed that organizations had ambitious and dynamic goals for their online presence, even if they were not yet able to realize these goals.

The small percent of survey respondents who mentioned social media mostly discussed it in terms of communication and outreach to audiences, such as email and e-newsletters, or were interested in using online tools for marketing strategies. On the one question that specifically addressed social media, responses indicated that 44% of organizations aspired to create a social-networking community for their audience members. However, by the time of the case studies and interviews with service organization heads, social media was a frequently discussed issue, and one that many were highly interested in pursuing. Since the time of the survey, every organization interviewed for a case study had increased its use of social media and Web 2.0 programs. The interviews with service heads also confirmed that members in all five disciplines had accelerated their use of, and interest in, social media as a new way to reach audiences.

The most frequently mentioned social media application in the case studies was Facebook, which was currently being used by every organization interviewed. Most used it to increase their online presence and to post updates and reminders about upcoming events. However, organizations' uses of Facebook varied and included gathering feedback from audiences, tracking audience demographics, and connecting with donors.

Perhaps because social media is young and lacking in success measures, some service organization heads questioned, based on their members' comments, whether social media was a short-term fad or long-term solution. However, case study organizations generally felt that the effects of social media, while hard to pin down, were positive. Most case study organizations did not know or were just beginning to measure the return on investment of maintaining social networks.

On the survey, when organizations mentioned their desire to upgrade websites, it was often as just one item on a long list of other pressing needs, without any further detail about how or why the website should be changed. Some aspired to use online tools to accept donations and to sell tickets. Those that had upgraded their websites were pleased with their enhanced ability to reach potential patrons. In contrast, the case study interviewees discussed the importance of their website to their artistic mission, displaying a forward-thinking attitude and increasingly planning highly specific strategies to improve the user experience. On both the survey and case studies the most successful and exciting web upgrades were those that used media, or interactive features, to involve audiences in everything from the creative process

to choosing performance seating. Case studies also revealed that organizations were increasingly using their websites as a marketing tool and an artistic platform. They appeared to be shifting their concept of the websites as a mere source of information to a holistic hub for cultivating their community of supporters, through audience engagement, ticket sales, and donations.

Art Production

The only other tech issue mentioned with much frequency or depth was art production, or the use of technologies such as video as an element in a performance.

At the time of the survey, performance-related use of technology came up infrequently, although 48% of organizations aspired to use state-of-the-market production technology. However, several case study organizations passionately described their use of new technology as part of their artistic product, most commonly video (less frequently higher-tech lighting, sound equipment, and mechanized stages). Some organizations felt that audiences' and artists' expectations make new production technology part of the evolving language of art and storytelling. For these organizations, production technology was integral to their process. Not all organizations were equally enamored with using high-tech projection methods, some feeling they were peripheral to the overall artistic concept. The incorporation of technology into art raised issues related to ethics and union contracts, since new technologies might take work away from artists. Organizations also had to pay for new equipment and contractors to create these new effects.

Mellon Proposed Solutions⁷

Organizations were presented with several solutions for some of their technology needs. One possible intervention Mellon asked about was whether a course on strategic technology planning, to be designed by an intermediary, would be beneficial to the field. During the case studies, the possibility of creating a website for comparative software reviews was also mentioned. Opinions from both survey respondents and case study interviewees were mixed. Endorsements and suggestions for content were given, as were reservations related to the usefulness, relevance, and necessity of each suggestion. Because of Mellon's interest in supporting a technology course, this section also addresses survey questions about organizations' professional development practices, including their willingness to pay for such training.

87% of survey respondents either had no line item in their budgets for professional development or an insufficient one; however, organizations had pursued professional development opportunities in the past and usually had to pay for them (respondents' ability to pay for professional development might have been affected by the economic downturn, such that the lag between the survey and report might have resulted in different observations). The professional trainings that respondents pursued most often included fundraising (74%), marketing (65%), and management (53%). 33% had attended technology trainings, most frequently related to database management, marketing and web presence.

The Suggested Technology Course: Endorsements and Reservations

Of the 552 survey respondents who answered the question about whether a technology course would be useful to them, about 80% felt that it would; 20% (111) were largely uncertain or doubtful that a course would be useful (the question did *not* ask whether respondents would attend and/or pay for such a course). Although most of the case study organizations had noted on the survey that they would "definitely"

⁷ Mellon has already incorporated feedback from this section into a pilot course (discussed in greater detail below). It is important to note that, once this pilot course was designed and offered to an invited group on a tuition-free basis, there was a high response rate.

benefit from a strategic technology planning course, they were more ambivalent during the interviews. The reservations expressed by the case study organizations and by the survey respondents were similar: they questioned whether the course could be at once general enough to apply to many organizations and specific enough to benefit individual entities. Others felt they were unlikely to benefit from the course because they already used similar resources (especially Tessitura, which provides its own training courses and online discussion forums). On the survey, funding was also a frequently cited concern, along with internal issues such as lack of time or staff to attend. There was one area in which case studies were in agreement: they would attend a course that emphasized new trends and cutting-edge ideas in the field, such as social media.

