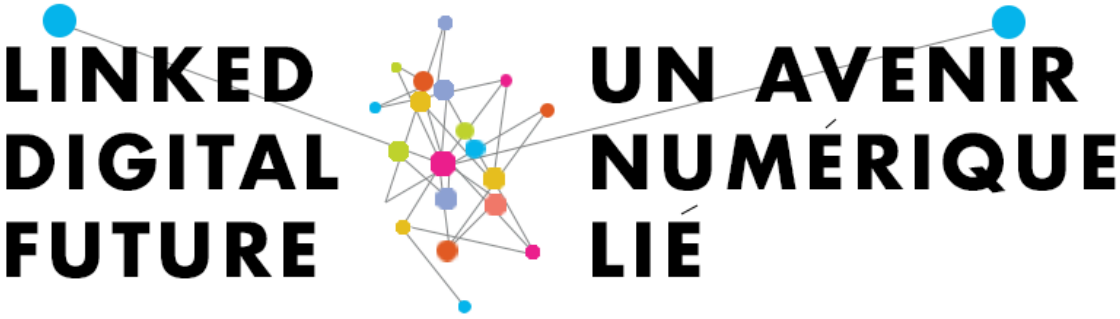


# 2022-2023 Annual Report

*This report is intended for Linked Digital Future (LDF) collaborators, funders and other agents of digital transformation. Please feel free to add comments to this document.*

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# Summary

In 2022-2023, the LDFI team and collaborators shifted the focus back to event data, while simultaneously completing many data uploads, prototyping activities and community engagement activities centered on venue data, person data and organization data.

Here is what we accomplished between April 2022 and March 2023:

- We collaborated with 9 providers of data about artists, organizations and venues. This brings the total to 13 since we began ingesting these kinds of datasets in 2020.
- Over the last two years, the number of persons, organizations and venues in Artsdata tripled from 11,100 to 35,000 (233% increase).
- Major efforts were invested to turn Wikidata into the most comprehensive database of performing arts venues, including a one-week datathon and manual population by LDFI staff. The number of venues in Wikidata increased from 276 to 549 (99% increase). This is nearly as much as the number of performing arts facilities in Statistics Canada' Open Database of Cultural and Arts Facilities (580).
- Thanks to digital discoverability programs run by dia-log and CAPACOA, the cumulative number of sources of event data in Artsdata has reached 73. The number of organizations who are implementing structured data is rising. They now account for 20% of upcoming events in Artdata. As a result, in the last quarter, the number of upcoming events available in Artsdata fluctuated between 3,000 to 4,000.
- Prototyping activities with Scène Pro, the Indigenous Performing Arts Alliance, CAPACOA and other data partners delivered proof that data exchange and reuse can deliver tangible benefits to platform operators and their users.
- The releases of the *Mid-Level Ontology for the Performing Arts* and of Québec's *Référentiel des métadonnées du spectacle* are imminent. These will be major milestones for the interoperability and discoverability of performing arts data.
- Explorations and consultations on Indigenous knowledge culminated with the release of the report *Indigenous Artists and Wikidata*. This report defines how information about Indigenous artists can be accurately and respectfully represented as linked open data.
- Over the last two years, members of the LDFI team provided data literacy services to no less than 26 arts service organizations, unions and awards organizations. They all received one-on-one guidance and resources to improve their data management practices. Nearly half of them made a data contribution to Artsdata and Wikidata.
- The LDFI resumed the Digital Discoverability Program and expanded the range of services to also include SEO and Wikidata audits. 20 organizations participated in the program. 7 of them implemented one or more recommendations to improve their discoverability or to make their event data reusable via Artsdata.
- The demand for data literacy services remained strong. Between April 2022 and March 2023, LDFI team members delivered 34 presentations and workshops to 753 participants – this is more than in any earlier phase of the initiative. Positive feedback from participants confirmed that these kinds of services are still valuable and necessary, even after five years of Linked Digital Future activities.

# Acknowledgements


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With sincere thanks to:

- All Artsdata data partners;
- All participants in the LODEPA Wikidata/Wikimedia Working Group.

The Linked Digital Future initiative is a CAPACOA project.



For more information about, please contact Frédéric Julien at frederic.julien@capacoa.ca.

# Prototyping, data partnerships and other data-centric activities

## Data about organizations, artists and venues

Descriptive metadata about organizations, artists and venues can serve many information needs in the performing arts sector. It can notably be interlinked with event metadata to deliver richer information to industry stakeholders and consumers alike.

Over the last two years, the LDFI team members and data partners pursued several projects to increase production and consumption of open data about performing arts organizations, artists and venues. Each project involved an Extraction-Transformation-Load (ETL) process. However, different extraction and upload strategies were used, depending on the accessibility of the data, and the availability of service providers to do the work. Extraction and upload strategies included:

- Website scraping, natural-language processing and loading to Artsdata (recurrent);
- Scraping of structured data and upload to Artsdata (recurrent);
- Extraction via API and upload to Artsdata (recurrent);
- Spreadsheet or CSV exportation and upload to Wikidata (i.e. batch uploads) (one-time);
- Manual data population in Wikidata (one-time);
- Uploads from Wikidata to Artsdata, and vice-versa (occasional).

Some data partnerships also involved consumption of data stored in Artsdata.

### Data provision via Artsdata

| **Organization name** | **Project name** | **Data provider** | **Data consumer** | **Provision software** | **Consumption software** | **Details** | **Status as of March 31, 2023** |
|---|---|---|---|---|---|---|---|
| CAPACOA | Member directory | ☐ | ☐ | Artsdata Databus | Arstdata plugin | Orgs, persons, controlled vocabularies | Recurrent, weekly |
| IPAA | Member directory | ☐ | ☐ | Artsdata Databus | csv | Persons | Recurrent, ongoing partner |
| Association RIDEAU | Scène Pro | ☐ | ☐ | Artsdata Databus | | Orgs, places, controlled vocabulary | Recurrent, monthly or annual |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Culture Laval | Signé Laval | ☐ | ☐ | Artsdata Databus, Footlight | | Events | Recurrent, weekly |
| Culture Outaouais | Tout culture | ☐ | ☐ | Artsdata Databus, Footlight | | Events, orgs, places | Recurrent, weekly |
| La Vitrine | La Vitrine | ☐ | ☐ | | csv, API, SPARQL endpoint | Events, orgs, places | One-time, can be repeated |
| Regroupement québécois de la danse | Member directory | ☐ | ☐ | Artsdata Databus | | Orgs, persons | One-time, can be repeated |
| La danse sur les routes du Québec | Member directory | ☐ | ☐ | Artsdata Databus | | Orgs | One-time, can be repeated |
| Japanese Canadian Artists Directory | Member directory | ☐ | ☐ | Wringer | | Persons | Recurrent, weekly |
| Union des artistes | Bottin | ☐ | ☐ | Artsdata Databus | | Persons, controlled vocabulary | Recurrent, monthly or annual |
| Associated Designers of Canada | Member directory | ☐ | ☐ | Artsdata Databus | | Persons | Recurrent, monthly or annual |

Data quality was validated prior to the upload to Artsdata. Data records that did not meet SHACL validation were flagged. Common errors included wrong type for the dataset (ex: a group within a dataset of persons) or an identifier (ex: a business number) that was not unique within the dataset.

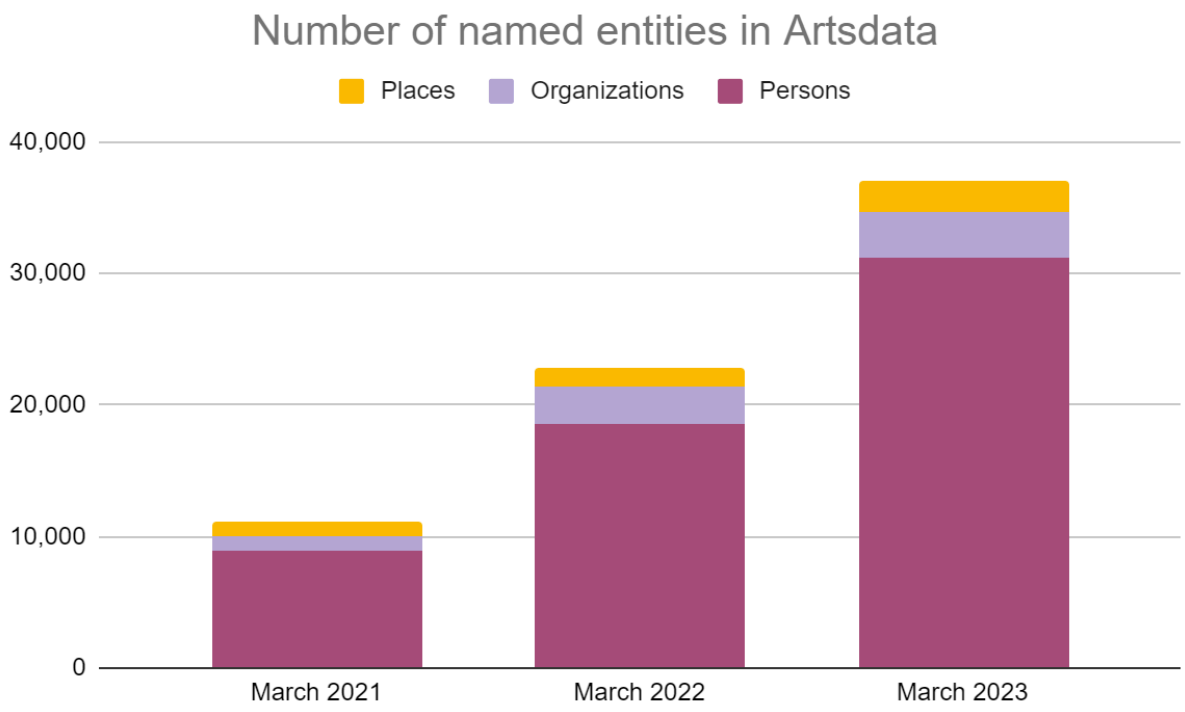
Each data set was uploaded into its own graph and was preserved “as is”. While this enables traceability and preserves ownership and control of the data, it also means that a given person or organization may have multiple records in different graphs within Artsdata. This is where reconciliation and Artsdata ID minting came into play.

