

a promising path to developing data governance in the performing arts sector

**A PROMISING PATH TO DEVELOPING DATA
GOVERNANCE IN THE PERFORMING ARTS SECTOR:**
EXPLORING CHARTERS AND PRINCIPLES FOR DATA GOVERNANCE

Megan Wylie
Miranda Sculthorp
Sarah Gagnon-Turcotte
Merlin Chatwin

July 2021

ACKNOWLEDGEMENTS

Research and writing

Megan Wylie, Open North

Miranda Sculthorp

Sarah Gagnon-Turcotte

Merlin Chatwin, Open North

Document layout

Tatev Yesayan

In collaboration with

Synapse C, Mass Culture and Josée Plamondon

Recommended citation

Wylie, M., Sculthorp, M., Gagnon-Turcotte, S. and Chatwin, M. (2021). *A promising path to developing data governance in the performing arts sector: exploring charters and principles for data governance*. Open North and Canadian Association for the Performing Arts (CAPACOA).

Legal deposit

Library and Archives Canada

ISBN: 978-1-9991984-4-2

Published July 2021

This work is licensed under a Creative Commons Attribution 4.0 International License.

This report is funded by the Government of Canada and the Canada Council for the Arts.



Canada Council
for the Arts

Conseil des arts
du Canada

CONTENTS

4	FIGURES, TABLES AND BOXES		
4	Figures		
4	Boxes		
4	Tables		
5	INTRODUCTION		
7	Methods		
9	OPPORTUNITIES FOR DATA SHARING AND COLLABORATION FOR THE PERFORMING ARTS		
9	A varied portrait of data sharing in the performing arts		
9	Exploring value generated from data sharing and collaboration		
13	National and Provincial support for data sharing in Canada		
15	CHALLENGES FOR DATA SHARING AND COLLABORATION FOR THE PERFORMING ARTS		
15	Digital capacity		
17	Changing industry and competitive advantage		
18	The general value of data sharing is not well understood		
18	Standards for interoperability in the performing arts		
19	Organizational priorities during COVID-19		
20	PROMISING WAYS FORWARD: USE CASES, CHARTERS, AND PRINCIPLES		
20	Build use cases as a way to generate a common set of objectives		
21	Building data collaboration: an introduction to data charters and principles		
23	Principles for the performing arts?		
25	Emerging principles of interest		
29	CONCLUSION		
30	REFERENCES		
A-1	APPENDIX A: A SHORT PRIMER ON DATA GOVERNANCE		
A-4	APPENDIX B: WORKSHOP PERSONAS		
A-4	Data-sharing personas		
A-4	Open data personas		

FIGURES, TABLES AND BOXES

Figures

6	Figure 1	The data spectrum
14	Figure 2	Experience publishing open data (survey responses)
16	Figure 3	Challenges to publishing open data and data sharing in the sector (survey results)
21	Figure 4	Situating principles in governance initiatives
23	Figure 5	Interest in developing principles (survey responses)
A1	Figure A-1	Data governance fundamentals

Tables

8	Table 1	Survey respondents: descriptive information
22	Table 2	The purposes and limits of data charters and their principles
26	Table 3	“Values-based” data principles, either named or inferred, that emerged during the workshop
28	Table 4	“Operational” data principles, either named or inferred, that emerged during the workshop

Boxes

10	Box 1	Use cases explored in the art of data sharing webinar, November 2020 - Apidae Tourisme
11	Box 2	Use cases explored in the art of data sharing webinar, November 2020 - Audience Agency
12	Box 3	Use cases explored in the art of data sharing webinar, November 2020 - Banque de Titres de Langue Française (La BTLF)

INTRODUCTION

In the age of digital transformation, organizations increasingly collect, store, and process data. This is no different in the performing arts sector, where organizations are looking to use their data as a tool to meet a variety of goals. Examples of data use include: understanding audience habits and patterns; developing digital communication strategies; delivering new performance experiences; and creating digital archives of past work.

When we refer to **data** in this report, we're referring to any facts or pieces of information that are in a digital form and can be transmitted or processed. These facts can be used to inform discussions, policy, business decision-making, or storytelling. In the performing arts, a variety of data is collected, processed, and used for decision-making. Examples include, but are not restricted to: metadata about organizations stored on their websites; audience demographics and purchasing patterns; government funding amounts and the associated project types and activities.

Benefiting from the opportunities that data brings can require different levels of access to data, as depicted in **The Data Spectrum** (see Figure 1 on p.4). This spectrum only defines *who can use or access the data*, not its type, size, or application.

Closed data, as seen on the left of Figure 1, is data that is held internal solely to an organization or team. Only those within the organization can access and use it (for example, sales reports). It could also be other primary collected data, such as ticket sales with credit card numbers, or a list of an Agent's clients and their

addresses. These are examples of private data, but it could also be non-private/non-personal data such as a list of venues that haven't been shared or opened.

Data sharing is an exchange of data between entities for a specific purpose. Unlike open data¹, it is not freely accessible to everyone and cannot be used for any and all purposes. In Figure 1, between the label 'Closed' and 'Shared', there are two types of access: 'Named access'—where one person at a time gains access to the data; and 'Group-based access'—where two (or potentially more) organizations enter into an agreement to share their data with each other. For example, The Audience Agency conducts a large data-sharing initiative where they pool and share information with performing arts organizations about audience numbers in their region and market (see page 11 for more information). Data sharing can also be decentralized. Decentralized data sharing helps to find data in the same place but isn't necessarily pooled together and can exist in a variety of formats with little attempt to harmonize (Wilkinson et al., 2016). For example, Apidae Tourisme collects and shares a variety of different data related to regional tourism, using a variety of tools to support harmonization across data producers (see page 10 for more information).

Open data is data that is publicly accessible to anyone. Truly open data allows anyone to use it, for

1 Within this report, we refer to 'open data' as a term that encompasses open content. We recognize that these two terms refer to different things, especially as open content invokes various legal obligations of organizations regarding the privacy and creative rights of people in the sector.

Data Sharing is “an exchange of data between entities for a specific purpose” (Thuermer et al., 2019, p. 31).

Open Data is “anyone can freely access, use, modify, and share the data for any purpose” (Open Knowledge Foundation, n.d., p. 1).

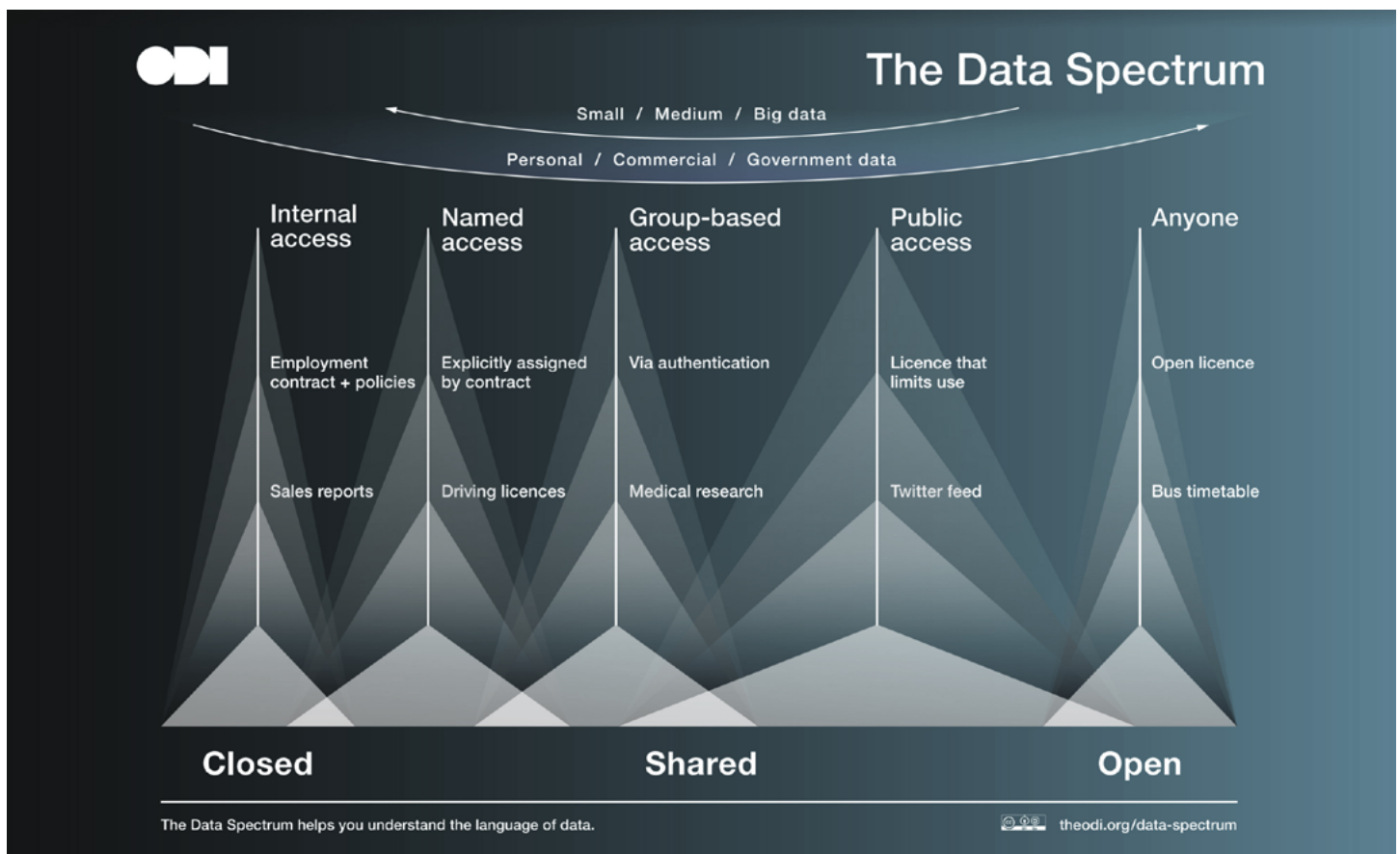


FIGURE 1: THE DATA SPECTRUM

Reproduced from "The Data Spectrum" by the Open Data Institute (n.d.). This figure is subject to a [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. It has been modified.

any purpose, for free. Examples can include data as simple as a company's name and address or regional ticket sales by art category.