Comparative Website

Case study interviewees were presented with an idea for a new website that would contain both expert and user reviews of software programs that were relevant to arts organizations, as well as a system to offer peer feedback for users to exchange information about these systems. Most questioned if a website could be both broad and specific enough to meet a variety of organizations' needs and wondered if it would be more suitable to smaller entities. Those that were most interested in the comparative software website felt that its appeal would lie in its convenience, neutrality, and specific relevance to the arts field. Some liked the idea of a website that was more strictly moderated than some current forums, and a few suggested that it should feature reviews from the arts field and not from vendors.

Implications and Recommendations

The following points are suggested for discussion about using the information in this report.

Funding

If funding is to be provided to organizations for technology, perhaps steps should be taken to increase the likelihood that plans will be implemented and systems will eventually be used well. Any funding provided for projects could require a research phase to choose the best systems, a process for vetting consultants and checking their references, and a plan that identifies roles for key players and includes a detailed budget with anticipated additional costs that may arise. A mandatory training phase for staff, and assurances that senior staff will learn and use the software, could also be wise steps to safeguard against failure and non-usage. In lean economic times, the sheer power of dollars to make purchases and implement plans should not be underestimated.

Building Knowledge and Shared Resources

The arts field, particularly smaller and mid-sized organizations, would benefit from strategies that are designed to increase knowledge and encourage sharing of information and expertise. Establishing shared resources could help avoid duplication of efforts and build an information base that is applicable to the arts field. The idea of a shared website is worthy of continued consideration, but should take into account the concerns and endorsements raised by the research. To be most useful, the website would have to avoid duplicating resources or endorsing one particular approach, product, or vendor. Questions for future research on a website might include who the site's target audience is, what information should be offered, what are the best ways to link arts practitioners who use the same software, what could be learned from the way Tessitura offers its training and installation, and whether other nonprofit fields are grappling with the same issues and have addressed these problems.

The concerns from the findings can be used to enhance the design for the new technology course. However, the near-unanimous interest in social media and new trends in technology implies that they would be useful elements of the course. Within the curriculum, the topic of technology planning should bear in mind ways in which organizations' planning practices cut across programs and job functions, along with the ways in which they make decisions about technology costs.

Up-to-Date Research on Technology Usage

Research on the arts field's technology-related issues should be conducted and shared at some regular interval, so that the stakeholders who are dedicated to serving that field can stay informed and craft meaningful responses. This analysis has pointed out gaps in knowledge and implications for future data collection. Due to the breakneck speed at which technology is changing, it would be ideal to establish an iterative and continued flow of feedback and information. A shorter instrument could be developed, adding questions about areas such as software, social media, the titles and roles of individuals who share technological duties, tech planning and strategies, and new trends or shifts in the barriers covered in this report. To ensure a short feedback loop, conducting a brief survey every one to two years would be ideal. To avoid over sampling of the same members, service organizations could distribute it to half of their members every other year. Findings should be shared widely with the entire arts field, providing a valuable service not only to the funding world but to the discipline-based service organizations and their members. Mellon may also opt to combine that research with some review of its own pilot course, allowing course revisions to be informed by up-to-date feedback from the field.

Postscript from The Andrew W. Mellon Foundation

Since 2008, the Mellon Foundation has targeted funding to organizations working in areas that seek to address the challenges identified through the survey; this funding includes grants to: the dance company Misnomer to support the Audience Engagement Platform; Fractured Atlas to support ATHENA Tix, an open source ticketing system geared toward lightly institutionalized performing arts organizations; and Corporate Council for the Arts to support Project Audience, which aims to build technologies to help service organizations encourage more people to get involved in the arts and culture.

As a direct response to the findings of the survey, the Foundation also made a grant to the Non-Profit Technology Enterprise Network (NTEN) to support the development and pilot of "The Art of Technology," a course for nonprofit arts organizations, in collaboration with NPower and Idealware, focusing on core technologies, social media, and data management. A beta version of the course is being presented to an invited group of New York-based performing arts organizations over several months beginning in August 2010, and will be assessed once complete. The course includes an online curriculum overview and technology self-assessment, a two-day on-site training session, and a series of online seminars and conference calls.

Callahan Consulting for the Arts helps arts organizations and funders realize their vision through services in planning, fundraising and evaluation.