PART OF THE
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SIGNALS**
SERIES

An Open Future

Data priorities for the
not-for-profit sector

Mowat NFP
THE MOWAT CENTRE'S
NOT-FOR-PROFIT RESEARCH HUB

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Introduction

In recent years, governments around the world have begun to develop open data policies as part of a broader push for government to become more accountable, effective, efficient and transparent. Advocates for these policies argue that opening datasets in a standardized and accessible way can spur innovation for both government and organizations, facilitating both social and commercial benefits. As not-for-profits (NFPs) and governments consider how to modernize the framework that governs their relationship, what potential do open data policies hold? Does the increased attention given to open data, both as a movement and policy, present an opportunity for the not-for-profit sector to better achieve its goals?

NFPs have long sought better information about the communities they work in and more information about the organizations that make up the sector. Now, there is growing interest in engaging with the open data movement as part of a broader push for information the sector needs. NFPs are not only seeking to improve on their work, but also to better assess and communicate the impact of that work. They have a strong foundation to build on, and — given the technological advances of the past decade — many see the increased use of data as a way to both to enhance the work of NFPs and strengthen the sector's ability to communicate its value. In order to do this, NFPs argue that they need indicators for the communities they operate in, information about the types of programs and activities that others offer, and more evidence about what works.

There is also growing focus within the sector and government on measurement and evaluation. Having access to and using quality data will only become more important as interest in better evaluation, collective impact initiatives and outcomes funding and programming grows. For NFPs looking to adapt to changing circumstances, having the information, skills and resources needed to effectively use data will be a key driver of success.

Current public discussions on open data policy frameworks provide an opportunity for the sector to communicate its priorities on the types of open government data it needs. There are also emerging opportunities for the sector to position itself as a source of data through creating, maintaining and opening up datasets that support its work, demonstrate impact and inform public policy.

Access to open data is just one part of the picture. Robust open data frameworks and initiatives require thought and action that go beyond conversations about access. It is an issue that touches on questions of capacity and culture change for both NFPs and government. This *Sector Signal* considers the opportunities around open data for the not-for-profit sector and highlights the priorities, standards, skills and leadership needed for a successful data partnership with government, with open data advocates and within the sector itself.

RESEARCH PROCESS

Research for this *Sector Signal* included a review of existing literature and a series of in-depth interviews with NFP leaders, policymakers and civic technologists engaged with providing and accessing data, developing standards, and putting data to use in organizations. Interviews were conducted with 16 informants in September and October 2014.

1 The Signal

What is open data?

As the not-for-profit sector considers its data needs, it is important to be clear what people in the sector mean when talking about data, information and open data.

Part of the challenge is the wide range of users who need to be included in a discussion about data for the NFP sector. These users come from different backgrounds and do not necessarily use the same terminology when speaking about the different ways that information is made open or shared. When this happens, it is easy for definitions to become blurred.

This is especially difficult in the NFP sector where use of data has not always been a central element of a not-for-profit's work and in many cases still is not. While some NFPs have been intensively using data to inform their work for years and have already taken steps to share their data, others are just now seeing the potential that it may hold. As a result, many NFPs are considering open data at the same time that they consider using data in general. This means the term open data is sometimes used as shorthand for ideas like better information sharing between NFPs, making data that is already open more accessible to the average user or developing knowledge of what works. However, clarity around these definitions will help the sector better articulate its needs and priorities in the future.

One important distinction is the difference between data and information. Another is the difference between open data and shared data. Depending on the context, data can be publically or privately held. Creators of data tend to have ownership of the datasets that they create and can choose to keep them private, share them with others in a limited way, or make them open to all. In this way, individuals, not-for-profits, governments, businesses and academia are all potential sources of open data. However, not all publically available data is necessarily open data (Chernoff, 2010). For data to be considered "open" it must be both technically and legally open to all. It is important to meet these standards for the purposes of interoperability — the ability to link and re-mix different datasets from different sources (Dietrich et al., 2012).

Many open data advocates are especially interested in open government data. This is because, by nature, governments hold large quantities of data that cover a variety of subjects and in most cases is public data by law (Dietrich et al., 2012). Hence, there is a lot of interest in opening up existing government datasets for social and commercial purposes. Figure 2 illustrates the ways that these definitions overlap.

Why open data?

But why open data and why now? Why not focus on using data as a first step and worry about the open part later? Interview participants noted that open data policies provide a unique policy window for organizations or groups that are looking for information. In cases where datasets are from government, open data policies offer an opportunity to work in collaboration with an area of government that is dedicated to sharing this type of information. This may provide an opportunity for NFPs to access information that might otherwise be difficult to obtain.

> "We are past the point of asking whether or not open data is something worth pursuing. Today, there is agreement that open data is worth it, now the question is how do we go about it?"
>
> — ANDREW BENSON, 211

FIGURE 1: DEFINING OPEN DATA

DATA VS. INFORMATION	
Data is made up of raw values or facts. It can be qualitative or quantitative and can come in a variety of forms.	**Information** is made up of data. Information is data that has been processed or analyzed within a context to make it useful. In this way, data are the facts that create information

PRIVATE, SHARED AND OPEN DATA		
Private data refers to data that is currently held in the private domain. Data that is not publically available or shared. Private data is the default for most datasets developed by non-profits or businesses if they do not choose to open their data. Some datasets, such as anything that includes personally identifiable information, should be kept private. Other datasets can be made open (McCullagh, 2008).	**Shared data** is data that is shared in a limited way, often to researchers or partners through data sharing agreements. Most open data advocates argue that, in general, data that is shared should instead be anonymized and then opened (Tennison, 2014). However, within the human and social services sector, some argue that there may be a need for access to client-specific, shared data that may not be appropriate for wider distribution.	**Open data** is data that "can be freely used, modified, and shared by anyone for any purpose" (Open Knowledge Foundation, 2014). The Open Definition also lays out the principles of openness, including requirements that data be: » available under an open license » available in a convenient and modifiable form » machine-readable » accessible as a whole, with little or no cost associated with its use. Unlike private data, open data is a resource that is made available to anyone with the skills and desire to use it.