It is easy to think that highly sensitive or personal data, such as contractual information, or government health records, would only be closed or shared data. However, this spectrum only shows **who can access the data**. The data can be transformed and/or anonymized to allow for more access and broader use, meaning that the same dataset can exist in different forms when closed, opened, or shared. For example, Statistics Canada shares anonymized health data in different forms both openly on their website, where health data are aggregated to the community level, as well as through researcher data-sharing agreements, where researchers can access individual-level health records that are anonymized (Statistics

Canada, 2021b). This data also exists in its raw form within Statistics Canada.

In this report, we begin by laying out both the opportunities and challenges for data sharing and collaboration in the performing arts sector, drawing on research results and examples from organizations in the field. Following this, we explore the approach of defining principles as a way to build alignment among organizations in the sector. **Data principles** can be captured and documented through data charters, a tool which we explored for their potential to create greater alignment among organizations and their data systems. Although the initial focus of this report was on data charters, most of the research focused on the principles contained in these charters.

This report is the culmination of a project led by

Principles are high-level “rules” or agreed-upon ideal norms that shape the design of an organization or a group’s structures and processes. They often reflect some group consensus and are embraced as guidelines by the members (Wilkinson et al., 2016).

Data Charters are documents that list declarative principles that underlie the actions of an organization and act as high-level guiding values in their work.

CAPACOA, in collaboration with Open North. The project was motivated by the desire to collaboratively improve data governance across the performing arts sector (Estermann & Julien, 2019). This is the first step in understanding and building a data governance framework, a set objective by the Linked Digital Future Initiative (LDFI), that can help to “establish who is able to share what type of data with whom, and who will have authority over which data/information” (Estermann & Julien, 2019, p. 7). Improving data governance is one way in which CAPACOA and its partners are creating conditions to foster more data sharing and data re-use in the performing arts sector as well as helping performing arts organizations reach their goals (Petri & Julien, 2017).

Methods

The research design was also driven by the following two emerging needs: recognition of the limited data literacy in the sector; and a desire to co-create any data governance tools developed. These additional motivations shaped Open North’s approach to the research and methods.

The project methods consisted of a series of exploratory activities on data charters and principles, including such entities as a webinar, workshop, environmental scan of research, and survey. The survey was distributed to relevant performing arts organizations in February 2021; a total of 178 responses from

those who started the questionnaire were received. Only about half (86) of the respondents completed the entire survey, and all analyses for this report only included those who completed the survey (i.e., the 86 responses).²

Our online workshop was held on April 22, 2021 for an hour and a half with 15 participants chosen by the research team. The workshop consisted of a persona analysis exercise, where two groups of participants reviewed three personas (a total of six different personas). One group focused on open data use cases and the second group focused on data-sharing use cases³. During a follow-up plenary, participants shared their thoughts and ‘ah-ha’ moments. Notes were recorded by Open North staff, and results are listed throughout the report.

Throughout the exploratory research, the Open North team also conducted an environmental scan. This consisted of further exploring items raised during conversations with our research partners and during our exploratory activities. This is not an exhaustive review of the challenges facing the sector, but the environmental scan allowed us to situate our work within a broader context of change and challenges in the sector.

2 Survey analysis was completed by Synapse C. The full analysis is available upon request to Megan Wylie, megan@opennorth.ca

3 The developed personas are available in Appendix B.

The Art of Data Sharing: Watch our webinar recording online at CAPACOA.ca!

[Watch here!](#)

**TABLE 1: SURVEY RESPONDENTS:
DESCRIPTIVE INFORMATION**

If you live in Canada, in which province do you primarily reside?		Number of responses
Canada	Ontario	24
	British Columbia	16
	Québec	25
	Prairies (Alberta, Saskatchewan, Manitoba)	8
	Atlantic Canada (New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island)	6
	Territories	No responses
International		6
Do you consider yourself to be part of the performing arts sector?		Number of responses
Yes		71
No		15
What is the primary activity of your organization?		Number of responses
Arts services, labour or membership organization		19
Consultant		7
Creation, production and/or presentation of art works		40
Educational institute		3
Library or archive		2
Other		7
Null		8

* Only about half of the respondents completed the survey (i.e. completed the entire questionnaire; 86) and all analyses for this report only included those respondents (i.e. 86 responses).



OPPORTUNITIES FOR DATA SHARING AND COLLABORATION FOR THE PERFORMING ARTS

The following section reports on Open North's observations for increased data collaboration in the performing arts sector.

A varied portrait of data sharing in the performing arts

It became apparent through our research that organizations in the performing arts sector are interested in the ideas of data sharing and collaboration. Just under half of the survey respondents (48%) either publish open data (1 in 4) or plan to publish open data (1 in 5). For data sharing, half of the survey respondents are sharing data (50%), and 1 in 5 are making plans to share data. This means that just under 70% of respondents (69%) are either sharing data or plan to share data. This was also noted during our workshop, where one respondent stated that performing arts organizations are already sharing a lot of diverse datasets with each other, just on a one-to-one basis.

Although there is enthusiasm, **the interpretations of data sharing are quite diverse**, highlighting the many ways in which organizations are collaborating to better structure and make use of the data they collect. For example, the survey respondents indicated that their data-sharing activities include:

- direct sharing of data between one organization and others for specific purposes (e.g., on an informal basis, or with requirements for protecting confidentiality), especially between arts associations and funders;
- creating online, accessible archives of performing arts data and content, such as [Sceneweb](#), a national historic archive of Norwegian professional performing arts and [artfinds](#), an app to find local art and art experiences close to them;
- sharing of working documents (e.g., text,

image, audio) while working on creating digital productions;

- publishing writing in free, open, newspapers, and magazines;
- maintaining an artist directory on Wikidata; and
- maintaining social media feeds (e.g., discussion forums).

These responses create a colourful picture of data sharing in the performing arts sector: different kinds of data are shared at different stages of its analysis, using different technologies, involving different people in the sector (e.g., funders, service organizations, individual artists, and more) as well as using different standards or models. Although the list of activities is diverse, the question then becomes: Why are people pursuing data sharing? What value are they looking to generate?

Exploring value generated from data sharing and collaboration

To answer this question, we looked at different real examples of data sharing and then reviewed these cases during exchanges in the webinar held in November 2020. These cases represent efforts to better structure and increase knowledge along the value chain as a whole. In the case of the three webinar panelists, specific organizations were created to:

- harmonize practices for sharing information as data; and
- generate value for people in the sector in achieving their goals.

Each organization focused on different data types, value propositions, and approaches to collaboration that provide different potential paths and considerations for the Canadian performing arts sector.



BOX 1: USE CASES EXPLORED IN THE ART OF DATA SHARING WEBINAR, NOVEMBER 2020

APIDAE TOURISME

“The first information network for tourism data”

— Claudia Patel, The Art of Data Sharing webinar

France

WHAT: Network of tourism organizations sharing data to improve tourism offerings across France. The network includes commercial partners, hotels, museums, tourist guides, and more.

TYPES OF DATA: The Apidae network boasts more than 300,000 object files! This includes points of interest, events, evaluation data, marketing data, and more.

VALUE: Apidae provides a platform that aggregates tourism data from across France and allows those in the network to share and access various datasets. The data, which inform customers of tourism offerings in different regions, are used to:

- improve customer experiences in various locations;
- improve tourism offerings, by evaluating and structuring a territory to improve its attractiveness; and
- support pilot initiatives, such as visitdata (Apidae: L’information touristique, n.d.-a).

APPROACH: Decentralized, network approach, and a cooperative model.

SUPPORTING PRINCIPLES: Apidae has an Ethical Behaviour Charter (Apidae: L’information touristique, n.d.-b) that is meant for their entire network of data providers and users. This espouses their network values of “sharing, openness, entrepreneurial freedom, community, ecosystem” (Apidae: L’information touristique, n.d.-a, p.1). The charter includes the following three remarks:

- “I contribute data”
- “I use the data”
- “And because I’m part of the community”

Each bullet has a sub-list of commitments made by those who participate in the network.



BOX 2: USE CASES EXPLORED IN THE ART OF DATA SHARING WEBINAR, NOVEMBER 2020

AUDIENCE AGENCY

“Enabling cultural organizations to use [UK] national data to increase their relevance, reach, and resilience”

— Patrick Towell, The Art of Data Sharing webinar
United Kingdom

WHAT: A centralized organization to aggregate, analyze, and help organizations use arts and culture audience data.

TYPES OF DATA: Survey data, ticketing data, and national statistics.

VALUE: The data are used to:

- provide collective intelligence by pooling data from multiple organizations and publishing national data insights; and
- support individual organizations with an analytics platform (Audience Finder, a personalized organization dashboard) and impact analysis (audience data linked to cultural engagement broadly).

APPROACH: A centralized database made up of pooled arts and culture audience data.

SUPPORTING PRINCIPLES: The Audience Finder Community Charter includes the following principles:

- “Your needs first”
- “Mission before profit”
- “Committed to quality”
- “We are responsible custodians of the national audience data set” (The Audience Agency, 2021, p.1)

These principles are primarily promises from the Audience Agency to its data users in how they conduct their organization.



BOX 3: USE CASES EXPLORED IN THE ART OF DATA SHARING WEBINAR, NOVEMBER 2020 BANQUE DE TITRES DE LANGUE FRANÇAISE (LA BTLF)

“Le pivot de l’intégration technologique de la chaîne du livre francophone au Québec”

— Patrick Joly, The Art of Data Sharing webinar

Québec, Canada

WHAT: A leader in international metadata standards for French-language books, providing consistency in French-language book metadata within the ‘book chain.’