Each data record that met minimal exhaustivity criteria for disambiguation (i.e. that had enough data points to be differentiated from or matched with any other similar record) was assigned an

Reconciliation is the process of comparing data from two or more sources and identifying data records that describe the same “thing”. Reconciliation usually starts with comparing names, but names can be tricky. It is not uncommon for an artist to go by a stage name, but some databases may only collect a person's given name and last name. Similarly, organizations can be known under a usual or operating name as well as a legal name.They may also be designated by the name of the venue they operate and/or the festival that they organize.

Artsdata ID and “sameAs” relationships with all known other records for the same entity. They were subsequently added to the core Artsdata graph.

As a result of these data partnerships, the number of named entities (persons, organizations and places) in Artsdata grew from 11,100 in 2021 to 37,000 in 2023, a 233% increase (see the detailed indicators below).



## Batch uploads to Wikidata

All datasets loaded to Artsdata were subsequently uploaded to Wikidata.

In addition, LaCogency performed several uploads directly into Wikidata.

The following table provides an overview of all datasets uploaded to Wikidata.

| Date | Data partner | Type of items | # of items in source dataset | # of properties edited | # of items edited | # of items created | total items touched |
|---|---|---|---|---|---|---|---|
| Dec 2022 | Orchestras Canada | Org | 140 | 4 | 44 | 94 | 138 |
| Dec 2022 | Japanese Canadian Artists Directory | Person | 306 | 12 | 0 | 306 | 306 |
| Mar-May 2022 | Union des artistes | Person | 5389 | 9 | *1083* | *2103* | 3186 |
| Apr 2022 | Scène Pro | Venue | 217 | 11 | *38* | *74* | 112 |
| Jul 2022 | Scène Pro | Org | 168 | 11 | 12 | 93 | 105 |
| Jul-Sep 2022 | CAPACOA | Org | 108 | 10 | 40 | 76 | 116 |
| Oct-Nov 2022 | OSAC | Venue | 50 | 7 | 3 | 46 | 49 |
| Aug 2022 | Indigenous Performing Arts Alliance | Person | 176 | 11 | 24 | 152 | 176 |
| Nov 2022 | Indigenous Performing Arts Alliance | Org | 23 | 14 | 9 | 14 | 23 |
| Apr 2022 | Regroupement québécois de la danse | Org | 122 | 7 | *31* | *31* | 61 |
| Oct 2022 | Regroupement québécois de la danse | Person | 437 | 14 | *142* | *427* | 569 |
| Feb 2023 | Associated Designers of Canada | Person | 224 | 11 | 1 | 132 | 133 |
| **Totals or averages** | | | 7360 | 10.08 | 1427 | 3547 | **4974** |

*Note: Numbers in italics are “guesstimates”.*

Batch uploads to Wikidata involved rigorous mapping, data cleaning, disambiguation and reconciliation processes before the data could even be uploaded. In addition, we also carefully documented the source of each upload.

Firstly, we had to “map” the concepts and fields in the source dataset with equivalent classes and properties in Wikidata. Most of the time, this was rather straightforward. Other times, we encountered challenges in accessing clear information about persons' occupations (i.e. their main professional activity), and practices/disciplines (known as "field of work" in Wikidata). The label for a field would appear to suggest an occupation, but the list of values associated with it clearly described a field of practice. Other times, we encountered concepts for which there was no good equivalent in Wikidata. These particular challenges were referred to the LODEPA Wikidata Working Group, who then determined whether or not a new Wikidata class was necessary.

Secondly, any data record that did not have enough data points for disambiguation was excluded from the upload.

Minimal data points for disambiguation included:

- **Names** (given name, last name and stage name [for persons]; and legal name, usual name and other “also known as” names [for organizations]);
- **Type** (i.e. what category of “things” the entry belongs to);
- **Occupation** or **field of work** (for persons);
- **Location** or **provenance**; and
- **Links** to an official website or social media accounts.

Disambiguation data is great for reconciling datasets and is excellent for discoverability too! Once alternative names (along with language qualifiers) are loaded to Artsdata and to Wikidata, search engines can more easily find artists, organizations and places.

32% of data records were rejected because they either had errors (they did not meet SHACL validation for upload to Artsdata) or they did not meet our minimal disambiguation requirements. They were filtered out and excluded from the upload process.

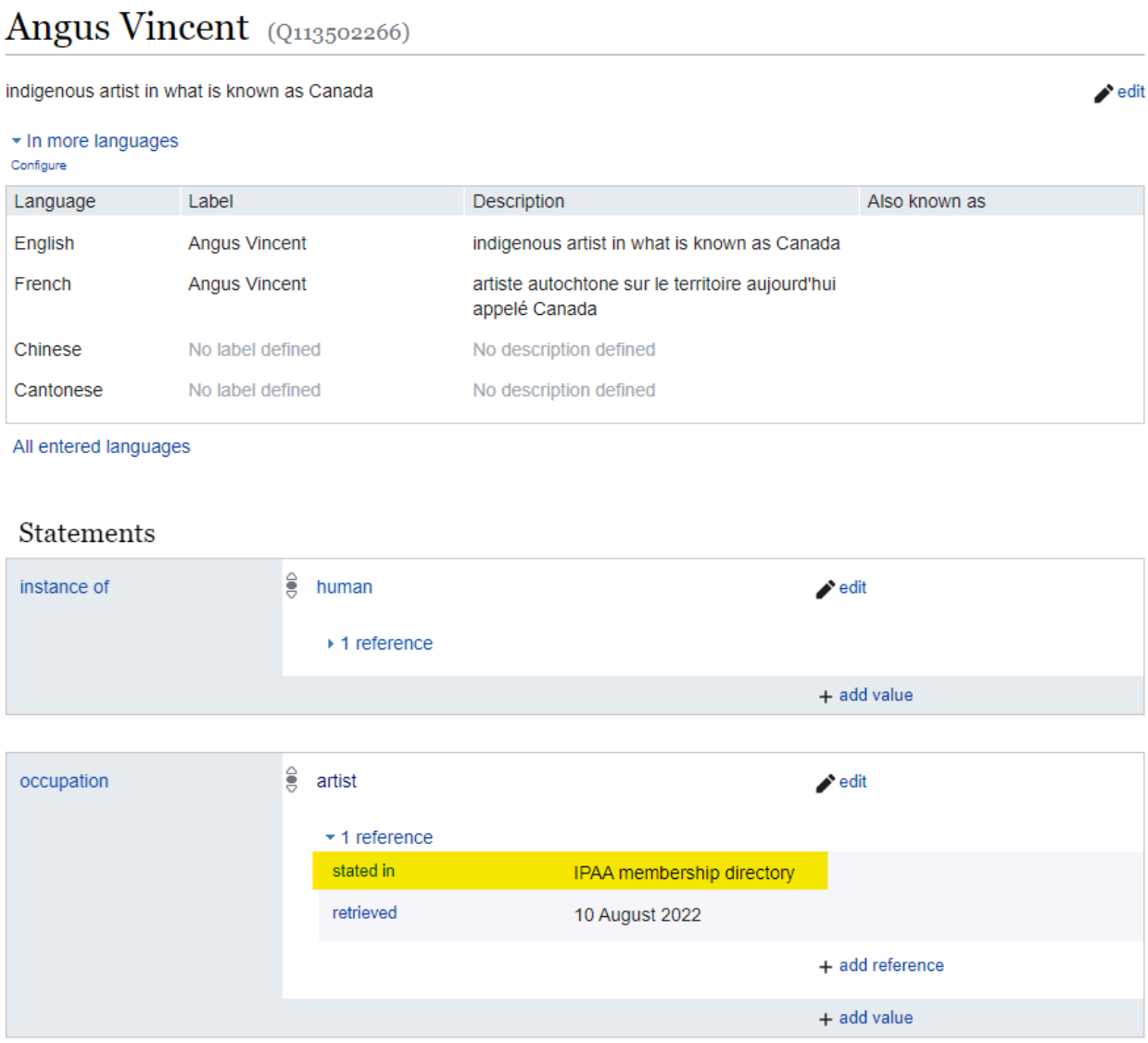
Thirdly, data records that did meet disambiguation requirements were compared and reconciled with existing items in Wikidata.

About 60-80% of records were reconciled programmatically, using software such as Open Refine and Quick Statement. For these records, we either found a match and were confident that the two entities were the same, or else we found no similar entity and were confident that the upload would not generate duplicate Wikidata items.

The remaining 20-40% of records needed to be manually reconciled by a “human-in-the-loop”. This manual reconciliation process was at times extremely time consuming. As a matter of fact, it often represented the bulk of the work. At one point, we considered using another software called Mix’N’Match to crowdsource the reconciliation process. However, we did not find it as effective as other tools.

Fourthly, we carefully documented the provenance of the data for each data upload. We created a Wikidata item describing the data source (see this example), and we cited it as reference for

all Wikidata statements created as part of the upload. We also created a meta item describing the LDFI data catalog and stating each individual data source as a part of this data catalog.




*Wikidata item for Angus Vincent, with a reference identifying the IPAA membership directory as the source of the information.*

In order to make subsequent uploads easier and faster to execute, we also meticulously attributed and documented unique identifiers:

- When the data source was on the Web and we were fairly confident that the URLs would be persistent, we considered creating Wikidata properties to document the source identifier in Wikidata. Only one data source seemed persistent enough to warrant the creation of a Wikidata external identifier property: Union des artistes ID (P8840).
- Items that met Artsdata SHACL validation were minted an Artsdata ID. This ID was documented with the property Artsdata.ca ID (P7627).

- Data partners were provided a .csv file with Wikidata identifiers (and Artsdata identifiers, when available) for all their data records. A few data partners – RIDEAU and IPAA – even received support to store these identifiers locally in their information system and to display them in their front-facing directories.