Open data also provides the benefit of access for all. Having data shared openly — rather than kept private — allows others to know what exists and reduces duplicated collection efforts. This is especially useful for NFPs who may not have high data collection capacity.

Open data around the world

Around the world, principles and standards surrounding the use of open data are reasonably well defined. The development of strong international linkages in the emerging open data community originates in the technology world, and takes its ethos from the idea of an open source community — one in which information and attribution is shared. The existence of this global community means that open data policies and work must align with the broader framework, and that ignoring the trends and standards that already exist in collecting or sharing data will greatly limit its use. It also represents an opportunity for the sector — it allows NFPs to fit their work into a larger policy discussion and highlight the sector's needs as they fit into emerging governance frameworks. The following initiatives, though not exhaustive, highlight the main international principles and bodies being used to advance government open data work globally.

The Sunlight Principles

Many countries, including Canada, have established operating principles for the sharing and use of government data based on the Sunlight Principles. The Sunlight Foundation is a not-for-profit that advocates for open government and for the greater

The Sunlight Foundation has identified ten key principles to empower the public's use of government-held data. According to the foundation, the list is not meant to be exhaustive, and "each principle exists along a continuum of openness" (Sunlight Foundation, 2010). The ten principles include directives about:

» completeness
» primacy
» timeliness
» ease of physical and electronic access
» machine readability
» non-discrimination
» use of commonly owned standards
» licensing
» permanence
» usage costs

The Sunlight Foundation has also produced more specific policy guidelines that offer 32 recommendations on what data should be public, how to make data public and how to implement open data policies (Sunlight Foundation, 2014).

use of technologies to hold government accountable to the public (Sunlight Foundation, 2014). While a number of general principles on open data have been published, the Sunlight Principles are arguably the best known and most broadly applied.

G8 Open Data Charter

The G8 Open Data Charter is one of the major international frameworks being used to advance open data policies globally. The charter outlines five principles for data access and release, and outlines specific commitments under each of them (Government of Canada, 2014b). Under the charter, G8 countries, including Canada, agree to develop country-specific action plans to implement these commitments and also agree to release high-value datasets under 14 areas identified under the charter. Several of the high-value areas are relevant to the sector,

including commitments to release information about companies, finance and contracts, health, environment, crime and education.
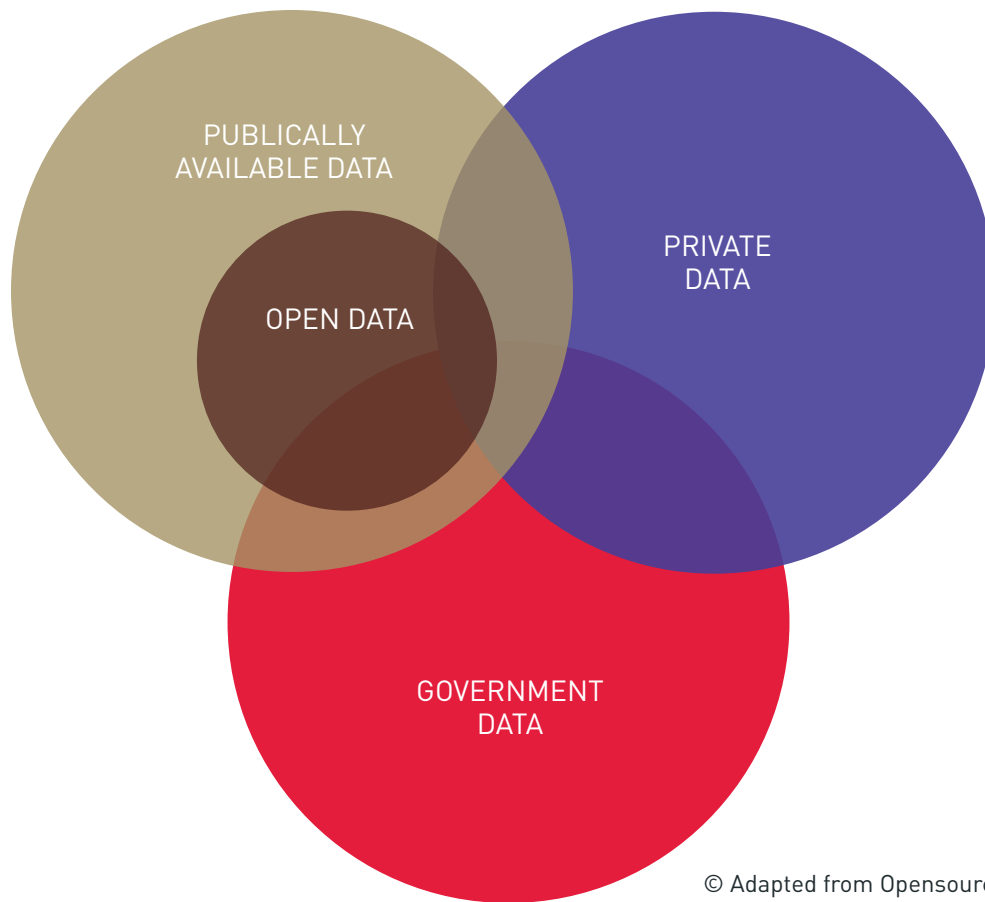
Open Government Partnership

The emergence of global standards for open data has also been advanced through the Open Government Partnership (OGP), a multilateral effort to "promote transparency, empower citizens, and harness new technologies to strengthen governance" (Open Government Partnership, 2014). The OGP launched in 2011 with eight founding governments, including Canada, and has since expanded to welcome 57 additional governments to the partnership.