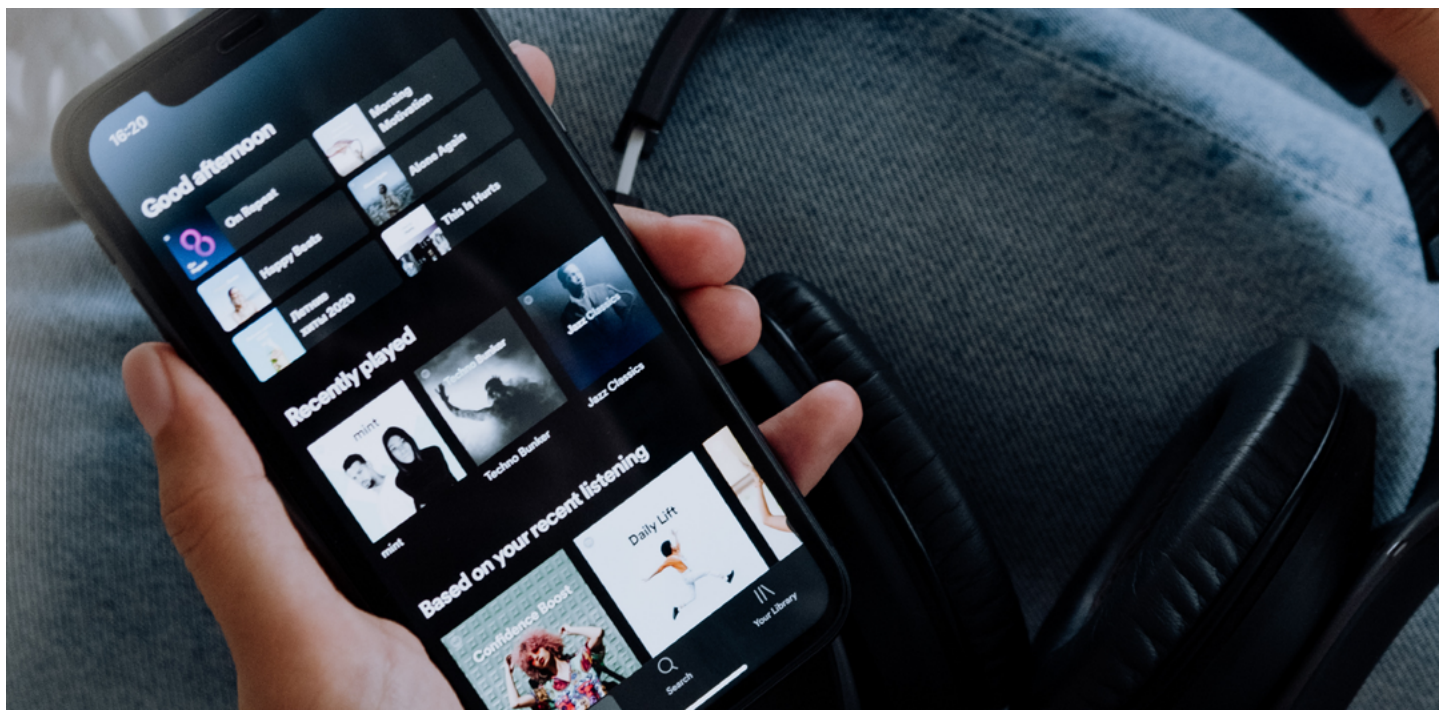
TYPES OF DATA: Metadata for French-language books, including thumbnail, cover images, summary, reviews, and biography (Cervellin et al., 2020).

VALUE: The data are used to:

- improve marketing and promotion of French-language books within Canada;
- foster communication and cooperation among publishers, booksellers, distributors, librarians, and other participants in the book industry; and
- provide tools and business intelligence for stakeholders.

APPROACH: A centralized database.

SUPPORTING PRINCIPLES: None explicitly stated. Their Politique de référencement de la BTLF (BTLF, 2020) includes data management guidelines that largely reflect the FAIR (findable, accessible, interoperable, and re-usable) principles.



National and Provincial support for data sharing in Canada

Many Federal and Provincial programs aim to address and improve the use of data and data literacy in the sector. The Canada Council for the Arts Digital Strategy Fund supports “strategic initiatives that will help Canadian artists, groups, and arts organizations understand the digital world, engage with it, and respond to the cultural and social changes it produces”. The Canada Council invested \$88.5 million and the fund is expected to continue in the coming years (Canada Council for the Arts, 2021, p.1).

Québec has gone as far as to create a digital strategy. This is championed in their Plan Culturel Numérique du Québec, where they commissioned studies to explore the impact of adopting data best practices

(Gouvernement du Québec, 2021). For example, in 2017 they conducted a study about the use of metadata in the arts sector (Observatoire de la culture et des communications du Québec, 2017). Québec also commissioned data literacy tools such as videos on descriptive metadata (Ministère de la culture et des communications, 2019a, 2019b) and a handbook on open data in the culture sector (Ministère de la culture et des communications & Secrétariat du Conseil du trésor., n.d.). We expected that this supportive policy environment for arts and culture organizations, designed to embrace digital transformation, would allow arts organizations to better understand the gaps and resources required to fully improve the use of data and technology, as it is unprecedented among Canadian provinces and territories.

LEARN MORE ABOUT THE BENEFITS OF METADATA!

From le Ministère de la culture et des communications

Les métadonnées, pour une meilleure visibilité des contenus culturels

[Watch here!](#)

Les métadonnées : un travail d'équipe!

[Watch here!](#)

Has your organization published open data?

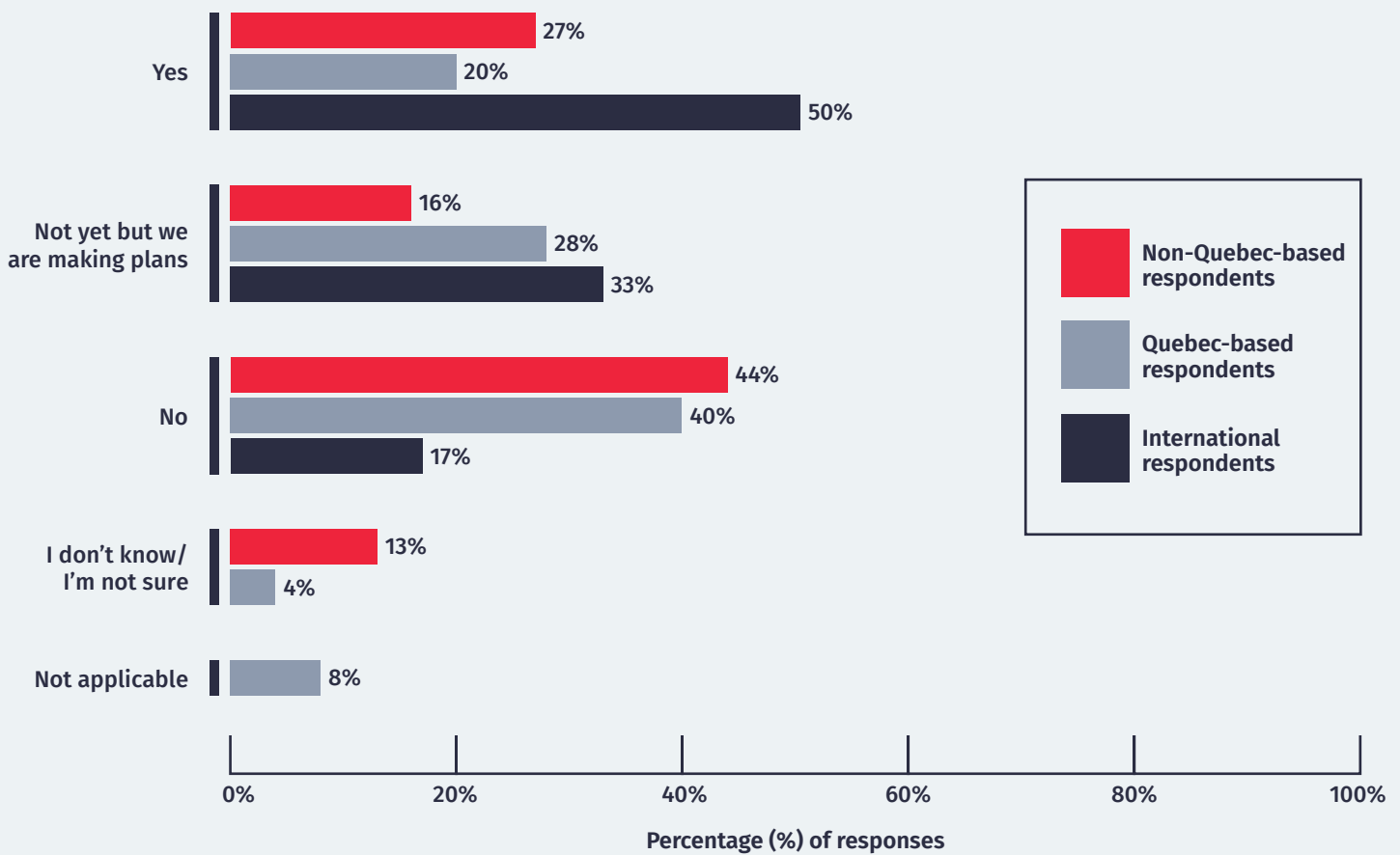


FIGURE 2: EXPERIENCE PUBLISHING OPEN DATA (SURVEY RESPONSES)

However, our survey results didn't find the expected differences between Québec and the rest of Canada in terms of the amount of data sharing or in the challenges faced by those in the sector to pursue data sharing. We see that, in fact, organizations within Canada but outside of Québec report publishing more open data⁴. A total of 20% of Quebec-based respondents reported that they are publishing open data, compared to 27% for the rest of Canada, a difference of 7%.

However, many more respondents are planning to publish open data in Québec. A total of 28% of

⁴ The number of respondents to the survey is too small to be confident that these differences are, in fact, statistically significant (i.e., actually different from each other versus random variations in numbers).

Québec-based respondents are planning to publish their open data versus 16% of respondents from the rest of Canada.

We recommend further research be completed on the differences between Québec and the rest of Canada, as the number of survey respondents was too small to draw definitive conclusions on patterns between Québec and the rest of Canada.

It becomes clear that, both within Québec and other provinces and territories, people are interested in data sharing. Our survey showed that people are looking for ways to better manage data within and across organizations to draw relevant insights that inform planning, increase service offerings, attract new audiences, increase discoverability, and more.

CHALLENGES FOR DATA SHARING AND COLLABORATION FOR THE PERFORMING ARTS

Although there seem to be many opportunities and avenues for data sharing and collaboration, challenges remain that would enable organizations to fully participate.

Digital capacity

Indeed, before starting to embark on inter-organizational efforts to better structure or share data, organizations need to have the data know-how and capacity. We listed a variety of challenges that survey respondents could identify as barriers to opening and sharing data within the performing arts sector.