### LDFI Data Catalog Widget

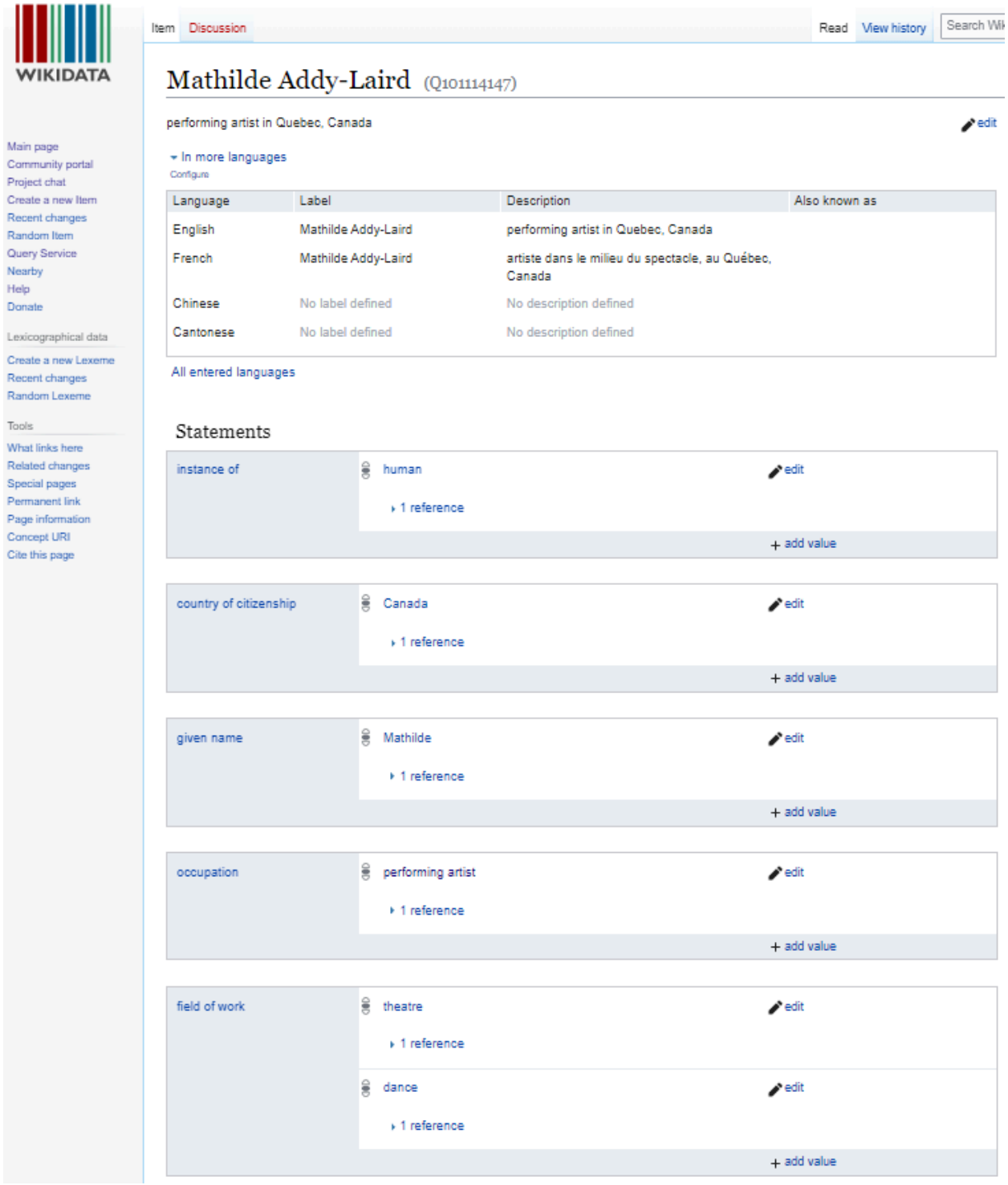
In order to monitor items after their initial upload, Culture Creates created The LDFI Data Catalog Widget. This widget lists datasets participating in the LDFI Data Catalog along with the number of Wikidata entities they enriched. Statements added to an entity must have the reference "stated in (P248)" in order to be included in this table.

As of March 31, 2023, the widget counted 12,375 items from 11 sources:

| "instance of" | Count |
|---|---|
| human | 10867 |
| organization | 1115 |
| venue | 393 |
| **Total** | **12375** |

*Note: This is not a count of unique Wikidata items. Several persons and organizations are referenced from more than one data source. For actual numbers of unique performing arts artists and organizations in Wikidata, see the Wikidata Indicators section.*

**Sample Wikidata item:**




*Mathilde Addy-Laird is a member of three data providing organizations: Union des artistes, Conseil québécois du théâtre, and Regroupement québécois de la danse. Data points from each source were progressively added and the result is a fairly comprehensive artist profile. Unfortunately, Union des artistes recently changed the URL format for their* bottin *(directory). Consequently, all UDA IDs populated in Wikidata no longer resolve to a webpage.*

### Manual data population in Wikidata

Further to the Cultural Venues Datathon (see below), CAPACOA hired two summer interns to manually create or edit venue items for all CAPACOA members. Together, they made 3,088 edits on 201 building and performance hall items. They also created 49 items.

One of these interns , Dessa Hayes, continued as a Digital Discoverability Consultant for the Linked Digital Future Initiative over the fall and winter.

Dessa worked with the Government of New Brunswick to ingest performing arts venues from their Inspired by NB platform into Wikidata. 19 new Wikidata items were created and 10 items were edited.

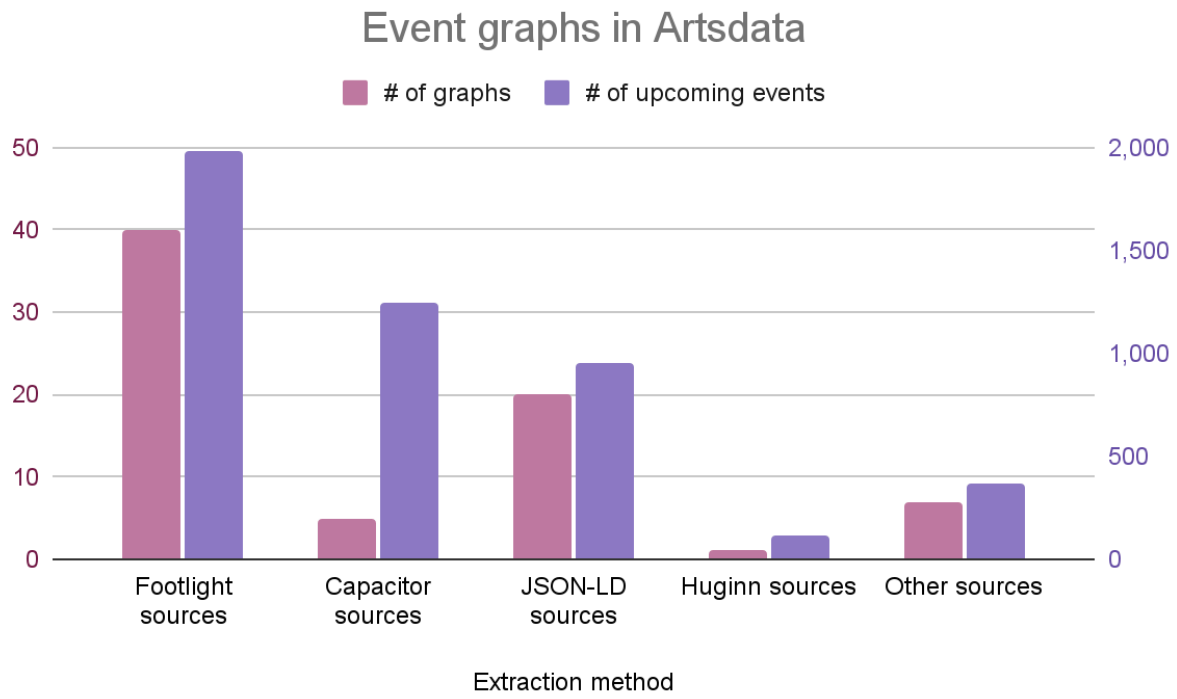
The goal for the 2023-2024 fiscal year is to assign Artsdata IDs to these 29 Wikidata items, so that structured open data about these venues can be easily consumed and shared by Inspired by NB.

## Data about performances

Between 2020 and 2022, we had been forced to put most of our event data provision strategies on hold. In 2022, we picked things off where we had left them:

- All organizations that were previously set up with either Footlight, Capacitor or JSON-LD structured data scraping had their events data loaded to Artsdata via their respective software and agent.
- In addition, CAPACOA and dia-log delivered discoverability services to 41 organizations (see below).
    - 13 of the 21 participants in the dia-log cohorts implemented a solution to make their event data reusable via Artsdata.
    - 7 of the 20 participants in CAPACOA's Digital Discoverability program implemented a solution to make their event data reusable via Artsdata. In addition, 4 past CAPACOA cohort members were still actively providing event data.
- As a cumulative outcome of previous years and the previous year's effort, there were 73 sources of event data in Artsdata as of March 31st (see the query).
- Together, these 73 event graphs listed 3476 upcoming events as of March 31st (see the query). This snapshot in time may not be representative of the average stock of upcoming events in Artsdata. In the weeks after the fiscal year end, we saw the number of upcoming events peak above 4000.
- The 73 event graphs with upcoming events were populated using the following extraction software or agent:
    - Footlight
    - JSON-LD (extracted with the Wringer application)
    - Capacitor
    - Huginn

- Other methods




*Note: This chart uses data queried on April 24th. At that point in time, the total number of upcoming events in Artsdata (4,093) was much higher than on March 31 (3,054). Additionally, some websites have their events in more than one graph, which also explains why the number of events is higher in this chart.*

# Prototyping activities with data partners

## The IPAA Member Directory and Data Sovereignty Strategy

In 2021, the LDFI team and the Indigenous Performing Arts Alliance (IPAA) had completed two essential steps prior to releasing IPAA member data as open data:

- IPAA adopted the Data Sovereignty Strategy, which emphasized the importance of control for their members and the benefits of linked open data.
- The IPAA membership form was expanded to include fields recommended by the LDFI for disambiguation and data reuse.

In 2022 and 2023, this work continued:

- A front-end Extract-Transform-Load process was implemented to load IPAA member information to the Artsdata knowledge graph and to Wikidata.
- The front end of the IPAA member directory was enhanced in various ways to make member profiles more authoritative and to improve their search engine ranking:
    - Display of self-identification information;
    - Display of official website and social media platforms;
    - Display of the last reviewed date;

- Display of the Artsdata and Wikidata identifiers
- Integration of structured data;
- Revision of the title tag to match the member's name;
- Addition of a dynamic sitemap.

The IPAA member directory now exemplifies many good practices for member profiles. Notably, their Schema structured data is quite elaborate. Many concepts are described with sameAs links pointing to the equivalent Wikidata item. You can see how Leela Gilday's information is represented in this Schema validator.

In parallel, IPAA member data was extracted, transformed and loaded to Artsdata and Wikidata. 176 member profiles were uploaded. In Wikidata, this resulted in a 73% increase in the number of Indigenous artists in what is known as Canada!