The OGP is a voluntary association created with the goal of opening up data to improve both the quality of governance and of the services citizens receive. In order to become a member, countries must endorse an Open Government Declaration which commits them to four principles of open and transparent government: increasing the availability of information about government activities; supporting civic participation; implementing standards of professional integrity throughout governments; and increasing access to new technology for openness and accountability.

UK Open Data and core reference datasets

The United Kingdom (UK) is generally seen as the leader in developing and implementing open data policies. As part of a broader open government policy, the UK's National Information Infrastructure (NII) is a promising example of government recognizing the potential of broadly available and accessible public sector information to drive social and economic growth. The UK has achieved this through the development of a national core reference data set. Once data included in the NII, there is a commitment to continuing to share and update the dataset. The guarantee to update and maintain the datasets is especially important since it allows organizations to rely on the data and build processes and products around them. Since 2013, the UK government has been working to develop a collaborative process for identifying important public sector data, prioritizing its inclusion

FIGURE 2: TYPES OF DATA

PUBLICALLY
AVAILABLE DATA

PRIVATE
DATA

OPEN DATA

GOVERNMENT
DATA

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in the NII (in part through a crowd-sourcing functionality), and supporting organizations both in and outside government to release data (UK Cabinet Office, 2013). Over 3,900 previously unpublished datasets have been made available thus far. As of late 2014, there were approximately 16,000 datasets on data.gov.uk, the UK's open data portal (Donaldson, 2014).

Open data in Canada

In Canada, interest in open data and open government is growing. To align with the international open data community, provincial and federal governments have started to develop open data plans and frameworks of their own. At the federal level, Canada has committed to open data under two main international commitments: the Open Government Partnership and the G8 Open Data Charter. Drawing on international best practices, these commitments require the federal government to develop open government and

data policies that align with work of other nations and the agreed upon standards. On November 6, 2014, the federal government released its Action Plan on Open Government 2014-2016 (Government of Canada, 2014a). The plan does not yet have an implementation strategy, which means there is an opportunity for further engagement (Kin-sing Chan & Keseru, 2014). These commitments offer an opportunity for the sector to communicate its priorities on data access and literacy.

Most provinces, including Alberta and British Columbia, maintain open data catalogues as a single point of access for publicly available raw data collected by government ministries. Others, such as Newfoundland and Labrador, have recently begun to develop similar online resources. Ontario has recently launched an open data catalogue and has begun the process of opening up its datasets. In 2014, Ontario began an online data consultation that allows users to vote on which datasets should be opened.

Municipal governments have also been very active. To date, about 50 municipalities in Canada have open data policies (Kin-sing Chan, 2014). Because municipal governments often hold large amounts of community level data, they have been leading the way in opening datasets that are useful to communities and developing various portals and tools to work with open data. An example of this is the City of Toronto's Wellbeing Toronto tool.

For the most part, Canadian governments are interested in making their open data policies work and have already taken steps toward opening many datasets to the public. However, much work remains. The Mowat Centre's report, Reprogramming Government for the Digital Era, examines the challenges facing government as it adapts to governance in a digital world. One challenge is that the current structures and processes of government were not designed with open data in mind (Johal & Galley, 2014). While government collects a lot of data, it has not always been collected and stored with public consumption as its goal. As a result, datasets created by one department in the government are not always easily understood or accessible to the public, or even other departments within the same level of government. Additionally, open data policies require collaboration across government, which is difficult because there are often few formal structures in place to facilitate this type of collaboration. In general, open government initiatives require a cultural and managerial shift on the part of government, as well as, long-term change management strategies.

However, while the alignment of provincial and federal governments with the trends and standards of the global open data community is a positive step, there has not yet been the same buy-in from the not-for-profit sector with the broader framework of established policies, standards for data sharing and use.

WELLBEING TORONTO: A TOOL FOR OPEN ANALYSIS

In 2011, the City of Toronto launched Wellbeing Toronto, an online application that allows the public to compare the wellbeing of the city's 140 neighbourhoods through dozens of indicators such as unemployment rates, traffic collisions and green spaces (City of Toronto, 2014b). The free portal allows indicators to be selected, combined and weighted to measure a variety of issues across different domains to provide a more comprehensive understanding of Toronto's diverse neighbourhoods.

Wellbeing Toronto was launched in response to demand for greater access to neighbourhood-level information from community groups and organizations to drive better program planning, and compare the wellbeing of different neighbourhoods. Wellbeing Toronto was developed to be a portal for open data; however, it goes beyond that mandate to include visualization tools. The service is a part of the City's broader Open Data Strategy (City of Toronto, 2014a).

This tool serves as an example of opening up data with the potential users in mind (such as community groups and the NFP sector), and offers a platform for a discussion of further opportunities. By providing easy access to data, the portal empowers Toronto's neighbourhoods to access and apply that data to their respective situations and to draw their own conclusions. Allowing users to overlay different demographic needs, create a snapshot and export it to a PDF, Wellbeing Toronto is an example of not just "open data" but also of the use of different data sources to create tools for open data analysis.

2 Defining the Opportunity

For NFPs, taking better advantage of data is not just a conversation about "access". The challenge for the NFP sector is how to use, package and share information in a way that supports and strengthens the sector's ability to deliver on its mission and inform public policy.