We found that digital capacity (i.e., skills, know-how) was a high perceived barrier to pursuing data sharing⁵. Respondents ranked digital capacity as the second-largest challenge to publishing open data and third for data sharing.

5 Our survey allowed participants to rate pre-defined challenges on a scale of the degree of the challenge (i.e., from minor challenge, major challenge, and not a challenge). To analyze the responses, Synapse C weighted them as 1 (major challenge), 0.3 (minor challenge), and 0 (not a challenge). This allowed Synapse C to rank the challenges from those with the highest scores to lowest scores, interpreted as those that are the largest challenges versus lower challenges.

In the open survey response category, the lack of digital capacity was also raised by respondents. One example included a respondent who stated the following deficiency: “lack of workforce to undertake this project.” Beyond the lack of team members, there was also a lack of legal resources and representation, IT resources, and data analysts.

As this is such a prolific challenge, we also heard examples of this in our workshop. One workshop participant remarked on the technical skills required to remove shared data and content online:

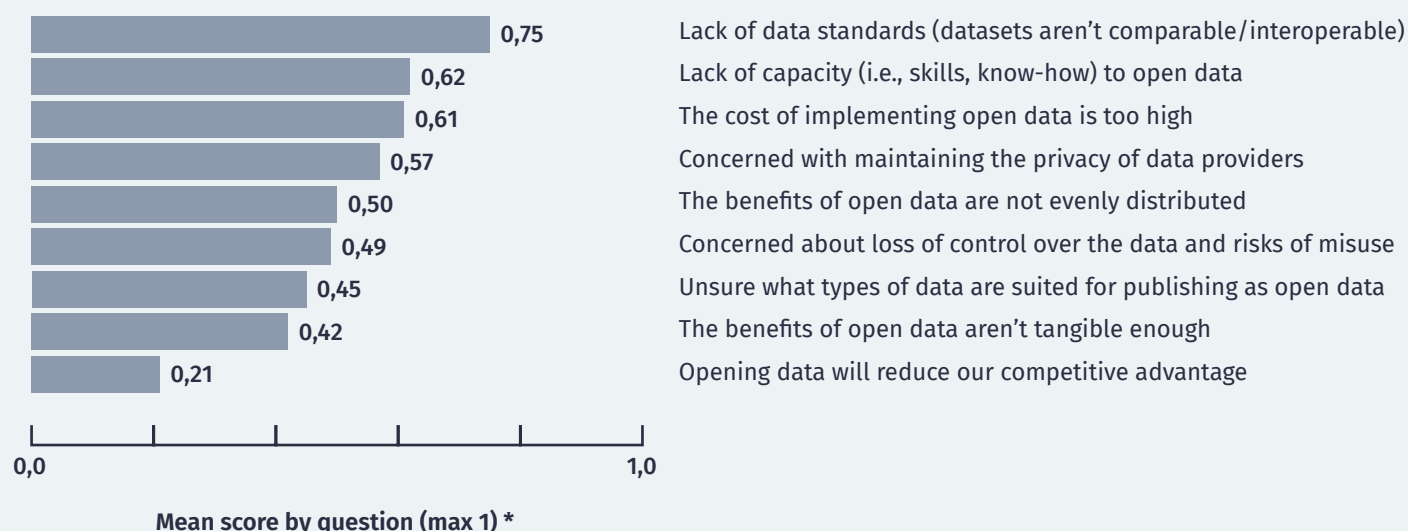
They’re not going to know how to remove people from Google indexing... it’s a really complex thing to do... How do we provide those skills and tools?

- Workshop participant

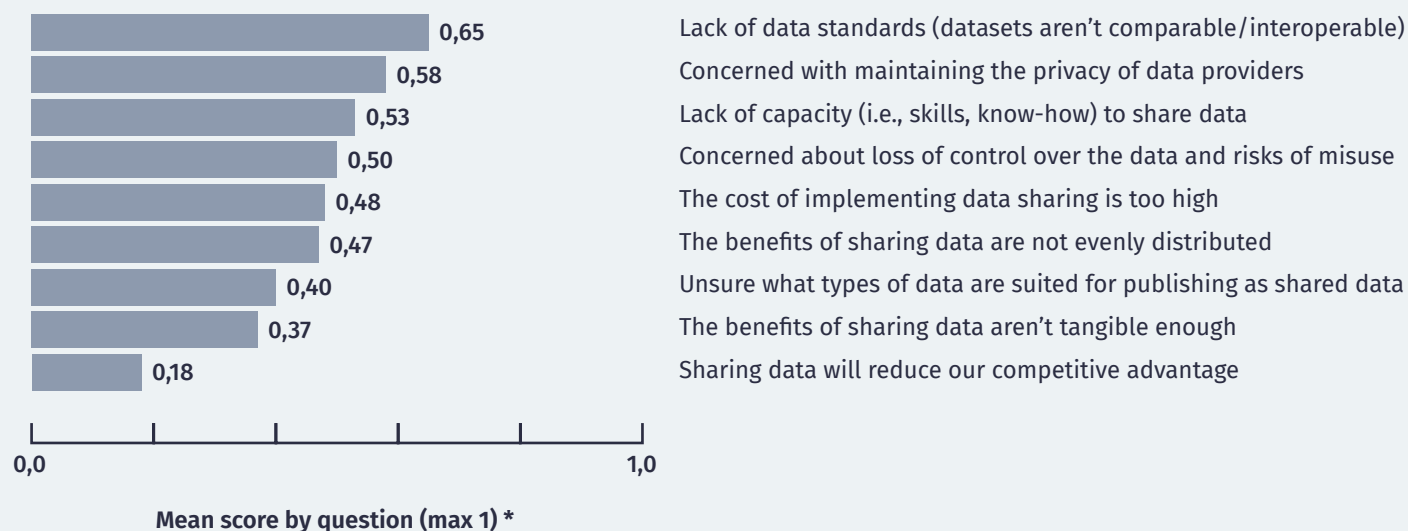
Beyond the initial availability of resources and digital capacity, additional organizational factors come into play.



What challenges do you foresee for your organization when publishing open data?



What challenges do you foresee when sharing your data?



* Note. Our survey allowed participants to rate pre-defined challenges on a scale of the degree of the challenge (i.e. minor challenge, major challenge, and not a challenge). To analyze the responses, Synapse C weighted them as 1 (major challenge), 0.3 (minor challenge) and 0 (not a challenge). This allowed Synapse C to rank the challenges from those with the highest scores to lowest scores, interpreted as those that are the largest challenges versus lower challenges. See Appendix B.

FIGURE 3: CHALLENGES TO PUBLISHING OPEN DATA AND DATA SHARING IN THE SECTOR (SURVEY RESULTS)

Changing industry and competitive advantage

As we know, each organization and/or artist has its/their own mission, objectives, values, and interests. Larger data collaboration projects will require inter-organizational collaboration and common goals and interests. Data sharing requires looking beyond individual needs and thinking about shared value and collaboration to generate individual and collective benefits.

This comes at a time when the performing arts sector is undergoing changes to its business model that leads to changes in competitive dynamics but also a need to share data and information. One example is the change in ticket sale patterns from long-term patrons to one-time buyers (WPF-TDC, 2016). Plus, there are specific attitudes surrounding data, particularly when it is seen as an asset for the organization: organizations may be reluctant to share data that they believe provides them with a competitive advantage over other parties; in other words, organizations fear that sharing their private data would result in a loss to them and a gain for other parties (Gagnon-Turcotte et al., 2021).

These diverging interests and competitive dynamics can be overcome when parties realize how collective value can be generated — and redistributed — as a result of sharing their data and making a commitment to engage in a collaborative process, aiming to achieve a set of common objectives (Gagnon-Turcotte et al., 2021 p.23; Wernick, Olk, & von Grafenstein, 2020).

Our research suggests that competitive dynamics are not a perceived concern within the sector. Our survey results indicate that reduced competitive advantage is the lowest perceived challenge. Not only is it ranked the lowest among respondents, but it is ranked 0.21 and 0.19 points lower (scale of 0-1) than the next challenge ranking, for open data and data sharing respectively.



Sample persona from our workshop: Data sharing

Francine: I'm a Program Manager for Canada Council for the Arts, managing their Digital Strategy Fund. I work with our evaluation and data team to collect and maintain all data related to programs and projects funded throughout Canada. This includes information such as the client's name, location, as well as detailed financial reports, staffing, and reporting about activities. Statistics about activities include the types of activities, number of activities, and total participation.

I am interested in sharing data and am in charge of researching how we can, as a first start, transform and share our disaggregated data with associations, with other funders, and with researchers. I don't know where to start, what skills and technology we will need to acquire/use, and what risks will arise. Because this is sensitive data about other organizations and about individual artists, I want to ensure this information sharing benefits our program clients.

Sample persona from our workshop: Open data

Theo: I'm a Chief Marketing Officer for a Quebec City-based ballet and modern dance school. I am interested and taking steps to aggregate and publish information about dance venues. I want to better share where dancers can practice and perform, including space availability. We already share our organization's preferred venues list with alumni.

We struggle to make open data a priority, as our team lacks the technical capacity (skills, know-how, and network) to assess implementation costs and next steps.

I want to share this data in a better format than a spreadsheet (e.g., Application Programming Interface (API), shapefile with geo-location) in order to help individual dancers find performance space that best suits their needs.

The general value of data sharing is not well understood

There are also many different reasons why people would want to participate in data sharing in the sector, and not everyone agrees on which reasons are the most important. This means that there isn't consensus within the sector on *why* organizations *should* share data. The material benefits to the community are not clear.

Many of the comments we received in our survey and workshop underscored the lack of perceived value of open data and data sharing for the sector. Survey respondents stated: "What are the benefits of open data? Which types of data are we trying to open?" In our workshop, participants also said, referring to the personas: "Why does this person care about open data? Is open data a solution for them?"

Despite this, we heard of many successful data-sharing and open data initiatives, as well as initiatives in their pilot stages. These specific use cases seem to be bringing together stakeholders to share data in order to achieve a common goal.