## The LIVE Performing Arts Directory: a proof of concept for data reuse

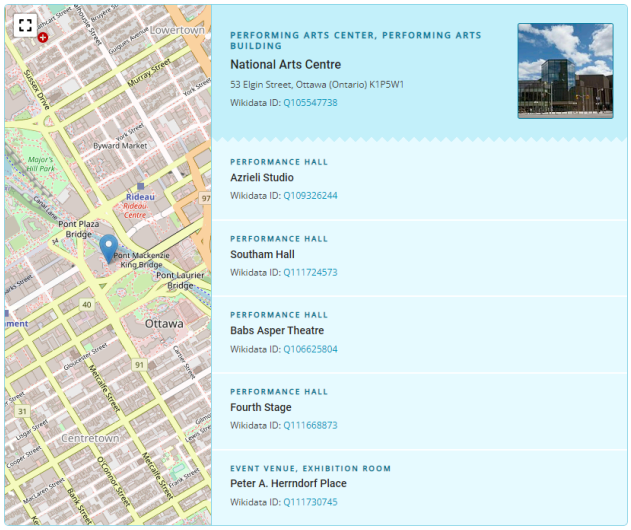
CAPACOA, Culture Creates and web developer Ryan Hutchinson developed a proof of concept for a member directory entirely powered by open data: the LIVE Performing Arts Directory.

- Member identifying and descriptive information is extracted, transformed and loaded to the Artsdata knowledge graph and to Wikidata.
- This data is assembled with data from Wikidata (venue information, social media identifiers) and from Artsdata (event information).
- This enriched data is then consumed into a directory powered by a Short Codes plugin for WordPress and is rendered on web pages.

A few cool features worth highlighting:

- Data provenance information is available when users hover their mouse over a header. A pop-up displays the source of the data.
- Venue information is entirely pulled from Wikidata and is displayed as venue info cards! These info cards include the following data points: Q ID, "instance of" value(s), coordinate location, street address, and image. When a building contains multiple performance halls and other rooms, these are nested under the building card (as in this example).

Venues




This new feature of the CAPACOA membership directory provides yet another proof of concept that:

1. Open data can be reused in industry applications; and,
2. This kind of data reuse involves little to no data population effort on the part of member organizations.

More documentation:

- https://github.com/culturecreates/capacoa-artsdata-usermeta
- https://github.com/culturecreates/artsdata-shortcode/releases

### Interlinking Scène Pro and Artsdata

Prototyping activities with Scène Pro continued over the last two years.

- In 2021, the Scène Pro API was fully implemented so as to enable queries and data reuse by third parties. An API key system was implemented and API documentation was released via Swagger.
- In 2022, Scène Pro organization and venue data were extracted, transformed and loaded to Arsdata and Wikidata (see the report).
- In 2023, Wikidata and Artsdata identifier fields were added to the Scène Pro database and front end.
- The next step will be to extract show data and make it available for reuse via Artsdata by third parties such as La Vitrine.

### Event data consumption in La Vitrine

- Over the last two years, we developed proofs of concepts of event data consumption with La Vitrine using both the Artsdata Event Query API and the Artsdata.ca SPARQL endpoint. These POC demonstrated that event data reuse in calendars is completely feasible, but the data feeds need to be customizable so it can be filtered and displayed according to the calendar's needs.
- The Scène Pro discipline/genre controlled vocabulary was represented in SKOS and loaded to Artsdata for reuse by La Vitrine.
- Further prototyping activities with La Vitrine are anticipated throughout the spring and summer.

## Other prototyping and development activities

Other noteworthy prototyping and development activities happening in the wider Artsdata.ca community, but not necessarily part of the LDF initiative, include the following:

- Working with Culture Laval and Culture Outaouais, Culture Creates is developing the Footlight CMS to manually populate structured event data into a regional calendar. The goal of this project is to develop an event calendar for the Arts sector, which can display a unified view of information coming from various sources.
- In support of digital discoverability cohorts led by dia-log and CAPACOA, Culture Creates and CAPACOA developed an event structured data template in JSON-LD format. This template "template" can be provided to a web developer for implementation

as a custom solution to generate Schema structured data. Thanks in part to this template and to the data literacy efforts of dia-log and CAPACOA, there were 20 websites providing events structured data to Artsdata at the end of this phase.

- Culture Creates developed the Artsdata Finder, a search tool that looks up Artsdata resources according to their names. While this string search is not as accurate as a SPARQL, it is much more easy to use.

### Other examples of open data reuse

Here are a few other applications that consume open data, as examples of "what else could be possible":

- Culture in time (developed in part with the support of the LDFI);
- MarionNet.CA
- OpenArtBrowser
- Wikxhibit
- LOD4 Culture

## Artsdata.ca Indicators

Here are key indicators about the Artsdata.ca knowledge graph as of March 31, 2023:

| Number of Uniform Resource Identifiers | March 2021 | March 2022 | March 2023 | 2-year change (%) |
|---|---|---|---|---|
| Artsdata Minted URIs | 10,268 | 19,301 | 32,908 | 220% |
| Events (cumulative) | 4,618 | 24,517 | 30,851 | 570% |
| Events (upcoming) | N/A | 3,054 | 3,476 | N/A |
| Organizations | 1,088 | 2,864 | 3,518 | 220% |
| People | 8,936 | 18,576 | 31,157 | 250% |
| Indigenous artists in Canada | 212 | 212 | 402 | 91% |
| Places (venues) | 1,077 | 1,327 | 2,330 | 120% |
| Entities interlinked with Wikidata | 459 | 674 | 5,627 | 1130% |
| Total number of entities (including external URIs) | 98,791 | 237,991 | 396,452 | 301% |
| Number of RDF statements (subject-predicate-object) | | | | |
| Explicit statements | 512,000 | 1,207,000 | 1,938,000 | 280% |
| Inferred statements | 893,000 | 1,953,000 | 2,961,000 | 230% |
| Total statements | 1,405,000 | 3,160,000 | 4,899,000 | 250% |

# Wikidata Indicators

| Classes of entities | March 2021 | March 2022 | March 2023 | 2-year change (%) |
|---|---|---|---|---|
| Performing artists born in, citizen of, residing in or working in Canada * | 7,092 | 10,747 | 11,724<br>19,070 * | 65% |
| Performing arts groups/organizations in Canada ** | 472 | 653 | 941<br>1029 ** | 99% |
| Performing arts buildings in Canada (excluding movie theatres) | 276 | 276 | 343 | 99% |
| Performance halls in Canada | 0 | 0 | 174 | |
| Open-air event venues in Canada | N/A | N/A | 32 | |
| Total | 7,840 | 11,676 | 13,149 | 68% |

Notes:

- The query of performing artists may exclude stage directors and choreographers who are not also specifically stated to be actors, dancers or any other performing artist. If stage directors and choreographers were included (as in this query), the count would have been 19,100. If musicians were also included (this query), the count would have been 32,600.
- The query of performing arts groups does not include organizations that work in the performing arts but are not an instance of a performing arts group (or a subclass). This query identifies 88 such organizations. Most of them are organizations that fall outside of the primary performing arts value chain: service organizations or organizations whose mandate is broader than just the performing arts. Others are organizations that could be instantiated as a “performing arts group”, but were rather given a broader instance of value.
- The classes “performance hall” and “open-air event venue” were created during the 2022-2023 fiscal year by the LODEPA Wikidata Working Group (read more). The sum of buildings, performance halls and open-air venues in Wikidata was 549 in March 2023. This is almost as many as the number of theatre/performance and concert hall records in the Open Database of Cultural and Arts Facilities (580) maintained by Statistics Canada (which includes many movie theatres improperly classified as "theatre/performance and concert hall").
- There are ontological and data exhaustivity issues that make it challenging to query Indigenous artists in Canada. At the time of writing this report, the most useful query looks for Indigenous Peoples from Canada, regardless of the artist’s actual provenance. This query is likely to capture several artists born in the United States.

# Action Research

## Modeling Activities

### Controlled Vocabulary for Organization Types

- A first version of the controlled vocabulary for Organization types, called Artsdata Organization Types, was implemented in Artsdata near the end of March 2022.
- Artsdata Organization Types is a bilingual controlled vocabulary for the classes and subclasses of organizations used in Artsdata, as well as their common aliases. Its goal is to serve as a base for mapping different types of arts organizations using a common language. The controlled vocabulary is implemented in SKOS and mapped to Wikidata classes, using intermediary SKOS Concepts with skos:closeMatch.
- Updated documentation is available here: https://culturecreates.github.io/artsdata-data-model/classes/organization.html
- History of versions of the Artsdata Controlled Vocabularies are here: https://github.com/culturecreates/artsdata-data-model/commits/master/ontology

In parallel, CAPACOA developed a logic model for inferring industry classifications to organizations. This model includes mappings to Wikidata classes, as well as NAICS codes.

In the future, Culture Creates and CAPACOA intend to harmonize the Artsdata controlled vocabulary and the organization classification definitions.

### Controlled Vocabularies for Disciplines/Genres

- CAPACOA continued to maintain the LDFI Mapping of Controlled Vocabularies. This resource maps different controlled vocabularies to one another, as well as to NAICS classifications and to Wikidata classes. This resource is regularly shared with operators of platforms and databases to help them achieve semantic interoperability with other systems.
- Meanwhile in Quebec, performing arts organizations agreed to adopt the Scène Pro vocabulary of disciplines as a standard for the province of Quebec. To support this harmonization effort and to enable the use of this vocabulary as linked data, the Scène Pro vocabulary was converted into SKOS and loaded to Artsdata. By assigning URIs (Unique Resource Identifiers) to each discipline or genre concept, it becomes possible to link disciplines/genres to works, offers and events in any other database, as well as to map between similar concepts in other controlled vocabularies (see the use cases in this report).
- We also provided a few recommendations to further enhance the reusability of the Scène Pro taxonomy:
    - Allowing the URIs to be dereferenced to a human-readable webpage;
    - Implementing descriptions and English translations;

- Harmonizing the first-level concepts with NAICS classifications;
- Enabling many-to-many relationships between first-level disciplines and second-level genres. At present, the Scène Pro vocabulary is a straight taxonomy with rigid one-to-many relationships between parent and child: a second-level genre can only be used along with its one first-level parent. This is bound to create interoperability challenges with other systems. It may also generate errors when implemented with real data. For example, “clown” is a genre and practice that can be associated with “circus”, “theatre”, “variety”, and even “dance”. Ausstage found that a many-to-many structure was necessary to represent real-life data.