Some organizations have begun to do this by incorporating data collection into their day-to-day operations and using the information for decision-making, delivering services and reporting their outcomes. However, these experiences are uneven across the sector. Many NFPs struggle to incorporate data into their operational practices and often lack staff with the required skillsets within their organizations. Particularly in smaller organizations, there is a worry that focusing on open data will become another distraction in an environment where staff is already overburdened. However, incorporating data into everyday operations and making that data open can actually help organizations become more efficient by streamlining reporting and evaluation processes and allowing organizations to assess their projects in real-time.

Data for what? Data for whom?

When looking at data needs from a sector perspective, it is especially important to be clear about whom data is for and what purpose it serves. Capacity in the sector to work with data is very uneven and as a result, there is a need to be strategic about how data is collected and shared. However, as both open data advocates and NFPs already know, too much data can be confusing. The focus should be on getting the right data, and sharing it in ways that make it useful and more accessible for those who need it.

In any data strategy, it will be important to clearly identify the profiles of potential users. For many NFP users, the bulk opening of "raw data" is not directly useful in the short term. Some high-level

users will need ongoing access to raw, high-volume, machine-readable data for business and research purposes. Meanwhile, lower-volume users will need easy access to information with little need for manipulation. In some cases, this means accessing online tools that allow users to openly analyze information rather than working with the data itself.

Given the competing demands on NFP staff, staff members do not always have the time or resources to dedicate to developing and maintaining complex data systems. It is important to design data tracking and sharing systems that only capture information that helps organizations achieve their goals and is not overly burdensome to track. This will help ensure that data collection and sharing is an activity that will enhance the activities of not-for-profits rather than distract from them.

In terms of access to data, governments and other data-sharing groups should prioritize opening and maintaining datasets that are of high social value, including datasets about the NFP sector. By sharing core data first, governments and data-sharing groups can help resource the information ecosystem and build the required social architecture to support it.

> "There is real potential for open data around what works, evidence-based program development and execution. If you have the relationship between government and the not-for-profit sector functioning as it should, program development should not be unilateral. It should be symbiotic, based on a loop of data, evidence and knowledge."
>
> – DAVID LASBY, IMAGINE CANADA

Data Priorities

There is a wide range of data that is relevant to the sector, and as NFPs consider their data needs, it will be important to clarify the different types of data that offer potential. The following types of data are not exhaustive but provide a framework to illustrate the opportunities that different forms of data may hold and may help to communicate diverse needs in the sector.

FIGURE 3: DATA PRIORITIES

WHO WE ARE — ADMINISTRATIVE DATA

There is a need for better information about the size and the scope of the not-for-profit sector. For many, this type of data is seen as the core information the sector needs to better understand itself as a whole. There is a desire for more information about the number and types of organizations that exist; details about the types of work that NFPs and charities do; and information about the labour force that carries it out. This type of data has the potential to act as key tombstone information that could facilitate deeper research into trends and demographics of the sector. An example of this type of data is the T3010 data on registered charities that is made available online by the Canada Revenue Agency (CRA). There is interest in opening up the same type of information for not-for-profits under the federal *Canadian Non-Profit Corporations Act (CNCA)* and the future *Ontario Non-Profit Corporations Act (ONCA)*.

WHAT WE DO — PROGRAMMATIC DATA

Sharing data about the programs and services available to the public has the potential to help users navigate the social care system, communicate trends around access and service gaps, link to other datasets and inform policy systems. In Ontario and across the rest of Canada, there is interest in linking and opening information and referral datasets for this purpose. These types of datasets can also help organizations in the sector understand what other organizations are doing and possibly collaborate more effectively.

INFORMING OUR WORK — BASELINE DATA

Better community information can help inform the work of not-for-profits. There is an appetite for better indicators and demographic information to help NFPs establish baseline data for planning and decision-making. Open government data is a key source of this type of information and many rely on publically shared data as the fact base for their work. Having a strong foundation of shared data is especially important in the context of evaluating impact and making the case to funders. Many NFPs are interested in accessing datasets relating to the environment, incarceration, education outcomes and literacy levels, and community health indicators. There is much work being done in this area and in many cases, municipal governments have been the leaders in releasing this type of data, given they hold community level information that is useful to a wide-variety of users. High-quality core open datasets will be a key factor of success for governments as they pursue evidence-based policy frameworks and shift toward funding programs based on evaluated impact.

COMMUNICATING OUR IMPACT — INFORMATION ON WHAT WORKS

With increasing interest in shifting program design to focus on outcomes and impact, there is a growing importance placed on building an evidence base around what works. This includes developing shared evaluation metrics, improving program design and collaborating to demonstrate the results of the work that NFPs do. By sharing more information about evaluations, program design and impact, NFPs hope to improve their planning and decision-making capacities, allowing them to develop enhanced programs based on evidence and past results. Many in the sector see this type of information as the key to achieving social progress and are interested in developing it. However, much work is needed to develop shared indicators and standards and ultimately allow the type of collaboration required to achieve these results.

3 Toward an Information Ecosystem

The timing is right for the not-for-profit sector to plan for its data needs. Converging emphasis on outcomes, accountability and impact in the sector mean the sector's needs will only grow over time. At the same time, governments are interested in making their open data policies work and provide information that will be useful to partners. If governments want to achieve their policy goals around the use of open data, as well as funding and evaluating based on outcomes, then it will need to engage with the not-for-profit sector around the types of information and conditions that will enable them to deliver as a key partner.

This is an opportunity for the sector to participate as a key stakeholder in building the information ecosystem. While there is agreement that open data and opening systems is something worth doing, the process is slow, time consuming and technical. The following section looks at the four key conditions that must be considered and developed in order to effectively meet the sector's data needs:

» priorities

» standards

» capacity

» leadership.