Standards for interoperability in the performing arts

Although the importance of standards for interoperability are well understood, establishing and adhering to standards remains a critical challenge across sectors. Standards for interoperability are more than just an individual challenge, they are a collective challenge. They require a community to arrive at a consensus on a set of specifications that guide how information is represented as data. Further, once consensus is reached, the community must still continue to meet to maintain and update the

standards based on user and community experience. This need for community consensus on establishing standards and cooperatively monitoring adherence indicates the need for a data governance framework to establish processes and agreements.

The data governance framework can also help to address when standards do not meet the needs of certain groups or communities within the sector. Although standards are widely recognized as beneficial, they are also criticized for prioritizing technical interoperability over unique human understanding or different ways of knowing (Brandusescu et al., 2020). Montenegro (2019) illustrates this by saying that, “The most basic assumption regarding any standardization process is that everyone takes equivalent steps to adopt standards and that the standard that is successful for one group of people or institution works for all” (Montenegro, 2019. p.736).

The challenge of interoperability was prevalent in the survey. When asked “What challenges do you foresee when sharing your data [/publishing open data]?”, respondents ranked “Lack of data standards (datasets aren’t comparable/interoperable)” as the largest challenge (see Figure 4).

Although standards for interoperability are a prerequisite for enabling data re-use and realizing the benefits of shared and open data, they do not have inherent or immediate benefits. Capacity limitations within organizations in the performing arts sector require them to prioritize investments in immediate needs. Overcoming these challenges and pursuing the long-term benefits of interoperability standards will require community collaboration.

Numerous existing examples of standards have been developed in the performing arts sector, with a diverse array of organizations pursuing the development of future standards. Despite the observable activity in developing interoperability standards, implementation and maintenance remains liminal.

The diversity of organizations, data, and needs will make it difficult to unify the sector into a cohesive set of standards. Further, acting alone, it is challenging for organizations to keep up with the pace of change and maintain a current understanding of relevant standards for particular datasets. A promising approach to collaboration in the sector is through knowledge sharing led by organizations that are advanced in their capacity to open and share data. To ensure equity and include the diversity of perspectives in the field, organizational leaders are encouraged to: actively seek out divergent perspectives in the standard design process; develop a broad understanding of the contexts and needs of multiple users; and be explicit about roles, power, autonomy, and relationships during implementation (Brandusescu et al., 2020).

Organizational priorities during COVID-19

The sector is typically made up of small to medium-sized organizations, many of which are already under-resourced, and this has been exacerbated by the COVID pandemic. Indeed, CAPACOA reports that between 2019 and 2020, employment in the arts declined by 25.4% and total actual hours worked fell by 36.6%. Of all sectors in Canada, the arts, entertainment, and recreation sector was the hardest hit in 2020 (CAPACOA, 2021; Statistics Canada, 2021a).

It goes without saying that in the current context, data sharing and collaboration is not a priority for many organizations, as it often takes dedicated technical resources and expertise to make these projects possible (Gagnon-Turcotte et al., 2021).

Overall, we see challenges to sharing data in the performing arts sector. These challenges remain and are looking to be addressed by different initiatives in the sector, including various projects and programs seeking to build a digital culture in the arts sector.

PROMISING WAYS FORWARD: USE CASES, CHARTERS, AND PRINCIPLES

This project explored data-centric and people- and purpose-centric principles as well as their packaging into data charters as a potential option to address some of the challenges in the sector. Our key findings are outlined below.

Build use cases as a way to generate a common set of objectives

Recognizing that people in the sector have different goals for data usage, sector stakeholders must first arrive at a common understanding of their direction before they can envision the individual and collective benefits of shared and open data. The use case methodology can help achieve this shared vision and define a common set of objectives.

In this context, the **use case** methodology looks at a particular type of person, stakeholder, or customer trying to achieve a certain goal and evaluates solutions to the challenges they encounter along their journey. In the case of open data and data sharing, we are typically thinking of particular stakeholder groups, the goal they are trying to achieve together, and how open data or data sharing could potentially help them achieve their goal. The use case helps to manage scope and vision of a project (Jacobson et al., 2011).

Defining a use case allows the parties to look beyond their own needs and to understand what can be gained if their efforts (and data) are put together. It clarifies **the vision and objectives** of the stakeholders and **the data they need** to pursue their goal (Gagnon-Turcotte et al., 2021; Jacobson et al., 2011). The same open data or shared data may be used in many different ways within different use cases.

The use case approach can help a group identify the first ‘quick win’ which will initiate the cycle of collaboration and experimentation between organizations. It can be useful to start by identifying which datasets are available, and what value can be generated from sharing them and structuring them in common formats. Our survey results showed that some people in the sector find that the lack of clear benefits to open data and data sharing are a key challenge for them in pursuing initiatives (see Figure 4). Compelling use cases can help to build a common understanding of the benefits.

A lack of IT, material, and legal resources as well as the perception of a lack of benefits for the organization.

- Workshop participant

Working groups within the global performing arts sector have already started building use cases! **W3C Performing Arts Information Representation Community Group** is creating shared models for data interoperability in the performing arts sector. As part of this, they have begun to compile use cases.

See [W3 working group description](#) and [Working group Github](#)

The **Linked Open Data Ecosystem for the Performing Arts** (LODEPA) has also begun compiling use cases as they work towards creating a data governance framework within their community.



FIGURE 4: SITUATING PRINCIPLES IN GOVERNANCE INITIATIVES

Note. Reproduced from an image titled “Three key elements of the IT Governance Model of CEF Telecom.” From “Non-paper on the IT Governance of the CEF Building Block Digital Service Infrastructures (DSIs),” by the European Commission Directorate-General for Communications Networks, Content and Technology, (p. 4). This figure is subject to a [CC BY 4.0](#) license. It has been modified.

Building data collaboration: an introduction to data charters and principles

Building off experiences from the ground, principles may start to emerge and can be documented into a more formal instance, such as a declaration or charter. Indeed, we began this project with the aim of exploring how data charters can be used to govern data across the performing arts sector.

Charters list declarative principles that underlie the actions of an organization and act as high-level guiding values in their work. Principles rest at the strategic level of an initiative, meaning that they underlie all implementation activities throughout the initiative, but do not necessarily define the *how*, or the implementation activities.

Types of principles

A data charter focuses on data principles, which typically outline aspirational data management practices and the principles. The **FAIR** principles — or Findable, Accessible, Interoperable, and Reusable — are a popular set of data principles that were created by academic researchers to better share and use scientific data (Wilkinson et al., 2016). They have since been taken up by a variety of other sectors, including “governments, governing bodies, and funding bodies” and are typically the focus of data charters (Mons et

al., 2017, p.1). We’ve referred to these data management principles as “operational” principles in our research.

Others have found it important to complement these data principles with principles that outline the people involved in the data processes and the purpose of the data collection and use. This was spearheaded by Carroll et al. (2020) in an article that outlines a set of principles called **CARE**, or Collective Benefit, Authority to Control, Responsibility, and Ethics. These principles were created to “empower Indigenous Peoples by shifting the focus from regulated consultation to values-based relationships that position data approaches within Indigenous cultures and knowledge systems to benefit Indigenous Peoples” (Carroll et al., 2020, p.3).

The CARE principles themselves are meant for Indigenous data governance as well as to complement the already established FAIR principles (Carroll et al., 2020). They have inspired other sectors and groups of people to think about their principles and how to centre people and purpose of data use. For the purposes of our research, we call these “values-based” principles.

A few examples of the use of principles in the performing arts and in the arts and culture sector include The Audience Agency’s Community Charter and Apidae Tourisme’s La charte de comportement éthique.

TABLE 2: THE PURPOSES AND LIMITS OF DATA CHARTERS AND THEIR PRINCIPLES

Purposes	Limits
<ul style="list-style-type: none"> Align a group around a single vision, providing a compass to guide their actions (but does not guarantee the implementation of the principles) Make public declarations on principles in order to set a vision and align on what you stand for, potentially in light of new emerging issues around data and tech (this is where we see, for instance, AI declarations) Catalyze new collaborations, gather organizations to think through potential solutions (especially if there is a collaborative, participatory process for designing the data charter) Provide guiding information to people in the sector on aspirational data management practices 	<ul style="list-style-type: none"> The charter is only as good as the process: A charter that truly reflects the sector's principles when embarking on digital transformation will require smart planning and foundational information. A charter is aspirational, not operational: a data charter will not tell organizations how to better manage their data or improve data use. However, it can ensure that data practices are done in alignment. Charter adoption will require consistent staff and sectoral investment to ensure its success.

* These bullet points are primarily drawn from a review of the following charters and declarations: [Nantes Métropole Data Charter](#), [Charte des données numérique](#), [Barcelona's Digital Rights Charter](#)



Are you interested in the arts sector adopting data principles?