## Advancing reconciliation

Culture Creates participated in the W3C Entity Reconciliation Community Group, who recently released version 0.2 of a specification for reconciliation APIs. This specification enables reconciling without supplying entity names (but only properties). This brings Artsdata a step closer to being able to reconcile events, for which names are an unreliable data point. Accurate disambiguation and reconciliation is a prerequisite for assigning and interlinking persistent identifiers.

## Recommended persistent identifiers

As we explained above, the upload of data about named entities (ex: persons, organizations) to Artsdata or Wikidata (or any other information system), involves a reconciliation process: matching entities from the source dataset with entities in the destination dataset to avoid creating duplicate entries. In the absence of a common unique identifier used in both datasets, this reconciliation process can be quite time-consuming and poses the risk of errors (i.e. wrong matches).

In order to make it easier to exchange data between performing arts systems, CAPACOA and Culture Creates developed a set of specifications for adopting common “bridge identifiers: LDF/ANL Recommended identifiers

Each recommended identifier is “persistent”. Along with the ID string comes a permanent Uniform Resource Identifier (URI) that can be used both in relational database management systems and in graph databases such as Artsdata. This URI can also resolve to a web page that displays metadata about the entity in a human-friendly format.

In the absence of a bridge identifier for entities, an “official URL” can serve as a proxy. However this imperfect solution presents too many flaws for identifying or reconciling data about events:

> Linked data is about “things”, not “strings” of characters. For a “thing” (or *entity*) to be processed and linked to other things, it needs to be assigned a *Uniform Resource Identifier* (or URI). The URI serves both as an identifier and a locator for the entity.

1. The same event can be listed on multiple websites, each with their own distinct event URL.
2. In Schema structured data, the same URL is often used as an @ID for both the “WebPage” entity and the “Event” entity – Google recommends assigning a distinct canonical URL to each entity.
3. Some performing arts organizations don’t have their own event webpage and rely exclusively on their ticketing system’s webpage. Again, this presents a problem because Google recommends assigning an “Event” webpage a canonical URL, and a different “Offer” canonical URL for the ticketing webpage.
4. Most of all, **event URLs are NOT persistent**. Once an event is past, it is usually removed from the website or moved to an archive section with a different URL structure.

As response to this problem, we initially used the webpage slug to mint event identifiers within the artsdata.ca namespace. However, now that duplicate events are coming from multiple websites, we have shifted to minted global Artsdata IDs (an opaque persistent identifier that begins with the letter K). This unique persistent identifier is now used to disambiguate and to interlink a given event, no matter if it is coming from two, three or ten different websites.

# National and international collaboration

## LODEPA WG6

LODEPA stands for “Linked Open Data Ecosystem for the Performing Arts”.

Members of this community share a vision for an international, decentralized linked open data ecosystem for the performing arts domain, as described in the report *A Linked Digital Future for the Performing Arts*. Like the architecture for this ecosystem, which consists of many layers (see this figure), the LODEPA community is organized in seven working groups which are loosely coupled.


Since efforts to secure COST funding for LODEPA have not been successful, most working groups have gone dormant, with the exception of one group stewarded by the LDFI.

The LDFI coordinated Working Group 6 (WG6), which is dedicated to Wikidata / Wikimedia related work. The group establishes best practices as to the use of Wikidata, Wikimedia

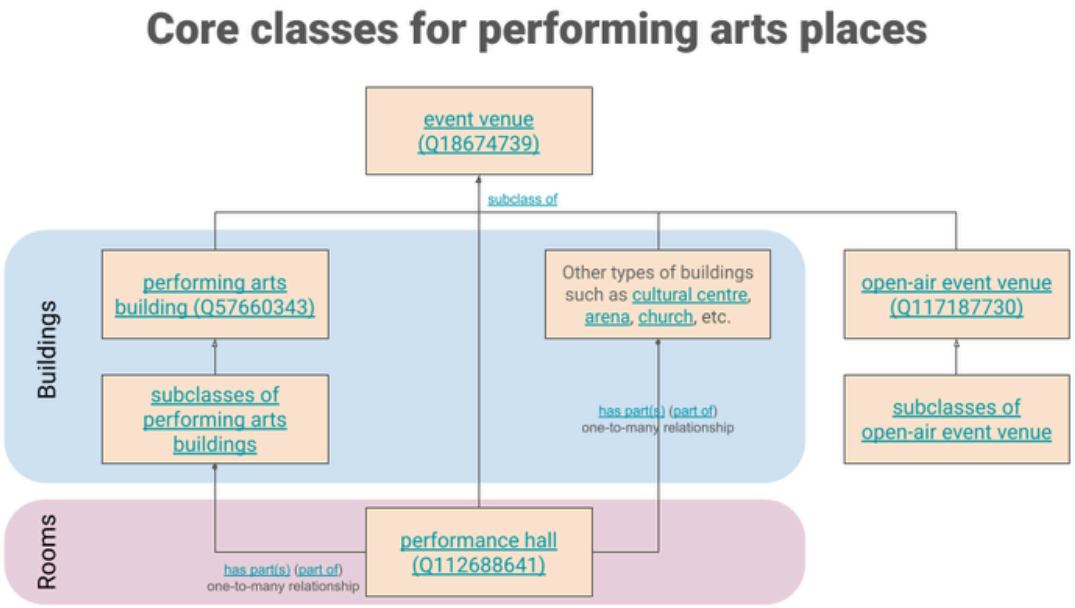
Commons and Wikipedias. This includes the implementation of models and vocabularies on Wikidata, the resolution of challenges (as they arise), the ingestion of data in Wikidata, and the pursuit of use cases that intersect with Wikimedia projects..

Four LODEPA WG6 meetings took place between June 2021 and March 2023. These meetups brought together 26 unique participants (and 43 total participants). The increase in the number of participants (20 in 2021-2022) is the result of national and international outreach, as well as the offering of English-French interpretation. In between meetings, the community continued to communicate over the LODEPA Slack Workspace (in which the LDFI Slack merged two years ago). Engagement on the Slack channel is however decreasing: most posts and comments now come from LDFI team.

Here are a few major outcomes of the LODEPA WG6 activities in the last year:

- After much discussion, the performance hall (Q112688641) class was created in June 2022 to designate a “room intended for the presentation of live performances before an audience, generally comprising an audience space and a stage space”.
    - Different dataset/data sources use venue information in different ways. For example, datasets of events tend to refer to a specific room in a building, while datasets dedicated to venues often describe the building as a whole. This granular model, with buildings and halls described as two distinct classes, seemed the fittest to respond to different users' information needs.
        - Notably, OpenStreetMap also represents buildings and halls as distinct entities: the building, as an area; the hall, as a single amenity node within the building. Since OpenStreetMap relies on Wikidata to assign unique identifiers to its entities, we needed the two models to be aligned.
        - The performance hall class also corresponds to the concept of « salle de spectacle » in Scène Pro, a database that was recently uploaded to Wikidata.
    - The new class has proven useful for representing performing arts buildings with multiple performance halls, or else performance halls that are part of an infrastructure that is not a performing arts building.
    - Creating distinct items for halls is also useful for documenting stage dimensions and the location of the hall’s technical specifications.
    - The performance hall class was adopted by the Getty Art and Architecture Thesaurus. Unfortunately, they opted for slightly different scope notes, and the two classes are therefore not exact matches.
- Another subclass of event venue (Q18674739) was also created: open-air event venue (Q117187730) designates an “outdoor space equipped to host events”.
- Both classes were integrated in the class hierarchy for event venue (Q18674739) (see the diagram below), and a detailed typology was documented in the WikiProject Cultural venues.
- Several members of the working group met to discuss the conflation of performing arts-related and television-related statements and identifiers in the variety show (Q336181) Wikidata item. As a result, a new variety (Q117187901) item was created for

the theatrical genre. The original variety show item will now be maintained purely as a television genre.




*Credit: Frédéric Julien, with Gregory Saumier-Finch and Dessa Hayes, CC BY 4.0, via Wikimedia Commons.*

## PAIR-CG and harmonized ontology development

For the last two years, the Performing Arts Information Representation Community Group (PAIR-CG) has been leading efforts to develop a harmonized performing arts ontology. The LDFI has continued to support this important endeavour in different ways: by promoting the PAIR-CG in the LODEPA news and LDFI newsletter, by participating in monthly meetings, and by reviewing and commenting on the draft ontology.

"Ontologies" are ways of representing and organizing information within a knowledge domain. When ontologies are "mapped" to one another, information can be reused across systems built upon these ontologies.

The core concepts and properties of the Mid-Level Ontology for the Performing Arts (aka MiLOPA) have been defined. However, the initial version of the ontology, in .owl format, has still not yet been released.

## Référentiel des métadonnées du spectacle

Meanwhile, in Québec, participants in *mesure 111* of the *Plan culturel numérique du Québec* developed their own conceptual model with core classes, properties and controlled vocabularies. The LDFI was not invited to participate in this work, but we were given the opportunity to comment on the first draft. We delivered detailed comments and

recommendations to ensure interoperability with MiLOPA, with classic RDF ontologies, with Wikidata and, ultimately, with Artsdata. We notably recommended a standard that is inclusive of Indigenous languages.

## Indigenous knowledge

Since 2020, the LDFI team and collaborators have been conducting various action research activities to define how information about Indigenous artists and their works could be accurately and respectfully represented in the Web of data.


Following a series of individual and group consultations, this work culminated in 2022 with the production and publication of *Indigenous Artists and Wikidata: Explorations and Consultations Report*. This report — co-authored by Brit Johnston, Frédéric Julien and Anju Singh — has garnered significant attention and led to an invitation to share our learnings at the Canadian Open Data Summit.

Next steps in this area of action research remain uncertain. Further work is needed to decolonize Wikidata, but we need allies. The ongoing partnership with the Indigenous Performing Arts Alliance cannot be taken for granted, and the Indigenous Music Summit has not shown any interest yet for this kind of work. We reached out to the WikiProject Indigenous peoples of North America but we have been unsuccessful. The organizations associated with this WikiProject are no longer supporting it and the group appears to be dormant. Instead, we are now turning to other groups such as the LD4 Wikidata Affinity Group and the National Indigenous Knowledge and Languages Alliance.

Now that we have a foundation of data about Indigenous artists and a set of good practices for creating even more Wikidata items about Indigenous artists, we need to put this data to work. Our primary intended use case remains the interlinking of linked open data about Indigenous artists with linked open data about events featuring these artists. This would enable querying these events and then featuring them in cultural listings. In the long-term, this would make it easier for culture goers to find information about works and performances by Indigenous artists over the web.