Priorities

On the open government data front, some of the greatest opportunities for NFPs come from the ongoing consultations and discussions on open data policies at the federal and provincial levels. There is a need for a strong NFP sector voice in these discussions. To date, much of the focus on the value of open data has been from a commercial perspective. However, the potential social benefits of open data are just as critical to consider. Having a list of priority asks on key datasets that the sector is interested in and ready to use can demonstrate the social value of open data and information.

However, there are challenges with presenting joint recommendations. One of the challenges is a lack of awareness of the types of data that may be available. Often, NFPs do not know the full extent of the types of data government collects and may not know whom and how to ask for the types of information that they need. However, if governments are able to thoroughly catalogue their datasets and share that information with the public, NFPs may be able to work in conjunction with open data advocates to communicate their needs. Interview participants also pointed out potential partnerships with other sectors and actors such as universities and municipalities.

Another challenge is the breadth of the sector. NFPs have a diverse set of priorities around the types of information that they are interested in using. Unless a principled and clear strategy is developed, diverse priorities may inhibit the overall voice of the sector. Consequently, a sector-wide data strategy, bolstered by a collection of sub-sector strategies, may help communicate the general types of information and supports that are needed and encourage NFPs to work together to gain access to priority datasets. This would allow NFPs to share their priorities and find common ground without diluting the specific data needs of each sub-sector.

There is also a need for the sector to establish priorities around its own datasets. Particularly on the administrative and programmatic data fronts, there are opportunities for the sector to lead by making greater use of and opening up well-established datasets pertaining to the size, scope and activities of the sector. Many organizations collect and have ownership over data that can be shared and used for multiple purposes. One commonly shared example is 211 information and referral data that might be used by others to learn about the sector and also to help communicate trends around access.

However, many organizations across the sector are unsure of the value of their data and how to

share it in ways that are useful and accessible to
others. In many cases there are duplicative efforts
between organizations. One solution may be found
by identifying and compiling information about the
existing data assets that the sector currently holds
to help clarify opportunities for collaboration.
By mapping out the sector's data assets, the
commonly used datasets that are already open
and those that are needed, leaders in the sector
will have a better understanding of who is doing
what, what information and skills are needed and
how the sector might better share its information.

Standards

Standards are the foundation for making data
useful and accessible. For the sector to effectively
share, link and take advantage of open data, it
must align itself with emerging standards and
help develop others that support the work of
organizations and their clients.

There are many standards that are relevant to
NFPs. Standards are being developed to help
users working with social data share information
in ways that allow others to access, use and
understand it.

Funding standards

One area that shows promise, especially for
those interested in the administrative data of the
sector, is the emergence of strong transparency
standards for funding. One example coming
from the international development sector is
the International Aid and Transparency Initiative
(IATI). The IATI standard was developed to
improve the "transparency of aid, development
and humanitarian resources in order to
increase their effectiveness in tackling poverty"
(International Aid Transparency Initiative,
2014). The standard publishes financial flows,
results information, budgets, timelines, project
descriptions and documentation, activity
and sector codes and geographic data about
each grant administered. This allows funders,
governments and organizations to better
understand the flow of money, goods and services
in a particular area and helps identify potential
partners and gaps. Interview participants noted
that there is a similar need for this type of
information in Ontario.

The 360giving standard is a data standard that
enables grant data to be searched, compared
and analyzed (360giving Standard, 2014). The
360giving standard was developed to be easily
accessible and can be used by any grant-maker or
grantee with access to a spreadsheet to publish
information about their grants online. Having a
common standard allows grants to be compared
more easily, and can help visualize and tell
stories about granting over time. These types
of standards combined with visualization tools
present opportunities for the sector to better
understand and communicate trends, such as
grant dollars over time, size of grants and diversity
of grant recipients, and may also help funders
make more informed decisions over time.

Referral Standards

On the service delivery front, especially in
the human and social services sector, there is
significant interest in opening up some of the
data held by information and referral providers.

Many see 211 data as an opportunity to open, link and share this directory information about organizations in communities. 211 data is governed by the AIRs standard and the organization is currently in the process of integrating and opening its databases for wider use.

Other organizations, such as Open Referral in the United States, are trying to build on these frameworks to ensure that different referral systems are able to work together and are able to align with broader internet standards to help users find what they are looking for easily.

Licenses

Finally, there is a need for NFPs, funders and government to ensure the work they are sharing is openly licensed and freely available for use. Recent steps by the federal and provincial governments mean that all government data should be released under the same, Open Government License. This represents a promising step for the sector, as it allows any data released to be repurposed to create better information tools and products for the sector. Individual NFPs and funders can also support open licensing by ensuring that their work is open-by-default and available under an open license, such as the Creative Commons licensing standard.

Standards require commitment and NFPs, funders and government can all contribute. Effective data frameworks must be backed up by a network of shared practices and standards. NFPs can support this work through the establishment of ongoing communities of practice on shared data issues. Funders and government can further contribute by adopting standards that push open information and data practices forward.

Capacity

In order to take advantage of open data, NFPs must have the skills and resources to access, use and create it. One of the biggest challenges cited by interview participants is the lack of capacity within the sector to effectively work with data — in terms of both working with available open datasets, and effectively collecting and sharing data created by NFP organizations. Currently, the skills and resources to work with data are

CREATIVE COMMONS

There are a variety of standards and practices that could encourage data sharing in the sector. One example from the United States is the adoption of the Creative Commons licensing standard by private funders to help open up data and work products developed with their grant monies. In the US, the William and Flora Hewlett Foundation has extended its open licensing policy to require that data and work materials from project grants be licensed and shared under CC licensing standards (Hewlett Foundation, 2014).