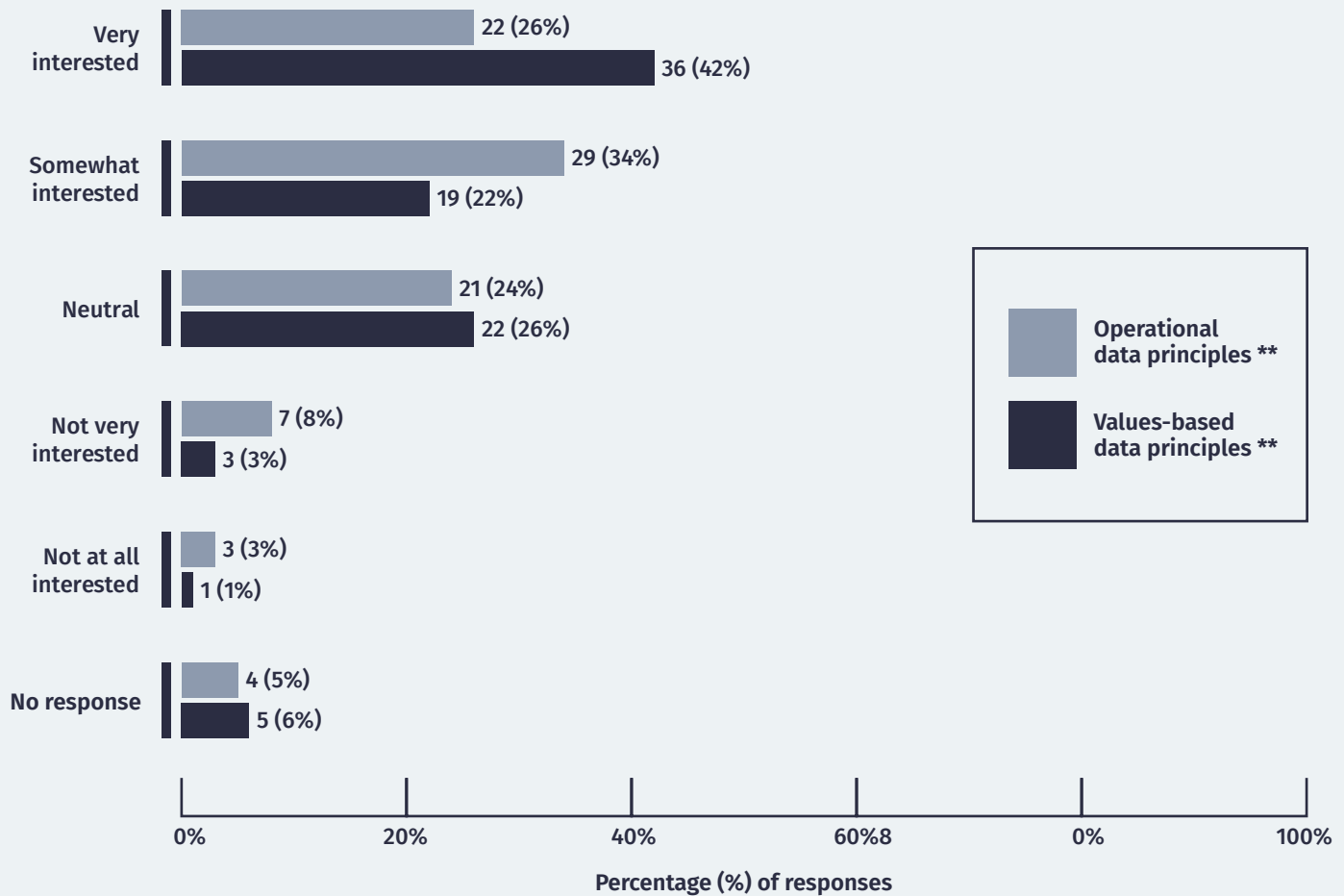


FIGURE 5: INTEREST IN DEVELOPING PRINCIPLES (SURVEY RESPONSES)

* Operational data principles: refer to aspirational data management practices

** Values-based data principles: refer to the people involved in the data processes and the purpose of the data collection and use

Principles for the performing arts?

Recognizing the purposes and limits of data principles, we went one step further by asking: What is the appetite for principles within the performing arts sector?

What is the interest in sector-based principles to guide data governance in the performing arts?

Sector respondents expressed an overall interest in co-developing a set of principles to guide data governance decisions. In our survey results, we found that 73% of respondents were either somewhat or very interested in developing a set of data principles.

Although more respondents indicated their support for what we called “values” principles, i.e., principles that centre people and purpose of the data collected, the difference was minimal when compared to more traditional data principles such as the FAIR principles. A total of 60% of respondents were at least somewhat interested in traditional data principles (such as the FAIR principles), and 64% of respondents were at least somewhat interested in values-based data principles.

Our workshop resulted in a similar sentiment, although the question was not directly posed to the participants. For example, participants followed up with project leads after the workshops to express

their interest and share their ideas on developing a set of principles for the performing arts sector. In another example, during the plenary discussion, one participant remarked:

The objective isn't to be comprehensive and exhaustive. That is why the approach of using principles is so powerful. Even in our individual contexts, we may be applying principles in a very specific way to our context, we can still articulate a shared understanding of what those principles are.

- Workshop participant

This data points to a strong perceived benefit of developing data principles for the performing arts sector.

What principles do performing artists and organizations currently use or refer to?

In our survey results, we found some examples of principles already in use by the sector. For example, two respondents mentioned the FAIR and CARE principles, and another respondent stated privacy.

Our survey results seem to indicate that there is *not* a common understanding of what is and is not a principle. Of those who provided written responses to our survey, many referred to data governance mechanisms (see Appendix A) and not principles, such as the General Data Protection Regulation (GDPR), ethics committees, democratic processes, and union contracts.

These data governance mechanisms may embed principles and are worth discussing and exploring as to which ones and how they may indicate principles; however, they are not principles of data governance.

What are some potential barriers to creating sectoral principles?

The process of creating principles for the performing arts sector is still uncertain — and many questions remain.

A. A perceived need to create “new” principles

Our survey showed that respondents favored the creation of a new set of data principles. We found that 29% of respondents supported the process of the arts sector “designing new charters and principles” and not using formerly developed or agreed-upon principles from other sectors.

Another 37% of respondents said that if existing sets of principles were adopted by the performing arts sector, they would require major changes. Only 2% of respondents stated that no changes would be needed.

B. Potentially different interests and needs between the open data and data-sharing community

It's unclear if a set of data principles could encompass both open data and data-sharing initiatives in the performing arts sector. When asked if there could be a set of principles that led to the development of data governance for both open data and data sharing in the performing arts, we heard that more conversations were needed. Workshop participants said:

- “You have to test it... there are way too many variables. That needs to go out... to me it's a massive question.”
- “There might be some common principles, and there might be some separate principles.”

This will warrant further discussion with community members before proceeding with the development of principles.

Emerging principles of interest

During our workshop, we found that certain data principles emerged as having a common interest and meeting a common need amongst our workshop participants. Table 3 and Table 4 list a set of 13 principles that were discussed during our work and within survey comments. The terms used to define the categories come from the authors' analysis of principles in other sectors. All quotes listed in the right-hand column are from primary data collected during this research. The tables are divided into principles that reflect the purpose and people involved in data initiatives ("values-based" principles; Table 3) and traditional data principles (Table 4; "operational").

These emerging principles in Table 3 and Table 4 warrant further exploration with a larger number of participants in the performing arts sector to ensure that the data principles are understood and categorized correctly and that they reflect the needs and intentions of those within the sector.

Emerging questions for data governance in the performing arts sector

Throughout our research, four key questions emerged

that warrant further exploration to ensure successful collaboration and governance of data throughout the sector:

1. What is a higher priority: operational principles, or values-based principles?
2. Is the expressed need for principles that are specific to the performing arts reflective of a true need or a reflection of limited knowledge of existing principles? If survey respondents don't have a clear understanding of what principles are, how should we interpret their stated need for "new" principles?
3. We found there was general agreement on the following assertion: performing arts organizations have a low capacity to participate and contribute to data initiatives. How do we make it easy enough, so that even low-capacity people and organizations can participate? How can principles such as inclusion, ownership, control, and sovereignty be reconciled with organizations' low capacity to participate in data initiatives?
4. How do we continue this conversation during a global pandemic that has particularly impacted the performing arts sector?

Overall, our research has shown that there is interest in creating principles to help guide the sector's data governance as well as various projects and programs.

TABLE 3: “VALUES-BASED” DATA PRINCIPLES, EITHER NAMED OR INFERRED, THAT EMERGED DURING THE WORKSHOP

Principle	Participant Perspective
Beneficial to performing artists and their organizations	<p>“We’re confounding the tool and the end goal. Why are they interested in open data?” (open data breakout room)</p> <p>“We realized that our personas don’t care about open data” (open data breakout room)</p> <p>“Most data and analysis we’ve gathered and presented are just being used from public institutions to check a box, thus we feel the NGO sector with low payments is being an exploitation to people working in the sector with volunteer work or low fees” (survey respondent)</p> <p>“We need to define the scope. If we open datasets for the sake of opening datasets, we’ll miss an opportunity. There’s a risk here of getting on the bandwagon. We’ll fall into some traps, we need to ground everything in need. Then we’ll set ourselves up for longevity and success in the sector” (plenary)</p>
Inclusive	<p>“Achieving the balance of sharing data for public interest/public good, while protecting the interest of groups that are REPRESENTED in the data (not necessary the source or contributor of the data)” (data-sharing breakout room)</p> <p>“It needs to involve the stakeholders, including those who are represented in the data” <i>[When referring to the development of an intermediary body to help with data]</i> (plenary)</p>
Right to be forgotten	<p>“...judicious use of data. We’re a few years on the web, and people are now asking about the right to be forgotten. Because people didn’t think about it” (plenary)</p> <p>“It’s so important to think about how we can create a web environment that we can live with later... So that later on we’re not thinking, why did we share all that stuff that we didn’t need to” (plenary)</p> <p>“Most information we’re talking about, the people want it to be re-used. The area where there seems to be issues is the images. I don’t know if I’d want my images to be ‘open,’ so all of a sudden I could be used for some marketing” (plenary)</p>
Accountable	<p>“Funders have a particular bird’s eye view that is rich with data and information. I would almost push them to think about themselves to be obligated to figure out how to share that data... so that connections can be made... for example, different projects doing similar work. It could recognize gaps... and these are all things that a funder can care about... they’re accountable... so that it is contributing towards a healthy arts sector” (data-sharing breakout room)</p>

TABLE 3 (CONT.): “VALUES-BASED” DATA PRINCIPLES, EITHER NAMED OR INFERRED, THAT EMERGED DURING THE WORKSHOP

Principle	Participant Perspective
Data ownership	<p>“We haven’t clearly defined data ownership clauses... who owns the data, and how do we dictate how it is used...how do you maintain some kind of standard of practice for how that data is going to be used?” (data sharing breakout room)</p> <p>“Recognize that there are already systems in place, like the First Nations governance. There’s expertise in place” (data-sharing breakout room)</p>
Data sovereignty	<p>“The ownership and autonomy of data; ensuring it is not hoarded and brokered by the ruling class. We should all own our own data and not be coerced into selling it” (survey respondent)</p> <p>“Le contrôle et la modulation des conditions de partage, la souveraineté identitaire numérique” (survey respondent)</p> <p>“Data is not a resource to be commodified and exploited, it is our identity. We should have full autonomy over what data is created from our activities and stored and sold” (survey respondent)</p> <p>“100% controlled by the users” (survey respondent)</p>
Innovation	<p>“To think beyond the traditional boundaries. We have established boundaries, but in the light of technologies, we need to shift those boundaries” (data-sharing breakout room)</p> <p>“It’s a good thing from the get-go if we don’t know all the uses of the data... that’s how innovation happens” (plenary)</p> <p>“Design’s solutions that account for emergent features and possibilities is so important, that we don’t tie ourselves into a box that doesn’t allow for new ideas to come to light” (plenary)</p>