We remain confident that we will undertake this kind of applied prototyping with the right partners in the next year.

## Governance of Artsdata

The number of members of the Artsdata community group continued to grow in 2022-2023. At the end of the year, group membership included:

1. CAPACOA
2. The National Arts Centre
3. Culture Laval
4. La Vitrine
5. Association RIDEAU
6. Culture Outaouais
7. Synapse C
8. The Government of New Brunswick

Crow's Theatre, however, has stepped down from the group. As a result, membership is now quite centralized in Quebec. This enables the group to function in French, without the need for an interpreter – which is convenient. However, this is a concern from the point of view of geographic representativity.

The Artsdata community group met no less than 11 times between April 2022 and March 2023. These frequent meetings enabled the group to :

- Lay out plans and budgets for grant applications;
- Share updates on prototyping projects;
- Align data provision efforts, including discoverability cohorts;
- Define data literacy and community building priorities.

# Community engagement and data literacy

## Support to arts service organizations

The Linked Digital Future initiative has pursued outreach to associations whose datasets on persons, organizations and venues could be uploaded to Wikidata. The goal was to build a critical mass of linked open data about organizations, artists and venues (which can then be interlinked with information with production and event information). Cultural Strategist Bridget MacIntosh led outreach activities in the "rest of Canada", while CQT's Raffaela Siniscalchi did the same in the province of Quebec.

The table below lists all arts service organizations that the LDFI reached out to, along with the nature of data literacy services provided. This table covers both the 2021-2022 and 2022-2023 fiscal years.

| | MET WITH STAFF / PROVIDED GUIDANCE | TRAINING PROVIDED (e.g. workshop, data enrichment clinic, information session) | DATA CONTRIBUTION |
|---|---|---|---|
| Associated Designers of Canada | ✔ | ✔ | Wikidata upload via Artsdata |
| Association RIDEAU | ✔ | ✔ | Artsdata partner |
| Association québécoise des autrices et des auteurs dramatiques (AQAD) / La Mine | ✔ | | |
| Atlantic Presenters Association | ✔ | | |
| Canadian Alliance of Dance Artists West (CADA / WEST) | ✔ | ✔ | |
| Canadian Dance Assembly | ✔ | ✔ | |
| CAPACOA | ✔ | ✔ | Artsdata partner |
| Conseil québécois du théâtre | ✔ | ✔ | Wikidata upload |
| Dance Umbrella of Ontario (DUO) | ✔ | | |
| Government of New Brunswick, Tourism, Heritage and Culture | ✔ | | Wikidata upload |
| Indigenous Performing Arts Alliance | ✔ | ✔ | Artsdata partner |
| Japanese Canadian Artists Directory | ✔ | ✔ | Wikidata upload |
| Les arts la ville | ✔ | ✔ | |

| | MET WITH STAFF / PROVIDED GUIDANCE | TRAINING PROVIDED (e.g. workshop, data enrichment clinic, information session) | DATA CONTRIBUTION |
|---|---|---|---|
| Manitoba Arts Network | ✔ | ✔ | ETL process established but interrupted |
| Orchestras Canada | ✔ | ✔ | Wikidata upload |
| Organization of Saskatchewan Arts Councils | ✔ | | Wikidata upload |
| Professional Association of Canadian Theatres | ✔ | ✔ | |
| RADARTS | ✔ | | |
| Rappels | ✔ | | |
| Regroupement québécois de la danse | ✔ | ✔ | Wikidata upload |
| Réseau Ontario | ✔ | | |
| Toronto Alliance for the Performing Arts | ✔ | ✔ | |
| Union des artistes | ✔ | | ETL to Artsdata |

Other organizations that we conducted outreach with and provided LDFI / Wikidata related information to include:

- Association des professionnels des arts de la scène du Québec (APASQ)
- Association des théâtres francophones du Canada
- Canadian Actors Equity Association
- Creative City Network of Canada
- En piste
- Fédération culturelle canadienne-française
- Greater Vancouver Professional Theatre Alliance
- International Society for the Performing Arts (ISPA)
- SPARC

### Resources developed for ASOs

Over the last two years, the LDFI team developed the following resources to help ASOs improve their data capacity:

- Two model consent strategies: the CAPACOA Membership Open Data Strategy and the IPAA Data Sovereignty Strategy
- Outreach Toolkit and Consent Guideline for Membership Based Arts Organizations
- Recommended Data Points for Individuals and Organizations
- Draft specifications for the adoption of bridge identifiers

These resources, along with lessons learned from our work with arts service organizations, were published in this blog post:

- Connecting with Arts Service Organizations. A Key to Opening Data About Canada's Performing Arts Sector, Bridget MacIntosh, October 25, 2023.

In addition, each ASO that uploaded their data to Artsdata and/or Wikidata was provided a project report with personalized recommendations. In the case of the Canadian Dance Assembly and its affiliate dance associations, we ran out of time to perform their batch upload, but we delivered a detailed report describing the roadmap for liberating member information as open data. This report will be used by the Canadian Assembly to seek funding to implement a data strategy. The Canadian Dance Assembly has kindly accepted to make this report available to other ASOs who want to learn more about liberating their member information as open data.

## Support to award programs

The Linked Digital Future Team also met with representatives from the following Canadian performing arts award programs:

- The Governor General's Award for the Performing Arts
- The Siminovitch Prize
- The Dora Mavor Moore Awards

Our goal was to educate award program staff on the benefit of Linked Open Data and to take steps to ensure that these organizations can directly contribute to increasing the discoverability of Canada's lauded performing arts contributors online. This was achieved by providing each organization with a customized data modelling strategy to guide staff through the process of adding program award winners to Wikidata.

## Support to individual organizations – Digital Discoverability Program

In 2022-2023, CAPACOA and Culture Creates enrolled 20 CAPACOA members in the Digital Discoverability Program. Each participant received a personalized diagnostic document, which

examined the available structured data on their event pages (using the Schema.org Validator), key SEO factors such as sitemaps and metatags, and Wikidata items for their organizations and venues (when applicable). For the structured data portion of the document, participants were offered two options: adding a JSON-LD template to the backend of their website (with the help of their web developers) or using the Footlight application.

Only 2 participants (Jeanne and Peter Lougheed Performing Arts Centre and Yukon Arts Centre) chose the Footlight option. However, they are both planning on implementing the JSON-LD template once they redesign their websites. Of the organizations who chose the template option, only 5 have implemented the recommended event structured data on their webpages (as of March 31, 2023). These include the Organization of Saskatchewan Arts Councils (OSAC), Eastern Front Theatre, Kabir Cultural Centre, The Cultch and Under the Spire Festival.

As a result of this new cohort of Digital Discoverability participants, we have learned the following:

- Many participants already recognized the importance of modernizing their webpages for Web 3.0 before attending their first session. By the end of the session, all participants acknowledged that structured data was essential to engage a new generation of web users who rely on Google, Siri and Alexa to provide them information about upcoming events in their area.
- Despite their acknowledgement of the importance of structured data and SEO, many organizations lack the resources to implement the recommended changes. Some participants were unsure if they had the financial means to approach their web developers. Others were waiting for funding opportunities to revamp their entire websites. Additionally, many participants, especially those who were launching some of their first events since the COVID-19 pandemic, confessed that they lacked the time to fit discoverability initiatives into their busy work schedules.
- Arts organizations that are subdivisions of municipalities face additional challenges to adding structured data, as they lack control over the backend of their websites and cannot obtain permission to have their web pages crawled by Footlight. Working with major ticketing platforms to implement structured data is one potential solution that can help these organizations boost their discoverability.
- Despite the reduction of financial and human resource hardships that Footlight offers, most participants still preferred to take control of their own event data by adding a JSON-LD template to the backend of their website. However, it should be noted that due to the time effort for Culture Creates to scrape a website and set up a Footlight account, the 9 participants who had less than 10 events on their website were exclusively offered the template option.
- Only 2 organizations expressed an interest in enhancing their existing Wikidata items/creating new items, while only 1 organization agreed to upload a photo to Wikimedia Commons. This may suggest that the impact of Wikimedia projects on discoverability is still largely underestimated in the performing arts sector.

- More outreach work is needed to educate the performing arts sector on even the most basic discoverability requirements (ex: having one webpage per event).


*In this video interview, Nicholas Beach (Jeanne and Peter Lougheed Performing Arts Centre) shares his impressions about the Digital Discoverability Program.* ▸ Watch the video.

# Wikidata

## Wikidata workshops

The last two workshops of the regular 2021-2022 Workshop Series, which focused on performing arts productions, were held in April and May 2022.

**Sadly, due to a lack of available human resources to coordinate and deliver the series, the Wikidata workshop series was not continued in the fall and winter 2022-2023.**

The LDFI's championing of Wikidata, however, did not stop. The regular workshop series was replaced by several other activities:

- Occasional introductory workshops (such as this one);
- The Cultural Venues Datathon (see below); and,
- Data clinics (see below).

With the exception of the datathon, none of the other activities generated as much long-term engagement as the regular workshop series: very few of the participants continued to contribute

to Wikidata after the event. Some participants did show an interest to participate in more Wikidata activities, but we lacked an ongoing program to sustain their engagement.

On the other hand, even though the regular series did not attract as large an audience, it did have a loyal core group of Wikimedians who valued the opportunity to hone their skills in a group setting. This program, however, experienced attrition: the number of participants progressively decreased over time. Without a means of recruiting new participants, such a program would be bound to collapse.

Our lessons learned is that neither one-off events nor ongoing editing sessions are not enough, on their own, to generate and sustain long-term engagement with Wikidata. In the future, if we want the arts community to integrate Wikidata in their digital practices, we have to provide **both**:

1. Occasional introductory workshops held in collaboration with host associations or in conjunction with conferences; and,
2. Regular series of accompanied editing sessions.

Considering the time commitment that a regular series of sessions would require, the LDFI is now exploring options to join forces with the LD4 Wikidata Affinity Group Working Hours or the new LD4 Art and Design Affinity Group.

## Cultural Venues Datathon

The Cultural Venues Datahon was held from April 25 to May 2, 2022.

This one-week edit-a-thon was organized to support the aim of the Wikidata WikiProject: Cultural venues, which is to “create the world’s most complete high-quality database of cultural venues”. This event was a strategic response to the lack of a comprehensive, quality database of performing arts venues. This was a major problem, since venue data is essential to many operational processes in the performing arts sector, including promoting to audiences events near them.