Creative Commons (CC) is a non-profit organization that enables the sharing and use of content through free legal tools (Creative Commons, 2014). Creative Commons provides content publishers with neutral, community-supported licensing standards for sharing their work. There are a variety of licensing options available and users can choose the licence that works best for them.

Adopting open standards like CC offer potential benefits to the sector by helping the data commons to grow over time. The more publishers apply these standards, the more they add to a pool of legally reusable data that anyone can use and repurpose. This could be especially useful for groups interested in gathering information about what works, and also for those looking to better understand the activities of the sector through its funding landscape.

not distributed evenly across the sector. If open data is to become a strategic priority, it will be important to develop capacity building strategies that create value for the widest possible range of organizations and users.

Developing the skills to work with data takes time. NFP staff members cannot be expected to develop the skills and habits to support this type of work overnight. It will require culture change for many organizations. Intentional capacity building strategies must be put in place.

So what are the priorities that NFPs should be thinking about? What skills and resources need to be developed in order to effectively capitalize on the open data opportunity? The following priorities for building NFP capacity around open data were identified:

FIGURE 4: CAPACITY CHALLENGES FOR NFPS

SHIFTING WORKING CULTURE TO FACILITATE DIGITAL DATA COLLECTION AND SHARING

Interviewees noted that a key challenge is changing the working culture within organizations to encourage data collection and sharing. This was identified as a foundational shift that needs to happen in the sector to adapt to increasing demands for transparency, evidence in decision-making and demonstrating impact. Part of this challenge will be that organizations must commit to an open-by-default mindset and encourage staff to develop the necessary skills. This shift will be easier for some organizations and sub-sectors than others. Some organizations have embraced digital data collection within their organizations and the main challenge lies in opening it up. Other NFPs will face a steep curve as they develop a mindset that collecting information on computers is easier and far less labour intensive than legacy methods that involve paper collection and manually converting data. However, organizations do not have to do this alone — many organizations in the NFP sector and in the tech community, more broadly, are specifically dedicated to helping users and organizations bridge the data divide.

TAKING ADVANTAGE OF EXISTING DATA

Beyond access, there is a need to take better advantage of the datasets that are currently available. NFPs are only beginning to take advantage of the datasets about the sector that are already open. For example, T3010 data about registered charities is open to the public, and though it is being used and downloaded frequently, information has not yet been put into widespread use by NFPs. Interviewees noted that there is a lack of grassroots awareness of what is available – many users do not know what types of information exists, do not know how, or where, to access datasets and once retrieved may be unsure of how to manipulate and analyse data. Once downloaded, some interviewees also found that existing datasets lacked key data points that are of interest from an NFP perspective. Another challenge is that many NFP organizations are not fully aware of open data's potential for their operations.

At a sector level, this means:

»there is a need for greater data literacy either within individual organizations through hiring or training

»better linkages between the NFP sector and the open data community to draw on the skills from other organizations

As a 2013 Aspen Institute report on opening NFP sector data notes, this may include reaching out to partners outside the sector to those who are "knowledgeable about open data in tech and media to uncover benefits and develop innovations" (Noveck & Goroff, 2013).

DEVELOPING THE SKILLS OR TOOLS TO WORK WITH AND COLLECT DATA

Another part of the challenge is finding ways to develop the skills needed to work with data when many organizations do not have many additional resources or staff to dedicate to the task. Organizations with capacity challenges must develop intentional strategies to become "open data friendly" in cost-effective ways. Having data strategies, both in individual organizations and across the sector and sub-sectors, can help ensure that the resources for data collection and sharing are accessible and designed with average users in mind. This type of thinking draws on the idea of "user archetypes." Thinking about user archetypes means that data collection and sharing systems are designed to accommodate the widest possible range of users — from power users accessing bulk data for software or research purposes to small not-for-profit staff members looking for one specific data point.

At a sector and sub-sector level, this means:

»sharing clean datasets in the widest possible range of formats and, at times, trusting developers and advocates to create additional tools for the NFP sector to use

At the organization level, this means:

»designing focused data collection strategies that match the goals and size of the organization. This requires NFPs to be mindful about what types of information they choose to gather and collect it in a way that does not detract from service or mission, but rather, enhances the quality and ease of their work. The tools to do this do not have to be costly. In many cases, it can be as simple as using shared Google documents or other free applications.

ALIGNING EFFORTS WITHIN THE SECTOR

Increased collaboration could help reduce the duplication of collection efforts within the sector and also help organizations access support from others that have more experience working with data.

At a sector and sub-sector level, this means:

»there is a potential for organizations to explore options around shared data collection and data services

Much like shared platforms offer sharedsupport to organizations that are aligned with a mission, organizations with similar goals could explore ways to pool their data collection efforts in a way that strengthens their operations (McIsaac & Moody, 2013).

At an organizational level, this means:

»organizations can pursue simple collection strategies

There are many steps that can be taken without substantial costs for NFPs. For example, food banks within a community could collect information on their service levels, population demographics and service gaps on a shared spreadsheet and make the results available online. This could help by making their work more transparent and by also developing a snapshot of community need that can be used to improve other systems, or make the case for new types of funding. Organizations can make their work more impactful if they coordinate their data efforts with similar organizations.