TABLE 4: “OPERATIONAL” DATA PRINCIPLES, EITHER NAMED OR INFERRED, THAT EMERGED DURING THE WORKSHOP

Principle	Participant Perspective
Traceability	<p>“We need an enabling environment for data re-use, with traceability” (open data breakout room)</p> <p>“If we’re going to share it openly, then traceability has to be a part of it” (plenary)</p> <p>“There’s also the machine intermediary, for open data definitely, that is also representing interests... You have a mediator between you and your audience” (plenary)</p> <p>“Provenance, authenticity” (survey respondent)</p> <p>“Data Must Be Primary, published as collected at the source, with the finest possible level of granularity.” (survey respondent)</p>
Findability	<p>“People have to think about how the data is structured so that it can be found” (open data breakout room)</p>
Usability	<p>“There needs to be intermediaries to make that information digestible... There’s no way around it. The usability of it is primary to me” (data-sharing breakout room)</p> <p>“Agree that it should be raw data out there people can make their own research and analysis... but without a tool it’s not usable for the sector” (data-sharing breakout room)</p> <p>“Access: format of the data depends on who the end user is; different motivations for getting access” (plenary)</p> <p>“Discussion of the formats — is it just a CSV file... or presented in a visual. It depends on who is the user of the data” (plenary)</p>
Interoperable	<p>‘Lack of data standards (datasets aren’t comparable/interoperable)’ was ranked as the largest challenge to implementing open data and data-sharing initiatives by survey respondents.</p>
Simplicity	<p>“How can we come up with principles/concepts/data models/standards that are as simple as possible (so that they will be used widely) and at the same time as complex as they need to be considering the many different forms of entities/nodes in the performing arts, the facets of the many different source materials, and the manifold academic approaches in research and teaching” (survey respondent)</p>
Timeliness	<p>“Data Must Be Timely, made available as quickly as necessary to preserve the value of the data” (survey respondent)</p>

Note. these are preliminary results. The principles listed above have not been endorsed by anyone in the performing arts sector or other sectors and are meant to elicit further conversations on the development of principles of data governance for the performing arts sector.

CONCLUSION

In this report, we conducted research and exploratory activities with our partners at CAPACOA to understand the challenges facing those in the performing arts sector when it comes to using open data and data sharing as a method of reaching their goals. We conducted a literature scan — as well as a webinar, a survey, and a workshop — to understand the challenges and opportunities. This report summarized our preliminary findings, presenting options for next steps as we continue to improve upon the use of open data and data sharing to help performing arts organizations and individuals meet their needs.

This exploratory research can help to inform organizations and individuals within the sector wishing to advance efforts of sectoral data governance, to gain understanding regarding data charters and data principles, as well as to understand perspectives from the performing arts sector regarding open data and data sharing.

“People and organizations learn and become stronger through sharing and collaboration; I consider it to be a necessary component of nonprofit and charitable work in society. I have always had a hard time understanding any reluctance to sharing and collaboration, therefore I have trouble answering your questions: it’s not really brain surgery, it’s just good practice necessary for the sector to advance.”

- Workshop participant

REFERENCES

- Abraham, R., Schneider, J., & vom Brocke, J. (2019). Data governance: A conceptual framework, structured review, and research agenda. *International Journal of Information Management*, 49, 424–438. <https://doi.org/10.1016/j.ijinfomgt.2019.07.008>
- Apidae: L'information touristique. (n.d.-a). *Apidae c'est quoi ?* Apidae Tourisme. <https://www.apidae-tourisme.com/>
- Apidae: L'information touristique. (n.d.-b). *Charte de comportement éthique*. Apidae Tourisme. <https://www.apidae-tourisme.com/ressources/charte-comportement-ethique/>
- BTLF. (2020). *Politique de référencement de la BTLF*. <https://btlf.ca/politique-de-referencement/>
- Brandusescu, A., Canares, M., & Fumega, S. (2020, August 21). *Open data standards design behind closed doors?* ILDA. <https://idatosabiertos.org/disenio-de-estandares-de-datos-abiertos-a-puertas-cerradas/>
- Canada Council for the Arts. (2021). *Digital Strategy Fund*. Canada Council for the Arts. <https://canadacouncil.ca/funding/strategic-funds/digital-strategy-fund>
- CAPACOA. (2021). *COVID Impact Statistics*. CAPACOA. <https://capacoa.ca/en/research/covid-impact-statistics/>
- Carroll, S. R., Garba, I., Figueroa-Rodríguez, O. L., Holbrook, J., Lovett, R., Materechera, S., ... & Hudson, M. (2020). The CARE Principles for Indigenous Data Governance. *Data Science Journal*, 19(1).
- Cervellin, M., Omiccioli, M., Haquenne, M., Gaudet-Labine, I., Joly, P., Favretti, E., Grenier, S., & Duperré, N. (2020). *The Effect of Metadata on Book Sales: Analysis of the Relationship Between Enriched Metadata and Book Sales*. https://btlf.ca/wp-content/uploads/2020/10/BTLF_Study_The-Effect-of-Metadata_2020-10-06.pdf
- Estermann B., & Julien F. (2019) *A Linked Digital Future for the Performing Arts: Leveraging Synergies along the Value Chain*. Canadian Arts Presenting Association (CAPACOA) in cooperation with the Bern University of Applied Sciences.
- European Commission Directorate-General for Communications Networks, Content and Technology. (2018). *Non-paper on the IT Governance of the CEF Building Block Digital Service Infrastructures (DSIs)*. <https://ec.europa.eu/cefdigital/wiki/download/attachments/82772892/%28CEF%20Telecom%20EG%20Non-Paper%20on%20IT%20Governance%20of%20CEF%20BB%20DSIs%29.%282018%29.%28v10.00%29.pdf>
- Gagnon-Turcotte, S., Sculthorp, M., & Coutts, S. (2021). *Digital Data Partnerships: Building the Foundations for Collaborative Data Governance in the Public Interest*. Open North.
- Gouvernement du Québec. (2021). *Plan culturel numérique du Québec*. Plan culturel numérique du Québec. <http://culturenumerique.mcc.gouv.qc.ca/>
- Jacobson, I., Spence, I., & Bittner, K. (2011). *USE-CASE 2.0: The Guide to Succeeding with Use Cases*. https://www.ivarjacobson.com/sites/default/files/field_iji_file/article/use-case_2_0_jan11.pdf
- Ministère de la culture et des communications. (2019a). *Les métadonnées, pour une meilleure visibilité des contenus culturels*. Plan culturel numérique du Québec. <http://culturenumerique.mcc.gouv.qc.ca/de-limportance-des-metadonnees/>
- Ministère de la culture et des communications. (2019b). *Les métadonnées: Un travail d'équipe!* Plan culturel numérique du Québec. <http://culturenumerique.mcc.gouv.qc.ca/2019-08-15-les-metadonnees-un-travail-dequipe/>
- Ministère de la culture et des communications, & Secrétariat du Conseil du trésor. (n.d.). *Pour des données ouvertes en culture*. <https://www.mcc.gouv.qc.ca/>

[qc.ca/fileadmin/documents/publications/guide/Donnees-ouvertes-Guide.pdf](https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3701)

Mons, B., Neylon, C., Velterop, J., Dumontier, M., da Silva Santos, L. O. B., & Wilkinson, M. D. (2017). Cloudy, increasingly FAIR; revisiting the FAIR Data guiding principles for the European Open Science Cloud. *Information Services & Use*, 37(1), 49-56.

Montenegro, M. (2019). Subverting the universality of metadata standards: The TK labels as a tool to promote Indigenous data sovereignty. *Journal of Documentation*, 75(4), 731-749. <https://doi.org/10.1108/JD-08-2018-0124>

Observatoire de la culture et des communications du Québec. (2017). *État des lieux sur les métadonnées relatives aux contenus culturels*. Institut de la statistique du Québec. <https://statistique.quebec.ca/en/fichier/etat-des-lieux-sur-metadonnees-relatives-aux-contenus-culturels.pdf>

Open Data Institute. (n.d.). *The Data Spectrum*. Open Data Institute. <https://theodi.org/about-the-odi/the-data-spectrum/>

Open Knowledge Foundation. (n.d.). *Open Definition: Defining open in open data, open content, and open knowledge*. Open Knowledge Foundation. <https://opendefinition.org/od/2.1/en/>

Petri, I., & Julien, F. (2017). Digitizing the Performing Arts An Assessment of Opportunities, Issues and Challenges. Strategic Moves and Canadian Arts Presenting Association (CAPACOA). https://capacoa.ca/documents/services/digital/Digital_Innovation_Assessment.pdf

Statistics Canada. (2021a, June 4). *Labour Force Survey, by selected industries*. Statistics Canada. <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3701>

Statistics Canada. (2021b, June 3). *Access to microdata*. <https://www.statcan.gc.ca/eng/microdata>

The Audience Agency. (2021). *Audience Finder Community Charter*. The Audience Agency. <https://www.theaudienceagency.org/audience-finder/community-charter>

Thuermer, G., Walker, J., & Simperl, E. (2019). *Data sharing toolkit: Lessons learned, resources and recommendations for sharing data*. Data Pitch. www.datapitch.eu

Wernick, A., Olk, C., & von Grafenstein, M. (2020). Defining Data Intermediaries: A Clearer View Through the Lens of Intellectual Property Governance. *Technology and Regulation*. 66-77.

Wilkinson, M. D., Dumontier, M., Aalbersberg, Ij. J., Appleton, G., Axton, M., Baak, A., Blomberg, N., Boiten, J.-W., da Silva Santos, L. B., Bourne, P. E., Bouwman, J., Brookes, A. J., Clark, T., Crosas, M., Dillo, I., Dumon, O., Edmunds, S., Evelo, C. T., Finkers, R., ... Mons, B. (2016). The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3(1), 160018. <https://doi.org/10.1038/Sdata.2016.18>

WPF-TDC. (2016). *Market-Based Strategy and the Use of Audience Research and Data in Philadelphia: Findings from TDC's interviews with Philadelphia Arts and Cultural Organizations and National Experts*. <https://williampennfoundation.org/what-we-are-learning/market-based-strategy-and-use-audience-research-and-data-philadelphia>

APPENDIX A: A SHORT PRIMER ON DATA GOVERNANCE

What is data governance?