The event involved daily guided editing sessions in English and in French. Anyone was welcome to participate: no previous experience with Wikidata was required. These sessions brought participants together to work in a relaxed and informal setting, which made them fun and rewarding, as the participant feedback and the recap video can attest.

> “I just wanted to say congratulations on the Datathon thus far. These sessions have helped me to understand how fun creating items can be. It's been a really enjoyable experience.”
>
> “As someone new to this, it's been very helpful participating in the Datathon and following along at all these Zoom calls. There's a lot more work that needs to be done within our organization but the possibilities are endless. This is definitely putting our organization and our venues on the map, figuratively and literally”


https://www.youtube.com/watch?v=jydqERqAfF4

In addition to the daily editing sessions, there were:

- Two supplementary activities to address modelling issues in Wikidata;
- A series of Coffee Breaks, led by The Swiss Archive for the Performing Arts, to encourage the editing of venue items in Switzerland.

The datathon was a great success!

- 57 active Wikidata editors participated.
- 189 new cultural venue items created
- More than 1,000 items edited
- More than 6,000 edits

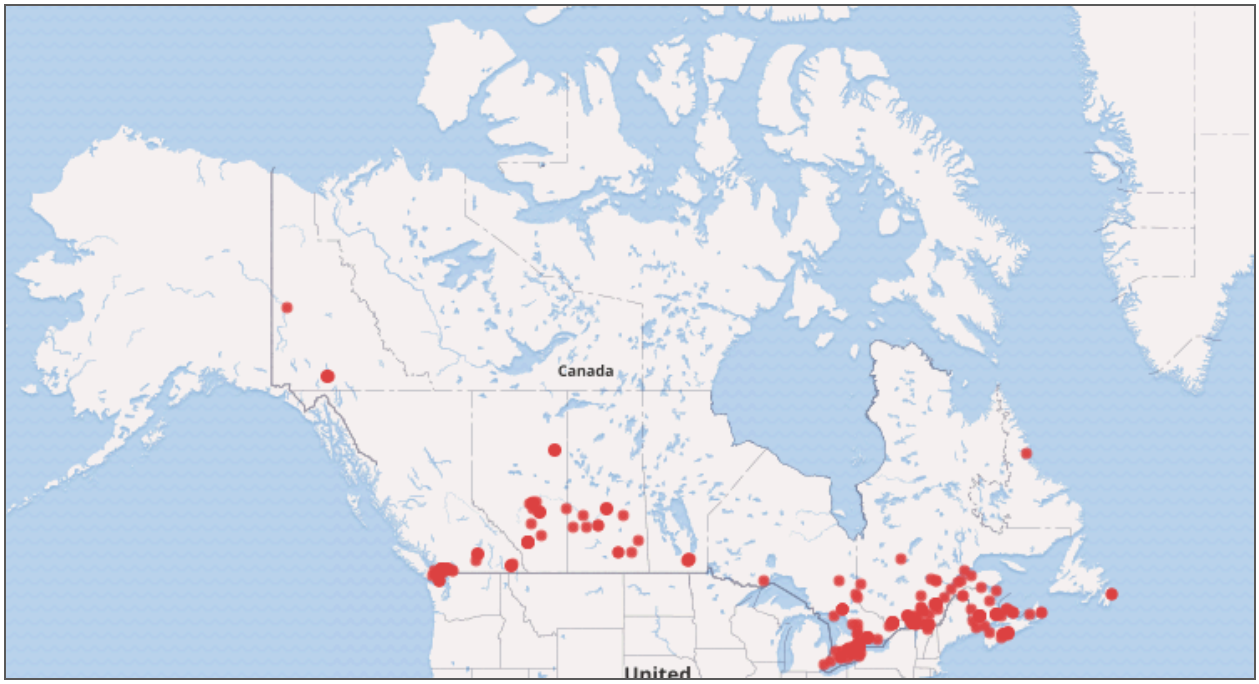
For more information:

- WikiProject Cultural Venues - Datathon page
- Final report of the Datathon

### Further manual data population

As mentioned above, the LDFI hired summer and contract workers to perform manual data population of venues in Wikidata. Thanks to the combined outcomes of their work and of the datathon, **the number of Canadian performing arts venues in Wikidata doubled**, jumping from 276 to 549!

The following query displays performing arts venues over a map:




Query: https://w.wiki/6cSU. Note: this query only displays performing arts buildings, performance halls or open-air event venues for which coordinate locations were populated in Wikidata. If you wish to add more venues on the map, add coordinate locations to venues on this list.

## Data enrichment clinics

We held four "data enrichment clinics" following batch uploads of associations' member data (see above for detailed reporting on the batch uploads):

1. Orchestras Canada – Data Enrichment for Canadian Orchestras
2. Indigenous Performing Arts Alliance – Raising an Artist Profile in Wikidata
3. Regroupement québécois de la danse – Data Enrichment for Dance - Session for artists
4. Regroupement québécois de la danse – Data Enrichment for Dance - Session for dance companies

| Association | # of member items uploaded | # participants in clinic | Ratio | Number of editors |
|---|---|---|---|---|
| Orchestras Canada | 138 | 20 | 15% | 13 |
| IPAA | 176 | 25 | 14% | 12 |
| RQD | 630 | 8+9 | 3% | 9 |

These activities have proven to be fairly effective for data cleaning and enriching:

- 8 items created (including 4 new work items);
- 50 more were edited (including 2 work items);
- 445 edits in total, one in ten of which were references added.

About two thirds of the 34 editors were returning contributors. 13 were new editors who created their Wikimedia user account on the day of the clinic. Only 2 new users continued to contribute to Wikidata after the clinic, which is far less than we had hoped. This lower than anticipated level of ongoing engagement is likely consequential to the discontinuation of the regular Wikidata workshop series: these new users were not given further opportunities to practice their skills.

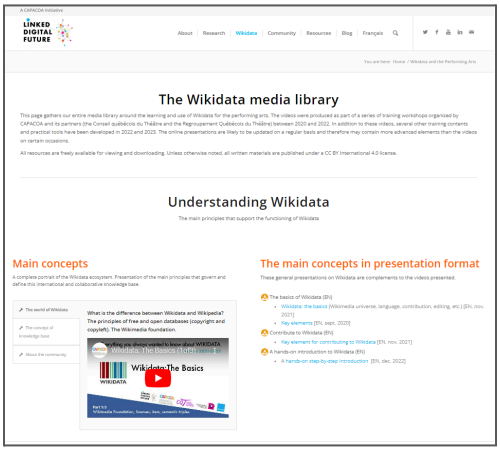
This being said, the large proportion of returning editors indicates that these offerings met very specific needs that were otherwise not met by other more generic Wikidata events. Indeed, several comments in the chat thanked the organizing team for the exhaustive presentation slides that were presented and made available for reuse.

These presentation slides are a very valuable output of the project.

### Library of Wikidata resources

Over the last two years, LaCogency and CAPACOA produced an impressive number of video tutorials and presentations.

In order to make it easy for users to retrieve the right content – and the latest version of it – the LDFI team organized them into a Wikidata Media Library that organizes content from the most basic to the most advanced learning units.



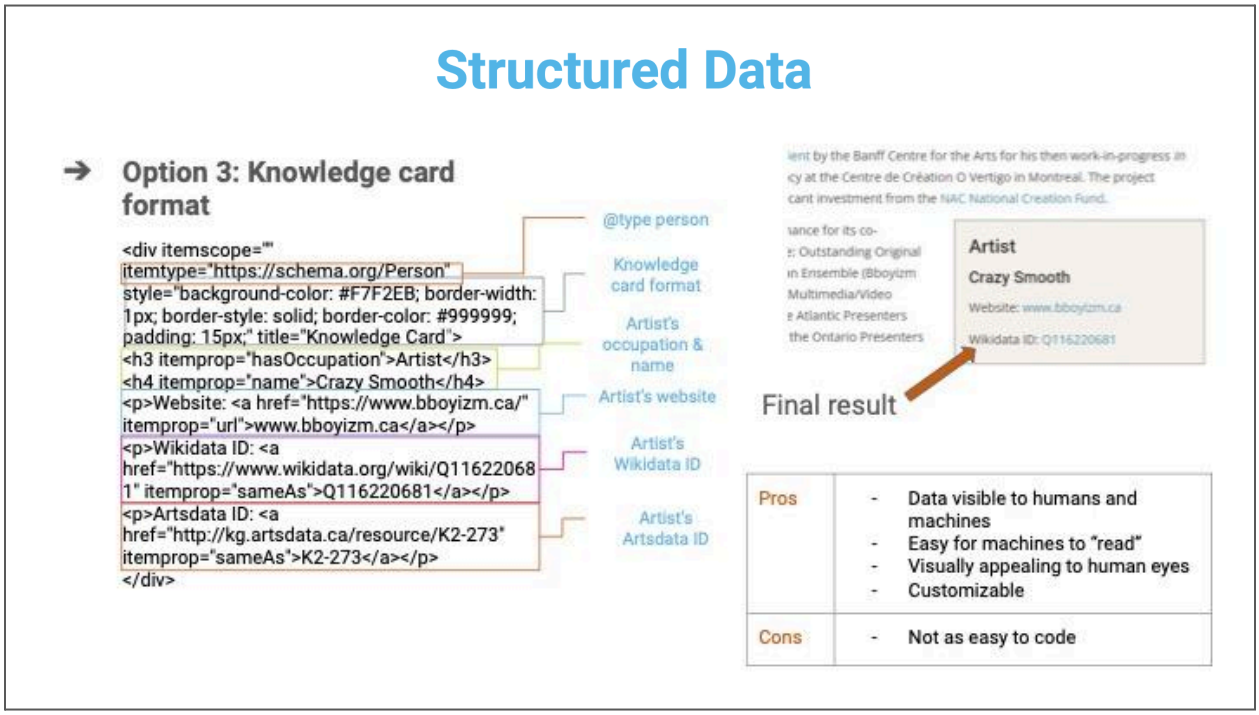

## Data literacy workshops and presentations

Excluding Wikidata workshops, consultative activities and working group meetings, members of the LDFI team delivered 17 webinars, presentations and workshops in 2022-2023. These activities reached a total of 404 participants. A full list of activities and attendance numbers is available in Appendix A.