To address these challenges, the NFP sector must be strategic. In the long term, building capacity will mean greater focus on hiring and training staff members that possess the right research and analysis skills to work with datasets and knowledge of open data principles. In the short to medium term, the sector should explore options in the community that can help bridge capacity gaps. For instance, under the federal government's Open Data Action Plan, the government commits to providing supports for digital skills literacy training (Government of Canada, 2014a). Recognizing the sector as a potential recipient under this pillar may facilitate capacity building support in the short term. Universities and academia may also have a role to play as important strategic partners to the sector. Whether through open data centres of excellence, research networks or communities of practice, further engagement with the academic sector may allow NFPs to access supports from skilled individuals. Finally, drawing on the shared

platforms model, NFPs working within a similar area or mandate should explore the possibility for shared data collection and data services. By pooling their resources, organizations may be able to decrease the burden of data collection and improve their ability to track their outcomes.

Leadership

Finally, interview participants stressed there was a need for leadership from the sector. Though there are many initiatives across the sector, interviewees stressed that there was low awareness across the sector about what they are and who is doing what.

Sector intermediaries will have a critical role to play in convening and communicating the needs of the sector. They must lead by starting conversations about the needs and priorities for open data and helping to communicate these needs to relevant stakeholders. In the short term, assessment is the first step in this process. There is a need to map out the current data ecosystem to identify its strengths, assets and priorities with the goal of identifying high-value datasets needed to help the sector function effectively. The sector must also be ready and able to communicate these priorities and their value proposition. Some of this work is already underway, but there is an opportunity for NFPs to fully engage in these efforts.

The open data community can also help through further outreach to the sector. There are many resources that have been developed to help those interested in open dataraise their literacy levels or develop open data use cases. This is promising. However, there is a need for greater understanding of the NFP sector's needs. In many cases, NFPs are interested in accessing data for the purpose of analysis, funding or delivering services. In some cases, they might be better served by being able to access tools that help them make these decisions. By better integrating partnerships with NFPs into their work, civic technologists can help develop tools and services that align with the work of the sector.

Finally, there is also a role for government to play as a leader and facilitator. For government to support open data and capitalize on its social benefits, it must lead on three fronts:
- » developing policy frameworks that support open data

- » releasing data that is of interest to the NFP sector
- » providing resources and training to help the NFP sector take advantage of these frameworks.

Government support of open data will mean that all levels of government provide up-to-date, standardized, usable datasets that are relevant to the NFP sector. This can be done by adopting core reference dataset policies and including key datasets for the not-for-profit sector. Government is also well-placed to facilitate leadership on standards and indicators — both in terms of helping build capacity and convening conversations. Enabling these capacities and conversations will help the NFP sector better achieve its objectives and deliver better outcomes.

VITAL SIGNS REPORT, TORONTO FOUNDATION

In 2014, the Toronto Foundation (TF) committed to opening up the data used for its Vital Signs Report by the following year. Released annually since 2001, the Vital Signs Report provides residents, community organizations, businesses, universities and government with a consolidated snapshot of the trends and issues affecting quality of life in the City of Toronto. The report is compiled from current statistics and studies, and is in partnership with various researchers.

Identifying both progress in the city and issues that need to be addressed, the Vital Signs Report is intended as a community endowment to mobilize people and resources to tackle the challenges facing Toronto's communities. It provides a wide array of resources to the NFP sector, including sections on demographics, health and wellness, the gap between the rich and poor, housing, leadership and civic engagement, and work. By doing so, the Vital Signs Report enables data use by Toronto-based NFPs, and presents opportunities to apply this open data to identify trends and address issues in a range of areas.

4 The Way Forward

A not-for-profit sector that takes advantage of open data will benefit in many ways. While open data presents many challenges, it also offers incredible potential to strengthen programs, streamline everyday operations and help the sector communicate its value.

There is an achievable vision around this opportunity. A NFP sector that takes advantage of open data will mean that organizations have the opportunity to use, create and maintain robust information systems that support their work and help demonstrate their stories of impact. Data from these systems can be used, linked and repurposed, helping to inform public policy and program design. In addition, high-quality, standardized sector and government data will facilitate the development of better information tools that can be made available for program planning and community development.

Systems can and should be designed with the range of possible users in mind. Systems based on user archetypes will mean that data stakeholders — from power users accessing bulk data for commercial software or research purposes to front-line staff looking for specific data points — will be able to access information in formats that are useful to them. In some cases this will mean raw data in preferred formats through an API[1], in others, by using tools that allow for open analysis, fed by these same open data streams.

Government support of open data will mean that all levels of government provide up-to-date, standardized, usable datasets that are of relevance to the NFP sector. Beyond data provision, government will facilitate leadership by supporting key conversations on the frameworks and standards that support open data and the development of shared indicators that NFPs and governments can use to track progress on shared social goals.

1 API stands for Application Programming Interface and it is simply a way to access information and pass it between software systems.

To capitalize on this ecosystem, NFPs will have the human resources to use data either within their organization, or can easily access supports from the civic technology community, universities and other NFP partners who share their skills.

However, this vision requires the sector to make open data a strategic priority; and government and open data partners to recognize the role the NFP sector can play as a partner in mobilizing open data for social good. While these goals are achievable, the work that must be done to reach them is detailed, slow and technical. It will require significant culture change for both NFPs and government as they adapt to new norms and ways of operating.

> "It will need to look a lot like learning – it will involve communities of practice, conferences, and a lot of trying and failing over the next 10 years. Real change is not the result of a silver bullet, but comes from a number of prongs, smaller strategies and multiple efforts happening in a community that is talking to one another."
>
> — MICHAEL LENCZNER, CEO, AJAH & POWEREDBYDATA

5 Recommendations

Assess

» Effective data strategies require thorough knowledge of the sector's data needs. A detailed assessment of the sector's existing datasets and their sources are a key first step to better understanding who is doing what, what is needed, how the sector might better share its information and promising tools.