Data governance determines who makes decisions, how the decisions are made, and how the decision-makers are held accountable for the collection, use, sharing, or control of an organization or group's data.

To facilitate understanding data governance and its operationalization, the following conceptual framework — developed by Abraham, Schneider, and vom Brocke (see Figure A-1) — synthesizes the key components of data governance based on a review of the literature published on data governance over the past two decades (Abraham et al., 2019, p.428).

They conclude that such governance is expressed through a complex set of explicit or implicit **mechanisms** that can take many forms, including policies, procedures, practices, etc., that govern the collection, use, sharing, and control of data. These mechanisms:

- exist to ensure the operationalization of data governance;
- are shaped by various **antecedents** at the political, legal, regulatory, organizational, or even cultural levels; and
- depend on the **scope** of the data governance, which has three dimensions: its **domain scope**, the **organizational scope**, and the **data scope**.

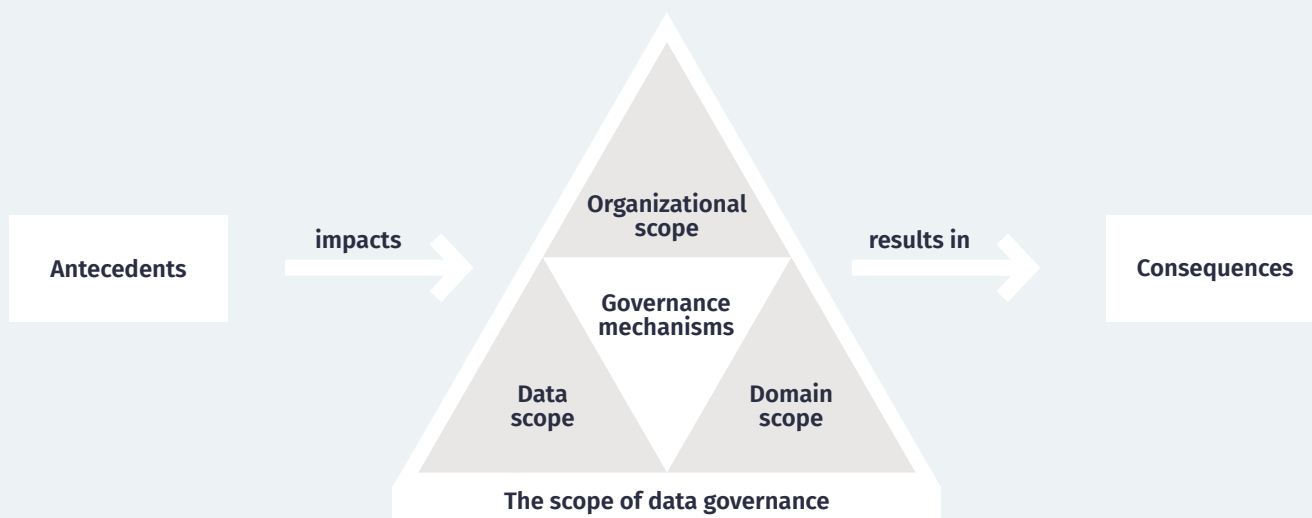


FIGURE A-1: DATA GOVERNANCE FUNDAMENTALS

Retrieved from the *International Journal of Information Management*, vol. 49, Rene Abraham, Johannes Schneider, and Jan vom Brocke, "Data governance: A conceptual framework, structured review, and research agenda" p. 428, (2019), reproduced with permission from Elsevier.

Finally, data governance choices have measurable **consequences**. These may include improving the short-term operational efficiencies of an organization or group, mitigating certain risks (such as privacy breaches), or, over the longer term, increasing public trust.

What can data governance do for the performing arts?

Inter-organizational data governance in the performing arts can serve to achieve a number of consequences or results. It can serve to align organizations around a common vision for how data can be linked and shared, and through the use of web standards and common vocabularies, can ultimately promote peoples' artistic content both individually and collectively. Beyond increasing the interoperability and discoverability of performing arts data, these initiatives — structured through data governance — can also serve to build a collective memory, through which arts content can be linked and contextualized.

As well, data governance can be a vehicle to define or advance certain values. In the performing arts, a number of these principles — such as openness, international collaboration, and accessibility of content and information that is in the public domain (or that is financed by public funds) — are already being pursued through linked open data initiatives.

Inter-organizational data governance can also serve to test new ways of valuing and managing data, through use cases, pilot projects, and tests.

How is data governance operationalized in performing arts organizations?

Data governance is traditionally exercised at the **intra-organizational** level, meaning limited to a single organization. For example, an objective of data governance within a performing arts organization could be to increase operational efficiency by defining and implementing principles, policies, and

practices around the quality of its metadata. Such governance can help the organization to align its business operations more efficiently by improving coherence between its units, reducing redundancies, and improving data searches and access to results.

Data governance can also exist across two or more organizations, for instance when organizations collaborate to develop a set of practices around documenting metadata, in order to make their data more easily discoverable on the web. In this case, which can be thought of as **inter-organizational** data governance, the parties look to structure their activities and participation in order to achieve a common goal or vision. Principles, practices, and frameworks of a few organizations can eventually extend to reach an entire community, sector, or local territory. Inversely, principles defined at higher levels of governance can also inform the daily data governance practices of organizations.

Concretely speaking, performing arts organizations operationalize either intra- or inter-organizational data governance by creating and implementing structural, procedural, and relational mechanisms.

Data governance mechanisms

Structural mechanisms determine the decision-making bodies and accountability structures. They define roles and responsibilities and assign decision-making authority. In the performing arts sector, recent data modeling initiatives by [CQAM](#) and CAPACOA are putting into play structural mechanisms, as they assign responsibilities and decision-making across organizations for arts documentation practices.

Procedural mechanisms consist of specific policies, practices, and processes for implementing the data governance framework and managing data over its lifecycle. This ensures that data are recorded accurately, stored securely, used efficiently, and shared

appropriately. To take an example, performing arts organizations use data access and authorization techniques to protect their client's personal information as a matter of compliance to privacy regulation. Performing arts organizations will also find that procedural mechanisms that define common ways of describing data across the sector, are essential for inter-organizational data governance.

Relational mechanisms are the various practices that facilitate collaboration among stakeholders. They

include communication, training, coordination, and decision-making. Relational mechanisms are particularly important for performing arts organizations, because they can serve to bridge divides between different organizational cultures and ways of working with and valuing data. Relational mechanisms are also key to improving an organization's capacity to better govern their data, enabling them to participate in initiatives which span the sector.

For a deeper look into how to operationalize data governance through data governance mechanisms, see Open North's recent report [Digital Data Partnerships](#).

APPENDIX B: WORKSHOP PERSONAS

Data-sharing personas

Persona #1:

Fidel: I am an Agent for twelve comedians and live in Quebec. As an Agent, **I want to access information about buyers** who book comedians in order to advocate for my clients and secure good show slots. It would be good to know what venues book what kinds of shows so that I can streamline my outreach. I am willing to share my own collected information about booking venues, their addresses, main contacts, and audience capacity from my own tracking.

I collect some of this information and have shared it with a few other Agents in the past, but all in different formats and with different information. In the future, I would like to more systematically share this data with Agents I know and trust.

I know that I need to better manage my data, but am unsure which skills to acquire to be successful in sharing data.

Persona #2:

Sonia: I am the Executive Director at a cultural centre for Indigenous youth performers in Whitehorse, YK. A researcher at a local university wants to enter a data-sharing agreement to access our event audience data and pre- and post-event event evaluation surveys.

I am unsure about sharing our data because of who I work with (Indigenous youth) and worry that I could lose control of the data or that it will be misused. It's also unclear how this research and data sharing will benefit the culture centre and its community.

Persona #3:

Francine: I'm a Program Manager for Canada Council for the Arts, managing their Digital Strategy Fund. I work with our evaluation and data team to collect and maintain all data related to programs and projects funded throughout Canada. This includes information such as the client's name, location, as well as

detailed financial reports, staffing, and reporting about activities. Statistics about activities include the types of activities, number of activities, and total participation.

I am interested in sharing data and am in charge of researching how we can, as a first start, transform and share our disaggregated data with associations, with other funders, and with researchers. I don't know where to start, what skills and technology we will need to acquire/use, and what risks will arise. Because this is sensitive data about other organizations and about individual artists, I want to ensure this information sharing benefits our program clients.

Open data personas

Persona #1:

Oscar: I'm a Digital Development Agent for a small theatre in rural Nova Scotia (Atlantic Canada).

I manage our web publishing which consists of our event information (location, time, title, registration) and production details (metadata). Making this information available is only part of my job.

Although I clearly understand and use schema-structured data standards for sharing data with event calendars, I'm not sure what other standards exist for publishing other information/content, such as videos of our performances and photos of our actors.

I've heard of Creative Commons licenses and I think it might be needed to publish videos and images from artists. I'm concerned about copyright and I'm not sure how to obtain consent and clear rights with artists to release the content as Creative Commons. I would like to publish all artistic credits as open metadata, but I don't know how to do this.

Persona #2:

Theo: I'm a Chief Marketing Officer for a Québec City-based ballet and modern dance school. I am

interested and taking steps to aggregate and publish information about dance venues. I want to better share where dancers can practice and perform, including space availability. We already share our organization's preferred venues list with alumni.

We struggle to make open data a priority, as our team lacks the technical capacity (skills, know-how, and network) to assess implementation costs and next steps.

I want to share this data in a better format than a spreadsheet (e.g., Application Programming Interface (API), shapefile with geo-location) in order to help individual dancers find performance space that best suits their needs.

Persona #3:

Tanya: I'm an independent musician who travels globally and manages myself.

I have heard of open data but have no plans to publish my data. I work alone, and keep track of my contracts, locations, audience numbers, events, and partners on my Google Drive but don't see how this data has value to others.

I also fear that this information would be used against me when negotiating contracts with venues, for example, and don't want to be taken advantage of for sharing this information.