These data literacy offerings covered a very broad range of digital discoverability and data literacy topics:

- Digital presence as a prerequisite to digital discoverability;
- Search engine optimization;

- Schema structured data for events and for artists;
- Unique identifiers;
- Geographic and provenance metadata;
- Self-identification metadata for Indigenous artists;
- Wikidata for artists, organizations, venues and productions;
- Creative Commons licenses and Wikimedia Commons.




*As part of a two-part digital discoverability session for agents and managers, the LDFI team devised several templates (including this knowledge card option) that create and display schema structured data about artists. Because the templates are written as microdata, they can be easily copied, modified and pasted into the HTML code of a webpage.*

Some of the host events where we presented the data literacy activities included:

- Forum avantage numérique
- Western Arts Alliance Conference
- Creative City Summit
- SPARC (Supporting Performing Arts in Rural & Remote Regions) Symposium
- Canadian Open Data Summit

*Photo from the workshop* Your Digital Presence: Let's Improve It! *presented at the Western Arts Alliance Conference on August 30, 2023. There were 60 participants who downloaded the presentation 51 times.*

While we typically did not survey participants on their experience, we did receive positive verbal and written feedback. As an example, in March 2023, LDFI Team members Frédéric Julien and Bridget MacIntosh presented a session on Open Data Production and Reuse in the Canadian Performing Arts Ecosystem at Theatralia's "Performing Arts: Transitioning to the Digital Age" conference in Zagreb, Croatia. This session made a strong impression on the conference's international audience:

> *"I found yours and Bridget's presentation fascinating yesterday and something which I would like to learn more about."*
> – A participant at the conference "Performing Arts: Transitioning to the Digital Age", Zagreb, March 2023.
> Bethany Johnstone, MPhil/PhD candidate at University College London

Feedback from the series of two digital discoverability workshops for agents and managers, also presented in March 2023, indicates that the contents were relevant, clear and actionable:

- This workshop was really packed... and it will take a few days to digest it all. However, I finally started understanding how SEO works and will be looking into implementing it at our website. Also, I really liked all the tips and programs I could use to test the websites I work with.
- Je ne savais rien sur le SEO - donc j'ai beaucoup appris, notamment comment vérifier que les besoins les plus élémentaires pour la découvrabilité sont remplis sur un site internet.

- This webinar was incredibly helpful.  I realize how much more I need to know about digital discoverability to ensure the artists I represent are given every opportunity to be found - thank you!
- All the contents in these sessions have been extremely useful! … Wikidata rules! Now I need to work on it super hard.

# Communications

## Website

The LDFI team worked with Margaret Lam and with LaCogency to update the website. Highlights include updating the resource section to remove outdated links, adding project reports, adding a mailing list subscription button to the contact page, and reorganizing Wikidata resources into a media library.

R&D and information sharing on discoverability best practices continued. Members of the LDFI team, Frédéric Julien and Bridget MacIntosh, published four new blog posts:

- Decentralization Must Go On
- The LIVE Directory: At the Crossroads of Performing Arts and Open Data
- Indigenous Artists Shine Equally on our Stages as in the Constellation of Linked Data
- Connecting with Arts Service Organizations: A Key to Opening Data About Canada's Performing Arts Sector
- New Report Paves the Way for Better Representation of Indigenous Artists

In addition, Dessa Hayes diligently continued to update former posts as new information became available. Last year's post on Schema structured data continued to attract a sizable audience (320 page views).

The website had very similar analytics in 2022-2023 as in the previous year: 5000 users and 15,100 page views.

## LDFI E-Newsletters

Launched in October 2021, the LDFI continued to design and distribute a quarterly newsletter intended to provide stakeholders with up to date information on LDFI initiatives. Newsletters were created for April 2022, June 2022, October 2022 and February 2023. The list includes over 600 subscribers.

# Appendix A: List of participants in LODEPA Wikidata/Wikimedia Working Group

**External participants:**

1. Jean-Robert Bisaillon
2. Zeljko Blace
3. Pierre Choffet
4. Baptiste De Coulon
5. Beat Estermann
6. Geneviève Fabio
7. Jelke Joosen
8. Aurélie Lauret
9. Bart Magnus
10. João Alexandre Peschanski
11. Marie-Pier Pilote
12. Daniela Rosu
13. Raffaela Siniscalchi
14. Loke Sjølie
15. Chris Van Goethem
16. Luc Wanlin
17. Gaston Wey

**LDFI team members and suppliers:**

1. Mariana Frandsen
2. Dessa Hayes
3. Frédéric Julien
4. Tammy Lee
5. Véronique Marino
6. Bridget MacIntosh
7. Caitlin Troughton

# Appendix B : Attendance at workshops and events

| Date | Event | Type of event | Program/ content | Partner | In-person attendance | Online attendance | Total attendance |
|---|---|---|---|---|---|---|---|
| 2022-04-22 | Crowdsourcing Open Data population with Wikidata | lightning talk | data literacy | Go Open Data | | 28 | 28 |
| 2022-04-25 | Cultural Venues Datathon | workshop | Wikidata | Several | | 39 | 39 |
| 2022-04-25 | Datathon des lieux culturels | workshop | Wikidata | Several | | 19 | 19 |
| 2022-04-26 | Cultural Venues Datathon | workshop | Wikidata | Several | | 14 | 14 |
| 2022-04-27 | Datathon des lieux culturels | workshop | Wikidata | Several | | 4 | 4 |
| 2022-04-28 | Cultural Venues Datathon | workshop | Wikidata | Several | | 13 | 13 |
| 2022-04-29 | Datathon des lieux culturels | workshop | Wikidata | Several | | 2 | 2 |
| 2022-05-02 | Datathon des lieux culturels | workshop | Wikidata | Several | | 6 | 6 |
| 2022-05-02 | Cultural Venues Datathon | workshop | Wikidata | Several | | 10 | 10 |
| 2022-05-06 | Exercer un contrôle sur ses métadonnées | presentation | data literacy | Petit théâtre du Vieux Noranda | 24 | 14 | 38 |
| 2022-05-16 | ARLIS/NA Wikidata Group Call | meeting | Wikidata | | 24 | | 24 |
| 2022-06-02 | Wikidata and Canada's presenting networks | workshop | data literacy | CAPACOA | 13 | 3 | 16 |
| 2022-06-23 | LODEPA WG6 Wikipedia/Wikidata | workshop | LODEPA | | 9 | | 9 |
| 2022-07-13 | Launch of the LIVE Performing Arts Directory | presentation | prototyping | CAPACOA | | 41 | 41 |
| 2022-07-28 | Wikidata training session for award organizations | workshop | data literacy | GGPAA and Siminovitch Prize | | 5 | 5 |

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|---|---|---|---|---|---|---|---|
| 2022-08-30 | Your Digital Presence: Let's Improve It! | workshop | data literacy | WAA | 60 | | 60 |
| 2022-09-13 | Data Enrichment for Canadian Orchestras | workshop | Wikidata | Orchestras Canada | 20 | | 20 |
| 2022-09-16 | Contemporary Issues Facing the Arts and Culture Sector Today | panel | data literacy | University of New Brunswick | | 22 | 22 |
| 2022-09-22 | LODEPA WG6 Wikipedia/Wikidata | workshop | LODEPA | | 13 | | 13 |
| 2022-10-04 | Tapping Into The Open Data Pipeline – New Approaches To Amplifying Community Vibrancy & Cultural Planning | presentation | data literacy | Creative City Network of Canada | 15 | | 15 |
| 2022-10-07 | Digital Discoverability Program Information Session | info session | prototyping | CAPACOA | | 6 | 6 |
| 2022-10-14 | Representing Rurality in Wikidata and Wikimedia Commons | presentation | data literacy | SPARC | 9 | | 9 |
| 2022-11-07 | Indigenous Artists and Open Data Respectful Representation and Control | presentation | Indigenous knowledge | Canadian Open Data Society | 28 | 78 | 106 |
| 2022-11-08 | Artsdata: Supporting data reuse in performing arts | presentation | data literacy | Canadian Open Data Society | 8 | 21 | 29 |
| 2022-11-10 | Raising an Artist Profile in Wikidata | workshop | Wikidata | IPAA and MAN | | 25 | 25 |
| 2022-11-16 | Data Enrichment for Dance - Session for artists | workshop | Wikidata | RQD | | 8 | 8 |
| 2022-11-17 | Data Enrichment for Dance - Session for dance companies | workshop | Wikidata | RQD | | 9 | 9 |
| 2022-11-24 | Matinée numérique dia-log | half-day event | data literacy | Culture Laval | | 30 | 30 |
| 2022-12-01 | Hands-on Wikidata introduction | workshop | Wikidata | Canadian Open Data Society | | 28 | 28 |
| 2022-12-02 | Continued Work On Advancing Pluralism Through Equity Diversity And Inclusive Learning | panel | data literacy | CPAMO | 7 | 20 | 27 |
| 2022-12-15 | LODEPA WG6 Wikipedia/Wikidata | workshop | LODEPA | | | 12 | 12 |

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|---|---|---|---|---|---|---|---|
| 2023-01-16 | Linked Open Data Q&A with CDA and CADA/West members | presentation | data literacy | CDA, CADA/West | | 16 | 16 |
| 2023-02-22 | Strategically Using Production Photos - Part 1 | workshop | Wikidata | TAPA | | 16 | 16 |
| 2023-02-24 | Strategically Using Production Photos - Part 2 | workshop | Wikidata | TAPA | | 6 | 6 |
| 2023-03-13 | Digital Discoverability for Agents and Managers - Part 1 | workshop | data literacy | CAPACOA | | 17 | 17 |
| 2023-03-16 | LODEPA WG6 Wikipedia/Wikidata | workshop | LODEPA | | | 9 | 9 |
| 2023-03-16 | Open Data Production and Reuse in the Canadian Performing Arts Ecosystem | presentation | data literacy | Teatralia | 18 | 12 | 30 |
| 2023-03-28 | Digital Discoverability for Agents and Managers - Part 2 | workshop | data literacy | CAPACOA | | 15 | 15 |
| **Totals** | | | | **38** | **248** | **548** | **796** |
| | | | | | | | |
| Sub-totals | | | Wikidata | 16 | 44 | 199 | 243 |
| | | | LODEPA | 4 | 22 | 21 | 43 |
| | | | Indigenous knowledge | 1 | 28 | 78 | 106 |
| | | | All other activities | 17 | 154 | 250 | 404 |

| | | |
|---|---|---|
| LODEPA | 5 | 48 |
| Indigenous knowledge | 3 | 20 |
| Wikidata workshops | 7 | 134 |
| All other activities | 15 | 454 |