» NFPs should carefully consider and articulate the shared resources and tools needed to build data capacity in the sector and potential partnerships with government, universities and the open data community needed to make them available.

Strategize

» Governments are developing their data strategies and frameworks now and they have a duty to reach out to civil society. The NFP sector should be ready to engage in these public discussions with an idea of its priorities and be prepared to communicate the value that NFP-related data can offer.

» Conversations and partnerships with municipal governments could be a potential starting point for further collaboration. Local governments both hold community-level information that is often of interest to NFPs and are interested in many of the same datasets (e.g. datasets relating to health outcomes, education, incarceration).
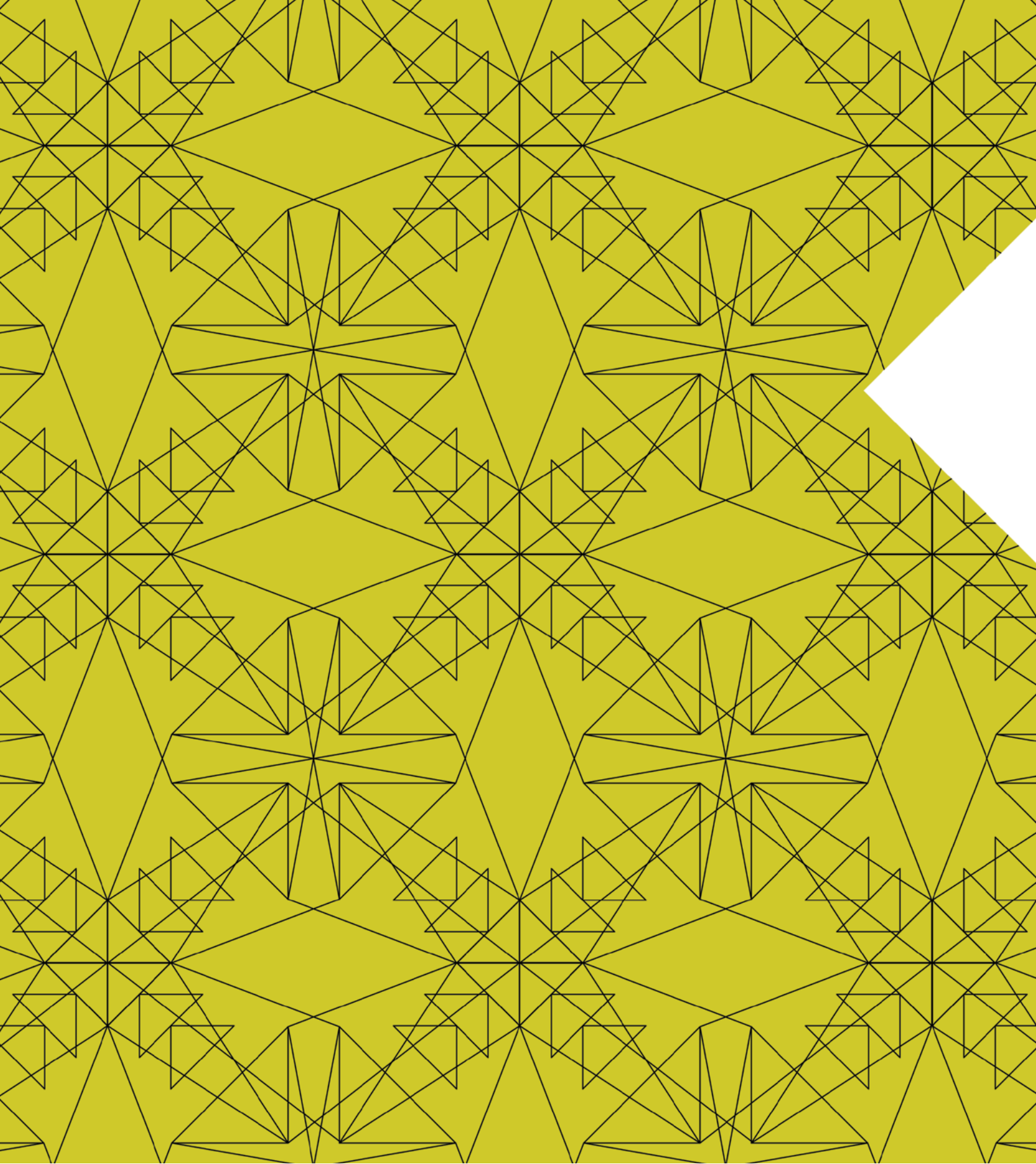
Encourage

» Sector funders can act as a key driver of change by encouraging open data practices. Key funders should consider adopting open licensing standards for data and work products developed by grantees, to achieve greater impact for investment.

» In order to take advantage of the different capacities and skills embedded across organizations, NFPs should consider the potential for new forms of collaboration, such as shared data collection and data services.

» There are a variety of emerging standards that may help NFPs make better use of data. Standards based on emerging international best practices should be adopted and should inform any efforts undertaken by the sector.

Lead

» Sector intermediaries (umbrella groups) have a critical role to play in convening and communicating the needs of the sector overall. They must lead by starting conversations about the needs and priorities for open data and helping to communicate these needs to relevant stakeholders.

» Individual organizations can contribute by developing data strategies for their own organizations and identify areas where further information and support are needed and share these strategies with similar organizations.

» Government is well placed to facilitate leadership on the open data front. Governments should consider international best practices, such as adopting core reference dataset policies that include key datasets for the not-for-profit sector.

» Governments can also lead by helping to establish and participate in communities of practice around the development of standards and indicators that are of relevance to the sector.

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